



# Adventures with Emmy 2026 Playtest Document

**Welcome to the Adventures with Emmy 2026 playtest!** This playtest will help us refine the core mechanics of this game and the main idea of each of its fields (this game's equivalent to "classes" in other TTRPGs). The playtest will run until August 1st, 2026. We're looking for your feedback, comments, and criticisms regarding the core mechanics and fields, focusing on feedback from play in any format that works for you (at home, in game stores, at events, or on-line). You can make new characters or use our pregenerated characters.

Anything can change based on the results of the playtest! These are very early iterations of the rules and player options, intended to accomplish the game's primary goals of having fun and learning together, so our biggest question is whether your group achieves these goals!

Once you've had a chance to try Adventures with Emmy, you can submit your feedback in an on-line survey available soon. This survey will remain open until the end of the playtest. You can also join our project's Discord at <https://discord.gg/CqG2JaBkb5> to ask questions and provide more detailed insights in conversation with the game's writing team and research team.

After August 1st, 2026, the writing team and research team will review the playtest data and update the rules and player options found here. If something seems to work overall, we'll refine it where necessary and expand on it where possible. If something doesn't seem to work, we'll revise it and test those updates internally. Then, in 2027, we'll release an **updated playtest document** for you to try, and tell us if the changes we made addressed your concerns!

We'd like to thank you for participating in the Adventures with Emmy playtest. We look forward to seeing what you think and using your feedback to make this game the best it can be!

## Part I: Player's Guide

*"...and make sure you enter through the passage on the left," Professor Emmy Noether concluded her instructions for Jenise, Latmer, and Volkva. As always, she spoke patiently, making each of them feel they held her full attention, as though she did not have thousands of other agents to direct across multiple worlds. "It's the only known entrance to Jintadra's cellular scale. Any other entrance will make you come out too large or too small to help the Bacteroids."*

*Jenise tried to listen carefully as Relor tugged nervously at her collar. She fished out another treat for her simian companion, worried that she would run out before they even arrived at Jintadra. Of course, she couldn't blame Relor; she didn't find the Quantum Caverns any more palatable.*

*“Any questions?” Emmy asked.*

*Latmer raised his hand and gestured to his kit of wires, coils, and power cells. “Is this, ah, going to function all right?” Professor Emmy smiled, considering the question. “You’ll need to take some waterproofing precautions, but I’m sure Volkva can help with that.”*

*Volkva, ever eager to synthesize new compounds, immediately began rummaging through her own kit. “Waterproof and an electrical insulator? Shouldn’t be a problem.”*

*Jenise smiled. She always appreciated Emmy Noether’s ability to connect her students’ strengths. Indeed, the entire Noether Society seemed built around the idea that the right combination of people could solve any problem, and it seemed Emmy’s greatest pleasure to try out every creative combination she could think of.*

*With a final good-bye from Professor Noether, Jenise, Latmer, and Volkva stepped into the entrance to the Quantum Caverns. As always, the walls, floor, and ceiling undulated to the point where you thought they couldn’t possibly be solid, but the cavern floor held beneath their feet, and the walls held back countless worlds that the Noether Society was dedicated to exploring. They followed Emmy’s directions at each fork in the Caverns, finally finding their way to a space with five portals. A sign had been affixed here, labeled “Jintadra,” with another labeled “Bacteroids” marking the left-most exit they were meant to take.*

*Volkva finished her modifications to the gear in Latmer’s kit, then nodded.*

*Relor grunted nervously, placing his hands over his mouth and holding his breath. “Just breathe,” Jenise assured her friend. She helped him don his respirator, then her own.*

*One by one, they stepped through the Bacteroid exit, as always, feeling the strange ripples of the Quantum Caverns intensify and then vanish. A sea of water suddenly pressed on Jenise, and she stepped forward along a soft spongy surface. A network of oblong structures spread out before them, their residents floating about their business between. A few spotted the new arrivals and waved their flagella in welcome.*

*Jenise narrowed her eyes, her attention drawn to the shower of particulates that suddenly began floating down from above. “Volkva, do you recognize--”*

*“Silica,” the chemist confirmed. “But the shape isn’t what you’d expect from just sand.”*

*“It’s like pieces of a shell,” Jenise inferred, then looked up just in time to see the distant sunlight blotted out by a massive creature descending from above. Housed inside a crystalline shell, it wavered and surged with a roar. “It’s already here! The amoeba’s already here!”*

*“This is your show, so let’s get you set up,” Latmer said, immediately attaching to Jenise wiring and servos and other gadgets that she didn’t recognize.*

*“I’ll work on getting everyone to safety,” Volkva said, mixing two reagents that propelled her further into the colony on a cloud of steam.*

*The servos now at Jenise’s side suddenly sprang to life, sending her up toward the massive amoeba. Jenise took a deep breath through her respirator, Relor now grunting to reassure her. “Let’s see if we can’t find a weak point in that shell...”*

## Chapter I.1 What is *Adventures with Emmy*?

*Adventures with Emmy* is a **tabletop roleplaying game for STEM education**. The goal of this game is to highlight concepts from STEM fields in a fun, strategic, collaborative, storytelling experience that develops and reinforces the players’ knowledge. *Adventures with Emmy* is all about **problem-solving**: A game master (GM) presents a group of players with a narrative problem they must use their knowledge and the game’s mechanics to solve. Solutions are considered successful based on the **claim-evidence-reasoning model** of scientific argumentation. In this model, a successful solution clearly states a claim about how the problem will be solved, presents evidence to support that solution, and explains the reasoning of why the evidence supports the claim.

### Game Overview

In *Adventures with Emmy*, you control a **hero** with a specific set of abilities and a personality of your crafting. Most of your game time is spent in an **encounter**, where the players respond to a challenge presented by the GM. Time is of the

essence in an encounter, where players take **turns** describing the **actions** that their heroes use. When your turn starts, you gain **3 Δs (Deltas)** to spend on actions. A single Δ represents 2 seconds of time in the game world. As a player, you choose what actions your hero takes. Perhaps you want your hero to move closer to an ally; you would say they use the **Stride action** for 1 Δ. Perhaps you then want them to attack a monster that has come too close to their ally; you might have them use a **blast action** for 1 Δ. Finally, you might want to see if your hero can notice something unusual about the monster; you could use your final Δ to **Recall Knowledge** about this monster. Your hero also has special actions they can use based on their STEM field: A biologist can apply exploits, a chemist can Prepare a Chemical Reaction, and an engineer can use prototype actions to support their client.

Some actions simply describe an outcome. For example, when you Stride, you move a certain distance. Other actions have outcomes that depend on you **making a check**, which means you roll a 20-sided die (abbreviated d20) and add a relevant numerical **modifier** that describes how prepared your hero is for that action. For example, to Recall Knowledge, your hero makes an **Awareness check** (rolls a d20 and adds their Awareness modifier), and to try to avoid an observer's notice, they make an **Agility check** (rolls a d20 and adds their Agility modifier). Each check is compared to a **Difficulty Class (DC)** to evaluate the outcome.

As you and your fellow players take turns, you work together to learn something about a STEM concept that the encounter represents. Perhaps you are fighting a plant creature powered by photosynthesis, or trying to stop an exothermic chemical reaction. Many abilities that you use in this game ask you to express a **hypothesis** about what you observe or create a **design** to solve a problem. The more you apply your STEM knowledge and share your ideas with your fellow players, the further you progress the encounter toward victory. At the end of each round of gameplay, the GM compares your strategy, reasoning, and discussion to the encounter's **Eureka Rubric** that summarizes the relevant STEM concepts at play, and rewards you with benefits at specific **Eureka Thresholds** outlined in the rubric. A Eureka Threshold might reward you with an advantage in the encounter, a special action you can carry out, or special information to move your story further.

Here's an example of gameplay:

*Luis, Rachel, Rand, and Hayley are playing an exciting game of Adventures with Emmy. Luis is playing as Latmer, an electrical engineer; Rachel is playing as Jobelle, an astrophysicist; and Rand is playing as Jenise, an evolutionary biologist. Their game master, Hayley, has told them that their characters are investigating a malfunctioning factory that was recently evacuated. Hayley describes the facility, where a robot with a glass chamber continues to labor. On a grid-lined marker board, Hayley draws a map of the factory, and asks each player to roll a 20-sided die to determine turn order.*

**Hayley:** Before we start our first round, does anyone have a hypothesis recorded that they want to ask about?

**Luis (Latmer):** When we arrived, I hypothesized that there might be a caltrinium leak. Is the robot leaking anything?

**Rachel (Jobelle):** And I found that scattered set of bolts and gears and hypothesized that something is malfunctioning. Is that hypothesis related to the robot?

**Hayley:** Rachel, your hypothesis is indeed related to the robot. You start combat with 1 Flow Point. Luis, you don't see anything leaking here but I want you to hold onto that thought for later. Rand, Jenise is up first in turn order. As always, you have three Deltas you can use on your turn.

**Rand (Jenise):** I would like to use my Establish Niche ability, for one Delta. This lets me ask nearby animals about a square in the environment. Is there any square I should investigate?

**Hayley:** Yes, this square here is right next to some overturned vats. A family of rats is pointing to the liquid residue inside and complaining that it's making them itch.

**Rand (Jenise):** Poor little rats! Okay, with my second Delta, I Stride over to my Niche, where I get a bonus to my defenses. Then with my last Delta, I'd like to Recall Knowledge and try to identify the liquid. I rolled a d20 and added Jenise's Awareness bonus for a total of 18.

**Hayley:** You identify this substance as caltrinium. You remember that this factory received caltrinium shipments each day before it shut down. The robot is next. It Strides up to Latmer and then attacks. I rolled a total of 25 with its Fitness. Luis, does that hit your Agility defense?

**Luis (Latmer):** Aww, beans, that's a hit.

**Hayley:** Latmer loses 6 Hit Points, and then the robot clamps down. Latmer feels sluggish, like he can't move as quickly. He takes a -2 penalty to his Agility for 1 round. It's your turn, Luis.

**Luis (Latmer):** Well, it's a good thing my character's best attribute is Fitness! First, I'll draw my sword, and second, I'll attack the robot with an electric blast. I rolled a 15 on the die, for a total of 21.

**Hayley:** That is a hit.

**Luis (Latmer):** Awesome. It loses 10 Hit Points, and then I want to use my Boost Efficiency ability to benefit Jobelle, who also becomes my client in the process. It says I first describe a design I'm going to build. I know chemicals can form reactions, so I want to set up a chemical reaction to help Jobelle move more quickly.

**Hayley:** Let me check the Eureka Rubric... Okay, chemical reactions do play an important role in this encounter, so your design is effective.

**Luis (Latmer):** Awesome. Rachel, you get an extra Delta you can use to Stride each turn for the next 10 rounds.

**Hayley:** And fittingly, it is Rachel's turn.

**Rachel (Jobelle):** Okay, so chemical reactions are important here, and that robot did something to steal Latmer's Agility... I know those both involve energy, so I use my Create Model ability to study the robot. I get to Recall Knowledge about the robot as part of that action.. I rolled an Awareness check of 22. Do I get the sense that the robot stole some of Latmer's energy?

**Hayley:** Yes, he did.

**Rachel (Jobelle):** Next I'd like to Build a Toy Model, where I make a hypothesis about the robot. I hypothesize that it's using the stolen energy to initiate a chemical reaction.

**Hayley:** That hypothesis is correct. In fact, you notice caltrinium churning within the robot's glass chambers.

**Rachel (Jobelle):** Then with my extra Delta--thank you Luis!--I Stride over to the robot and then I spend my Flow Point to make a Force Flurry. The robot takes 7 force damage, and my correct hypothesis gives me a +2 bonus to the damage for a total of 9!

**Hayley:** Well, that's the end of the round, and I'm happy to announce that your ideas about chemical reactions have brought you to Eureka Threshold 1! In this encounter, Eureka 1 means everyone gets a +1 bonus to Agility DC against the robot's attacks. Take a minute to discuss your next steps before the next round begins...

*This first round of the encounter has reinforced Rand's compassion, Luis's creativity, and Rachel's knowledge of chemical reactions. They feel a sense of community and recognition as a result of their collaboration, and are looking forward to exploring more about energy in the story to come.*

## What you Need

To play this game, your group needs...

- A copy of this book.
- A physical or virtual board with pawns to represent the spatial layout of the game. A virtual tabletop implementation of Adventures with Emmy will become available during the playtest.
- Some dice. Each player needs a 20-sided die (hereafter, a d20) and the group needs a few 6-sided dice (hereafter, a d6). The d6's are easy to share, but a game session usually progresses more quickly if each player has their own d20.
- A set of notes for the GM running the adventure.
- Paper to take notes and write down reminders of your adventures.

## EMMY WELCOMES EVERYONE

STEM and gaming are for everyone, and this game about STEM learning is designed for people of every age, gender, race or ethnicity, religion, sexual orientation, and any other identities and life experiences. Every player--not just the GM--who participates in *Adventures with Emmy* assumes responsibility to make sure the experience is fun, welcoming, and educational for everyone.

### Eureka Rubrics

At the heart of an *Adventures with Emmy* game session is the **Eureka Rubric**. Each creature and encounter in a published *Adventures with Emmy* Learning Path or Learning Module includes a Eureka Rubric, which describes relevant STEM principles that the heroes can leverage to strategically resolve an encounter. The more the heroes' actions leverage STEM knowledge, the more they can turn the encounter in their favor.

While Eureka Rubrics are usually managed by the GM, it's helpful for players to also know what a Eureka Rubric looks like:

#### ENCOUNTER OR CREATURE NAME

#### EUREKA RUBRIC

**Claims** This entry describes something the heroes could try to accomplish to resolve the encounter. This might involve taking advantage of an adversary's weakness or making strategic use of their surroundings. This description is structured as examples of high-level strategies that the heroes could enact. The GM should compare the heroes' plans against these examples and evaluate whether they appeal to the same general idea.

**Evidence** This entry describes the type of observations, facts, concepts, principles, or knowledge the heroes or players possess that they believe supports their claim. This is where "metagaming" (the blending of the players' out-of-game knowledge and the heroes' in-game knowledge) is encouraged.

**Eureka 1** This threshold identifies a benefit or event in the encounter that is unlocked the first time the heroes strategically leverage appropriate knowledge in the encounter. They must use evidence to support a claim of why they expect their strategy to work. This outcome is usually designed to provide a minor reward that signals to the heroes that they're on the right track, but it also might change the behavior of the associated creature, possibly advancing the story of the encounter or heightening the sense of pressure. A GM awards a Eureka Threshold at the end of the round and explains what actions or ideas brought the heroes across the threshold.

**Eureka 2** This entry identifies a benefit or event in the encounter that is unlocked when the heroes implement a second item in the rubric, or refine the strategy that brought them to Eureka 1. This outcome is usually stronger than the Eureka 1 outcome, and unless stated otherwise, is cumulative with the Eureka 1 outcome. A Eureka Rubric can have more than 2 thresholds if the encounter is expected to be lengthy or represents an epic moment in your adventure. GMs should let their players know when they've reached all Eureka Thresholds for an encounter.

**Hints** This last block lists a few hints that your GM can work into the encounter. You can learn more about hints in "Some Key Terms" below.

Here's an example Eureka Rubric for an encounter in which the heroes fight a water elemental (a creature made of water) who is threatening local wildlife with drowning.

#### WATER ELEMENTAL

#### EUREKA RUBRIC

**Claims** Pushing the water elemental closer to a powerful heat source will cause it to evaporate. Sufficiently thirsty plants could drain the water elemental. Manipulating electromagnetic fields around the water elemental could force it to move or keep it stationary.

**Evidence** Heat causes water to evaporate or boil. Plants consume water. Water has an electric dipole.

**Eureka 1** Each round, each hero gains a +1 bonus to one check of their choice that would help advance their plan. Sensing the heroes' plan, the water elemental attempts to defend itself by soaking in nearby water. Its Size increases from Medium to Large, granting its melee attacks a range of 2 meters instead of 1 meter.

**Eureka 2** The water elemental becomes flustered at the possibility of evaporating, shouting curses for the wizard who summoned it but not yet naming them. It gains the vulnerable condition with a value of 1 for the remainder of the encounter.

**Eureka 3** Ask the heroes to describe what effect their plan has. A typical outcome might be a condition like slowed, hampered, or vulnerable 2. Once defeated, the water elemental vengefully cries out "Melchario!" the name of the wizard who summoned it.

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**Hints** If the water elemental is exposed to a weaker or temporary source of heat, tendrils of steam rise from its body. The water elemental takes care to stay away from plants. Small metal objects nudge themselves toward the water elemental.

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### Where to Next?

If this is your first time reading this book, at this point you can head to one of two chapters: Chapter I.2 Game Rules will tell you how the game is played, and Chapter I.3 will tell you how to create a hero. You can read these chapters in either order. You will also refer to these chapters frequently during your *Adventures with Emmy* game sessions and between sessions, so don't worry about getting everything at once!

## Chapter 1.2 Game Rules

This chapter presents all the rules you need to play a game of *Adventures with Emmy*. You will likely return to this chapter repeatedly throughout gameplay to decide what to do on your turn and resolve events. It's okay if you want to skim this chapter on your first read-through, or skip straight to [Creating a Hero](#).

### Have Fun and Learn Together!

The first and most important rule of *Adventures with Emmy* is to **have fun and learn together!** It's the goal of the game. We centralize this rule in the Eureka Rubrics that a GM can find in creature stat blocks and *Adventures with Emmy* Learning Paths and Learning Modules. If there's a rule, hero option, or encounter that prevents your group from achieving the goal of having fun and learning together, you are encouraged to work with your group to modify it. This means, for example, you have explicit permission to simplify any aspect of this game.

This rule carries a communal responsibility to create a safe and welcoming environment for every player at the table. Work with your fellow players to establish expectations, boundaries, and support structures to ensure everyone feels welcome and secure. We recommend the following baseline for expectations at the table (adapted from the *Pathfinder Player Core*):

- Bloodshed and injuries might be described. However, dismemberment and excessive descriptions of gore and cruelty should be avoided.
- Romantic and sexual relationships can happen in the game, but players should avoid being overly suggestive. Sex happens "off-screen." One hero attempting to initiate a relationship with another should generally be avoided.
- Avoid excessively gross or scatological descriptions.
- No characters (heroes or villains) perform any of the following acts: torture, rape, nonconsensual sexual contact, sexual threats, harm to children (including sexual abuse), owning slaves or profiting from slavery, reprehensible uses of mind-control magic.

Your group might consider adopting any of the following tools to help create a welcoming environment:

- The GM can privately ask each player for lines (examples of content they're uncomfortable with entirely) and veils (examples of content they're fine with happening "off-screen"). After receiving such information, the GM can share lines and veils with the rest of the group and maintain player anonymity.
- Each player can have an "X" on a card (an X-Card) ready to use to silently reject upsetting content. The current speaker then rewinds and resumes gameplay in a direction that doesn't include the upsetting content, with no explanations required and no judgment passed. The GM can privately follow up with the player after the session to find out if a new line or veil needs to be established. You can find more details at [tinyurl.com/x-card-rpg](https://tinyurl.com/x-card-rpg).

### Some Key Terms

*Adventures with Emmy* game materials will frequently reference the following terms. If this is your first time reading this book, you can skim this material and return any time you need a reminder.

**Ability** When you create and level up a hero in *Adventures with Emmy*, you choose a set of abilities. An ability might grant an **action** or a **reaction** that your hero can use, or might grant an enhancement to an ability they already have.

**Actions, Reactions, and Δ ("Delta")** During an encounter, you and your fellow players will take turns carrying out actions. When your turn starts, you gain 3 Δs—or ΔΔΔ, as it will usually be denoted—along with 1 reaction denoted ⇄. A single Δ represents a brief step forward in time. In a combat encounter, Δ represents 2 seconds. Everything you might want your hero to do on their turn costs some number of Δs. For example, in ["Basic actions Anyone Can Perform,"](#) the Stride action (in which you move a certain number of squares on a game board) costs you a single Δ, while Administer First Aid (in which you tend to a creature's wounds) costs you ΔΔ (2 Δs). When you use an action, you reduce your number of Δs by the listed amount. When you run out of Δs your turn *usually* ends (although you might have an ability that says otherwise) and play passes to the next character in initiative order. When you use a ⇄ for a reaction, it usually happens outside of your turn, and doesn't represent a specific interval of time. A reaction always has a trigger, specifying what event allows you to use it.



**Allies** The heroes that your fellow players in your game control are your hero's allies. Any action or ability that refers to your allies is intended to interact with or benefit these heroes. Unless you state otherwise, it is assumed that your hero always communicates to their allies any information they learn during the game. Sometimes, it might be beneficial for you to (perhaps temporarily) adopt a non-player character controlled by the GM as your ally. This usually requires at least 1 minute of bonding with a willing non-player character. You are not considered your own ally.

**Attributes** An attribute is a capability of a creature to accomplish a type of task. *Adventures with Emmy* uses four attributes: **Agility** represents a creature's ability to move in harmony with their surroundings and follow the rhythms of the natural world; **Awareness** represents a creature's ability to identify or notice things in their surroundings; **Fitness** represents a creature's ability to physically manipulate the world around them; and **Influence** represents a creature's ability to sway others with their willpower or intention. Each attribute uses a **modifier**, a constant number that is added when making a check (described below). The higher the modifier, the greater the creature's capability with that attribute. Your modifier for an attribute is equal to your level plus the number of boosts you've applied to that attribute.

**Bonus** See check.

**Check** A check is a roll with a d20, usually with a modifier added. Checks are required when a creature attempts an action and determine whether the action succeeds or fails. The d20 roll represents an element of uncertainty in the game's story, while the modifier represents a creature's consistent ability to succeed at the attempted action. There are generally five types of checks: Agility, Awareness, Fitness, Influence, and flat. The first four are named after the attributes that every creature has. So, for example, to "make an Agility check," you roll a d20 and add the creature's Agility modifier, with the same process for Awareness checks (d20 roll plus Awareness), Fitness checks (d20 roll plus Fitness), and Influence checks (d20 roll plus Influence). A flat check represents a d20 roll with no modifier added. Flat checks are used to represent a random event that is outside any creature's control. Your GM compares your roll result with the Difficulty Class (DC, described below) of the check. If your check is lower than the DC, you fail. If you meet or exceed the DC, you succeed. If you exceed the DC by 10 or more, you critically succeed, which can give you additional benefits on some actions. Similarly, if your check is 10 or more lower than the DC, you critically fail, which might introduce a worse outcome than a failure. These four outcomes are called the **degrees of success**. If you roll a 20 on the d20, you upgrade your success by one degree (critical failure becomes failure, failure becomes success, success becomes critical success). If you roll a 1 on the d20, you downgrade your success by one degree. Sometimes, your check will benefit from an additional **bonus** or suffer a **penalty** due to circumstances your hero is in, items they've equipped, or abilities you have. Bonuses do not combine with each other; you always use the greatest (most positive) bonus applicable to the check. Similarly, penalties do not combine with each other; you always use the greatest (most negative) penalty applicable to the check. Add your bonus and penalty at the same time you add your modifier to your check.

**Creature** The story your game tells will involve many creatures, entities who can take actions and influence the world around them. Most creatures will possess a life force, personality, or will, but some will be mindless (such as robots). Creatures include heroes (whom the players control), non-player characters (NPCs, whom the GM controls), and monsters or other special characters. Creatures who play an important role in the story will be given a stat block with their attribute modifiers and unique actions. GMs can build creatures using the process in "[Building Creatures](#)."

**Difficulty Class (DC)** A DC is a number that represents how challenging a task is. For example, when you try to hit something with an attack, you attempt a check against the target's Agility DC. Or, when you attempt to persuade someone to help you, you attempt an Influence check against their Awareness DC. Sometimes, your GM will choose a set DC from a table, but in many cases, the DC is based on an attribute, with a value of 10 plus the attribute modifier. For example, your Agility DC (how difficult it is for another creature to hit you) is always 10 + your Agility modifier. Any bonuses or penalties that apply to an attribute modifier also apply to the attribute's DC. Sometimes, an effect will apply a bonus or penalty "to your defenses." This refers to your DCs and any checks you make in response to an enemy's abilities to avoid or reduce harmful effects.



**Encounter** An encounter is how we resolve important events in *Adventures with Emmy*. During an encounter, you take turns with your allies. Encounters typically involve some sort of combat, where each round represents 6 seconds of activity. The full rules for encounters are found in “[Encounters](#)” below.

**Eureka Rubric** Encounters in *Adventures with Emmy* can be challenging, and they are designed to be overcome when players apply their real-world knowledge of STEM to the heroes’ advantage. Your GM adjudicates this application of knowledge using a Eureka Rubric (see the [example above](#)). Each creature you confront in *Adventures with Emmy* has a Eureka Rubric, and a published adventure might add items to this rubric based on the specific encounter. Your GM can also modify a Eureka Rubric during their preparation for a session, or in response to hero actions or player ideas.

**Eureka Threshold** At the end of each round during an encounter, your GM compares your actions and strategic reasoning to the encounter’s Eureka Rubric. You and/or your allies must implement this strategy by spending  $\Delta$ s, and the Eureka Rubric might specify criteria for what your strategic reasoning must include. If, at the end of a round, your GM determines that your strategy appropriately applies knowledge relevant to the Eureka Rubric, they announce that you have advanced to the next Eureka Threshold and explain how. When you reach a new Eureka Threshold, all players receive 1 Flow Point (described below). You and your allies all advance to the same Eureka Threshold at the same time, regardless of who developed the strategy or who enacted it. The Eureka Rubric specifies how the encounter develops at each Eureka Threshold: You might gain a bonus, or gain access to a special action, or gain a special advantage over your enemies. But your enemies might also respond to this development: They might start using a new strategy, or gain an advantage of their own that intensifies the story.

**Field** Your hero’s field represents their primary body of knowledge. When building a hero, the field is one of the most impactful choices you’ll make, as it grants a set of benefits as you level up, and determines which field abilities you can choose at each level. Typically, you’ll refer to your hero as a member of that field: If their field is chemistry, you’ll refer to them as “a chemist.” Many fields include a choice of specialization, representing a specialized set of methods and topics often featured in their work. Our playtest offers six fields: biologist, chemist, computer technician, engineering, mathematician, and physicist.

**Flow Point** Some actions that you gain require a build-up of focused concentration after connecting observations with your STEM knowledge. This preparation is tracked through Flow Points. Some actions cost a Flow Point, meaning you must have at least as many Flow Points as the ability’s cost, and you reduce your number of Flow Points by that amount when you use the action. Other actions require you to simply have a certain number of Flow Points, or grant additional benefits if you have that many Flow Points, but you don’t need to spend them. If an ability requires you to both expend Flow Points and requires a certain number of Flow Points for an effect, expend the required Flow Points before you check the number for the latter. You primarily gain Flow Points in three possible ways: Whenever you and your allies reach a new Eureka Threshold in an encounter, everyone gains 1 Flow Point. Your field specifies conditions under which you individually gain a Flow Point. Finally, the Investigate action allows you to gain up to 1 Flow Point at the start of a combat. You can have a maximum of 3 Flow Points at any one time, and your Flow Points reduce to 0 at the end of an encounter.

**Game Master (GM)** A GM is a player who plans the adventure, describes the world to the players, and controls non-player characters.

**Grids and Maps** In this book and subsequent *Adventures with Emmy* materials, encounter maps are assumed to be drawn on a square grid, with each square representing a 1 meter x 1 meter space in the game world. Many rules elements refer to general distances in meters, but a few refer more specifically to the **four grid directions** that result when you draw a line connecting one square to one of its 8 neighbors. Two of these directions are **orthogonal** (connecting two squares along an edge) and two of these directions are **diagonal** (connecting two squares along a corner).

**Hero** A hero is a player-controlled character. Heroes are created using the rules in [Creating a Hero](#). Your hero is represented on a **hero sheet** that you complete during the creation process.

**Hints** Science is all about turning observations into generalizable knowledge, and engineering is all about turning that knowledge into advantage. As a scientist or engineer develops these practices within their field, they start to more

readily develop hunches or intuitions for which observations might lead to useful knowledge and advantage. In Adventures with Emmy, a hero sees more than the GM can describe, and they might observe something worth investigating that the player doesn't immediately notice as significant. A GM can bridge this gap by giving hints. A hint is an observation that a hero might make about a creature, an item, or a situation that they have a hunch is related to the Eureka Rubric. GMs have access to suggested hints printed in creature stat blocks and adventure materials. A GM can also construct a hint based on a hero's method of inquiry. A hint should give less information than a Recall Knowledge action (something the hero knows) but should be specific enough to alert the player that something is important. A hint is usually an indisputable observation ("You felt colder when you walk past this corner of the room."), but, if your hero is asking around town for information, a GM might also provide a hint in the form of a rumor (although GMs should be careful when embellishing or twisting information in rumors). In general, a GM can provide a hint whenever they think appropriate and helpful. Some game mechanics specify when the GM should give a hint, such as on a successful Search action or when a physicist uses Conduct Experiment. If the players are investigating a topic for which the GM has no hints and seems irrelevant to the broader adventure, the GM can also use hints to encourage them to conduct another line of inquiry, or simply communicate that the heroes find this line of inquiry unproductive.

**Hit Points (HP) and Damage** Hit Points represent a creature's level of health. When a creature takes an amount of damage, they lose that many HP. When a creature is healed by an amount, they regain that many HP. When a creature is reduced to zero HP, they fall unconscious. An unconscious creature wakes up if they regain any number of HP. Damage comes in different types, which might be more or less effective against some creatures.

#### DAMAGE TYPES

Each damaging effect in Adventures with Emmy specifies how that damage is delivered: bludgeoning, piercing, and slashing damage are the standard types of damage delivered by, for example, hammers, arrows, and swords (respectively). Acid damage refers to chemical corrosion, cold and fire damage refer to a sudden onslaught of extreme temperature, electricity damage refers to an application of high electric current, and sonic damage refers to intense vibrations. Force damage refers to a direct application of a fundamental force of the universe. Lastly, mental damage refers to an attack on the target's mind, like from an overload of information, and poison damage refers to debilitating the target's physiology. Most of the time, these damage types are merely descriptive, but some abilities work only with specific damage types. For example, a creature who has **resistance 1 to bludgeoning damage** reduces any bludgeoning damage they take by 1. On the other hand, a creature who has **weakness 1 to electricity damage** increases any electricity damage they take by 1. In the rare event that a creature has both a resistance and a weakness to a damage type, apply the resistance first and then the weakness. A creature that has **immunity** to a damage type does not take any damage of that type.

Resolving resistances and weaknesses is usually straightforward, but sometimes multiple damage types and multiple resistances and weaknesses can complicate the matter. See the second paragraph onwards in the GM Advice section below to resolve any confusion on this matter.

#### GM ADVICE

Learning a creature's immunities, resistances, and weaknesses is an important part of many encounters. Players might definitively learn this information using Recall Knowledge, or they might become aware of the possibility through trial and error. When a creature's immunity, resistance, or weakness is applied, the GM should describe the process narratively, such as, "It looks like that fire is partially melting the ice creature," or, "The robot seems to barely notice the poison."

Resistances and weaknesses can only apply once per instance of damage: combine all damage of the same type that happened as a consequence of the most recently taken action before subtracting damage for resistances or adding it for

weaknesses. For example, let's say a creature has weakness 5 to slashing damage and fire damage, and resistance 5 to cold damage. You hit it with an action that deals 9 slashing damage, 4 cold damage, and 1 fire damage, and then the same attack forcibly moves it through an area of hazardous terrain that deals it 3 cold damage and 2 fire damage. All of this happened as a result of the same action, so we combine this into 9 slashing, 7 cold, and 3 fire damage before applying resistances and weaknesses, making it 14 slashing, 2 cold, and 8 fire damage. If an ally then had a reaction to the action you took (e.g. if they had a reaction triggered by the forced movement), you resolve it as a separate instance of damage, since this is a different action than the one that triggered it.

Sometimes resistances and weaknesses may reference a trait that does not correspond to a damage type involved in the action. For example, a creature of pure order and determinism might have a weakness to damage from abilities with the probability trait, rather than any specific type of damage. When this happens, follow all the rules above for damage types first, and determine the total damage the creature would take. Once that is resolved, determine (individually for each type of damage the creature took) what traits involved in the instance of damage above might trigger a resistance or weakness that was not already accounted for in the calculation above (for example an ability with the fire trait that deals fire damage will have already accounted for any resistance or weakness, but an ability with the number trait dealing force damage will not have done so), then subtract damage for each resistance to a relevant trait, followed by adding for each weakness, from the total damage the creature would take.

Sometimes an instance of damage can occur without being the consequence of the most recently taken action (e.g. persistent damage, or damage that you take from starting your turn in a hazardous area or an aura, or perhaps something specific to an encounter's Eureka Rubric). When this happens, it is considered its own separate instance of damage, and you calculate resistances and weaknesses for it as above.

**Hypothesis** Some actions require you to state a hypothesis about something you have observed or collected information about. For example, any hero can use their Investigate action to collect information between encounters and record a hypothesis to test later. You can gain additional hypothesis actions from your field. When you state a hypothesis, you express to your GM an explanation or prediction about your current situation, an observation, or a set of information you have received. You might attempt to predict what a creature will do under a certain stimulus, or why a machine is behaving a certain way, or what sort of creature left a set of footprints. This process is open-ended and, when you use a hypothesis action during an encounter, you learn something about the encounter's Eureka Rubric. Hypotheses are made to be tested in some way. When you test a hypothesis, your GM responds with one of the following outcomes: **Correct** (your hypothesis accurately states something about a relevant Eureka Rubric), **Partially Correct** (your hypothesis gets at an idea in a relevant Eureka Rubric but is missing something important), or **Incorrect** (your hypothesis is not representative of a relevant Eureka Rubric). Hypothesis actions offer benefits based on these outcomes, so it's always worthwhile to use these actions. Even an incorrect outcome produces a benefit! If your hypothesis is particularly relevant to an element of the Eureka Rubric, your GM might give you relevant information that your hero learns, or they might even advance your group to the next Eureka Threshold. Some actions specify how you test your hypothesis, while others leave it up to you and your GM to determine. Your GM might determine that you need to spend additional  $\Delta$ s to test your hypothesis. You usually only test each hypothesis once, but you can refine a hypothesis you previously recorded or tested.

#### GM ADVICE

Sometimes players might be immersed in tabletalk and express an idea that would make a good hypothesis, especially if you know it's relevant to something in the Eureka Rubric! Listen for statements like, "I wonder if..." or "I think it might..." and then encourage them with prompts like, "Would you like to turn that idea into a hypothesis?" These suggestions can help them transition from free-form tabletalk to utilizing this important game mechanic.

**Initiative** At the beginning of an encounter, you make an initiative roll to determine the order in which everyone acts. Your initiative roll is always a d20 plus your highest attribute modifier. After making initiative rolls, the GM sorts all creatures participating in the encounter into initiative **slots** in descending order. Some abilities or rules might modify your initiative slot, moving you to an earlier or later slot in the round.

**Inventory** An inventory refers to the collection of specific items that a hero carries, such as a key they found or a special artifact. An inventory is separate from a kit (see below).

**Kit** Each hero gets a kit of general equipment appropriate for their field. The equipment in a kit isn't specifically tracked like items in an inventory. An ability that has the kit trait requires the use of your kit.

**Penalty** See check.

**Repertoire** Each hero has a Repertoire of abilities, which represents the collection of knowledge and skills they have developed over the course of their adventure. An ability could be an action you can take on your turn using your Δs, a reaction you carry out in response to a specified trigger, or a passive benefit that modifies the outcomes of your actions. All heroes' Repertoires start with the [basic actions](#), and when you create a hero at 1st level, you start to add more abilities to your Repertoire from your background and your field.

**Size and Reach** Creature stat blocks (see below) include a description of how much space a creature takes up on a map: tiny (0.25 meter square), small (0.5 meter square), medium (1 meter square), large (2 meter square), huge (3 meter square), and gargantuan (4 meter square). Unless specified otherwise, heroes are of medium size. A creature's size also determines how far they can reach using their appendages. Tiny creatures have a reach of 0 meters; they can only interact with creatures or object within the square they occupy. Small and medium creatures have a reach of 1 meter; they can interact with any adjacent square. Large creatures have a reach of 2 meters, huge creatures have a reach of 3 meters, and gargantuan creatures have a reach of 4 meters. An individual creature's stat block might specify different reach values.

**Stat Block** A stat block is a condensed collection of information. It might represent a creature, an item, or a Eureka Rubric.

## Encounters

*Adventures with Emmy* is all about collectively telling a story through discovery, creativity, and the thrill of the dice roll. Intensive events during this story are called **encounters**, which require the players and GM to take turns to resolve their actions.

### *At the Start of an Encounter...*

**Roll for Initiative.** Everyone rolls a d20 (20-sided die) and adds their Initiative modifier. A creature's Initiative modifier is the highest of their 4 attribute modifiers, plus any special modifiers they might gain to Initiative from an ability or item. This is called "making an Initiative roll" or "rolling for Initiative." The GM (or a helpful player) notes the Initiative roll for each participant and sorts them into initiative slots in descending order. If two or more creatures tie on their Initiative roll, the players get to choose who goes first. Finally, if any player has a hypothesis recorded from using their Investigate action, they can choose up to one creature or hazard and ask whether one of their recorded hypotheses is related to this creature or hazard. If the GM's answer is yes, the player starts the encounter with 1 Flow Point.

**Draw a map.** During this time, the GM also draws or reveals a map to represent the physical layout of the encounter's location. This map might be highly detailed or a rough outline, depending on how much time the GM has had to prepare this encounter. (Sometimes GMs find themselves running an unexpected encounter, so go easy on their art!) These drawings should never be taken as complete, and players and GM should always take time to discuss reasonable questions about the surroundings. For example, during an encounter in a barn, "Where can I find a rake?" is a reasonable question, while, "Where is the secret treasure?" is not. In this book and subsequent *Adventures with Emmy* materials, encounter maps are assumed to be drawn on a square grid, with each square representing a 1 meter x 1 meter space in the game world. If your group doesn't have such a grid, you can usually draw one quickly, or you can agree upon a conversion scale between your map and distances in the game world.

**Populate the map.** Positions of encounter participants can be represented by dots or figurines on the map. Cardboard pawns work well, as do meeples or pawns from board games. Just make sure everyone can tell which item represents each creature!

#### *When It's Your Turn...*

**You get one turn each round, based on your slot in initiative.** Play during an encounter proceeds in **rounds**, with each round representing a fixed amount of time in the game world (6 seconds in a typical combat encounter). In principle, everyone's turns are happening *at the same time*, but it would obviously be impossible for everyone at the table to act at once! So, turn order (determined by initiative as described above) serves as a model of how the encounter resolves. Think of initiative order as representing who is reacting to whom as events unfold, or whom the camera is focused on for right now.

**Gain your Δs and ↺.** When your turn comes up in an encounter, it's an exciting time. The game's narrative focuses on you, and you'll likely interact directly with your GM while your fellow players listen in, plan their turns, or take a bio-break. To represent the amount of time you have to act in the game world, you gain 3 Δs ("Deltas"). A single Δ represents a brief step forward in time. In a typical combat encounter, a Δ represents **2 seconds**. You also gain 1 ↺ (a reaction), which you can use on special abilities called reactions.

**Use your Δs to perform actions.** Everything you might want your hero to do during an encounter costs some number of Δs. For example, the Stride action (in which you move a certain number of squares) costs a single Δ, while Administer First Aid (in which you tend to a creature's wounds) costs ΔΔ (2 Δs). When you perform an action, you reduce your number of Δs by the appropriate amount. When you run out of Δs your turn *usually* ends (although you might have an action or ability that says otherwise) and play passes to the next character in initiative order. The list of "Basic actions Anyone Can Perform" covers almost every basic action you might try to perform, but if you ever want to do something that's not described there, just discuss with your GM how much time the action would take, and translate that into a number of Δs.

**Make checks when necessary.** Many actions you take will require you to make some sort of **check**. To make a check, you roll a d20 and add the relevant attribute modifier. For example, Climbing requires a Fitness check, in which you roll a d20 and add your Fitness modifier. Your GM will compare your check against a difficulty class (DC) from their notes. If your check equals or exceeds the DC, you succeed! If your check exceeds the DC by 10 or more, you critically succeed, which can sometimes produce additional benefits. If your check is lower than the DC, you fail, and if your check is lower than the DC by 10 or more, you critically fail. Some actions have specific outcomes for failures, but if a failure isn't specified, nothing happens. Rolling a 20 on the d20 upgrades the degree of success by one step, and rolling a 1 on the d20 downgrades the degree of success by one step.

**Try to resolve the encounter.** Every encounter in *Adventures with Emmy* is governed by a Eureka Rubric, which only your GM sees. The Eureka Rubric describes a breadth of general strategies that you and your allies can apply to turn the encounter in your favor. You are encouraged to ask your GM questions about your surroundings, other creatures in the encounter, or scientific principles that might be at work. Your goal in this process is to make an **argument** for how your hero and their allies can resolve the encounter by stating evidence that you observe, a claim of how the encounter can be resolved, and reasoning to support your claim with the evidence. The more complete your argument, the greater an advantage you set up for yourself!

#### *When It's Not Your Turn...*

**Take a bio-break if needed.** *Adventures with Emmy* is fun but take care of yourself!

**Watch and plan.** When another player or your GM is taking a turn, you're encouraged to watch the story unfold and plan out your next actions. If you have a reaction in your Repertoire, look out for its trigger.

**Take notes and check references.** You never know what useful information you might find that's helpful!

**Refer to your DCs.** Sometimes, another creature needs to make a check against you, in which case the creature's check is compared to your relevant DC. Your DC for any attribute is equal to 10 + your attribute modifier, so your Fitness DC is equal to 10 + your Fitness modifier. It's like replacing a d20 roll with an "average" value of 10.



**Help your allies.** You and your fellow players are working together to craft an argument for how you can resolve the encounter. “Table talk” about what you’re observing and thinking is encouraged so you can learn and have fun together!

### *Review at the End of Each Round.*

When everyone has taken their turn, the group reaches the end of a round and enters the **Review phase**. At the start of Review, the GM announces whether the heroes have reached a new Eureka Threshold. The GM should explain what actions or ideas brought the heroes across the Eureka Threshold, and announce whether this is the last Eureka Threshold for the encounter. Players typically reach no more than 1 Eureka Threshold per round, but the GM might determine otherwise. Then, each hero can take up to 1 action that has the review trait. The group can decide what order to take these review actions in; if you are unsure how to decide, use Initiative order. Finally, after resolving all review actions, the players can choose to swap two heroes’ Initiative slots. The players should come to a consensus on one swap per round (or agree to make no swap and maintain the current order). This swapping might extend or shorten the duration of an effect that ends on a player’s turn, so plan carefully.

### **Between Encounters**

Not every moment in *Adventures with Emmy* has to take place in initiative order or play out moment-by-moment. A GM running a published adventure has an idea of what upcoming encounters the heroes might face next, and should ask players to describe what their heroes are doing generally and make sure each player gets a chance to contribute to advancing the story. As heroes move between encounters, the players will likely want to use their Investigate action to gain clues and form hypotheses about their surroundings and potential dangers.

Some transitions can be described even more broadly. For example, when the heroes travel for a hundred miles from one city to another, the GM and players don’t need to describe every mile or play out every day they’re on the road. Unless the GM has a dramatic moment in mind along the way, it’s appropriate to describe the journey in a few sentences and transition to the destination. Or if the heroes are taking a day to purchase new equipment and gather information, the players don’t need to play out every interaction. Think of these events between encounters as taking place in a movie montage: You get an idea of the main events and can play out critical moments, but you generally keep the story moving along.

#### **EXAMPLE OF INVESTIGATE**

Let’s suppose Marie is playing her hero Xavian, a 2nd-level biologist whose party is currently investigating some ancient ruins. Marie’s GM has just described how a set of vines along a wall appears to have been cut. Marie announces that Xavian will Investigate the vines. Her GM says that Xavian notices that only the vines that are sprouting blue flowers have been cut; all others have been left alone. Marie knows that blue is a rare color for flowers, so she records the following hypothesis in her notes: “Someone cut the vines because they wanted the rare pigment combination.”

Later in the session, Xavian and their allies come upon a band of gremlins, each armed with a set of shears. Upon rolling initiative, Xavian asks, “Are the gremlins’ shears related to my hypothesis about the vine pigment?” Her GM consults her adventure notes and confirms that they are related. Marie doesn’t know whether the gremlins still have the vines or whether they were motivated by the blue pigment as she hypothesized, but she starts the encounter with 1 Flow Point and is positioned to find out more on her turn.

#### **USING INVESTIGATE AS A PLAYER**

While outside of combat or other immediate danger, there’s no wrong time to Investigate, and no bad ideas for what or how to Investigate. You might decide to Investigate based on something your GM describes, or you might first ask them about something in the environment and then decide whether to Investigate it. You can even ask your GM for suggestions of what to Investigate; if your GM is running a published adventure, they have access to suggested lines of investigation. In this playtest, some fields have additional benefits they can set up by using Investigate, which can help guide your choice of what to Investigate.

You may always modify a recorded hypothesis in response to gaining additional information, even in the middle of combat. You can Investigate the same subject multiple times if you want to record additional hypotheses related to it. You and an ally can also Investigate the same subject concurrently and each develop your own hypothesis.



### GM ADVICE

The Investigate action is one of the few ways players can start a combat encounter with a Flow Point, so it's important to support your players in this process with time and advice. If you run a published adventure, consult the suggested lines of investigation for what you can encourage your players to Investigate. If they're new to the game or struggling with what to Investigate, you can even use these suggested lines in a multiple choice format: "Who wants to Investigate the slime on the wall? Who wants to interview the witness?" The players still have to determine their own hypotheses, which is the most important aspect of player agency in the Investigate process.

Also keep in mind that players might identify something helpful to Investigate or might start forming a hypothesis without invoking the Investigate action. Listen for statements like, "I wonder if..." or "I think it might..." and then encourage them with prompts like, "Would you like to Investigate that?" or "Are you stating a hypothesis?" These suggestions can help them transition from free-form tabletalk to utilizing this important game mechanic.

Take a minute to ask players to elaborate how their hero is Investigating, and negotiate what equipment they're using. For example, if a biologist wants to Investigate the cellular structure of a drop of blood, they would use the microscope and slides in their kit. However, if they want to identify any unusual chemicals in that same drop of blood, they might need to wait to Investigate in a lab that has a mass spectrometer.

When a player makes a hypothesis, compare it to a relevant Eureka Rubric or creature stat block. If the hypothesis is relevant, make a note for yourself about this player's hypothesis so you can quickly answer their question upon rolling initiative. If you think the hypothesis is insightful but not directly represented in a Eureka Rubric, feel free to add an item to the Eureka Rubric so you can remember to reward the player appropriately.

Generally, you should avoid requiring checks for a hero to Investigate, since it represents a methodical process that the player describes, rather than a test of the hero's performance in the moment.

### Rest and Daily Preparations

All heroes need to rest for 8 hours a day to perform their best. Going for longer than 16 hours without resting leaves your hero inhibited 1 until they rest for 8 hours. This inhibited value cannot be reduced otherwise. When heroes finish resting, they recover all missing Hit Points and typically carry out their **daily preparations**.

"Daily preparations" refers to a 30-minute period of getting ready for the next phase of the adventure: Any abilities with a daily frequency reset and kits are replenished with equipment. Some abilities (such as a computer technician's daily research topic) refer to decisions the player makes as part of their daily preparations that affect the scope or outcomes of those abilities throughout the day. Abilities that require a hero to do something during daily preparations do not extend the amount of time required for their preparations. Each hero makes their daily preparations only once per day.

While it's generally assumed that your hero performs their daily preparations upon waking, you can delay this activity if it would be helpful to you. For example, if the heroes are meeting with Emmy Noether before starting out on a new mission, they might choose to make their daily preparations after this meeting so they can specifically prepare for this mission.

Daily preparations are often a good opportunity for the GM to set the stage for the day and check in with players about their heroes: What is the setting and mood like? What NPCs are around, and what are they doing and talking about? Are there any time-sensitive needs the heroes are aware of? What are the heroes preoccupied with as they prepare? What are their priorities as they embark on the next segment of their adventure?

### Basic Actions Anyone Can Perform

This section outlines basic actions that any creature (whether controlled by a player or GM) can perform during an encounter. When you create a hero, your Repertoire starts out with all these basic actions.

Some actions take place between encounters. These actions list the amount of time required instead of a number of  $\Delta$ s.

The stat block for actions follow this format:

ACTION NAME  $\Delta$ S OR ↺

TYPE OF ACTION

**TRAIT | ANOTHER TRAIT** These traits give a quick description of what this action involves or requires. They'll be referred to throughout this rulebook.

**Frequency** This entry lists any limitation on how often you can use this action.

**Trigger** If the stat block describes a reaction  $\leftrightarrow$ , the trigger specifies the conditions under which you can use the reaction.

**Requirements** This entry lists any requirements you need to meet to use this action. If this entry is omitted, then you can use the action any time on your turn.

**Range; Area; Targets** This entry specifies how far away this action can be used, what area it applies to, and what creatures or objects it affects.

**Offense or Defense; Duration** If the action requires a check, this entry shows a brief summary of who makes the check, what type of check is required, and what DC is used to determine the result. If you make the check, this entry is labeled Offense; if the target makes the check, this entry is labeled Defense. A Duration specifies how long the action's effects last. If a Duration is sustained, it lasts 1 round, but you can spend 1  $\Delta$  each round to extend the effect to the end of your next turn.

**Cost** If the action requires you to spend a resource, such as a Flow Point, the cost is specified here.

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This section describes the action and its effects. The first sentence describes the action from the creature's perspective, and the rest lists, in order, what you do while using this action. You might be required to attempt a check, with a listed DC, to determine the outcome of the action. If so, there will be descriptions of what happens on a success. There might be a failure outcome, but if this is omitted, then nothing happens. Some actions also list a critical success outcome, but if this is omitted, you get the outcome for a success.

**Flow** Some actions' effects are modified if you have a certain number of Flow Points, or if you choose to spend a certain number of Flow Points. Those modifications appear here.

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Below are definitions of some **traits** that appear in actions:

- **Attack** This action requires a check (usually Fitness or Agility) in an attempt to harm or restrain another creature. If you attempt a second attack action on your turn, the required check takes a -5 penalty. If you attempt a third attack action, the check takes a -10 penalty, as do any further attacks. This **multiple attack penalty** resets to zero at the end of your turn, and does not apply when it is not your turn. Think of multiple attack penalty as the game's encouragement for you to work creatively in addition to attacking.
- **Discovered** This trait indicates that you can only add this action to your Repertoire by making an appropriate discovery in an adventure. While this trait does not appear in this book, it will be used in future materials to grant rewards to players.
- **Flow** This action requires you to have, and possibly to spend, at least 1 Flow Point. If an action allows you to alter its effects if you have or spend Flow Points, the action gains the flow trait when you make this alteration.
- **Hypothesis** This action requires you to state a hypothesis [as described above](#).
- **Intensive** This trait indicates that the action requires significant concentration and effort from your hero, with the benefit of allowing you to carry out multiple actions for a reduced number of  $\Delta$ s. You can use a maximum of 1 intensive action per round.
- **Kit** This action requires the use of your kit. You draw and stow any equipment from your kit as part of this action.
- **Linguistic** This type of action requires another creature to be able to understand your language (whether spoken or through sign) to be effective.
- **Manipulate** This action requires the use of at least one of your hands, so you can't use this action if all your hands are occupied.
- **Review** An action that has this trait can be used during the [Review phase](#) without spending  $\Delta$ s. You can usually only take 1 review action during Review.
- **Traversal** An ability with the traversal trait includes one or more Stride actions and allows you to adapt them for other forms of movement. You can substitute a Climb or Swim action in place of any Stride actions. Any

adjustments to the Stride, such as gaining a bonus or penalty to the distance moved, still apply to the substituted action.

- **Velocity** This action causes you to move relative to your surroundings.

Below are the actions that any creature (heroes or non-player characters) can perform.

## ADMINISTER FIRST AID ΔΔ

BASIC ACTION

### MANIPULATE

**Requirements** You have a hand free.

**Targets** 1 creature within your reach

You patch up the target's wounds. If you're in a combat encounter, roll 1d6 for each of your levels and add your Awareness modifier. The target recovers that many HP. If you're between encounters, the target recovers all their HP.

## AID A PEER Δ

BASIC ACTION

### EDGE | REVIEW

**Frequency** once per round

Choose an ally and describe how you help them set up a task for their next turn that requires an attribute check. On their next turn, when they attempt this check, they can describe how they accept your help and work with you. If they do, you both roll the check. Your ally uses the better of the two results to determine the outcome.

### AIDING A PEER

To Aid a Peer, you have to be able to reasonably assist or attempt the same check alongside them at the time that they use the action you're aiding. For example, if they're attempting to blast a creature, they need to be within range of your blast, as well.

If your check is the higher of the two, your ally uses the result and gains any benefits they usually would if they had received this outcome on their own. You don't receive any benefits that would normally apply to such an outcome for you, unless the benefits specifically refer to the Aid a Peer action. For example, if you Aid a Peer on a blast, and you would normally apply an additional effect on a critical hit, the additional effect doesn't apply, even if your check was a critical success.

## CLIMB Δ

BASIC ACTION

### VELOCITY

**Requirements** You have a free hand.

You scale a vertical surface. Your GM sets a DC based on the difficulty of the climb (10 for a surface with clear handholds, 13 for a rope, 16 for a craggy rock wall, 20 for a smooth rock wall). Then, attempt a Fitness check against this DC.

**Critical Success** You climb a number of meters equal to your Fitness modifier.

**Success** You climb a number of meters equal to half your your Fitness modifier.

**Failure** You make no progress but can try again.

## CRAWL Δ

BASIC ACTION

### VELOCITY

**Requirements** You are prone.

While remaining prone, you move 1 meter.

## CONVEY Δ

BASIC ACTION

### LINGUISTIC

You make a verbal, visual, or written communication to an NPC. Communicating with your allies does not require using a Δ and you can do so any time, even when it’s not your turn. If you’re in a combat encounter, your message can usually be one to two sentences. Otherwise, your message length is subject to GM discretion.

During your communication, you might try to calm, deceive, impress, or intimidate a creature to influence their behavior toward you. Your GM might require you to attempt an Influence check against the target’s Influence DC, possibly based on a relevant Eureka Rubric. Some actions use the Convey action to achieve specific results.

DISMISS Δ

BASIC ACTION

LINGUISTIC | REVIEW

**Requirements** An effect that you created with a duration is active.

You end any number of active effects that you created. If any of those effects was created by an ability with the kit trait, this action also gains the kit trait.

INTERFERE Δ

BASIC ACTION

**Targets** 1 creature you can see

**Offense** Influence check vs. the target’s Awareness DC; **Duration** 1 round

You distract or obstruct a creature you can see. Make an Influence check against their Awareness DC.

**Critical Success** Choose two attributes. The target takes a -1 penalty to checks with these attributes for 1 round. The effect ends if you use Interfere again before then.

**Success** As critical success, but you choose only one attribute.

**Failure** No effect.

JUMP Δ

BASIC ACTION

VELOCITY

You jump, ending your movement a certain number of meters either horizontally or vertically from your starting location. If you jump horizontally, you jump only a few centimetres off the ground as you do it, letting you clear only small obstacles (at the GM’s discretion). If you jump vertically, you can additionally move a number of meters horizontally up to the vertical distance you cleared.

Your jump distance depends on your Fitness modifier, as shown in the table below. If you Stride directly before you Jump and move at least 2 meters, you jump the distances equal to the running long jump or running high jump sections of the table below. Whenever needed, round the value down to the nearest meter increment whenever you are measuring movement on the grid (this typically means the extra half meter is only relevant outside of encounters). You cannot jump further than the distance you could Stride.

| FITNESS MODIFIER | LONG JUMP | HIGH JUMP  | RUNNING LONG JUMP | RUNNING HIGH JUMP |
|------------------|-----------|------------|-------------------|-------------------|
| +4 or less       | 1 meter   | 0.5 meters | 2 meters          | 1 meters          |
| +5 to +9         | 2 meters  | 1 meters   | 4 meters          | 2 meters          |
| +10 to +14       | 4 meters  | 2 meters   | 8 meters          | 4 meters          |
| +15 or more      | 6 meters  | 3 meters   | 12 meters         | 6 meters          |

## MANIPULATE AN ITEM Δ

## BASIC ACTION

### MANIPULATE

**Requirements** You have a hand free, or are holding the item you want to manipulate.

You draw an item, stow an item you're holding, swap one item for another item by stowing the first and drawing the second, pick up an item from your square or an adjacent square, or otherwise interact with an item. Some items require more than one Δ to activate, as specified in their stat blocks, but if they don't specify an activation, then you perform this action to activate them.

You can use this action to attempt to take an item from another creature. If you do, you can attempt a Fitness check against their Fitness DC to force the item out of their hands, or you can attempt an Agility check against their Awareness DC to steal the item without notice.

**Success** You obtain the item. If you made an Agility check, they didn't notice.

**Failure** They retain the item.

You can use this action to move a larger object. This action is usually successful if the object isn't too large, but your GM might have you attempt a Fitness check if it poses a challenge. If you use this action to move a creature, attempt a Fitness check against their Fitness DC.

**Critical Success** You move the creature 2 meters.

**Success** You move the creature 1 meter.

**Failure** The creature remains where they are.

## PINPOINT Δ

## BASIC ACTION

**Targets** 1 creature you can see

**Offense** Awareness check vs. the target's Awareness DC; **Duration** until the end of your turn

You focus your attention on a creature you can see, attempting to identify a weak point in their positioning. Make an Awareness check against their Awareness DC.

**Critical Success** If your next action this turn is to attack the target, you gain a +1 bonus on the attack roll. If your attack hits, you gain a bonus to damage equal to half your level rounded up.

**Success** If your next action this turn is to attack the target, you gain a +1 bonus on the attack roll.

**Failure** No effect.

## RECALL KNOWLEDGE Δ

## BASIC ACTION

### REVIEW

You search your memory for useful information. Tell your GM a question you'd like to recall information about, or a creature, hazard, or object you can see that you'd like to identify. Your GM sets the DC for an Awareness check, and determines whether you attempt the check, or whether they attempt it for you in secret. If your GM attempts the check for you, they don't tell you the value of the check. Your GM can also award you an automatic success for a topic your hero would likely know. After resolving the check, unless you say otherwise, you communicate any information you learn to your allies.

**Critical Success** You receive a true answer and additional information about the subject.

**Success** You receive a true answer.

**Failure** You receive no answers.

## RECALLING KNOWLEDGE MULTIPLE TIMES

A player might choose to use the Recall Knowledge action multiple times about the same subject. This is like wracking one's brain to recall something buried deep in memory. If a GM thinks the information that could be gained is important, they can encourage the player to use the action again, especially if their previous check was very low. However, Recalling Knowledge multiple times can quickly consume a player's entire turn, possibly making them feel left out of the story. A GM can encourage a player to try something else for now and return to the subject later, or another player can attempt to Recall Knowledge about the same subject on their turn. A GM might also share that a particular subject is not immediately relevant to the situation, or that the heroes could look up the information after the current encounter.

## SEARCH $\Delta$

## BASIC ACTION

### REVIEW

You examine your surroundings. Choose an area you want to examine or a creature or object you want to search for. These should be things beyond what would be included in a GM's description of the room or the creature, basic structure (how tall is the ceiling) and appearance (how many appendages do they have). If you feel the GM has missed something in the description you may ask for a clarification outside of formal actions, and they can tell you if that is too specific and would require a search action.

If you're in a combat encounter, you usually Search in a 3 meter x 3 meter square you can see; outside of combat, you can usually Search anywhere you can see. You can also Search for a particular object. If you do, you can identify them anywhere that you can see, and if the object is particularly obvious, your GM might give you this information without requiring you to use a  $\Delta$  or make a check.

Sometimes, your GM will require an Awareness check, using a DC based on what you might find. They determine whether you attempt the check, or whether they attempt it for you in secret. If your GM attempts the check for you, they don't tell you the value of the check. Your GM can also award you an automatic success for searching for something obvious, or if you choose to take several minutes to Search.

**Critical Success** If what you were looking for was in the area, you find it, or you find something of interest in the area. If your GM thinks there is another area you might benefit from Searching, you identify this area, as well.

**Success** If what you were looking for was in the area, you find it, or you find something of interest in the area.

**Failure** You don't find anything.

## STRIDE $\Delta$

## BASIC ACTION

### VELOCITY

You move up to a number of meters equal to your Agility modifier or 5, whichever is higher.

You might attempt to avoid notice while Striding, which requires you to have some obstruction to hide behind. If you do, you move half the distance you usually would and attempt an Agility check against the Awareness DC of each creature that's observing you or that might observe you.

**Success** The creature can't tell where you are and can't target you.

**Failure** The creature can target you as usual.

### DIAGONAL MOVEMENT

Distances in *Adventures with Emmy* are typically resolved along a grid of 1 meter x 1 meter squares, allowing anyone to determine how far apart two points are. When distances need to be measured diagonally across the grid, the most accurate way to determine the distance is to count the number of squares in each direction along the grid and use the Pythagorean theorem. However, this process can forestall an encounter's narrative development and might trigger disengagement from math-anxious players. Instead, you can use a common convention in TTRPGs to count the first square of diagonal movement as 1 meter, then count the second square of diagonal movement as 2 meters, and continue to alternate the two counts. This process is equivalent to approximating  $\sqrt{2}$  as 1.5, a 6% difference that is reasonable across nearly all grid-based encounters. When moving, apply this alternating process across all your total diagonal movement across your entire turn, and reset the count at the end of your turn.



If you play using a virtual tabletop, most include a distance measuring tool and allow you to use either the exact or approximate distances.

### DIFFICULT TERRAIN

The distance specified in the Climb, Stride, and Swim actions assume the moving creature encounters no obstructions in their path. This is not always the case. Some abilities or adventure text refer to an area as difficult terrain. Moving into a square of difficult terrain costs an extra 1 meter of movement. Moving into a square of greater difficult terrain costs an extra 2 meters of movement.

Some abilities allow a creature to ignore difficult terrain, either outright or under specific circumstances. In this case, the creature treats difficult terrain as ordinary terrain and greater difficult terrain as difficult terrain. The difficulty of an area's terrain cannot be reduced more than once.

### SWIM $\Delta$

### BASIC ACTION

#### VELOCITY

**Requirements** You have a free hand.

You swim through water or another (hopefully safe) liquid. Your GM sets a DC based on the turbulence (10 for calm, 15 for choppy, 20 for large waves, 30 for a tsunami). Then, attempt a Fitness check against this DC.

**Critical Success** You swim a number of meters equal to your Fitness modifier.

**Success** You swim a number of meters equal to half your Fitness modifier.

**Failure** You make no progress but can try again.

#### Customizing Actions

Sometimes a player wants to use an action in a creative way or attempt to achieve an outcome that's not exactly specified in the rules. A GM can always increase or decrease the number of  $\Delta$ s required for an action and require a check at an appropriate DC (see "Setting DCs"). GMs should use these adjustments to reward creative gameplay and insightful investigation, especially when the hero is using a design or hypothesis action!

#### Conditions that Affect your Hero

The basic danger that heroes face in *Adventures with Emmy* is a loss of HP, which represents the general damage they incur before they become unconscious. There are also **conditions** they can incur that impose penalties or make adventuring more challenging. But there are some conditions that provide benefits! The conditions defined below are referenced throughout this book and other game materials.

**Edge and Mishap** Some effects modify how you make a check, usually allowing you to make a roll twice and take the better result, or require you to roll twice and take the worse result. These are called edges and mishaps, respectively. An edge represents some keen insight you have, or a fortunate set of circumstances you find a way to make the most of. A mishap represents an unfortunate circumstance beyond your control that you try your best to overcome. Any one roll you make can benefit from up to one edge, and it can suffer up to one mishap. If your roll would be affected by multiple edges or multiple mishaps, your GM decides which effect applies. If any roll you make would be subject to an edge and a mishap at the same time, the two effects cancel and you roll normally. Effects that grant an edge or mishap typically only apply to a single check.

**Forced Movement** Some effects force you to move a specified distance. When you experience forced movement, you don't trigger reactions that would normally be triggered by moving, but otherwise count as moving through all of the spaces. Forced movement is stopped by obstructions like walls or barricades, but you can usually pass through other creatures' spaces unless your GM rules otherwise. Forced movement must be aligned with the four Directions of the Grid, and cannot be done in the vertical direction unless the ability has the vertical trait. If forced movement would cause

you to take damage (by moving through a damaging effect, for instance) you can only take that damage a maximum of once per round.

**Hampered** Through mental overload or an impeding force, your movements become sluggish. Hampered always includes a duration, like 1 round or 1 minute. While you are hampered, you gain 1 fewer  $\Delta$ s at the start of your turn. If you become hampered during your turn, the hampered condition takes effect at the start of your next turn. If you're quickened and hampered at the same time, the effects cancel. The effect that makes you hampered should describe how long you're hampered for; if this duration is ever omitted, you lost the condition after 1 minute.

**Inhibited** When you're inhibited, some external influence is preventing you from exercising your full potential. This might be a frightened state, an unexpected injury, or a distraction; the details are specified in the effect that made you inhibited. The inhibited condition includes a numerical value, usually 1 or 2. You take a penalty equal to this number on all checks. If you're inhibited from multiple sources, you only apply the highest penalty; you do not combine the penalties. The effect that makes you inhibited should describe how long you're inhibited for; if this duration is ever omitted, you lose the condition after 1 minute. Some effects might make you Inhibited against a specific creature; in this case, the penalty only applies to checks against their DCs.

**Jumbled** Your kit has become disorganized, and you can't reach as quickly for equipment you rely on. While your kit is jumbled, you cannot use actions that require your kit. You can remove the jumbled condition by Manipulating your kit. Game text might refer to you being jumbled or your kit being jumbled; these descriptions are equivalent.

**Prone** You have fallen on the ground. While prone, you take a -2 penalty to your Agility DC and you can't use any actions to move except Crawl. You can spend a  $\Delta$  to stand up, which removes the prone condition.

**Quickened** Through manipulation of time or your body, you act more quickly than usual. At the beginning of your next turn, you gain an additional  $\Delta$ . In combat, you still treat a  $\Delta$  as 2 seconds, but your  $\Delta$ s all overlap slightly so that your turn still lasts the usual 6 seconds. You can only receive one additional  $\Delta$  at a time. Quickened effects usually specify what actions you can use with the extra  $\Delta$ . If you become quickened from more than one effect at a time, you choose which one affects you, allowing you to choose from all the possible actions they present. The effect that makes you quickened should describe how long you're quickened for; if this duration is ever omitted, you lost the condition after 1 round.

**Slowed** Something has ensnared you and is hindering your movement. When you Climb, Stride, or Swim, reduce the maximum distance by half (rounded down to a minimum of 1 meter). The effect that makes you slowed should describe how long you're slowed for; if this duration is ever omitted, you lost the condition after 1 minute.

**Temporary Hit Points** Some effects grant temporary Hit Points. You record these separately from your Hit Points, and they aren't capped by your maximum Hit Points. When you take damage, reduce your temporary Hit Points first. Temporary Hit Points last a limited duration; if an effect doesn't specify a duration, they last 1 minute. You can have temporary Hit Points from only one source at a time; if you gain temporary Hit Points from more than one source, you choose which to apply.

**Vulnerable** When you're vulnerable, you're slower to react to the world around you. This might be something interfering with your senses, a physical restraint, or your need to concentrate on a very challenging task. The vulnerable condition includes a numerical value, usually 1 or 2. You take a penalty equal to this number on all DCs. If you're vulnerable from multiple sources, you only apply the highest penalty; you do not combine the penalties. The effect that makes you vulnerable should describe how long you're vulnerable for; if this duration is ever omitted, you lose the condition after 1 minute. Some effects might make you vulnerable against a specific creature; in this case, the penalty only applies to DCs against their checks.

## Rounding

Some effects tell you to reduce a number by half. For example, the slowed condition reduces the distance you can Stride by half, or some abilities refer to a target taking half the usual amount of damage. If the result of such a reduction is ever a fraction, always round down.

## Chapter I.3 Creating a Hero

When you start a new game of *Adventures with Emmy*, your first goal is to **create a hero**, a member of the game world you control. This section walks you through the process of hero creation in a step-by-step guide. Many of these steps instruct you to fill out fields on a **hero sheet**. During gameplay, you use your hero sheet to reference your hero's attribute modifiers and Repertoire to and track their HP and conditions. Blank hero sheets are available for free [in this Google Doc](#).

### Step 1: Create a Concept

What sort of hero do you want to play? Are they usually shy or sociable? Do they rush headlong into danger or sit back and carefully plan their next course of action? How do they respond to stressful situations? What are some actions they never take, and what are some ways they always respond to certain situations? General considerations like these help you to imagine a unique hero before you begin to assign them numerical values and actions.

Additionally, think about how your hero fits in with their allies, the other heroes represented at the table. How did they meet? How do they work together? What common goals do they have? How do they resolve differences?

**Should my hero be like me?** Some players like to build heroes who represent themselves. They might choose a field they're interested in, give their hero a backstory similar to their own, or roleplay them with similar personality traits. Others prefer to play heroes that offer a different perspective on life and learning, as doing so can help expand their worldview and explore underdeveloped aspects of their identity. Many play heroes that are a combination of the two. The degree of overlap between you and your hero is up to you. Just keep in mind that when your hero interacts with another player's hero, they're also a representation of that player. Approach those interactions with kindness.

### Step 2: Start Building Attribute Modifiers

As you create your hero, you'll need to track the value of their attribute modifiers. An attribute modifier is equal to your level plus the number of boosts you've applied to each attribute. On a spare sheet of paper, start a record of each attribute modifier (Agility, Awareness, Fitness, and Influence) with zero boosts. You'll add to these boosts as you build your hero.

### Step 3: Choose a Background

Choose your hero's **background**. A background represents what their life was like before they began adventuring and learning about the broader world. A background might specify their incoming knowledge, their attitude toward STEM or motivations for studying, or something special about their geographical or family origins. A background grants you boosts to two of your attribute modifiers and grants you an action. Record these boosts and add your action to your Repertoire. Backgrounds are found in [Chapter I.4](#).

### Step 4: Choose a Field

Choose your hero's **field**. This is perhaps the most significant long-term decision that you'll make for your hero. A field represents their primary area of study, and their unique contributions to their allies. Most groups will create heroes with different fields, but there is sufficient diversity within a field to carry a team with overlapping fields to victory.

Your field specifies a **key attribute**, which is important in a few ways:

- Your field grants you 2 boosts to your key attribute. Record these 2 boosts.
- Many actions from your field will require you to make checks using your key attribute.
- Some effects or items might refer to your **key attribute DC**, which is 10 + your key attribute's modifier.

When you select your field, you also gain the 1st-level benefits specified in your field's description. This usually includes one or more special actions unique to your field and bonuses when you take particular actions. Record these benefits on your hero sheet.

Finally, at 1st level, choose one ability from your field to add to your Repertoire. Abilities from your field will include the field name as a trait. So, for example, if you're a biologist, your field actions will include the biologist trait. Field abilities are presented in 3 tiers (beginner, advanced, and pinnacle), which you gain access to at different levels (1st, 4th, and 7th, respectively). These tiers represent your hero's advancement in knowledge and stature in their field, and create stronger effects during gameplay.

Fields and their abilities are found in [Chapter 1.6](#).

### Step 5: Finalize Attribute Modifiers

Finally, choose two different attribute modifiers and record one boost for each of them. Then, determine each of your attribute modifiers by adding your level to the number of boosts you applied to the attribute.

**attribute modifier = your level + the number of boosts applied to that attribute**

This means the highest attribute modifier you can have at 1st level is +5 (+1 for your level, +1 from a background boost, +2 from your field's boosts, and +1 from this final boost) and the lowest attribute modifier you can have at 1st level is +1 (+1 for your level and no boosts). At the end of this process, if you add all your attribute modifiers together, the total should be +10.

**Should I maximize my key attribute?** Many players will choose to make their key attribute as high as possible, and that is an acceptable way to build a hero. On the other hand, others will prefer to more evenly distribute their attribute boosts, setting up their hero to succeed at a greater diversity of tasks. The narrative focus of *Adventures with Emmy* means that either approach is acceptable. If your group consistently appeals to the game's Eureka Rubrics, you'll find that having a lower modifier is offset by the benefits you unlock at each Eureka Threshold.

### Step 6: Assign Hit Points

Your hero starts play with a number of HP equal to 10 plus their Fitness modifier.

#### HERO CREATION CHECKLIST

- Create a concept.
- Start with all attribute modifiers equal to +1.
- Choose a background.
- Add your background's action to your Repertoire.
- Add +1 to the two attributes for your background.
- Choose a field.
- Add +2 to your field's key attribute.
- Add your field's 1st-level benefits.
- Choose an action from your field to add to your Repertoire.
- Choose two different attribute modifiers to increase by +1. As a check, all your modifiers should now add to +10.
- Assign Hit Points.

### More Ways to Describe your Hero

The steps above represent the mechanical choices you make to create your hero for gameplay. These steps are designed to keep the process streamlined for newcomers to the TTRPG hobby, but could not possibly represent every dimension of your hero's identity. There are many other details about your hero you might consider, such as their family history, education, hometown, ancestry, and personal beliefs. These are all important facets of your hero, and can inform their decisions throughout your adventure. You can use *Adventures with Emmy* setting materials to help you make these decisions, or you can consult guidelines and examples from other TTRPGs that explore these facets.

### Levelling Up

When you and your fellow players reach important milestones in your adventure, your GM will announce that each hero increases their level by 1. This is called "levelling up," and is one of the most exciting aspects of playing *Adventures with Emmy*. When you level up a hero, increase all your attribute modifiers by 1, and increase your maximum number of Hit Points to a new value of (10 x your level) + your new Fitness modifier. Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level. You also gain all the new benefits listed in your field's progression table, which always includes a new field ability at each level, a new archetype ability at each even level, a new general ability at every odd level starting at 3rd, and two additional attribute boosts at 3rd, 6th, and 9th levels. Your field might grant additional benefits at specified levels, so always check when you level up.

Your additional attribute boosts at 1st, 3rd, 6th, and 9th levels cannot be applied to the same attribute. The Attribute Modifier Progression Table below shows the highest possible value any of your attribute modifiers can be at each level, and the total number that all your attributes should add to each level. Each time you level up, use this table to check your attribute modifiers.

| HERO LEVEL  | HIGHEST POSSIBLE* ATTRIBUTE MODIFIER | TOTAL OF ATTRIBUTE MODIFIERS |
|---|--------------------------------------|------------------------------|
| 1   | 5                                    | 10                           |
| 2   | 6                                    | 14                           |
| 3   | 8                                    | 20                           |
| 4   | 9                                    | 24                           |
| 5   | 10                                   | 28                           |
| 6   | 12                                   | 34                           |
| 7   | 13                                   | 38                           |
| 8   | 14                                   | 42                           |
| 9   | 16                                   | 48                           |
| 10  | 17                                   | 52                           |
| * Your highest modifier might be lower depending on how you assigned your attribute boosts. |                                      |                              |

Attribute Modifier Progression Table

You never level down a hero. You can start and end an adventure at any level that your group agrees to. The rules for Adventures with Emmy presented here cover gameplay from 1st level through 10th.

## Chapter I.4 Backgrounds

A hero's background represents what their life was like before they started the adventure of learning science. A background might specify their incoming knowledge, their attitude toward science or motivations for studying, or something special about their geographical origins. Choose a background for your hero at 1st level.

A background is formatted as follows:

### BACKGROUND NAME

### BACKGROUND

**Attribute Modifier Increases** Increase each of these modifiers by +1.

This text begins by describing the type of story this background represents. It offers advice for roleplaying a hero with this background, but you can always feel free to adapt these ideas as best fits your concept. Backgrounds usually conclude by identifying a general ability you gain. General abilities are found in [Chapter I.5](#).

### Background List

The following backgrounds are available to all heroes. Future *Adventures with Emmy* publications will introduce additional backgrounds, possibly with restrictions about which types of stories would make these backgrounds appropriate.

### ADAPTABLE

### BACKGROUND

**Attribute Modifier Increases** Agility and Awareness

Others have hailed you as naturally talented, but you believe your success has come from simply being willing to learn from your mistakes. Add Bold Try to your Repertoire.

### AVIATOR

### BACKGROUND

**Attribute Modifier Increases** Agility and Awareness

You enjoy taking to the skies, either as a hobby or to provide transport for passengers or shipments. Add Aerodynamic Leap to your Repertoire.

### BUSINESS OWNER

### BACKGROUND

**Attribute Modifier Increases** Awareness Influence

Perhaps you're trying to share your discoveries with the world, or the business funded your research. Either way, you got an eye for financials and a flare for selling. Add Sharing the Approach to your Repertoire.

### CLIMBER

### BACKGROUND

**Attribute Modifier Increases** Agility and Fitness

You enjoy climbing for leisure, be it mountains outdoors or just some colourful plastic indoors. Add Dyno to your Repertoire.

### FOCUSED

### BACKGROUND

**Attribute Modifier Increases** Awareness and Fitness

You are particularly interested in a specialized problem or subfield. Add Focused Interest to your Repertoire.

### GAMER

### BACKGROUND

**Attribute Modifier Increases** Awareness and Fitness

Whether you're playing yourself or your friends, there's no game you can't crack. Add Read the Manual to your Repertoire.

### GUARDED

### BACKGROUND

**Attribute Modifier Increases** Agility and Fitness



You are apprehensive about learning more about the natural world. Perhaps your friends have told you they found it difficult, or perhaps science has a nasty reputation where you come from. Add On Guard to your Repertoire.

#### LONG LINE OF SCIENTISTS

BACKGROUND

**Attribute Modifier Increases** Awareness and Influence

You herald from a family of researchers emblazoned with passion for science. Having grown up around so many scientists, you are a reliable source of information on a diverse array of subjects. Add Helpful Communicator to your Repertoire. Your family name may also be recognizable to NPCs, giving you an advantage—or disadvantage—in certain situations.

#### ON THE MOVE

BACKGROUND

**Attribute Modifier Increases** Awareness and Fitness

You relocated frequently growing up, learning to cover ground and take in new sights quickly. Add Quick Step to your Repertoire.

#### POET

BACKGROUND

**Attribute Modifier Increases** Awareness and Influence

You are not only a crafter of words, a bringer of roiling feelings and whimsy. You see the bridge between art and science, the potential of what could be, the context of what is, and how it connects to the human experience. Add Poetry in Thought to your Repertoire.

#### RUNNER

BACKGROUND

**Attribute Modifier Increases** Agility and Fitness

Whether from cross-country, track, or just the love of a good run, you know best how to wear down a pair of shoes. Add Practiced Sprint to your Repertoire.

#### SCIENCE FAIR CHAMPION

BACKGROUND

**Attribute Modifier Increases** Awareness and Influence

You excelled at designing and presenting science fair projects. Add Helpful Communicator to your Repertoire.

#### SCIENCE ILLUSTRATOR

BACKGROUND

**Attribute Modifier Increases** Agility and Influence

An eye for detail and deft hands allow you to excel at recording scientific observations. Add Detailed Sketch to your Repertoire.

#### SCOUT

BACKGROUND

**Attribute Modifier Increases** Awareness and Fitness

You have trained to thrive in wilderness environments. You might have acquired these skills through a children's scouts organization, or through tough lessons in the wild. Add Scout's Start to your Repertoire.

#### SWIMMER

BACKGROUND

**Attribute Modifier Increases** Awareness and Fitness

You enjoy a good swim, for both your physical and mental wellness. Add Swimming Rush to your Repertoire.

#### TEAM ATHLETE

BACKGROUND

**Attribute Modifier Increases** Agility and Fitness

You not only love rushing the field, but rising to face the competition with your team mates by your side. Add Sweeping Save to your Repertoire.

**Attribute Modifier Increases Agility and Influence**

You value offering instructional insights, enabling others to excel. Add Tutor's Aid to your Repertoire.

**Optional: Building your own Background**

If you have a concept for a hero that doesn't quite fit one of the published backgrounds, you can work with your GM to construct a custom background. Once you have an idea for the story you want to represent, work with your GM to choose two attributes to increase by +1 each and a general ability to add to your Repertoire.

## Chapter 1.5 General Abilities

General abilities represent your hero's aptitudes, interests, and values outside of their field or archetype. Most backgrounds grant a general ability, and you gain additional general abilities at 3rd level and every 2 levels thereafter. General abilities can be taken by any hero, with some requiring prerequisites.

### AERODYNAMIC LEAP $\Delta$

### GENERAL ACTION

#### GENERAL | INTENSIVE | KIT

You have created a personal aviation system, which only you can use, that allows you to briefly take to the air. This system becomes part of your kit, and might be a glider suit, a jet pack, or mechanical flapping wings. You Stride. During this movement, you can choose a 1-meter square along your path containing difficult terrain, a trap, or a Medium or smaller enemy. You pass over this square, ignoring the difficult terrain or trap or passing over the creature unobstructed.

### BOLD TRY $\Delta$

### GENERAL ACTION

#### EDGE | GENERAL

**Frequency** once per encounter

Choose an action in your Repertoire that requires one  $\Delta$  and a check. Use the action. When you attempt the check, roll twice and take the higher result.

### DETAILED SKETCH

### GENERAL ABILITY

#### GENERAL

Once per day, you may spend 30 minutes sketching an illustration of something you observed that day: a creature, a plant, or samples that might be interesting. You may have a number of illustrations equal to half your level, rounded up, with any new illustrations past that number replacing a prior sketch of your choice. You may expend an illustration for  $\Delta\Delta$ . When you do, choose one of the following:

**Distraction** An illusory form of your drawing springs to life, distracting your foes. All enemies within 3 meters of you take a -2 penalty to all attacks until the end of your next round.

**Insight** Your allies gain a deeper scientific understanding, and gain +2 to Recall Knowledge checks for the next minute.

### DRESS FOR SUCCESS

### GENERAL ABILITY

#### GENERAL

You wear distinctive garb, so you are recognizable. And your reputation proceeds you. You gain a +2 on Influence checks to Convey.

### DYNO $\Delta$

### GENERAL ACTION

#### GENERAL | INTENSIVE

You Jump and Climb, in either order. If you Jump first and then Climb, add 1 meter to the distance you climb, in the direction you were moving for your Jump. If you Climb first and then Jump, you can choose to remain Climbing; if you are within 1 meter of the top of an edge at the end of this, you automatically pull yourself over.

**Special** If you used a Stride immediately before this ability, you can use running jump values rather than standing jump values.

### FOCUSED INTEREST $\Delta$

### GENERAL ACTION

When you first gain this action, work with your GM to choose a topic that is of particular interest to you. This topic should be more specific than your Field, but doesn't necessarily need to be contained within it. For example, if your Field is Biology, you might choose Neuroscience, or you might choose Woodwind Instruments.

When you use this action, your GM consults the Eureka Rubric and you learn whether your chosen topic is relevant to the current encounter.

**If your topic is relevant**, you identify a piece of information about why your topic is relevant.

If your topic isn't relevant, use the Recall Knowledge action.

#### HAND TOSS Δ

GENERAL ACTION

##### GENERAL

Your coordination with your allies is so complete, you can perform certain maneuvers from a distance. You can use Manipulate an Item to throw items between you and an ally up to a number of meters equal to your Fitness modifier.

#### HELPFUL COMMUNICATOR Δ

GENERAL ACTION

##### GENERAL

**Frequency** once per round

Choose an ally. They gain a +2 bonus on their first attempt to Recall Knowledge, Convey, or Search on their next turn.

#### ON GUARD Δ

GENERAL ACTION

##### GENERAL

Until the start of your next turn, you gain a +1 bonus to your Agility DC.

#### POETRY IN THOUGHT

GENERAL ABILITY

##### GENERAL

You see the possibilities within your surroundings, and always new words on the tip of your tongue. If you critically succeed on an Awareness Check while using the Search action, you can immediately Recall Knowledge without expending any Δ. If you recite or share a relevant poem, you gain 1 Flow Point.

#### PRACTICED SPRINT ΔΔ

GENERAL ACTION

##### GENERAL | INTENSIVE

Stride up to three times. If the next action you take is to Jump, double the distance jumped.

#### PROLONG Δ

GENERAL ACTION

##### FLOW | GENERAL | INTENSIVE | REVIEW

**Prerequisites** 5th level

**Requirements** An effect that you created with a duration is active.

**Cost** 1 Flow Point

You build on the conditions and influences that you previously manipulated. Choose an effect that meets the Requirements. Its duration is extended by 1 round. If the ability you used to create this effect has the kit trait, Prolong gains the kit trait, as well.

#### QUICK STEP Δ

GENERAL ACTION

##### GENERAL | INTENSIVE | TRAVERSAL

You rush to an important destination, using the rush of blood flow to stimulate thought. Stride, then Recall Knowledge or Search.

#### READ THE MANUAL

GENERAL ABILITY

##### GENERAL

You appreciate the benefits of learning all you can about a topic, thoroughly reading journals, attending lectures, maybe even participating in round tables. Pick a topic not related to your field. You gain +2 Recall Knowledge on this topic.

**Note** This General Ability can be taken multiple times for different topics.

#### SCOUT'S START Δ

GENERAL ACTION

##### GENERAL

**Requirements** This is your first action this encounter.

Use the Recall Knowledge and Search actions, in either order.

### SHARING THE APPROACH ΔΔ

GENERAL ACTION

#### GENERAL | INTENSIVE | LINGUISTIC

**Targets** an adjacent creature.

**Offense** Influence check vs. the target's Influence DC.

You understand your field so thoroughly you can, and will, share it at the drop of a hat. You Convey to describe your next action in such a way as to sway the target to step aside. Attempt an Influence check against the target's Influence DC.

**Critical Success** The creature is inhibited 1 for one minute and you gain a Flow Point.

**Success** The creature is inhibited 1 for one round.

**Failure** The creature can use their reaction to attack you.

### SHOW YOUR WORK Δ

GENERAL ACTION

#### GENERAL

**Requirements** During your last action this turn, you succeeded at an attribute check against a creature.

You go over the details of your process for others' benefit. Before the start of your next turn, one ally can choose to gain a +1 bonus to the same attribute check against the same creature. They must make the choice before they make the check.

### SWEEPING SAVE Δ

GENERAL ACTION

#### GENERAL | INTENSIVE | VELOCITY | TRAVERSAL

**Requirements** An ally is within the range of your Stride.

You use a Stride action and end your movement adjacent to an ally. You can then do one of the following:

**Aid a Peer** with your adjacent ally.

**Manipulate an Item** to give it to your ally.

### SWIMMING RUSH Δ

GENERAL ACTION

#### GENERAL | INTENSIVE

You Stride and Swim, in either order.

### TUTOR'S AID

GENERAL ABILITY

#### GENERAL

When you Aid a Peer, you can choose to spend 1 Flow Point to grant them a +2 bonus to the aided check.

## Chapter 1.6 Fields

Your heroes' field represents their primary body of knowledge and how they contribute to your group's learning adventure. You gain an ability from your field at each level, so a field is a very impactful choice. Each field entry below describes what your hero gains at each level, called your **field's progression**. When you choose a field at 1st level, you don't need to review everything in that field; the benefits at 1st level are designed to give you an idea of what playing a hero of that field is like throughout an adventure.

Additionally, each field includes a call-out box with **Advice for GMs** on how to make the most of this field to have fun and learn together. A player and GM can use this advice together when planning and running an adventure.

**Biologist pg #** All life—from the leviathanic blue whales of the ocean, to the Cavendish bananas in the supermarket, and even down to the helpful *Lactobacillus* bacterium of our microbiome—is the domain of the biologist. As an adventuring biologist, you will Collect Samples from the fantastical life around you to form hypotheses which can later be leveraged to Exploit dangerous creatures' weaknesses.

**Chemist pg #** Chemists study the substances that make up inanimate objects and life forms, including their properties, physical structures, and processes of change. During an encounter, you use a near limitless catalog of chemical reactions to tactically create a big impact during an enemy's weakest moment.

**Computer Technician pg #** Computing is one of the most impactful technologies, and as it has shaped us, we must purposefully continue to shape it. In the world of Adventures with Emmy computers may not be as we know today, nor are they as ubiquitous, but as a Computer Technician they are known to you. During combat encounters, Computer Technicians sustain a research platform to broaden awareness and knowledge and in order to hand out temporary flow points to their allies.

**Engineer pg #** Engineers are the field of application, implementing the works of their scientific colleagues answering not why, what, or how... but when. Engineers create designs, leveraging their specialties and the environment to prototype with their allies to find a solution to the team's problems.

**Mathematician pg #** Mathematics is the fundamental language of the universe, the foundation of all other science. As an adventuring mathematician, you will develop your theories about every problem you encounter from Axioms, rapidly adapting to circumstances both in and out of combat; to you, every problem is an equation simply begging to be solved, no matter how strange or alien it may appear to others.

**Physicist pg #** As a physicist, you study the mechanisms that drive the natural world, from galaxies down to subatomic particles. During an encounter, you use the Create Model action to focus on a particular threat, mystery, or opportunity and leverage insights for your allies.

### Biologist

*"Nothing in biology makes sense except in the light of evolution."* ~ Theodosius Dobzhansky

Biology is a diverse field, and likewise offers a diverse playstyle. At the core of each biologist is the collection of organic samples which are studied to gain insight into the natural world. As a biologist, you will collect samples as you adventure, growing a collection within your logbook in order to draw inferences and test hypotheses to gain an advantage over the obstacles in your path. Biologist adventurers may specialize in healing their allies or hindering their enemies, and often resiliently hold the front line during encounters.



## Biologist Field Progression

You gain the following benefits at each of the listed levels.

| AT THIS LEVEL... | ...YOU GAIN...  |
|------------------|---|
| 1                | key attribute, background, attribute boosts, biologist's kit, biology specialization, biologist ability, field notebook, exploits |
| 2                | archetype ability, biologist ability, improvise exploit, all attributes +1  |
| 3                | general ability, biologist ability, all attributes + 1, 2 additional attribute boosts   |
| 4                | advanced biologist, archetype ability, biologist ability, all attributes +1   |
| 5                | general ability, advanced exploits, biologist ability, all attributes + 1   |
| 6                | archetype ability, biologist ability, all attributes +1, 2 additional attribute boosts  |
| 7                | general ability, biologist ability, pinnacle biologist, all attributes + 1  |
| 8                | archetype ability, pinnacle exploits, biologist ability, all attributes +1  |
| 9                | general ability, biologist ability, all attributes + 1, 2 additional attribute boosts   |
| 10               | archetype ability, biologist ability, paths of inquiry, all attributes +1   |

Biologist Progression Table

### Getting Started as a Biologist (1st Level)

This section guides you through the essential features of creating and playing a biologist at 1st level.

**Key Attribute** Your key attribute is Influence, or another option available in your specialization. You gain 2 boosts to this attribute at 1st level.

**Background and Attribute Boosts** At 1st level, you gain a background and 2 attribute boosts of your choice of +1 each (see [Chapter 1.4](#) for backgrounds). When you're finished with creating a 1st-level hero, your attribute modifiers should all add to 10, with no modifier greater than +5.

**Hit Points** You begin play with a maximum number of Hit Points equal to 10 + your Fitness modifier.

**Repertoire** You gain a Repertoire of abilities, which represents the collection of knowledge and skills you have developed over the course of your adventure. Your Repertoire starts with all [basic actions](#) included.

**Investigate** Add the Investigate action to your Repertoire. You use this process to learn about your surroundings and prepare for upcoming combat encounters.

#### INVESTIGATE

#### FIELD ACTION

##### BIOLOGIST | HYPOTHESIS

**Time** 10 minutes or longer (per GM discretion)

You apply a combination of inductive and deductive reasoning to information that you believe requires an explanation. This information could take one of many forms: You might make an observation, examine a piece of material, review documents, follow up on a rumor, or collect information from a witness or expert. Your GM can tell you if the subject of your investigation is a spurious line of inquiry before you invest the time in this action, or they can suggest a modification to your investigation to make it more beneficial to progressing your adventure. Work with your GM to determine what

tools you need to carry out your investigation and how long this process takes. Then, record in your notes a hypothesis that explains the information you have Investigated.

When you roll initiative, you can choose one creature you can see and one hypothesis you have recorded using the Investigate action. Ask your GM if this creature is related to this hypothesis. If it is, you gain 1 Flow Point, regardless of whether the hypothesis is correct. At the start of your turn during this encounter, you can spend 1 Flow Point to become quickened for the turn and use the extra  $\Delta$  to Stride toward the chosen creature. This effect has the traversal trait.

**Collect Sample (Biologist)** When you Investigate a clue that could help shape your understanding of an organism or its place in the ecosystem, you can Collect a Sample left behind by that organism. Samples can take many forms—a tuft of fur, a written description of an observed behavior, a detailed sketch of a footprint, or a pressed flower, among many more. Write a brief description of the Sample, where you collected it, and one unique, identifying characteristic or trait from the Sample related to your hypothesis. If the sampled organism has not been taxonomically identified, come up with a genus species name for your discovery and write it down! Your GM may suggest a sample or identifying characteristic, or you could declare your intention to look for something specific. You can ask your GM if you can collect a sample from any trace of an organism that you find interesting. Record this Sample alongside your hypothesis.

#### EXAMPLE OF COLLECTING A SAMPLE

Alex collects distinctive red scales from a one-eyed monster she saw fleeing a cave and records the sample as belonging to a “Redstalker” (*Beholdicus redstalkus*). The red scales Alex collected from the Redstalker were found outside a cave with crimson moss growing in it. Alex infers that the red scales are an adaptation to help the Redstalker camouflage against the crimson moss when hunting its prey. Or, Alex might infer that Redstalker’s scale gain has red scales from eating the crimson moss and acquiring its pigment. If her party encounters a Redstalker again, she may get the chance to put her hypothesis to the test!

**Biologist’s Kit** At 1st level, the Noether Society gives you a biologist’s kit. Your kit provides you with equipment you need to carry out your biologist actions. Your kit includes but is not limited to safety goggles, gloves, collection boxes and vials, a dissection kit, pipettes, charcoal, forceps, a magnifying glass, and extra paper. You never need to purchase equipment for your kit, and any components of your kit that you lose, the Noether Society replaces. When using your kit as part of an ability, describe what equipment you use and how you use it. Even when not using a specific ability, you can incorporate your kit into descriptions of what you do and how you interact with your surroundings. Under usual gameplay circumstances, it is assumed that you have your kit with you, but in some rare circumstances, you might not have immediate access to your kit. In such circumstances, your GM should communicate to you how to regain access.

You know how to use larger biology equipment that you might find in a lab, like a thermal cyclor or an electron microscope, but these are too large to carry around.

Some biologist abilities expand the contents of your kit and what you can do with your kit. When you gain abilities from your field or an archetype, your kit expands to include the necessary equipment, or you can improvise how to carry out those abilities using your biology equipment.

In your journeys, you might also gain specific items that you purchase or find. Items might provide specific bonuses to your attributes or offer special actions you can use, going beyond the capabilities of your kit. When describing how you use your kit, you can also integrate the use of an item, but items are never considered part of your kit and are tracked separately in your inventory.

**Field Notebook** Biologists collect observations and test hypotheses about the natural world around them. Your biologist kit includes a field notebook where you keep detailed records of what you’ve seen and learned in three categories: Samples, Inferences, and Results. A Sample is a piece of evidence you collect about a creature. An Inference is a hypothesis specifically recorded about one of your Samples. A Result is a record from when you test an Inference. Add Test Inference to your Repertoire.

TEST INFERENCE  $\Delta$ +

FIELD ACTION

BIOLOGIST | HYPOTHESIS | KIT

**Frequency** once per round

**Targets** one living creature or hazard that you can see and have an Inference for

It is time to test a hypothesis! Restate an Inference about the target, and support your hypothesis with information from one or more of your Samples. You can make minor modifications to your Inference based on recent observations of the target. Describe how you plan to test this Inference, and your GM will propose appropriate subordinate actions, and additional  $\Delta$ s, to carry out the test. After the test, your GM tells you if this Inference is correct, partially correct, inconclusive, or incorrect.

**Correct.** Your Inference leads you to directly surmise a weakness in the target. Choose an Exploit to apply to the target with an initial duration of 1 minute. Once per round, if you damage the Exploited creature, the Exploit is extended by 1 round. Record this outcome in your Field Notebook as a Result.

**Partially Correct.** As correct, but the Exploit expires at the end of your next turn unless extended, and you don't record the Result.

**Inconclusive.** Maybe you missed your attack or fumbled with the potion. Regardless, you weren't able to gather the results needed to form a conclusion but feel more prepared to try again. You gain 1 Flow Point, and next turn you gain a +1 bonus on checks made as part of any actions required to Test an Inference.

**Incorrect.** The test results don't support your hypothesis, but you learned more from further observation. You gain a +1 bonus to your Agility DC from the target's attacks and abilities until the start of your next turn.

**Flow.** Once per round, you can spend 1 Flow Point on your turn to Test Inference using 1 fewer  $\Delta$ . If your GM requires additional  $\Delta$ s to Test Inference, you can choose to apply this effect after the number of  $\Delta$ s is determined.

**Exploits** You can leverage your insights into lifeforms to press your advantage against them. At 1st level, you gain the following exploits that you can apply using Test Inference. You can gain additional exploits through biologist abilities.

## EXPLOITS

You've identified an aspect of the target that you can use for an advantage. Select one option from the following list, and apply it to the target. Note that some Exploits may not apply to all targets (For example, most hazards will not have an attack to reduce). The duration of the Exploit is determined by the ability that applied it. A target can only have one exploit at a time, and applying a second exploit immediately removes the first. You may propose additional exploits based on your knowledge of the target, at the GM's discretion.

- The target takes a -2 penalty to attack rolls.
- The target creature takes a -2 penalty to Agility DC.
- The target hazard takes a -2 penalty to all DCs.

**Organic Blast** Add Organic Blast to your Repertoire. This is your primary offensive ability as a biologist.

## ORGANIC BLAST $\Delta$

## FIELD ACTION

### ATTACK | BIOLOGIST | BLAST | KIT

**Range** 5 meters; **Targets** 1 creature

**Offense** key attribute check vs. the target's Agility DC

You unleash a torrent of life forms at the target. Make a check using your key attribute against the target's Agility DC.

**Critical Success** As success, but double the damage, and apply the critical effect from your biologist specialization. This critical effect applies even if the target takes no damage.

**Success** You deal 1d6 damage for every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well. The damage type is determined by your biologist specialization. If the target is a member of a species you recorded in your Results, and does not currently have an exploit applied, you also apply an Exploit to them for 1 minute. This exploit applies even if the target takes no damage.

## Biology Specialization

Choose a biology specialization. The following are available in this book, and more will be available in future books.

- **Botany** You study plants and their role in their environment. You may choose Agility as your key attribute. Your biologist kit also includes planting trays, a plant press, gardening shears, and a shovel. When you Recall Knowledge (ask the GM a question about information your biologist may already know, usually requiring an Awareness check) about plants, or creatures and hazards with the plant trait, you gain a +2 bonus on the Awareness check. Add the Medicinal Properties ability to your Repertoire. Your Organic Blast deals bludgeoning damage, as roots erupt from beneath the target. On a critically successful Organic Blast, the target becomes slowed until the end of your next turn.
- **Microbiology** You study bacteria, protists, viruses, and other microscopic organisms. You may choose Awareness as your key attribute. Your biologist kit also includes a portable microscope, slides, inoculating loops, and agar plates. When you view an organism, virus, or Sample on a prepared slide with a microscope, you can Recall Knowledge about the organism with a +2 bonus on the Awareness check. Add the Symbiotic Empowerment ability to your Repertoire. Your Organic Blast deals force damage, as cells explode within the target. On a critically successful Organic Blast, the target becomes vulnerable 2 until the end of your next turn.
- **Mycology** You study fungi, their mycelial networks, and how they aid in the natural cycle of growth and decay. You may choose Fitness as your key attribute. Your biologist kit also includes a hygrometer, pH meter, thermometer, and spore print kit. When you Recall Knowledge about fungi or remains undergoing decay, you gain a +2 bonus to the Awareness check. You gain the Mycelial Network ability. Your Organic Blast deals poison damage, as toxic spores permeate the target. On a critically successful Organic Blast, the target takes additional poison damage equal to half your level rounded up at the end of each of its turns. Ending this poison damage requires using  $\Delta\Delta$ .
- **Physiology** You study the physical, anatomical structures and functions of creatures both mundane and magical. You may choose Fitness as your key attribute. Your biologist kit also includes a stethoscope, disinfectant spray, bandages, and a rubber tourniquet. When you study exposed organismal tissue, or are listening to a creature with your stethoscope, you can Recall Knowledge about the creature and any conditions affecting it with a +2 bonus on the Awareness check. Add the Diverse Exploitations ability to your Repertoire. Your Organic Blast deals electricity damage, pushing activation potentials beyond their limit. On a critically successful Organic Blast, the target becomes hampered until the end of your next turn.
- **Zoology** You study animals—their behaviors, diets, evolutionary relationships, social hierarchies, and more. You may choose Fitness as your key attribute. Your biologist kit also includes thick leather gloves, small animal traps, a catchpole, and mild sedatives. When you Recall Knowledge about a creature that has the animal trait, you gain a +2 bonus on the Awareness check. If you Recall Knowledge about a creature that does not have the animal trait but you can describe an evolutionary relationship between the creature and an animal (such as a dragon and lizards), your GM can award you a +1 bonus. Add the Establish Niche ability to your Repertoire. Your Organic Blast deals piercing damage as you send forth an animal to attack the target. On a critically successful Organic Blast, the target becomes inhibited 2 until the end of your next turn.

## Biologist Abilities (Every Level)

At 1st level and every level thereafter, choose one biologist ability to gain. Some abilities add a new action or reaction to your Repertoire, others enhance actions you already have. At 1st level, you can choose from the beginner biologist abilities. Starting at 4th level, you can also choose advanced biologist abilities. Starting at 7th level, you can also choose pinnacle biologist abilities.

## Improvise Exploit (2nd Level)

You can use brief observations of living creatures to form short-lived strategies. You gain the Improvise Exploit ability.

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### Hit Point Increases (2nd-10th Levels)

Each time you level up, increase your maximum number of Hit Points to a new value of (10 x your level) + your new Fitness modifier. Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level.

### Archetype Abilities (2nd, 4th, 6th, 8th, 10th Level)

At 2nd level, you begin following an archetype that represents your career choices, academic interests, or hobbies. An archetype is a collection of abilities that anyone can draw from if they meet the Prerequisites. At 2nd level, choose an archetype dedication ability you have access to and meet the Prerequisites for. You gain this dedication ability. At 4th level and every 2 levels thereafter, you gain another archetype ability. Each time, you can continue to gain abilities from the same archetype, or you can choose a dedication from a different archetype that you have access to and meet the Prerequisites for. Archetypes are detailed in [Chapter I.8](#).

### Attribute Boosts (3rd, 6th, 9th Level)

Throughout your adventures, you further develop your foundational capacities. At every level, increase all your attribute modifiers by 1 to factor in your new level. At 3rd, 6th, and 9th level, you also gain 2 boosts to apply to 2 different attributes of your choice. Update the number of boosts and your level in your hero sheet to track these choices. You can consult the [Attribute Modifier Progression Table](#) to check that you have applied all the appropriate attribute boosts.

### General Abilities (3rd, 5th, 7th, 9th Level)

Throughout your adventures, you grow as a person in addition to learning more about physics. These personal developments are represented by general abilities. At 3rd level and every two levels thereafter, choose a general ability. General abilities are found in [Chapter I.5](#). Many general abilities are also granted by backgrounds, which you can use to help choose general abilities that are thematically appropriate for your character.

### Advanced Biologist (4th Level)

Starting at 4th level, you can choose advanced biologist abilities.

### Advanced Exploits (5th Level)

You gain the following Exploit:

- The target gains weakness equal to half your level to a type of damage of your choosing. If the target has immunity or resistance to this damage, you learn this fact and may choose another type of damage.

### Pinnacle Biologist (7th Level)

Starting at 7th level, you can choose pinnacle biologist abilities.

### Pinnacle Exploits (8th Level)

You gain the following Exploit:

- The first time the target uses the Stride action on their turn each round, it requires an additional  $\Delta$ . This effect has the traversal trait.

### Paths of Inquiry (10th Level)

When you Draw Inference, you can record two Inferences for a given Sample. When you Test Inference on a Sample with two Inferences, you can test both, and use the correct or partially correct outcome for either.

## Biologist Abilities

At each level, add one of the following abilities to your Repertoire.

### Beginner Biologist Abilities

You can choose beginner biologist abilities at any level.

#### DIVERSE EXPLOITATIONS

#### BEGINNER ABILITY

##### BIOLOGIST

All organ systems are connected, and you can use these connections to morph one disadvantage into another. When you use a blast against a creature with an Exploit and deal damage, you can replace one Exploit with your choice of another.

#### ESTABLISH NICHE Δ

#### BEGINNER ACTION

##### BIOLOGIST

**Frequency** once per round

You solicit nearby animals to provide you with a clue about your current encounter. Your GM might identify a relevant animal already established in the encounter, or provide the clue through small creatures in the background, like mice or insects. They respond by clustering in a single square that could help you, designated as your Niche. You can ask your GM to identify a square in the encounter that could offer a hint about the current encounter's Eureka Rubric. You then choose the square for your Niche. Until you use Establish Niche again, you or an ally who is in your Niche gains a +1 bonus to Agility DC against attacks.

#### EVOLUTIONARY CONNECTION ΔΔΔ

#### BEGINNER ACTION

##### BIOLOGIST | HYPOTHESIS

**Frequency** once per day

You see the connection between lifeforms stretching back eons to common ancestors. State a hypothesis about a trait possessed by an organism and how that trait conveys an evolutionary advantage. You may Test Inference on that hypothesis, without needing a Sample.

#### MEDICINAL PROPERTIES

#### BEGINNER ACTION

##### BIOLOGIST | HYPOTHESIS

**Frequency** once per day

**Time** 10 minutes

Rather than studying samples to exploit a weakness, you attempt to discern how the sample may be of use to you. You may Draw Inference on a Sample regarding its medical applications. If you do, you may then spend 10 minutes Testing your Inference.

**Correct.** Your hypothesis leads you to directly surmise a medical use for the sample. You gain the benefits of Partially Correct. In addition, you may spend one hour refining the sample. When you do, you may expend the Sample to create an improvised elixir. This elixir can be consumed with Δ to restore HP equal to twice your Key Attribute modifier. The elixir loses its potency 24 hours after it is created.

**Partially correct.** When you take an action to restore lost HP within the next 24 hours, you may expend the tested Sample to increase the amount of HP restored by an amount equal to your Key Attribute modifier.

**Incorrect.** Your test didn't turn out as you expected, but you learned more from further observation. State another medicine-related Inference. You may test it the next day.

#### MYCELIAL NETWORK

#### BEGINNER ABILITY

##### BIOLOGIST

**Requirements** mycology specialization



The study of fungal connections has allowed you to tap into the mycelium networks between plants and fungal colonies. While you have a fungal Sample in your field notebook, you gain a +2 bonus on checks to Search and when you Administer First Aid, you gain a +2 bonus to the amount of Hit Points restored per dice.

## SYMBIOTIC EMPOWERMENT ΔΔ

## BEGINNER ACTION

### BIOLOGIST

**Frequency** once per day per Sample

**Requirements** You have a Sample with an Inference in your field notebook.

You quickly study the Sample, gaining insight into one of its key traits. Make a key attribute check against the Influence DC of the creature that produced the sample. If no creature produced the Sample, use a [standard DC](#) for your level. The same Sample can only be used for Symbiote once per day.

**Critical Success** The GM reveals a trait related to the Sample. For the next minute, your attacks and damage-dealing abilities deal additional damage equal to your level. The damage type is determined by the GM based on the trait revealed. You may share this benefit with a number of allies equal to half your level, rounded down, within 6 meters of you.

**Success** As critical success, but the effect lasts until the end of your next turn.

**Failure** You learn a trait of the sample, but gain no other bonus or benefit.

### Advanced Biologist Abilities

You can choose advanced biologist abilities starting at 4th level.

## EXAMINE NICHE Δ

## ADVANCED ACTION

### BIOLOGIST | HYPOTHESIS | KIT

**Prerequisites** Establish Niche

**Requirements** You or an ally are in your Niche.

You examine the area around your Niche, or call out instructions for your ally to do so. State a hypothesis to your GM related to the encounter's Eureka Rubric. Your GM tells you if this hypothesis is correct, partially correct, or incorrect.

**Correct.** The creature in your Niche regains 1d6 HP plus 1d6 for each level you have. Any excess HP are added as temporary HP that last until the start of your next turn.

**Partially correct.** As correct, but the HP restored is equal to your level.

**Incorrect.** The creature in your Niche becomes quickened for their next turn. They can use the extra action to Recall Knowledge or Search.

## FILTERED MICROSCOPY

## ADVANCED ABILITY

### BIOLOGIST | HYPOTHESIS | KIT

**Prerequisites** microbiology specialization

Through diligent study you have mastered the use of your microscope, and have found new ways to enhance it. By adding filtered lenses you can control the spectrum of light seen by the microscope to discover new aspects of your samples. You can Draw Inference twice on a given sample, and when you Recall Knowledge about subjects related to one of your Samples, you gain a +2 bonus to the check.

## FOOD CHAIN

## ADVANCED ABILITY

### BIOLOGIST | HYPOTHESIS

You have learned to recognize how different parts of the ecosystem fit together, including how predators and prey evolve in tandem. Once per day, you may Draw Inference about a creature without a collected Sample by using a Sample from a related animal. For example, poison spines in a prey animal may reveal poison resistance in its predator, or hooked claws

in a predator may reveal a soft underbelly in its prey. You must justify the relationship to your GM. If no relationship exists, the GM can provide that information before you spend the time to Draw Inference.

## FUNGAL BLOOM ↩

## ADVANCED REACTION

### BIOLOGIST

**Trigger** A creature within 3 meters of you dies.

**Requirements** You must be in an encounter and the dying creature must have a slot in initiative.

The cycle of life means death and decay leads to more life. You regain 1d6 Hit Points for each level you have. You may apply any excess healing to one ally within 3 meters of you.

## SURVIVAL OF THE FITTEST

## ADVANCED ABILITY

### BIOLOGIST | HYPOTHESIS

**Prerequisites** evolutionary biology specialization

You learn from each encounter, and have developed resiliency in the face of danger. When you roll initiative against a species of creature that you or your allies present has previously defeated, you start the encounter with 1 Flow Point. “Defeat” need not mean “kill;” your GM has the final say in whether this ability applies. Once per day, the first time you would be reduced to 0 Hit Points, you remain conscious with 1 Hit Point.

### Pinnacle Biologist Abilities

You can choose pinnacle biologist abilities starting at 7th level.

## ADAPTIVE OPTICS

## PINNACLE ABILITY

### BIOLOGIST | HYPOTHESIS

**Prerequisites** filtered microscopy

You further upgrade your microscope, adding flexible mirrors and adaptive components to reach unparalleled resolution. You may Draw Inference three times from a given Sample.

### BIOLOGIST: ADVICE FOR GMS

A biologist works best when they can interact with the environment. This doesn’t mean you need to plan unique contents for every corner of the encounter, but you can work with your biologist player to collaboratively set the stage as the biologist interacts with their Niche.

**Have Fun** When a biologist wants to Establish Niche, there are always animals nearby, even if just a handful of insects. The animals are usually passive in the encounter and don’t receive turns or use a stat block. They simply gather to provide information, and you can roleplay their watching of the encounter if you like.

**Learn Together** Feel free to ask your biologist player what items or information they’re looking for. If they’re just looking for a strategic advantage, you can choose a square for their Niche and have the NPCs react accordingly by also recognizing that square as important.

**What counts as the same species?** Some biologist abilities refer to creatures of the same species. On the GM’s side, this generally refers to variants of a creature that share a name, like a young nuclear dragon or an ancient nuclear dragon. Some categories of creatures (like dragons or gremlins) are too broad to constitute the same species.

## Chemist

Chemists study inanimate objects and life forms based on the substances they are made of. By identifying properties, physical structures, and processes of change, a chemist in *Adventures with Emmy* can offer insight into nearly any mysterious object, threatening monster, or foreboding obstacle. A chemist also uses a near limitless catalog of chemical reactions to solve problems and create advantages. During combat, a chemist can be a tactical planner, saving their biggest impact for an enemy's weakest moment.

### Chemist Field Progression

You gain the following benefits at each of the listed levels.

| AT THIS LEVEL... | ...YOU GAIN...  |
|------------------|---|
| 1                | key attribute, background, attribute boosts, chemical reactions, chemist ability, chemist's kit, chemistry specialization, investigate, repertoire, student of matter |
| 2                | archetype ability, manifold reactions, chemist ability, all attributes +1   |
| 3                | general ability, chemist ability, all attributes + 1, 2 additional attribute boosts   |
| 4                | advanced chemist, archetype ability, chemist ability, all attributes +1   |
| 5                | general ability, chemist ability, ready to react, all attributes + 1  |
| 6                | archetype ability, chemist ability, all attributes +1, 2 additional attribute boosts  |
| 7                | general ability, chemist ability, pinnacle chemist, all attributes + 1  |
| 8                | archetype ability, modify chemical reaction, chemist ability, all attributes +1   |
| 9                | general ability, chemist ability, all attributes + 1, 2 additional attribute boosts   |
| 10               | archetype ability, prescient reagents, chemist ability, all attributes +1   |

Chemist Progression Table

### Getting Started as a Chemist (1st Level)

This section guides you through the essential features of creating and playing a chemist at 1st level.

**Key Attribute** Your key attribute is your choice of Agility or Influence. You gain 2 boosts to this attribute at 1st level.

**Background and Attribute Boosts** At 1st level, you gain a background and one boost to two attribute boosts of your choice (see [Chapter 1.4](#) for backgrounds). When you're finished with creating a 1st-level hero, your attribute modifiers should all add to 10, with no modifier greater than +5.

**Hit Points** You begin play with a maximum number of Hit Points equal to 10 + your Fitness modifier.

**Student of Matter** You use all your senses to examine material properties and test compounds. You gain a +2 bonus on checks when you Recall Knowledge (ask the GM a question about information your chemist may already know, usually requiring an Awareness check) to identify materials and their properties.

**Repertoire** You gain a Repertoire of abilities, which represents the collection of knowledge and skills you have developed over the course of your adventure. Your Repertoire starts with all [basic actions](#) included.

**Investigate** Add the Investigate action to your Repertoire. You use this process to learn about your surroundings and prepare for upcoming combat encounters.

**INVESTIGATE****FIELD ACTION****CHEMIST | HYPOTHESIS**

**Time** 10 minutes or longer (per GM discretion)

You apply a combination of inductive and deductive reasoning to information that you believe requires an explanation. This information could take one of many forms: You might make an observation, examine a piece of material, review documents, follow up on a rumor, or collect information from a witness or expert. Your GM can tell you if the subject of your investigation is a spurious line of inquiry before you invest the time in this action, or they can suggest a modification to your investigation to make it more beneficial to progressing your adventure. Work with your GM to determine what tools you need to carry out your investigation and how long this process takes. Then, record in your notes a hypothesis that explains the information you have Investigated.

When you roll initiative, you can choose one creature you can see and one hypothesis you have recorded using the Investigate action. Ask your GM if this creature is related to this hypothesis. If it is, you gain 1 Flow Point, regardless of whether the hypothesis is correct. At the start of your turn during this encounter, you can spend 1 Flow Point to become quickened for the turn and use the extra  $\Delta$  to Stride toward the chosen creature. This effect has the traversal trait.

**Collect Reagent (Chemist)** When you Investigate an object, you learn one substance the object is made of, and you collect enough of this substance to use as a reagent in one chemical reaction. Record this substance along with your hypothesis. Later, you can use this reagent when you Prepare Chemical Reaction (see below).

**Chemical Reactions** Add Prepare Chemical Reaction and Activate Chemical Reaction to your Repertoire.

**PREPARE CHEMICAL REACTION  $\Delta$** **FIELD ACTION****CHEMIST | KIT | MANIPULATE**

**Frequency** once per round

**Requirements** You have a free hand.

You select a pair of reagents from your kit to set up a chemical reaction. Target a creature or a square within your reach, and describe a Trigger for your chemical reaction, like “The target Strides,” or , “A creature enters the square”. This Trigger determines when you can Activate this Chemical Reaction. Then, choose one of the reaction properties below to apply to this chemical reaction. Each reaction property lists the type of check the triggering creature must succeed at to avoid the listed effect.

- **Combustion** (Fitness) The chemical reaction is explosive. On a failure, they fall prone.
- **Endothermic** (Fitness) The chemical reaction steals energy from your target. On a failure, they become slowed until the end of their next turn.
- **Exothermic** (Agility) The chemical reaction envelops your target with heat. On a failure, they take 1d6 fire damage, plus an additional 1d6 fire damage per level you have.
- **Heterolytic** (Fitness) The chemical reaction coats the target with ionic compounds. On a failure, they become vulnerable 1 until the end of their next turn.
- **Redox** (Agility) The chemical reaction transfer electrons across the target. On a failure, they become inhibited 1 until the end of their next turn.

You can choose to use a reagent you collected using the Investigate action; if you do, choose two reaction properties that require the same type of check. This consumes the reagent you collected.

When you Activate this Chemical Reaction (see below), the target must attempt the listed check against your key attribute DC; on a failure, they take the listed effect. If you have a Flow Point and the target succeeds (but doesn't critically succeed) at their check, you can expend 1 Flow Point to change the outcome to a failure. Once you Activate this Chemical Reaction, the reagents are spent.

Your target can use the Manipulate an Item action to attempt to stop the chemical reaction before you activate it. If they do, they attempt an Agility check against your key attribute DC. On a failure, they take the effect of the chemical reaction.

## CHEMIST | KIT | MANIPULATE

**Trigger** The target of your prepared reaction meets the Trigger you described, or your turn begins.

**Requirements** You Prepared this Chemical Reaction less than 1 minute ago.

**Defense** Agility or Fitness check (specified in the reaction property) vs. your key attribute DC

You rapidly increase the chemical reaction's rate. Choose one of the following methods of activation and describe how you apply this change. The target then attempts the type of check specified in your chosen reaction property. On any outcome other than a critical success, they also suffer the listed activation effect.

**Apply a Catalyst** The target takes a -1 penalty to their check against the next chemical reaction you activate with them as the target.

**Apply Pressure** The target moves 2 meters in a direction of your choosing. This is force movement.

**Radiate** You and your allies gain a +1 bonus to attack rolls against the target until the start of their next turn.

## USING REACTIONS

In designing the chemist, we wanted them to be the best field at using reactions, in terms of both chemicals and game mechanics! The chemist is the only field that grants a special **reaction ability** at 1st level, **Activate Chemical Reaction**. Using this ability requires you to first **Prepare a Chemical Reaction** on your turn, which requires you to spend 1 Δ, and then you Activate a Chemical Reaction by spending your ↺ on the target's turn. This Δ+↺ combination allows you to customize the ability's effect: You choose one effect when you Prepare Chemical Reaction, and another when you Activate Chemical Reaction, allowing you to customize the outcome based on how the combat evolves!

During encounters, it's important that you track when you've spent your ↺ each round--especially starting at 2nd level, when you gain an additional ↺ each turn! Remember that you regain your ↺ **at the start of your turn**. If you didn't use your ↺ since your previous turn, you can still use it to Activate Chemical Reaction under the trigger "Your turn begins," and **then** gain your new ↺ for the new turn. In other words, you never have to let a ↺ go to waste!

Also remember that each reaction requires a **Trigger**, a preceding event that allows you to use the reaction. When you Prepare Chemical Reaction, you're in charge of designing the trigger. Think about what actions the target is likely to take: Have they been trying to reach one of your allies, or reach a specific item? Have they made a particularly dangerous attack? Use the trigger to try to intimidate them into taking a different course of action.

**Chemist's Kit** At 1st level, the Noether Society provides you with a chemist's kit. Your kit provides you with equipment you need to carry out your chemist abilities and use the Investigate action. Your kit includes but is not limited to safety gear, basic reagents and catalysts, glassware, pH strips, clamps and stands, funnels, hot plates, mortar and pestle, spatulas and tongs, thermometers, and, of course, an up-to-date periodic table. You never need to purchase equipment for your kit, and any components of your kit that you lose, the Noether Society replaces. When using your kit as part of an ability, you describe what equipment you use and how you use it. Even when not using a specific ability, you can incorporate your kit into descriptions of what you do and how you interact with your surroundings. Under usual gameplay circumstances, it is assumed that you have your kit with you, but in some rare circumstances, you might not have immediate access to your kit. In such circumstances, your GM should communicate to you how to regain access. You know how to use larger chemistry equipment that you might find in a lab, like a mass spectrometer or a centrifuge, but these are too large to carry around.

Some chemist abilities expand the contents of your kit and what you can do with your kit. When you gain abilities from an archetype, your kit expands to include the necessary equipment, or you can improvise how to carry out those abilities using your chemistry equipment.

In your journeys, you might also gain specific items that you purchase or find. Items might provide specific bonuses to your attributes or offer special actions you can use, going beyond the capabilities of your kit. When describing how you use your kit, you can also integrate the use of an item, but items are never considered part of your kit and are tracked separately in your inventory.

**Chemical Blast** Add Chemical Blast to your Repertoire. This is your primary offensive ability as a chemist.

#### CHEMICAL BLAST Δ

#### FIELD ACTION

**ATTACK | BLAST | CHEMIST | KIT**

**Range** 5 meters; **Targets** 1 creature

**Offense** key attribute check vs. the target's Agility DC

You prepare a quick chemical mixture and hurl it at the target. Make a check using your key attribute against the target's Agility DC.

**Critical Success** As success, but double the damage.

**Success** You deal 1d6 fire damage for every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well.

### Chemistry Specialization

Choose a chemistry specialization. The following are available in this book, and more will be available in future books.

- **Inorganic Chemistry** You specialize in metals and minerals. You know how to shore up strong defenses and breach brittle barriers. Add your choice of one beginner chemist ability that requires inorganic chemistry as a prerequisite to your Repertoire. When you use Chemical Blast, you can choose to deal piercing damage instead of fire.
- **Organic Chemistry** You study the complex structures formed by carbon, and their diverse applications for life forms. Add your choice of one beginner chemist ability that requires organic chemistry as a prerequisite to your Repertoire. When you use Chemical Blast, you can choose to deal poison damage instead of fire.
- **Physical Chemistry** Instead of specializing in a class of substances, you master the art of energy manipulation. Add your choice of one beginner chemist ability that requires physical chemistry as a prerequisite to your Repertoire. When you use Chemical Blast, you can choose to deal acid damage instead of fire.

### Chemist Abilities (Every Level)

At 1st level and every level thereafter, choose one chemist ability to gain. Some abilities add a new action or reaction to your Repertoire, others enhance actions you already have. At 1st level, you can choose from the beginner chemist abilities. Starting at 4th level, you can also choose advanced chemist abilities. Starting at 7th level, you can also choose pinnacle chemist abilities.

### Hit Point Increases (2nd-10th Levels)

Each time you level up, increase your maximum number of Hit Points to a new value of (10 x your level) + your new Fitness modifier. Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level.

### Archetype Abilities (2nd, 4th, 6th, 8th, 10th Level)

At 2nd level, you begin following an archetype that represents your career choices, academic interests, or hobbies. An archetype is a collection of abilities that anyone can draw from if they meet the prerequisites. At 2nd level, choose an archetype dedication ability you have access to and meet the Prerequisites for. You gain this dedication ability. At 4th level and every 2 levels thereafter, you gain another archetype ability. Each time, you can continue to gain abilities from the same archetype, or you can choose a dedication from a different archetype that you have access to and meet the Prerequisites for. Archetypes are detailed in [Chapter I.8](#).



## Manifold Reactions (2nd Level)

You increase your facility with creating chemical reactions. You can use Prepare Chemical Reaction twice per round. The second time you Prepare a Chemical Reaction in a round, you gain an additional ↻ you can use only to Activate a Reaction.

## Attribute Boosts (3rd, 6th, 9th Level)

Throughout your adventures, you further develop your foundational capacities. At every level, increase all your attribute modifiers by 1 to factor in your new level. At 3rd, 6th, and 9th level, you also gain 2 boosts to apply to 2 different attributes of your choice. Update the number of boosts and your level in your hero sheet to track these choices. You can consult the [Attribute Modifier Progression Table](#) to check that you have applied all the appropriate attribute boosts.

## General Abilities (3rd, 5th, 7th, 9th Level)

Throughout your adventures, you grow as a person in addition to learning more about physics. These personal developments are represented by general abilities. At 3rd level and every two levels thereafter, choose a general ability. General abilities are found in [Chapter I.5](#). Many general abilities are also granted by backgrounds, which you can use to help choose general abilities that are thematically appropriate for your character.

## Advanced Chemist (4th Level)

In your travels, you have collected and analyzed a broad diversity of materials. Starting at 4th level, you can choose advanced chemist abilities.

## Ready to React (5th Level)

When you are quickened, you can always use the additional Δ to Prepare Chemical Reaction. Additionally, when you start your turn quickened, you can choose to gain an additional ↻ instead of an additional Δ, with the same constraints as manifold reactions.

## Pinnacle Chemist (7th Level)

You can solve nearly any problem at the molecular level. Starting at 7th level, you can choose pinnacle chemist abilities.

## Modify Chemical Reaction (8th Level)

You gain Modify Chemical Reaction.

### MODIFY CHEMICAL REACTION Δ

### FIELD ACTION

#### CHEMIST | KIT | REVIEW

**Frequency** once per prepared chemical reaction

**Requirements** You have a chemical reaction prepared but you have not Activated this Chemical Reaction.

You use something you have learned since Preparing a Chemical Reaction to make the reaction more potent against the target. Describe how you modify the reagents or process in the chemical reaction. If your description is particularly relevant to the target's Eureka Rubric or stat block, you can choose up to two reaction properties.

## Prescient Reagents (10th Level)

You are always prepared to leverage your chemical insights. Once per hour, when you Prepare Chemical Reaction, you can describe a specific reagent that you use as though you had collected it using the Investigate action. If your description is particularly relevant to the target's Eureka Rubric or stat block, you can choose up to two reaction properties.

### DESIGN ACTIONS

**Design** Some actions require you to describe a design you build or enact to solve a problem during the current encounter. When you describe a design, you express to your GM the problem you want to solve and how the design solves it. You might attempt to move a heavy object using a lever or melt an ice elemental by positioning them near a heat source. This process is open-ended and results in you effecting some change in the encounter. Your GM responds to your design with one of the following outcomes:

Solved (your design appropriately addresses the problem),

Partially Solved (your design helps address the problem but is missing something important), or

Unsolved (your design is irrelevant to the problem).

Design actions offer benefits based on these outcomes, so it's always worthwhile to use these actions. Even an unsolved outcome produces a benefit! If your design is particularly relevant to an element of the Eureka Rubric, your GM might give you relevant information that your hero learns, or even advance your group to the next Eureka Threshold. Your GM might determine that your design requires additional time to enact. If so, you can spend additional  $\Delta$ s to enact your design before resolving the outcome. You usually only enact each design once, but you can refine a design on subsequent actions.

Engineers as they grow in experience expand their knowledge and refine their design methods. At levels 1, 4, 7, and 10 they gain new actions to aid their design activities.

### *Chemist Abilities*

At each level, add one of the following abilities to your Repertoire.

### **Beginner Chemist Abilities**

You can choose beginner chemist abilities at any level.

#### **CREATE BOND $\Delta\Delta$**

#### **BEGINNER ACTION**

##### **CHEMIST | KIT | MANIPULATE**

**Requirements** You have a free hand.

**Targets** 2 creatures within your reach, or 1 creature and an adjacent 1 meter-wide section of wall

**Duration** 1 round or until the bond is broken

You bond the targets together like atoms in a molecule. The targets gain a +2 bonus to defenses against effects that would forcibly move them or make them prone. The bond breaks if they become separated by more than 1 meter.

**Special** When you Create Bond, you can spend 1 Flow Point to extend the duration to 1 minute.

#### **CUSTOMIZE VITAMER $\Delta$**

#### **BEGINNER ACTION**

##### **CHEMIST | DESIGN | KIT | MANIPULATE**

**Prerequisites** organic chemistry specialization

**Requirements** You have a free hand.

You create subtle variations in the properties of a vitamin to meet a challenge. Name a specific ability or effect that you or an ally has identified or experienced, and describe how your vitamer helps a creature resist the effect. As part of this action, you can administer the vitamer to a creature within your reach, or you can administer it later using the Manipulate an Item action. For 1 minute after administration, that creature gains a +1 bonus to their defenses against the ability or effect. Your GM can increase the bonus to +2 if your description is particularly relevant to a Eureka Rubric associated with the ability or effect.

#### **KINETIC ENERGY TRANSFER $\Delta$**

#### **BEGINNER ACTION**

##### **CHEMIST | VELOCITY**

**Prerequisites** physical chemistry specialization

**Range** 10 meters; **Targets** 2 creatures, at least one of which must be willing

**Defense** Fitness check vs. your key attribute DC

You set up an elastic collision between two creatures. Choose a willing creature within range. They immediately Stride a number of meters up to your key attribute modifier. They must end their movement adjacent to another creature. The second creature is then pushed up to the same distance as the first creature's Stride. This is forced movement. If the second creature is unwilling, they can attempt a Fitness check against your key attribute DC.

**Critical Success** The creature is not moved.

**Success** The creature is moved half the maximum distance in a direction away from the first creature. If their movement is obstructed, they take bludgeoning damage equal to your level.

**Failure** As success, but they move the maximum distance.

## MATERIAL ADVANTAGE Δ

## BEGINNER ACTION

### CHEMIST | KIT | MANIPULATE

**Requirements** You have a free hand.

You identify the properties of a material to establish an advantage. Target an object primarily made of a material you have identified or recognized. Choose one of the following properties to describe this material. If you are correct, you apply the listed effect for 1 round. You can extend all your Material Advantages for 1 round by Manipulating your kit.

**Absorptive** A creature wearing or holding the object gains weakness to sonic damage equal to your level.

**Corrosive** A creature wearing or holding the object gains weakness to acid damage equal to your level.

**Elastic** When a creature wearing or holding the object is forcibly moved, increase the maximum distance by 2 meters.

**Electrical Conductor** A creature wearing or holding the object gains weakness to electricity damage equal to your level.

**Magnetic** A creature wearing or holding the object takes a -2 penalty to defenses against magnetic effects.

**Thermal Conductor** A creature wearing or holding the object gains weakness to cold and fire damage equal to your level.

**Viscous** A creature wearing or holding the object takes a -2 meter penalty to movement.

## METAL DEPOSITION Δ

## BEGINNER ACTION

### CHEMIST | KIT | MANIPULATE

**Prerequisites** inorganic chemistry specialization

**Requirements** You have a free hand.

**Targets** 1 creature within your reach

**Duration** 1 round

You apply a layer of metal to the target. They can attempt to avoid Metal Deposition by succeeding at an Agility check against your key attribute DC. While the layer is applied, they gain a bonus to defenses against physical damage and take a penalty to defenses against acid, cold, electricity, electromagnetic, and fire effects. If the target is an ally, the bonus is +2 and the penalty is -1. If the target is an enemy, the bonus is +1 and the penalty is -2.

**Special** When you use Metal Deposition, you can spend 1 Flow Point to extend the duration to 1 minute.

## POLYMER CHAIN ΔΔ

## BEGINNER ACTION

### CHEMIST | KIT | MANIPULATE | TRAVERSAL

**Prerequisites** organic chemistry specialization

**Requirements** You have a free hand.

**Duration** 1 round or until the polymer is cut

You quickly spin out a chain of macromolecules to connect 2 willing creatures together with a long polymer chain. The 2 creatures must be within your reach but you can Stride as part of this action to attach the chain to them. A creature can have up to 1 polymer chain attached to them at a time. While the polymer chain is in place, when one of the creatures moves in a direction that would increase the distance between them, the other creature moves the same distance in the same direction.

Your polymer chain can be cut with an attack that deals slashing damage, using your key attribute DC as the defense against the attack roll. It has Hit Points equal to 5 times your level.

**Special** When you use Polymer Chain, you can spend 1 Flow Point to extend the duration to 1 minute.

## TENACIOUS MANIPULATION ΔΔ

BEGINNER ACTION

### CHEMIST | KIT | MANIPULATE

**Prerequisites** inorganic chemistry specialization

**Requirements** You have a free hand.

Using your knowledge of material properties and deft handiwork, you alter the shape or structure of a piece of material within your reach. The material must be unattended or held by a creature willing to help you, and it can have a mass up to a number of kilograms equal to your level. The changes you can apply are based on the material's tenacity as follows:

**Brittle** You break the material up into powder.

**Ductile** You pull the material to bend, deform, or stretch it without breaking.

**Malleable** You compress the material into a thin sheet.

**Sectile** You cut the material into thin slices.

## TREAT SURFACE Δ

BEGINNER ACTION

### CHEMIST | KIT | MANIPULATE | MISHAP

**Prerequisites** physical chemistry specialization

**Requirements** You have a free hand.

**Duration** 1 minute

You adsorb reactants onto a 1-meter square of ground, floor, or wall within your reach. When you Activate a Chemical Reaction and the target is on this square or adjacent to this wall, they roll twice and take the worse result. The target then becomes wise to your chemical trickery, making them immune to your Treat Surface for 1 hour.

**Special** When you use Treat Surface, you can spend 1 Flow Point to adsorb reactants onto a 5-meter square.

## Advanced Chemist Abilities

You can choose advanced chemist abilities starting at 4th level.

## DECOMPOSITION REACTION

ADVANCED ABILITY

### CHEMIST

You can set up chemical reactions that break down substances into their constituent elements. When you use Prepare Chemical Reaction and target a creature whose body or equipment is primarily made of a substance you have identified, you can choose the following reaction property.

**Decomposition** (Fitness) The identified substance begins to break down. Choose a damage type. The target takes 1d6 acid damage for every odd level you have, and then gains weakness equal to twice your level to the type of damage you chose. If you applied the reaction to the target's equipment, they lose the weakness if they drop their equipment.

## HEAT SINK Δ OR ↩

ADVANCED REACTION

### CHEMIST | DESIGN | KIT

**Targets** 1 ally and 1 enemy you can see

**Duration** see text

You set up a transfer of thermal energy from one creature to another. Choose cold or fire damage, and choose one ally and one enemy. Describe how you redirect thermal energy between them.

**Solved** For 1 minute, the ally gains resistance to the chosen damage type equal to twice your level. When they take this damage, half the resisted amount is applied to the enemy.

**Partially Solved** As solved, but your Heat Sink ends after 1 round.

**Unsolved** Your ally gains a +2 bonus to their defenses against cold and fire damage for 1 round.

**Special** You can use this action as a reaction with the following trigger: A creature you can see takes cold or fire damage.

**SCATTERING CLOUD ↺****ADVANCED REACTION****CHEMIST | KIT | MANIPULATE**

**Trigger** A creature uses an area effect and you are in the area.

**Requirements** You have a free hand.

You disperse reagents into the air to lessen the impact of an encroaching effect. Describe what your Scattering Cloud is made of and how it protects creatures from the triggering effect. Creatures within 2 meters of you gain a +1 bonus to their defenses against the triggering effect. Your GM can increase the bonus to +2 if your description is particularly relevant to the creature's Eureka Rubric.

**Special** When you use Scattering Cloud, you can spend 1 Flow Point to grant the bonus to creatures within 5 meters of you. Any damage dealt by the triggering effect takes a penalty equal to the number of damage dice rolled.

**Pinnacle Chemist Abilities**

You can choose pinnacle chemist abilities starting at 7th level.

**BINDING EQUILIBRIUM ΔΔ****PINNACLE ACTION****CHEMIST | KIT | MANIPULATE | TRAVERSAL**

**Range** 10 meters; **Targets** 1 creature not already affected by your Binding Equilibrium

**Defense** Fitness check vs. your key attribute DC; **Duration** 1 minute

You set up a potential energy between yourself and the target that attracts and repels them in an effort to maintain a constant distance. When the target Strides and the movement would make them closer to you or farther away from you, they must attempt a Fitness check against your key attribute DC. They attempt this check only once per Stride action.

**Critical Success** No effect.

**Success** The target treats all remaining spaces in this Stride as difficult terrain.

**Failure** The target treats all remaining spaces in this Stride as greater difficult terrain.

**Critical Failure** The Stride action is disrupted.

**CHAIN REACTION****PINNACLE ABILITY****CHEMIST**

You can unleash one reaction after another. When you Activate a Chemical Reaction, you can choose to activate all chemical reactions you have applied to the target and to all creatures adjacent to the target. If you do, all targets suffer the same activation effect and take a -2 penalty to their check. Additionally, if any of your allies has a chemical reaction applied to any of these targets, they can each use their ↺ to Activate one Chemical Reaction applied to one of the targets, with the same activation effect and penalty.

**GM ADVICE**

A player with a chemist hero is likely to split their "time in the spotlight" between their turn and one of your creature's turns. This means their turn is likely shorter, and the dramatic actions your creatures are taking are likely to be interrupted. This is okay! The creature that a chemist targets with a chemical reaction is likely aware of the pending chemical reaction on their person and can change their plans accordingly, either trying to avoid the established trigger or Manipulating the chemicals to free themselves. Keep in mind that the chemist gives up immediacy of this ability to attempt to influence the target's choices.

## Computer Technician

In many locales in *Adventures with Emmy*, computer technicians are received like mages. The technology is more advanced for their time, so let's live in a world where perhaps Charles Babbage's analytic engine was built and advanced quickly.

Some of this field's abilities are written around the concepts of computing technology but not necessarily using a physical computer. Several of the concepts highlight principles of the computing field that are not dependent on technology but rather facilitated by it. A computer technician can synergize these concepts with whatever level of technology they have access to.

The computer technician's core ability is the Research Platform which hands out temporary and lingering Flow points, representing how computers are a tool for humans to use. Other abilities focus on how people interact with them trying to incorporate those non-functional considerations. Flow management is a key component of the character and more complicated than other fields, so it might help to have a few counters of different colors on hand.

### Computer Technician Field Progression

You gain the following benefits at each of the listed levels.

| AT THIS LEVEL... | ...YOU GAIN...   |
|------------------|--|
| 1                | key attribute, background, attribute boosts, computer technician ability, computer technicians's kit, computer technician's specialization, investigate, repertoire, research platform, threshold monitoring |
| 2                | archetype ability, scope creep, computer technician ability, all attributes +1   |
| 3                | general ability, computer technician ability, all attributes + 1, 2 additional attribute boosts  |
| 4                | advanced computer technician, archetype ability, computer technician ability, all attributes +1  |
| 5                | general ability, computer technician ability, continuous testing, all attributes + 1   |
| 6                | archetype ability, computer technician ability, all attributes +1, 2 additional attribute boosts   |
| 7                | general ability, computer technician ability, pinnacle computer technician, all attributes + 1   |
| 8                | archetype ability, continuous integration, computer technician ability, all attributes +1  |
| 9                | general ability, computer technician ability, all attributes + 1, 2 additional attribute boosts  |
| 10               | archetype ability, continuous deployment, computer technician ability, all attributes +1   |

Computer Technician Progression Table

#### KEY TERMS

**Temporary Flow Points** Temporary Flow Points count toward the usual limit of 3 Flow Points per hero, but are tracked separately. A temporary Flow Point is lost at the end of the next turn of the player who awarded it, if not spent.

**Lingering Flow Points** Lingering Flow Points cannot be spent but count towards any abilities that require having a certain number of Flow Points. They have a set duration defined in the action that granted them. A hero is still limited to 3 Flow Points. If at any point the sum of your normal and Lingering Flow Points exceeds three, the Lingering Flow Points drop first.

### Getting Started as a Computer Technician (1st Level)

This section guides you through the essential features of creating and playing a computer technician at 1st level.



**Key Attribute** Your key attribute is Awareness. Increase this attribute modifier by +2 at 1st level. You gain 2 boosts to this attribute at 1st level.

**Background and Attribute Boosts** At 1st level, you gain a background and one boost to two attribute boosts of your choice (see [Chapter 1.4](#) for backgrounds). When you're finished with creating a 1st-level hero, your attribute modifiers should all add to 10, with no modifier greater than +5.

**Hit Points** You begin play with a maximum number of Hit Points equal to 10 + your Fitness modifier.

**Repertoire** You gain a Repertoire of abilities, which represents the collection of knowledge and skills you have developed over the course of your adventure. Your Repertoire starts with all [basic actions](#) included.

**Investigate** Add the Investigate action to your Repertoire. You use this process to learn about your surroundings and prepare for upcoming combat encounters.

## INVESTIGATE

## FIELD ACTION

### COMPUTER TECHNICIAN | HYPOTHESIS

**Time** 10 minutes or longer (per GM discretion)

You apply a combination of inductive and deductive reasoning to information that you believe requires an explanation. This information could take one of many forms: You might make an observation, examine a piece of material, review documents, follow up on a rumor, or collect information from a witness or expert. Your GM can tell you if the subject of your investigation is a spurious line of inquiry before you invest the time in this action, or they can suggest a modification to your investigation to make it more beneficial to progressing your adventure. Work with your GM to determine what tools you need to carry out your investigation and how long this process takes. Then, record in your notes a hypothesis that explains the information you have Investigated.

When you roll initiative, you can choose one creature you can see and one hypothesis you have recorded using the Investigate action. Ask your GM if this creature is related to this hypothesis. If it is, you gain 1 Flow Point, regardless of whether the hypothesis is correct. At the start of your turn during this encounter, you can spend 1 Flow Point to become quickened for the turn and use the extra  $\Delta$  to Stride toward the chosen creature. This effect has the traversal trait.

**Extract (Computer Technician)** When you Investigate, choose yourself or an ally who made a hypothesis related to your research topic. The chosen creature can gain one additional temporary Flow Point related to your research topic today.

**Research Platform** You've developed a system for ongoing research. Depending on your specialization, this platform may be driven more by complex algorithms, intense data management, powerful hardware structures, or clever architectures and designs. This Research Platform is a foundation to enable future capabilities for your team.

During your daily preparations, identify a topic of research to pursue. This could be a person, a new scientific discovery, a location, a creature, a building, famous formulas, geographical points of interest, etc etc. You can ask your GM if you can postpone this until after any morning mission briefs. You gain a +1 bonus to Recall Knowledge (ask the GM a question about information your computer technician may already know, usually requiring an Awareness check) or Search checks for your research topic.

When you or an ally uses an action related to your research, you grant them 1 temporary Flow Point. Temporary Flow Points count toward the usual limit of 3 Flow Points per hero, but are tracked separately. A temporary Flow Point is lost at the end of the computer technician's next turn if not spent. Individuals cannot gain Flow Points more than once for the same topic of research per day, unless further research abilities say otherwise. This ability can be used multiple times in a day if a new entity still related to the topic of your daily research is revealed.

**Threshold Monitoring** Through your careful monitoring of your research system, you are the first to notice if the team has hit a Eureka Threshold. Once per round, you can ask your GM if you and your allies have reached a Eureka Threshold. If so, all players receive their Flow Point immediately instead of at the end of the round. Players can choose to go to Review at the end of the current turn or wait until the end of the round as usual.

**Computer Technician's Kit** At 1st level, the Noether Society provides you with a kit. Your kit provides you with equipment you need to carry out your computer technician's abilities and build your Research Platform. Your kit includes but is not

limited to portable computational devices, wearables, cables, cords and fiber, microphones, headphones, graph paper, writing implements, and reference books. You never need to purchase equipment for your kit, and any components of your kit that you lose, the Noether Society replaces. When using your kit as part of an ability, you describe what equipment you use and how you use it. Even when not using a specific ability, you can incorporate your kit into descriptions of what you do and how you interact with your surroundings. Under usual gameplay circumstances, it is assumed that you have your kit with you, but in some rare circumstances, you might not have immediate access to your kit. In such circumstances, your GM should communicate to you how to regain access.

You know how to use larger computer technician equipment that you might find in a datacenter, or a lab, or a closet like servers, network gear, and storage devices, but these are too large to carry around.

Some computer technician abilities expand the contents of your kit and what you can do with your kit. When you gain abilities from an archetype, your kit expands to include the necessary equipment, or you can improvise how to carry out those abilities using your chemistry equipment.

In your journeys, you might also gain specific items that you purchase or find. Items might provide specific bonuses to your attributes or offer special actions you can use, going beyond the capabilities of your kit. When describing how you use your kit, you can also integrate the use of an item, but items are never considered part of your kit and are tracked separately in your inventory.

#### DESIGN ACTIONS

**Design** Some actions require you to describe a design you build or enact to solve a problem during the current encounter. When you describe a design, you express to your GM the problem you want to solve and how the design solves it. You might attempt to move a heavy object using a lever or melt an ice elemental by positioning them near a heat source. This process is open-ended and results in you effecting some change in the encounter. Your GM responds to your design with one of the following outcomes:

Solved (your design appropriately addresses the problem),

Partially Solved (your design helps address the problem but is missing something important), or

Unsolved (your design is irrelevant to the problem).

Design actions offer benefits based on these outcomes, so it's always worthwhile to use these actions. Even an unsolved outcome produces a benefit! If your design is particularly relevant to an element of the Eureka Rubric, your GM might give you relevant information that your hero learns, or even advance your group to the next Eureka Threshold. Your GM might determine that your design requires additional time to enact. If so, you can spend additional  $\Delta$ s to enact your design before resolving the outcome. You usually only enact each design once, but you can refine a design on subsequent actions.

**Streaming Blast** Add Streaming Blast to your Repertoire. This is your primary offensive ability as a computer technician.

#### STREAMING BLAST $\Delta$

#### FIELD ACTION

**BLAST | COMPUTER TECHNICIAN | KIT | MENTAL**

**Range** 5 meters; **Targets** 1 creature

**Offense** Awareness check vs. the target's Agility DC

You inundate your opposition with torrents of data, complex code, abundant visuals, or even the magnificence of your specifications. Make an Awareness check against the target's Agility DC.

**Critical Success** As success, but double the damage.

**Success** You deal 1d6 of mental damage every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well.

#### Computer Technician Specialization

Choose a computer technician specialization. The following are available in this book, and more will be available in future books.

- **Computer Scientist** Algorithmically driven. They understand the language of computing, but more importantly how to analyze a situation and create the methods to solve problems. Computer Scientists will program, put together models, manage data structures, and draw from a dearth of libraries and algorithmic knowledge while incorporating non-functional concerns like accessibility, performance, and even ethical or diversity considerations. Add Refine Analysis to your Repertoire. When you use Streaming Blast, you can choose to deal sonic damage instead of mental, focusing the torrent of information into percussive bursts.
- **Cyber Operative** Risk driven. Cyber operatives are the guardians who've learned the way of adversaries, anticipating the moves of bad actors and how to counter them in a cyber landscape. The keepers of cryptography, they have a toolbox of digital imperatives and control patterns, for but more importantly behaviors, monitoring, and recourse to aid in their constant practice of vulnerability management. It's simply a matter of picking where best to focus one's energy, and where to accept risk. Add Allied Connections to your Repertoire. When you use Streaming Blast, you can choose to deal poison damage instead of mental, fixating your attack on the target's weakest points.
- **Information Technologist** Configuration driven. They create environments, using their breadth of knowledge across hardware, networking, data, and human interactions. They are our oracles, running our centers of knowledge with heads in the cloud, and rivers of network flowing through their finger tips. Or perhaps the LAN, connecting locals for a friendly game. And sometimes even that person willing to troubleshoot your equipment. They are the heroes we don't deserve. Add Data Dispatch to your Repertoire. When you use Streaming Blast, you can choose to deal electricity damage instead of mental, wiring the target directly to your information source.
- **Software Engineer** Description driven. Their trenches are the consumers, balancing process and design with an especial focus on separating needs from wants, and conceiving the best way to achieve that within active constraints and opportunities. They apply their portfolio of design patterns, architectures, and heuristics. Add Team Diagramming to your Repertoire. When you use Streaming Blast, you can choose to deal slashing damage instead of mental, firing off shards of data at the target.

### Computer Technician Abilities (Every Level)

At 1st level and every level thereafter, choose one computer technician ability to gain. Some abilities add a new action or reaction to your Repertoire, others enhance actions you already have. At 1st level, you can choose from the beginner computer technician abilities. Starting at 4th level, you can also choose advanced computer technician abilities. Starting at 7th level, you can also choose pinnacle computer technician abilities.

### Hit Point Increases (2nd-10th Levels)

Each time you level up, increase your maximum number of Hit Points to a new value of  $(10 \times \text{your level}) + \text{your new Fitness modifier}$ . Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level.

### Archetype Abilities (2nd, 4th, 6th, 8th, 10th Level)

At 2nd level, you begin following an archetype that represents your career choices, academic interests, or hobbies. An archetype is a collection of abilities that anyone can draw from if they meet the Prerequisites. At 2nd level, choose an archetype dedication ability you have access to and meet the Prerequisites for. You gain this dedication ability. At 4th level and every 2 levels thereafter, you gain another archetype ability. Each time, you can continue to gain abilities from the same archetype, or you can choose a dedication from a different archetype that you have access to and meet the Prerequisites for. Archetypes are detailed in [Chapter I.8](#).

## Scope Creep (2nd Level)

You can take 10 minutes to Expand the Scope of your research. This adds an additional topic to your Research Platform for the day which means multiple topics can potentially produce more Flow Points for your team.

## Attribute Boosts (3rd, 6th, 9th Level)

Throughout your adventures, you further develop your foundational capacities. At every level, increase all your attribute modifiers by 1 to factor in your new level. At 3rd, 6th, and 9th level, you also gain 2 boosts to apply to 2 different attributes of your choice. Update the number of boosts and your level in your hero sheet to track these choices. You can consult the [Attribute Modifier Progression Table](#) to check that you have applied all the appropriate attribute boosts.

## General Abilities (3rd, 5th, 7th, 9th Level)

Throughout your adventures, you grow as a person in addition to learning more about computing. These personal developments are represented by general abilities. At 3rd level and every two levels thereafter, choose a general ability. General abilities are found in [Chapter I.5](#). Many general abilities are also granted by backgrounds, which you can use to help choose general abilities that are thematically appropriate for your character.

## Advanced Computer Technician (4th Level)

All those postmortems have paid off and you have a greater knowledge of computing. Starting at 4th level, you can choose advanced computer technician abilities.

## Continuous Testing (5th Level)

After each encounter during a day, feedback is reincorporated into your Research Platform. You gain 1 Linger Flow Point until you hand out a Flow Point, or the end of the next encounter.

## Pinnacle Computer Technician (7th Level)

You've been in the industry so long you've developed your own set of heuristics. Starting at 7th level, you can choose pinnacle computer technician abilities.

## Continuous Integration (8th Level)

You can Expand the Scope of research during encounter.

## Continuous Deployment (10th Level)

Everyone gains +1 Linger Flow Point, until you hand out a flow point, or the end of the next encounter.

### *Computer Technician Abilities*

At each level, add one of the following abilities to your Repertoire.

## Beginner Computer Technician Abilities

You can choose beginner computer technician abilities at any level.

### ADAPTIVE ACTION ΔΔ

### BEGINNER ACTION

### COMPUTER TECHNICIAN | DESIGN | INTENSIVE | KIT

**Targets** 1 ally

Incorporating observations of your allies and the topics of your research platform, you design an adapter to make one of your ally's actions more effective against the creature or hazard.

**Solved** One ally's action deals a type of damage you choose for the remainder of the encounter. If it previously dealt multiple types of damage, only one type is replaced.

**Partially Solved** As solved, but it is only for the next use of the attack or action.

**Unsolved** The GM confirms the topic creature's weakness if the party did not identify it correctly. The target ally can make a blast as a reaction.

## ALLIED CONNECTIONS ΔΔ

## BEGINNER ACTION

### COMPUTER TECHNICIAN | KIT

**Prerequisites** cyber operative specialization

**Range** 5 meters; **Targets** 1 ally

**Defense** Awareness check vs. your Awareness DC; **Duration** 1 round or more

You set up a secure connection between yourself and 1 ally within 5 meters, making it difficult for others to interrupt your connection. Interrupting your connection includes attacking, taking any action that requires a check of you, or moving between you. They must make an Awareness check against your Awareness DC or become hampered for 1 round. If they attempt any qualifying actions and fail again, increase the number of rounds they are hampered by 1.

**Flow** You may expend any number of Flow Points to extend this effect for that number of rounds.

## CONTINUED FLOW Δ

## BEGINNER ACTION

### COMPUTER TECHNICIAN | REVIEW

**Requirements** Your ally has one or more temporary Flow Points

**Targets** 1 ally

Extend the duration of 1 ally's temporary Flow Point by 1 round.

## CORRECT ADDRESSING Δ

## BEGINNER ACTION

### COMPUTER TECHNICIAN

**Prerequisites** information technologist specialization

**Targets** 1 creature or hazard

There is power in knowing someone's true name. If you can correctly address the creature or hazard you gain +2 on the next action or check against it.

**Flow** You can expend 2 Flow Point to ask the GM if the entity didn't have a name before you used this action. If true, you name the entity yourself and gain +1 on attacks and checks for the remainder of the encounter. This gains the intensive trait.

## DATA DISPATCH ΔΔ

## BEGINNER ACTION

### COMPUTER TECHNICIAN | DESIGN | MANIPULATE | INTENSIVE | KIT

**Prerequisites** information technologist specialization

**Requirements** You have a free hand.

You create a design to digitize information into text, graphics, (or more depending on Flow Points) and transmit it somewhere else. When in an encounter, state a problem and a design to your GM related to the encounter's Eureka Rubric, including a benefit for the solved outcome, such as a +2 bonus to a type of attribute check or inflicting inhibited 2 on enemies who fail at an Awareness check against your Awareness DC. Your GM tells you one of the following results. Outside of encounters this could also be used as a utility with any adjustments to the results at the GM's discretion.

**Solved** Information is encoded in any format you wish to any distance you identify. You achieve the designed effect for 1 minute.

**Partially Solved** Information can be transmitted no further than the vicinity of the encounter, or shorter at the GM's discretion. You achieve the designed effect with a lower numerical value.

**Unsolved** You Expand the Scope of your research (see scope creep). If this wasn't a new topic, the outcome still applies.

**Flow** The number of Flow Points you have determines what types of data you can send. You can always send text and graphics. Flow 1: audio. Flow 2: video. Flow 3: The media can become interactive. You can describe your design accordingly.

#### DEBUGGING DELIVERIES ↩

BEGINNER REACTION

##### COMPUTER TECHNICIAN

**Requirements** An ally's hypothesis is ruled partially correct or incorrect, or their design does not fully address the problem.

**Targets** the triggering ally

When an ally is not successful in pursuing their inquiries, you can help them troubleshoot. They gain a temporary Flow Point that must be used before the end of your next turn to assist with researching or attempting again. If their hypothesis was partially correct or their design partially solved the problem, they may also choose to get the incorrect or unsolved effects for their hypothesis or design action.

#### HEALING FLOW

BEGINNER ABILITY

##### COMPUTER TECHNICIAN

When you or your ally's temporary Flow Point expires, the creature regains Hit Points equal to your level multiplied by your remaining number of Flow Points.

#### IN THE CLOUDS

BEGINNER ABILITY

##### COMPUTER TECHNICIAN

You and your Research Platform do not suffer from the jumbled condition. When starting an encounter, you go last in initiative. Any effects that could modify initiative happen after this ability.

#### INQUISITIVE FLOW Δ

BEGINNER ACTION

##### COMPUTER TECHNICIAN

**Requirements** Your allies have 1 or more temporary Flow Points.

Each of your allies can spend 1 temporary Flow Point to Recall Knowledge or Search for something related to your daily topic of research.

#### MALLORY IN THE MIDDLE Δ

BEGINNER ACTION

##### COMPUTER TECHNICIAN

**Prerequisites** cyber operative specialization

**Targets** 1 creature in between you and an ally and within reach of both of you

**Offense** Fitness check vs. the target's Agility DC

You wish to rid yourself of the malicious creature between yourself and your ally. Attempt a Fitness check against the target's Agility DC. If you succeed, you swap positions with the target so they are no longer between you and your ally.

**Flow** If you were successful, you can expend 1 Flow Point to make a blast against the creature without using any Δs.

#### RECURSIVE PERFORMANCE Δ

BEGINNER ACTION

##### COMPUTER TECHNICIAN | INTENSIVE

**Frequency** once per encounter

**Targets** self

**Duration** 1 round

When you perform the same action that involves a roll (a blast, a check, etc) you gain a +1 bonus.

**Flow** You can spend 1 Flow Point to continue this effect an additional round. On the second round you can spend 2 Flow Points to continue it a third round. On the third round you can spend 3 Flow Points to continue the effects for a fourth and final round.

#### REFINE ANALYSIS Δ

BEGINNER ACTION

##### COMPUTER TECHNICIAN | INTENSIVE

**Prerequisites** computer science specialization

**Targets** 1 ally or yourself

You refine the scope of your Research Platform. You gain the results of research even if it's for the same entity during the same encounter. Enemies or hazards become vulnerable 2 against the target for 1 round, and vulnerable 1 against the target for the next round. This effect ends if you Expand the Scope or use Refine Analysis again.

**Flow** For each Flow Point you spend you can extend this effect an additional round.

#### TEAM DIAGRAMMING Δ

BEGINNER ACTION

##### COMPUTER TECHNICIAN | INTENSIVE | LINGUISTIC

**Prerequisites** software engineering specialization

**Targets** 2 allies

You outline an optimal pathway for your allies to proceed. Two allies can Stride without using any Δs.

**Flow** You can spend 1 Flow Point to force an enemy to move up to half their usual Stride distance. They must succeed at a Fitness check against your Awareness DC to avoid the effect. Then, for each Flow Point you have, you may target 1 additional ally to Stride half their usual distance.

#### TIGHT COUPLING ΔΔ

BEGINNER ACTION

##### COMPUTER TECHNICIAN

**Requirements** You have a free hand.

**Targets** 2 creatures with 2 meters of each other, each within your reach

You shove one target into the other and then blast the shoved target. You can follow through to be adjacent to the shoved creature, or make the blast with 1 meter additional reach. If you hit, the second creature takes half damage.

#### Advanced Computer Technician Abilities

You can choose advanced computer technician abilities at level 4 and above.

#### RECURSIVE PARTY

ADVANCED ABILITY

##### COMPUTER TECHNICIAN

**Prerequisites** Recursive Performance

Your Recursive Performance action can now target an ally. Extending its duration is still dependent on the number of Flow points you have.

#### Pinnacle Computer Technician Abilities

You can choose pinnacle computer technician abilities starting at 7th level.

#### GM ADVICE

Computer technicians complicate Eureka Rubrics. Due to Threshold Monitoring be sure to call out when your players reach a Eureka Threshold immediately. Computer technicians also have the concept of the effect of Flow Points without actually having them available to use them. A Computer Technician may lose track of how much Flow Points they have since they essentially have two pools. At level 10 everyone gains this ability.



**Have fun:** While the computer technician field is written around computers being a not yet a ubiquitous technology in the era of Adventures with Emmy, so consider explicitly mentioning computing when a computer technician is in your party. Otherwise, be sure to support their Research Platform ability; potentially reminding them at the start of the day what their topic.

**Learn Together:** If the party looks a little lost on the next direction for the adventure you could potentially suggest options for Scope Creep. When an ally is working on a hypothesis, investigation, or design that could benefit from some Flow, maybe remind them if it's related to any of the computer technician's research topics.

## Engineer

The engineers in the world of Adventures of Emmy are scrappers, using their ingenuity to craft creations from what the environment presents, as a modern day engineer builds upon the science of their peers. They use keen awareness to look for opportunities to help allies or hinder foes across the battlefield. Engineers follow a rigorous process in order to bring designs to life, collecting a variety of blueprints to add to their Repertoire in addition to abilities.

Early in an encounter, you're likely prototyping with your allies as you learn more about the situation to figure out the most appropriate designs to pull off, and how best to make your delivery successful.

### Engineer Field Progression

You gain the following benefits at each of the listed levels.

| AT THIS LEVEL... | ...YOU GAIN...   |
|------------------|--|
| 1                | key attribute, background, attribute boosts, engineer ability, engineer's kit, engineering specialization, fabrication, gather requirements, prototyping |
| 2                | archetype ability, scope constraints, engineer ability, all attributes +1  |
| 3                | general ability, engineer ability, all attributes + 1, 2 additional attribute boosts   |
| 4                | advanced engineer, archetype ability, engineer ability, all attributes +1  |
| 5                | general ability, engineer ability, risk's reward, all attributes + 1   |
| 6                | archetype ability, engineer ability, all attributes +1, 2 additional attribute boosts  |
| 7                | general ability, engineer ability, pinnacle engineer, all attributes + 1   |
| 8                | archetype ability, performance criteria refinement, engineer ability, all attributes +1  |
| 9                | general ability, engineer ability, all attributes + 1, 2 additional attribute boosts   |
| 10               | archetype ability, concurrent invention, engineer ability, all attributes +1   |

Engineer Progression Table

### Getting Started as an Engineer (1st Level)

This section guides you through the essential features of creating and playing an engineer at 1st level.

**Key Attribute** Your key attribute is determined by your engineering specialization. You gain 2 boosts to this attribute at 1st level.

**Background and Attribute Boosts** At 1st level, you gain a background and one boost to two attribute boosts of your choice (see [Chapter 1.4](#) for backgrounds). When you're finished with creating a 1st-level hero, your attribute modifiers should all add to 10, with no modifier greater than +5.

**Hit Points** You begin play with a maximum number of Hit Points equal to 10 + your Fitness modifier.

**Repertoire** You gain a Repertoire of abilities, which represents the collection of knowledge and skills you have developed over the course of your adventure. Your Repertoire starts with all [basic actions](#) included.

**Investigate** Add the Investigate action to your Repertoire. You use this process to learn about your surroundings and prepare for upcoming combat encounters.

INVESTIGATE

FIELD ACTION

ENGINEER | HYPOTHESIS

**Time** 10 minutes or longer (per GM discretion)

You apply a combination of inductive and deductive reasoning to information that you believe requires an explanation. This information could take one of many forms: You might make an observation, examine a piece of material, review documents, follow up on a rumor, or collect information from a witness or expert. Your GM can tell you if the subject of your investigation is a spurious line of inquiry before you invest the time in this action, or they can suggest a modification to your investigation to make it more beneficial to progressing your adventure. Work with your GM to determine what tools you need to carry out your investigation and how long this process takes. Then, record in your notes a hypothesis that explains the information you have Investigated.

When you roll initiative, you can choose one creature you can see and one hypothesis you have recorded using the Investigate action. Ask your GM if this creature is related to this hypothesis. If it is, you gain 1 Flow Point, regardless of whether the hypothesis is correct. At the start of your turn during this encounter, you can spend 1 Flow Point to become quickened for the turn and use the extra  $\Delta$  to Stride toward the chosen creature. This effect has the traversal trait.

**Match Heuristic (Engineer)** When you Investigate a target that might eventually need to be overcome (a creature, hazard, terrain, feature of nature, a person, etc) you take note of your experiences and try to deduce how you might approach overcoming it in the future. Record this note. When performing actions against this target, you may expend a flowpoint to:

- Roll twice and take the higher result. This is an edge effect.

**Engineer's Kit** At 1st level, the Noether Society provides you with a kit. All engineers are assumed to have simple tools such as hammers, screw drivers, binding agents, something to separate materials, graph paper, writing implements, and reference books. This is part of their kit. However, depending on your specialty, you also have materials to aid in those creations. These enable you to use actions with the fabricate trait when the necessary materials are absent in the environment.

You never need to purchase equipment for your kit, and any components of your kit that you lose, the Noether Society replaces. When using your kit as part of an ability, you describe what equipment you use and how you use it. Even when not using a specific ability, you can incorporate your kit into descriptions of what you do and how you interact with your surroundings. Under usual gameplay circumstances, it is assumed that you have your kit with you, but in some rare circumstances, you might not have immediate access to your kit. In such circumstances, your GM should communicate to you how to regain access.

You know how to use larger engineering equipment that you might find in a lab, like generators or fabricators, but these are too large to carry around.

Some engineering abilities, such as your specialization, expand the contents of your kit and what you can do with your kit. When you gain abilities from an archetype, your kit expands to include the necessary equipment, or you can improvise how to carry out those abilities using your chemistry equipment.

In your journeys, you might also gain specific items that you purchase or find. Items might provide specific bonuses to your attributes or offer special actions you can use, going beyond the capabilities of your kit. When describing how you use your kit, you can also integrate the use of an item, but items are never considered part of your kit and are tracked separately in your inventory.

**Malleable Blast** Add Malleable Blast to your Repertoire. This is your primary offensive ability as a Engineer.

#### MALLEABLE BLAST $\Delta$

#### FIELD ACTION

##### BLAST | ENGINEER | KIT

**Range** 5 meters; **Targets** 1 creature

**Offense** key attribute check vs. the target's Agility DC

You have a weaponized gadget, and each day, you tinker with it to deliver a different damage type. During your daily preparations, choose from one of the following: bludgeoning, piercing, slashing, acid, cold, electricity, fire, sonic, force, mental, poison. When used, this action gains that energy trait.

When you use Malleable Blast, make a check using your key attribute against the target's Agility DC.

**Critical Success** As success, but double the damage.

**Success** You deal 1d6 of your prepared damage choice for every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well.

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## Engineering Specialization

Choose an engineering specialization. This will determine your Prototyping action and what is in your kit driving their fabricate actions. The following are available in this book, and more will be available in future books.

- **Computer Engineer** Computer Engineers bring devices to life, working at the intersection of hardware and software, the physical and the programmable. You're caught lugging around circuits, sensors, and batteries, always on the lookout for your electrical friends. With the right circumstances you know you can create embedded gear, constructs, and networks. Your key attribute is Awareness, and you gain the Iterative Optimization prototype action. When you use Malleable Blast, you can choose to deal mental damage instead of your prepared damage choice.
- **Electrical Engineer** Electrical Engineers are the literal powerhouse, from generation to creation and the perception of the fields in nature. You manage power flows, route circuits, and manipulate electromagnetic fields. You carry wires, cogs, magnets, circuit boards and circuit components, metal scrap, and power sources like batteries and crank generators. Your key attribute is Fitness, and you gain the Sustain Concentration prototype action. When you use Malleable Blast, you can choose to deal electricity damage instead of your prepared damage choice.
- **Mechanical Engineer** Mechanical Engineers are a driving force. You are a maker, and use your expertise in motion, materials, thermodynamics, and fluid mechanics to manufacture the right tool for the job. Your kit would fit in a circus, with enough pulleys, rope, levers, and a hoard of mysterious bottles even you've lost track of what they contain. Your key attribute is Fitness, and you gain the Boost Efficiency prototype action. When you use Malleable Blast, you can choose to deal force damage instead of your prepared damage choice.

**Prototyping** Your specialization gives you an action with the prototype trait. When you prototype, you gain a client that you interact with in subsequent actions. You yourself could be the client, but a client must be willing to receive your help. The creature you designate as your client retains that designation until you prototype again. You may prototype with the same client again to start a new design. Flow Points help you take on more clients. Prototype actions are written with outcomes for a combat encounter, when you design in response to an immediate danger. Prototyping generates a good deal of noise, so if you try to use a prototype action before a combat begins, it usually alerts any hostile creatures. Outside of combat, you can more generally describe devices you build to assist your allies without using a specific prototype action.

### DESIGN ACTIONS

**Design** Some actions require you to describe a design you build or enact to solve a problem during the current encounter. When you describe a design, you express to your GM the problem you want to solve and how the design solves it. You might attempt to move a heavy object using a lever or melt an ice elemental by positioning them near a heat source. This process is open-ended and results in you effecting some change in the encounter. Your GM responds to your design with one of the following outcomes:

Solved (your design appropriately addresses the problem),

Partially Solved (your design helps address the problem but is missing something important), or

Unsolved (your design is irrelevant to the problem).

Design actions offer benefits based on these outcomes, so it's always worthwhile to use these actions. Even an unsolved outcome produces a benefit! If your design is particularly relevant to an element of the Eureka Rubric, your GM might give you relevant information that your hero learns, or even advance your group to the next Eureka Threshold. Your GM

might determine that your design requires additional time to enact. If so, you can spend additional  $\Delta$ s to enact your design before resolving the outcome. You usually only enact each design once, but you can refine a design on subsequent actions.

Engineers as they grow in experience expand their knowledge and refine their design methods. At levels 1, 4, 7, and 10 they gain new actions to aid their design activities.

**Fabrication** When you Recall Knowledge (ask the GM a question about information your engineer may already know, usually requiring an Awareness check) about machines, devices, or traps, you gain a +2 bonus to the Awareness check. Choose one engineer action with the fabricate trait to add to your Repertoire. Actions with the fabricate trait always list at least one specialization. For engineers of those specializations, they do not require materials from the environment to perform the action. It is assumed that the engineer has the materials within the kit granted by their specialization.

**Gather Requirements** In order to make better designs, you need to better understand your client's needs. Once per round, when you use an action to create a design for your client, you can first Search or Recall Knowledge in support of that design without spending any  $\Delta$ s. The action then gains the intensive trait. When making the Awareness check, you may use the higher of your modifier or your client's, or include any of your client's bonuses if they are relevant.

### Engineer Abilities (Every Level)

At 1st level and every level thereafter, choose one engineering ability to gain. Some abilities add a new action or reaction to your Repertoire, others enhance actions you already have. At 1st level, you can choose from the beginner engineering abilities. Starting at 4th level, you can also choose advanced engineering abilities. Starting at 7th level, you can also choose pinnacle engineering abilities.

### Hit Point Increases (2nd-10th Levels)

Each time you level up, increase your maximum number of Hit Points to a new value of  $(10 \times \text{your level}) + \text{your new Fitness modifier}$ . Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level.

### Archetype Abilities (2nd, 4th, 6th, 8th, 10th Level)

At 2nd level, you begin following an archetype that represents your career choices, academic interests, or hobbies. An archetype is a collection of abilities that anyone can draw from if they meet the Prerequisites. At 2nd level, choose an archetype dedication ability you have access to and meet the Prerequisites for. You gain this dedication ability. At 4th level and every 2 levels thereafter, you gain another archetype ability. Each time, you can continue to gain abilities from the same archetype, or you can choose a dedication from a different archetype that you have access to and meet the Prerequisites for. Archetypes are detailed in [Chapter I.8](#).

### Scope Constraints (2nd level)

Understanding your constraints ensures a focus on the possible, and what is in scope for your Designs. When your design, or an action your client takes, would affect an area, you can exclude a number of creatures equal to half your level.

### Attribute Boosts (3rd, 6th, 9th Level)

Throughout your adventures, you further develop your foundational capacities. At every level, increase all your attribute modifiers by 1 to factor in your new level. At 3rd, 6th, and 9th level, you also gain 2 boosts to apply to 2 different attributes of your choice. Update the number of boosts and your level in your hero sheet to track these choices. You can consult the [Attribute Modifier Progression Table](#) to check that you have applied all the appropriate attribute boosts.

## General Abilities (3rd, 5th, 7th, 9th Level)

Throughout your adventures, you grow as a person in addition to learning more about engineering. These personal developments are represented by general abilities. At 3rd level and every two levels thereafter, choose a general ability. General abilities are found in [Chapter 1.5](#). Many general abilities are also granted by backgrounds, which you can use to help choose general abilities that are thematically appropriate for your character.

## Advanced Engineer (4th Level)

With more experience comes the ability to predict and avoid pitfalls. Starting at 4th level, you can choose advanced engineering abilities.

## Risk's Reward (5th Level)

During any encounter in which you've avoided die rolls for at least three rounds, and not been the subject of any mishaps or edges, on your next roll you can roll twice and take the higher result. This is an edge effect.

## Pinnacle Engineer (7th Level)

You've grown and are better able to tease out the appropriate performance criteria to more quickly optimize designs. Starting at 7th level, you can choose pinnacle engineering abilities.

## Performance Criteria Refinement (8th Level)

In situations when a GM would normally determine designs requires additional delta or refinements, they do not.

## Concurrent Invention (10th Level)

Your mastery of the fields of engineering is so thorough you not only know how to construct designs, or pull multiple components together, but become an inventor in your own right, creating unique applications. When Prototyping, you can attempt to create a more complex design by also incorporating the prototyping action of any other engineering specialty. You need to make the check appropriate to the prototype's specialty in order to determine if you've decomposed the component successfully before proceeding to the Design outcomes.

**Two Success** Even if the design would normally be considered irrelevant to the problem, the client receives at least the benefits of partially solved for one of the prototypes for simply how elegant the solution is.

**One Success** At most one design can be solved since the components aren't entirely compatible.

**Two Failures** Neither can be fully solved, but they could be partially solved since some synergy exists to help the other.

## Engineer Abilities

At each level, add one of the following abilities to your Repertoire.

## Beginner Abilities

You can choose beginner engineer abilities at any level.

### BOOST EFFICIENCY Δ

### BEGINNER ACTION

**DESIGN | MANIPULATE | ENGINEER | KIT | PROTOTYPE**

**Prerequisites** mechanical engineering specialization

**Requirements** You have a free hand.

**Range** 10 meters for each of your levels; **Targets** 1 creature

You designate one of your allies as your client. You can be your client. This client designation lasts beyond the duration of the action until you've prototyped again.

You design a system that enables the target to move more efficiently. State a problem and a design to your GM related to the encounter's Eureka Rubric. As part of the design, name an action you'd like the target to take, or a specific goal you'd like them to pursue. Your GM tells you one of the following results.

**Solved.** The target becomes quickened for 1 minute. They can use the extra  $\Delta$  to carry out your named action or in pursuit of your specified goal, as evaluated by your GM.

**Partially solved.** As solved, but the quickened condition lasts for 1 round.

**Unsolved.** The target can immediately Stride without using any  $\Delta$ . This is a traversal effect.

**Flow** You can have 1 additional client if you have any number of Flow Points, for a maximum of 2.

## COMPARATIVE DESIGN $\Delta$

## BEGINNER ACTION

### DESIGN | MANIPULATE | ENGINEER

You never run out of ideas for designs. Use a prototype action. If the result is unsolved, use that prototype action again using the same problem and a different design.

## CREATE SENSOR $\Delta$

## BEGINNER ACTION

### ENGINEER | FABRICATE (COMPUTER) | KIT | MANIPULATE

**Requirements** sensors must be placed at least 2 meters apart.

Sensors allow you to better collect and analyze information about the environment. When placing sensors in combat you rise one slot in the initiative.

## DRILL A PEEK $\Delta$

## BEGINNER ACTION

### ENGINEER | FABRICATE (MECHANICAL) | KIT | MANIPULATE

You assemble a hand drill and drill a hole on a surface within or on an adjacent square. The hole is no deeper than 1 meter, indeed, it is likely considerably shorter. You can use this to collect and retrieve samples of the material or if the surface was thin enough to pierce it.

**Flow** Your GM can determine the surface is too hard to drill, and you can spend Flow Points to account for superior manufacture. If there is a source of electricity in the environment or your kit, this decreases any Flow Point requirements from your GM by 1.

## ELECTRO-COMBUSTION $\Delta\Delta$

## BEGINNER ACTION

### ENGINEER | FABRICATE (ELECTRICAL) | KIT | MANIPULATE | VELOCITY

**Range** 10 meters; **Targets** 1 or more enemy in water or touching a vessel of water

Spotting enemies in or near water and an available power source, you set forth to connect the two. Each target takes 1d6 bludgeoning damage, plus an additional 1d6 per level you have.

## ITERATIVE OPTIMIZATION $\Delta$

## BEGINNER ACTION

### DESIGN | MANIPULATE | ENGINEER | KIT | PROTOTYPE

**Prerequisites** computer engineering specialization

**Requirements** You have a free hand.

**Range** 10 meters for each of your levels; **Targets** 1 creature

You designate one of your allies as your client. You can be your client. This client designation lasts beyond the duration of the action until you've prototyped again.

You prototype a design with your client that enables the target optimize their capabilities for the right moment. State a problem and a design to your GM related to the encounter's Eureka Rubric. As part of the design, name an action you'd like the client to take, or a specific goal you'd like them to pursue. Your GM tells you one of the following results.

**Solved.** The client gains edge for one type of check against one type of DC for 1 minute. The GM determines which is most optimal for one of them, you choose for the other.



**Partially solved.** As solved, but the edge lasts for 1 round.

**Unsolved.** On the client's next check they roll twice and take the higher result. This is an edge effect.

**Flow** You can have 1 additional client if you have any number of Flow Points, for a maximum of 2.

#### LEVERAGE FORCE Δ

#### BEGINNER ACTION

**FABRICATE (MECHANICAL) | FORCE | KIT | MANIPULATE**

**Targets** 1 creature or object

**Range** 30 meters for each of your levels

You quickly assemble a lever arm or rudimentary device to push against the target. Use the Manipulate an Item action to push the target. If your GM requires a Fitness check and you succeed at the check, you get a critical success, instead. If you previously used Leverage Force against the same target on your last action this turn, you can choose to use the same outcome instead of rolling. Regardless of the outcome, you then learn one hint about how the target relates to the encounter's Eureka Rubric.

#### LEVERAGE PROJECTILE Δ

#### BEGINNER ACTION

**ATTACK | FABRICATE (MECHANICAL) | FORCE | MANIPULATE**

**Prerequisites** Leverage Force

**Requirements** Your last action this turn was to push an object using Leverage Force.

**Offense** key attribute check vs. the target creature's Agility DC

You redirect the object's momentum in an arc. Attempt a key attribute check against one creature within 6 meters. On a hit, you deal bludgeoning damage equal to 2d6 plus an additional 1d6 damage for each level you have. This damage is doubled on a critical hit. Based on the nature of the object, your GM can agree to apply a different damage type.

#### SAVED STATE

#### BEGINNER ABILITY

**ENGINEER | EDGE**

**Prerequisites** computer engineer specialization

You gain a cartridge as part of your kit. During daily preparations you interact with it to store some of your concentration. Choose Agility, Awareness, Fitness, or Influence. Then roll a d20 and record the result and attribute as stored in your cartridge. A creature wearing the cartridge can use the roll in place of the attribute check. They must declare this before rolling.

**Flow** If you end an encounter with 3 Flow Points, you can spend 10 minutes to store a new roll.

#### SUMMON EXPERT Δ TO ΔΔΔ

#### BEGINNER ACTION

**ENGINEER | INTENSIVE**

**Requirements** You have not Gathered Requirements this round

After working with your client for some time, you realize you still have a gap of knowledge. You search for an expert in the field in order to help you with your designs.

Ask a number of questions equal to the number of Δs you used to Summon Expert. If one of your fellow players can roleplay the expert for any one of the questions, you gain 1 Flow point. Otherwise, the GM plays the expert.

#### SUSTAIN CONCENTRATION Δ

#### BEGINNER ACTION

**DESIGN | MANIPULATE | ENGINEER | KIT | PROTOTYPE**

**Prerequisites** electrical engineering specialization

**Requirements** You have a free hand.

**Range** 30 meters for each of your levels; **Targets** 1 creature

You designate one of your allies as your client. You can be your client. This client designation lasts beyond the duration of the action until you've prototyped again.

You prototype a design with your client that enables the target to continue one action they used on their previous turn. State a problem and a design to your GM related to the encounter's Eureka Rubric. Your GM tells you one of the following results.

**Solved.** The client becomes quickened for 1 minute and can use the extra  $\Delta$  only to carry out the named action.

**Partially Solved.** As solved, but for 1 round.

**Unsolved.** The client can immediately perform the action without using any  $\Delta$ s.

**Flow** You can have 1 additional client if you have any number of Flow Points, for a maximum of 2.

## TERRAFORMING $\Delta$

## BEGINNER ACTION

### DESIGN | ENGINEER | KIT

You've traveled and studied a variety of terrains enough to determine how best to turn them to your advantage. You attempt to design a hazard. If you investigated the terrain directly before this encounter, this action loses the kit trait.

**Solved.** Choose up to 10 contiguous orthogonal squares. Any enemy that enters a square becomes hampered.

**Partially Solved.** As solved, but the hazard affects all creatures.

**Unsolved.** One enemy of the GM's choice loses all their  $\Delta$ s on their next turn.

**Flow** You can spend 1 Flow Point to also deal 1d6 damage for every odd level you have when a creature first becomes hampered by your hazard. The damage type depends on the materials you used to construct the hazard, based on either the environment or what is in your kit.

## Advanced Abilities

You can choose advanced engineer abilities starting at 4th level.

## PRIORITIZE TIME $\Delta\Delta\Delta$

## ADVANCED ACTION

### ENGINEER | TRAVERSAL

**Requirements** has an active client

Stride, or start your turn next to your client. Hold the rest of your  $\Delta$  until the start of their turn. From the combined pool of  $\Delta$  between the two of you allocate the  $\Delta$  as you wish. You can even alternate until both of you are out of  $\Delta$ .

## Pinnacle Abilities

You can choose pinnacle engineer abilities starting at 7th level.

### ENGINEER: ADVICE FOR GMS

Engineers work with both their party and the environment to guide their designs. These more often leverage discoveries rather than directly resolve a conflict or Eureka Rubric, so consider a way to narratively demonstrate how their actions contributed to overarching results. Sometimes that's using the party's collective knowledge to engage with the creatures or hazards directly or to build tools to help their allies.

**Have Fun:** Be sure to drop in the appropriate environmental clues that would allow the Engineer to leverage their specialty, unless it is meant to be a difficult encounter. If so, and they creatively overcome this lack of clues, consider treating the results of their Design one degree higher.

**Learn Together:** If your engineers look unsure what to do, encourage them to check in with their teammates. What plans can they bolster, or what knowledge have they gleaned can the engineer incorporate into a new Design?

## Mathematician

As a mathematician, you are focused on the raw theory that defines every other field and the universe itself. You learn about the world through numbers, geometry, and probabilities: the language of reality.

During an encounter, you might make seemingly random and often arbitrary assumptions about various targets, use your understanding of geometry and optimization to slow down foes and speed up allies, and dissect the battlefield into clean slices. At your peak, you might outright bend reality, catching your foes in the frightening expanse of infinities and divergences.

### *Mathematician Field Progression*

You gain the following benefits at each of the listed levels.

| AT THIS LEVEL... | ...YOU GAIN...  |
|------------------|---|
| 1                | key attribute, background, attribute boosts, axiomatic theory, investigate, number theory, mathematician's kit, mathematician ability, repertoire |
| 2                | ever prepared, archetype ability, mathematician ability, all attributes +1  |
| 3                | general ability, mathematician ability, all attributes + 1, 2 additional attribute boosts   |
| 4                | advanced mathematician, archetype ability, mathematician ability, all attributes +1   |
| 5                | opening axiom, general ability, mathematician ability, all attributes + 1   |
| 6                | archetype ability, mathematician ability, all attributes +1, 2 additional attribute boosts  |
| 7                | general ability, mathematician ability, pinnacle mathematician, all attributes + 1  |
| 8                | theory of everything, archetype ability, mathematician ability, all attributes +1   |
| 9                | general ability, mathematician ability, all attributes + 1, 2 additional attribute boosts   |
| 10               | language of reality, archetype ability, mathematician ability, all attributes +1  |

Mathematician Progression Table

#### SOME KEY TERMS

**Geometry** Abilities with this trait manipulate your surroundings, like creating difficult terrain or setting up walls. Unless stated otherwise, two instances of the same geometry effect cannot overlap the same space.

**Numerical** Abilities with this trait manipulate the quantitative reality underpinning the target. Some apply untyped damage, which bypasses nearly all resistances and weaknesses.

**Paradox** Abilities with this trait present the target with a self-contradictory manifestation of unreality.

**Prediction** Predictions are an additional resource the Mathematician can consume for some of their more powerful abilities. They represent your foreknowledge and understanding, and are recorded and tracked as a pool of d20 rolls. A creature for whom you have at least one Prediction is called a **Fixation**, and you can only have one Fixation at a time.

**Probability** Abilities with this trait alter the way checks are made, such as turning an offensive check you make against a target's DC into a defensive check the target makes against your DC.

### Getting Started as a Mathematician (1st Level)

This section guides you through the essential features of creating and playing a physicist at 1st level.

**Key Attribute** Your key attribute is Awareness. You gain 2 boosts to this attribute at 1st level.

**Background and Attribute Boosts** At 1st level, you gain a background and one boost to two attribute boosts of your choice (see [Chapter 1.4](#) for backgrounds). When you're finished with creating a 1st-level hero, your attribute modifiers should all add to 10, with no modifier greater than +5.

**Hit Points** You begin play with a maximum number of Hit Points equal to 10 + your Fitness modifier.

**Number Theory** You gain a +2 bonus to your defenses against effects with the geometry, numerical, paradox, or probability traits. When you Recall Knowledge (ask the GM a question about information your mathematician may already know, usually requiring an Awareness check) about creatures or effects with these traits, you gain a +2 bonus to the Awareness check.

**Repertoire** You gain a Repertoire of abilities, which represents the collection of knowledge and skills you have developed over the course of your adventure. Your Repertoire starts with all [basic actions](#) included.

**Investigate** Add the Investigate action to your Repertoire. You use this process to learn about your surroundings and prepare for upcoming combat encounters.

## INVESTIGATE

## FIELD ACTION

### HYPOTHESIS | MATHEMATICIAN

**Time** 10 minutes or longer (per GM discretion)

You apply a combination of inductive and deductive reasoning to information that you believe requires an explanation. This information could take one of many forms: You might make an observation, examine a piece of material, review documents, follow up on a rumor, or collect information from a witness or expert. Your GM can tell you if the subject of your investigation is a spurious line of inquiry before you invest the time in this action, or they can suggest a modification to your investigation to make it more beneficial to progressing your adventure. Work with your GM to determine what tools you need to carry out your investigation and how long this process takes. Then, record in your notes a hypothesis that explains the information you have Investigated.

When you roll initiative, you can choose one creature you can see and one hypothesis you have recorded using the Investigate action. Ask your GM if this creature is related to this hypothesis. If it is, you gain 1 Flow Point, regardless of whether the hypothesis is correct. At the start of your turn during this encounter, you can spend 1 Flow Point to become quickened for the turn and use the extra  $\Delta$  to Stride toward the chosen creature. This effect has the traversal trait.

**Axiomatic Theory** Add the State Axiom and Solve Equation actions to your Repertoire.

## STATE AXIOM $\Delta$

## FIELD ACTION

### AXIOM | HYPOTHESIS | MANIPULATE | MATHEMATICIAN

**Range** 10 meters; **Targets** 1 creature

Other sciences may start from a model or an experiment, but math can often start from nothing. Make a guess about the target creature, from one of the following:

- Which of its four attributes is the highest.
- Which of its four attributes is the lowest.
- One resistance, weakness, or immunity it has.
- One trait it has.
- One detail on how the target relates to the encounter's Eureka Rubric.

The guess you make cannot be about something you already deterministically know the answer to (e.g. if an ally used Recall Knowledge on the target, or if you already made this guess with State Axiom before), but it can be about something you have a suspicion of based on other actions taken so far. The GM has the final say on whether a guess is valid or not. If the GM determines that a guess is invalid, you do not spend the action on State Axiom.

Depending on whether your guess was correct or incorrect, you get one of the following outcomes:

**Prediction** On a correct guess, you roll a d20, and record the number. The target of the guess is then designated as your Fixation. Once during the next minute, when you make an Awareness check against your Fixation (including to Recall Knowledge about it), you can use the recorded number as your d20 roll instead of rolling. This substitution has the edge

trait and expends the Prediction. Alternatively, when your Fixation makes a check against your Awareness DC, you can force them to use the recorded number as their d20 roll instead of rolling. This substitution has the mishap trait and expends the Prediction. You can only have one Fixation at a time, and can have up to 3 recorded Predictions for them. If you designate a new Fixation, you discard any Predictions you made regarding your previous Fixation. If you consume all of your Predictions, your Fixation ends.

**Contradiction** On an incorrect guess, the creature reels from your paradoxical observations about its nature. It becomes inhibited 1 until the end of your next turn. You also become quickened for 1 round, and you may only spend the additional  $\Delta$  on any actions with the axiom trait that target this creature (or include this creature as a target, if the action has multiple targets).

**Flow** The first time in an encounter you make a correct Prediction, you gain 1 Flow Point.

## SOLVE EQUATION $\Delta$

## FIELD ACTION

### AXIOM | KIT | MATHEMATICIAN

**Range** 10 meters

**Targets** your Fixation

**Cost** 1 Flow Point

The GM tells you one detail about the target and how it relates to the encounter's Eureka Rubric. Then, you may expend any number of Predictions, up to a maximum of 3. Until the end of your next turn, you and your allies gain a bonus equal to the number of expended Predictions to all checks made against this target and to Recall Knowledge checks about this target.

**Mathematician's Kit** At 1st level, the Noether Society provides you with a kit. Your kit contains a scientific calculator, a graphing calculator, and several loose sheets of paper with useful equations, cheatsheets, etc. In addition, you pick one of the statistician's kit or topologist's kit. You never need to purchase equipment for your kit, and any components of your kit that you lose, the Noether Society replaces.

- **Statistician's Kit** Your kit additionally contains a portable computational devices, equipped with your preferred programming language for statistical modeling.
- **Topologist's Kit** Your kit additionally contains a geometry set (including compasses, rulers, protractors, and set squares), and a laser rangefinder.

Some mathematician abilities expand the contents of your kit and what you can do with your kit. When you gain abilities from an archetype, your kit expands to include the necessary equipment, or you can improvise how to carry out those abilities using your equipment.

In your journeys, you might also gain specific items that you purchase or find. Items might provide specific bonuses to your attributes or offer special actions you can use, going beyond the capabilities of your kit. When describing how you use your kit, you can also integrate the use of an item, but items are never considered part of your kit and are tracked separately in your inventory.

**Numerical Blast** Add the Numerical Blast action to your Repertoire. This is your primary offensive ability as a mathematician.

## NUMERICAL BLAST $\Delta$ TO $\Delta\Delta$

## FIELD ACTION

### BLAST | KIT | MATHEMATICIAN | NUMERICAL

**Range** 5 meters; **Targets** 1 creature

**Offense** Awareness check vs. the target's Agility DC or **Defense** Agility check vs. your Awareness DC (see text)

The effects of your Numerical Blast depend on the number of  $\Delta$ s you use.

**Numerical Blast  $\Delta$  (attack)** You manipulate the numerical fabric of reality around the target. Make an Awareness check against the target's Agility DC.

**Critical Success** As success, but double the damage.

**Success** You deal 1d6 damage (no damage type) for every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well.

**Numerical Blast** ΔΔ (probability) **Requirements** The target is inhibited or is your Fixation. **Effect** The target must attempt an Agility check against your Awareness DC.

**Critical Success** No effect.

**Success** As failure, but half the damage.

**Failure** You deal 1d6 damage (no damage type) for every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well.

**Critical Failure** As failure, but double the damage.

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## Mathematician Abilities (Every Level)

At 1st level and every level thereafter, choose one mathematician ability. Some abilities add a new action or reaction to your Repertoire, others enhance actions you already have. At 1st level, you can choose from the beginner mathematician abilities. Starting at 4th level, you can also choose advanced mathematician abilities. Starting at 7th level, you can also choose pinnacle mathematician abilities.

## Hit Point Increases (2nd-10th Levels)

Each time you level up, increase your maximum number of Hit Points to a new value of (10 x your level) + your new Fitness modifier. Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level.

## Archetype Abilities (2nd, 4th, 6th, 8th, 10th Level)

At 2nd level, you begin following an archetype that represents your career choices, academic interests, or hobbies. An archetype is a collection of abilities that anyone can draw from if they meet the Prerequisites. At 2nd level, choose an archetype dedication ability you have access to and meet the Prerequisites for. You gain this dedication ability. At 4th level and every 2 levels thereafter, you gain another archetype ability. Each time, you can continue to gain abilities from the same archetype, or you can choose a dedication from a different archetype that you have access to and meet the Prerequisites for. Archetypes are detailed in [Chapter I.8](#).

## Ever Prepared (2nd Level)

You are always on the lookout for applying fields of mathematics to your surroundings, even ones you aren't specialized in. You gain one additional beginner mathematician ability. Each day during your Daily Preparations, you may swap out this ability for another beginner mathematician ability. You cannot use this ability to meet the prerequisite for another ability that you pick while levelling up. Additionally, State Axiom gains the review trait for you.

## Attribute Boosts (3rd, 6th, 9th Level)

Throughout your adventures, you further develop your foundational capacities. At every level, increase all your attribute modifiers by 1 to factor in your new level. At 3rd, 6th, and 9th level, you also gain 2 boosts to apply to 2 different attributes of your choice. Update the number of boosts and your level in your hero sheet to track these choices. You can consult the [Attribute Modifier Progression Table](#) to check that you have applied all the appropriate attribute boosts.

## General Abilities (3rd, 6th, 9th Level)

Throughout your adventures, you grow as a person in addition to learning more about mathematics. These personal developments are represented by general abilities. At 3rd level and every three levels thereafter, choose a general ability to add to your repertoire. General abilities are found in [Chapter I.5](#). Many general abilities are also granted by backgrounds, which you can use to help choose general abilities thematically appropriate for your character.

### Advanced Mathematician (4th Level)

Knowing the rules means you can bend and break them. Starting at 4th level, you can choose advanced mathematician abilities.

### Quick Axiom (5th Level)

When Initiative is rolled, you can State Axiom without spending any  $\Delta$ s.

### Pinnacle Mathematician (7th Level)

The models you create are no longer just tools to understand reality, but to alter and reshape it. Starting at 7th level, you can choose pinnacle mathematician abilities.

### Theory of Everything (8th Level)

You gain one additional beginner or advanced mathematician ability. Each day during your Daily Preparations, you may swap out this ability for beginner or advanced mathematician ability. You cannot use this ability to meet the prerequisite for another ability you pick while levelling up, but you can use your ability from Ever Prepared to meet the prerequisite for this one if necessary.

### Language of Reality (10th Level)

Your unparalleled expertise in mathematics gives you the ability to speak reality into existence. Once per day, when Initiative is rolled, you can swap the ability you prepared for Theory of Everything with any other beginner or advanced mathematician ability.

#### *Mathematician Abilities*

At each level, add one of the following abilities to your Repertoire.

### Beginner Mathematician Abilities

You can choose beginner mathematician abilities at any level.

#### EXPLOIT CONTRADICTION $\Delta\Delta$

#### BEGINNER ACTION

##### AXIOM | MANIPULATE | MATHEMATICIAN | PARADOX

**Range** 10 meters; **Targets** 1 creature inhibited by an Axiom action

**Offense** Awareness check against the target's Influence DC

You attempt to throw the target off balance with haphazard predictions. Make an Awareness check against their Influence DC. If you describe a paradox particularly relevant to the target, your GM can award you a +1 bonus to the check.

**Critical Success** As success, and the target is hampered for as long as it remains inhibited.

**Success** The target becomes inhibited 2 instead of inhibited 1, and the duration increases by another round. It is vulnerable 1 for as long as it remains inhibited. You may expend 1 Flow Point to immediately use State Axiom on the target without spending any  $\Delta$ s.

**Failure** The target becomes vulnerable 1 for as long as it remains inhibited.

#### GEOMETRIC MASTERY $\Delta$ TO $\Delta\Delta\Delta$

#### BEGINNER ACTION

##### GEOMETRY | MATHEMATICIAN | TRAVERSAL

**Range** 10 meters

**Area** up to three 2-meter bursts

**Duration** sustained up to 1 minute



Your understanding of geometry helps you and your allies make more efficient movements, and set up your foes to fail. The area becomes difficult terrain for your foes. Allies who pass through the area using a Stride action can move 1 additional meter as part of that action.

When you use this ability, you create a number of bursts equal to the number of Δs spent. Bursts created by this ability cannot overlap with one another (including ones from prior uses of this ability). You can have up to 3 bursts of Geometric Mastery at a time, and if you create a fourth, the oldest one disappears. You cannot create a burst that overlaps with an existing one.

**Flow** Each time you sustain Geometric Mastery you may do one or both of the following: expend 1 Flow Point to move each existing burst by up to 3 meters, and/or expend 1 Flow Point to add one additional burst (you cannot exceed the limit of 3 total bursts).

#### GIMBAL LOCK ΔΔ

#### BEGINNER ACTION

GEOMETRY | INTENSIVE | MATHEMATICIAN | TRAVERSAL

**Range** 5 meters; **Targets** up to 3 creatures

**Duration** 1 minute or until all targets are immune

**Defense** Agility check vs. your Awareness DC

You force your enemies into a singularity, locking out one degree of freedom. Choose one of the 4 grid directions. For the duration, any time a target Strides between two squares in the chosen direction, they must make an Agility check against your Awareness DC. If the target is flying, swimming, or otherwise moving in three dimensions, this effect ignores any vertical movement and only considers the horizontal component of the movement parallel to the grid.

**Critical Success** The target is unaffected, and they are immune to this effect for the rest of the duration.

**Success** The target is unaffected.

**Failure** The target treats the rest of their movement for this action as difficult terrain, even if they stop moving in the triggering direction.

**Critical Failure** The target's movement ends.

#### MINIMAX DECISION Δ

#### BEGINNER ACTION

AURA | INTENSIVE | MATHEMATICIAN | NUMERICAL | PARADOX

**Duration** 1 round

**Area** 3-meter emanation

You help your friends minimize the maximal risk for all their decisions. All allies in the aura deal additional damage equal to 1 plus half your level, and gain resistance to all damage equal to 1 plus half your level.

**Flow** If you have at least 2 Flow Points, the additional damage and resistance are both equal to 1 plus your level instead.

#### PLOT GEODESICS Δ

#### BEGINNER ACTION

GEOMETRY | KIT | MATHEMATICIAN

**Range** 10 meters; **Targets** You and up to 3 allies

**Duration** 1 round

**Cost** 1 Flow Point

Your knowledge of curves and how to navigate the shortest paths along a curved geometry gives your side an edge over foes. Whenever a target of this effect uses an effect with an area, they can choose one of the following effects depending on the area type:

**Burst** Increase or decrease the radius by 2 meters.

**Cone** Increase the length of the cone by 2 meters, and you can choose any number of targets within the cone to be unaffected.

**Line** Once at any point in the line's path, you can choose to end the line, and create a second line with that ending as its point of origin. The total length of both lines must add up to no more than the maximum length of the original line effect.

#### REGRESSION Δ

#### BEGINNER ACTION

**AXIOM | INTENSIVE | KIT | MATHEMATICIAN | PROBABILITY**

**Range** 15 meters; **Targets** 1 creature

**Requirements** The target creature is your Fixation or you have no other Fixation.

**Duration** 1 minute

**Cost** 1 Flow Point

You create a statistical model of your target's behaviors, letting you predict what they do. You immediately roll a d20 and record it as Prediction for the target, as though you succeeded on a State Axiom check against it. You have resistance equal to half your level to all damage the target does. Additionally, you gain the Just Like I Modeled! reaction. If you use Regression targeting another creature, any previous use of the ability ends.

**Just Like I Modeled** ↩ (mishap) **Trigger** The target of your Regression succeeds at a Fitness or Agility check within 10 meters of you. **Effect** The triggering creature rerolls the check, and must use the new result.

**Flow** The reroll has a penalty equal to the number of Flow Points you have.

#### SHARED AXIOM Δ

#### BEGINNER ACTION

**AXIOM | INTENSIVE | KIT | MATHEMATICIAN**

**Range** 10 meters; **Targets** 1 ally

**Duration** until the start of your next turn

You share your theory and understanding with your ally. That ally gains a +1 bonus to checks against your Fixation.

**Flow** If you have at least 2 Flow Points, the bonus is +2 instead.

#### Advanced Mathematician Abilities

You can choose advanced mathematician abilities starting at 4th level.

#### CREATE SINGULARITY ΔΔ

#### ADVANCED ACTION

**MATHEMATICIAN**

**Range** 20 meters; **Area** 4-meter burst

**Offense** Awareness check vs. each creature's Agility DC; **Duration** 1 minute

**Cost** 1 Flow Point

You create a point of poorly behaved math, a singularity. Make an Awareness check against the Agility DC of each creature in the area, dealing 1d6 damage plus an additional 1d6 damage for each level you have.

**Critical Success** The creature takes double damage, and is slowed for 3 rounds.

**Success** The creature takes full damage, and is slowed for 1 round.

**Failure** The creature takes half damage.

**Critical Failure** The creature is unaffected.

**Flow** You can spend additional Flow Points to amplify the effect. For each Flow Point spent, increase the burst radius by 2 meters (to a maximum of an 8-meter burst). If you spend at least 2 Flow Points, add your level to the damage.

#### LAW OF LARGE NUMBERS ΔΔ

#### ADVANCED ACTION

**AURA | EDGE | MATHEMATICIAN | PROBABILITY**

**Area** 3-meter emanation

**Duration** 1 minute

**Cost** 2 Flow Points

With a simple application of probability, you nullify variance. Allies within this aura treat d20 rolls (before adding modifiers) lower than 7 as a 7, and rolls higher than a 13 as a 13. Additionally, they treat d6 rolls lower than a 3 as a 3. On subsequent turns, you can spend 1 Δ to increase the size of the emanation by 2 meters.

#### MAXIMAL FLOW ΔΔΔ

#### ADVANCED ACTION

**KIT | MATHEMATICIAN | NUMERICAL | PROBABILITY**

**Range** 5 meters; **Targets** yourself and any number of allies

**Duration** 1 minute

**Cost** 3 Flow Points

Optimization is your forte, and you can get your friends to pick up the pace too. All Flow abilities cost 1 fewer Flow Points, to a minimum of 1.

#### RESOLVE PARADOX Δ

#### ADVANCED ACTION

**AXIOM | INTENSIVE | KIT | MATHEMATICIAN | PARADOX**

**Range** 10 meters; **Targets** any number of creatures inhibited by an Axiom action

**Duration** 1 minute

**Offense** Awareness check against each target's Influence DC

You have an epiphany about your own paradoxical observations, and the energy of that ripples through your foes. Make an Awareness check against the Influence DC of each target, dealing 1d6 damage, plus 1d6 for each of your levels.

**Critical Success** The target takes double damage. You can spend 1 Flow Point to make them vulnerable 1 for 1 round.

**Success** The target takes full damage. You can spend 1 Flow Point to make them vulnerable 1 for 1 round.

**Failure** The target takes half damage.

**Critical Failure** The target is unaffected.

Then, regardless of the result, the inhibited condition on each targeted creature ends. For each target that became vulnerable as a consequence of this effect, you repeat the effect on each enemy within 2 meters of them, as the lingering echo of the paradox ripples out through space. A creature can be affected only once, even if it is within 2 metres of multiple damaged creatures.

### Pinnacle Mathematician Abilities

You can choose pinnacle mathematician abilities starting at 7th level.

#### CREATE HYPERPLANE ΔΔΔ

#### PINNACLE ACTION

**AXIOM | MATHEMATICIAN**

**Frequency** once per hour

**Range** 20 meters

**Duration** 1 minute

**Cost** 3 Flow Points

A good mathematician knows that well-posed constraints are key to solving the hardest problems. You divide the battlefield with an invisible barrier. This barrier has no discernible thickness, and must be placed lined up with one of the 4 Directions of the Grid, passing through the centre of a square of your choice. The barrier is functionally infinite: enemies you are aware of cannot move around it in any way, but it is not actually infinite (so it wouldn't affect an enemy you are not aware of). It passes through objects and terrain alike, but cannot be placed in a space occupied by any creature.

Whenever an enemy moves through the barrier or attempts to affect a creature or space on the other side of the barrier, they take mental damage equal to double your level, and then must make an Agility check against your Awareness DC, having that Δ disrupted on a failure. Additionally, they are automatically inhibited 1 for any checks they make for this action, including the check to avoid disruption.

The hyperplane can be destroyed by dealing damage. It has an Agility DC equal to your Awareness DC and it has 10 HP for each level you have.

## CONFOUND $\Delta\Delta$

## PINNACLE ACTION

LINGUISTIC | MENTAL | MATHEMATICIAN | KIT

**Range** 5 meters; **Targets** 1 creature

**Offense** Awareness check vs. the target's Awareness DC; **Duration** sustained up to 1 minute

**Cost** 2 Flow Points

You present your foe with an unsolved mathematical problem, leaving them floundering as they ponder the question. Make an Awareness check against the target's Awareness DC.

**Critical Success** As success, but instead of being hampered, they are obsessed 1, as they are completely taken by your question and unable to focus on much else. Obsessed creatures gain fewer  $\Delta$ s at the start of their turns, equal to their obsessed value. At the end of each of their turns while Confound lasts, they make an Awareness check against your Awareness DC: on a failure increase their obsessed condition by 1 (2 on a critical failure) up to a maximum of 4, and on a success decrease their obsessed condition by 1 (2 on a critical success). If the obsessed value ever reduces to 0, the target then suffers from the effects of a success for the remaining duration of Confound.

**Success** Pondering your question and other profound truths about the universe leaves your target. For the duration they are hampered, inhibited 2, vulnerable 2.

**Failure** You only mildly engage the target with your question. They are inhibited 1 and vulnerable 1 for 1 round, and this effect cannot be sustained.

**Critical Failure** There are some things humankind wasn't meant to know, and thinking too long distracts you. Until the end of your next turn, you are inhibited 2 and vulnerable 2.

**Special** If the target was already inhibited or vulnerable due to an axiom action, add the value of that inhibited or vulnerable condition with any gained from this ability, rather than overwriting it.

## INFINITE AND INTANGIBLE $\leftrightarrow$

## PINNACLE REACTION

MATHEMATICIAN

**Trigger** You or an ally within 10 meters is targeted by an effect.

**Cost** 2 Flow Points

You surround the triggering creature with an infinitesimally thin layer, deflecting incoming attacks into harmless loops of converging spacetime. The triggering creature becomes momentarily invulnerable, ignoring the triggering effect. The triggering creature is then hampered on its following turn, as it readjusts to coming back into contact with normal spacetime.

## NON-EUCLIDEAN TUNNELING $\Delta$

## PINNACLE ACTION

EXTRADIMENSIONAL | GEOMETRY | MATHEMATICIAN

**Prerequisites** Geometric Mastery

**Range** infinite (ignoring line of effect); **Targets** all areas you have created with Geometric Mastery

**Duration** the shortest duration from among the targeted effects

**Cost** 1 Flow Point

**Defense** Agility check vs. your Awareness DC

Your mastery of geometry lets you impose your will on reality itself, to some degree. When you use this ability, you immediately Sustain Geometric Mastery. For the duration, allies within any of the targeted areas can use  $\Delta$  (with the extradimensional trait) to teleport to any space within that area or another targeted one. Foes attempting to teleport into or out of targeted areas must succeed at an Agility check against your Awareness DC, or the teleport is disrupted.

**Flow** If you have at least 2 Flow Points, you can spend an additional  $\Delta$  to immediately try to teleport a target that is within one of the targeted areas, to a space that is entirely within that area of another targeted one. An unwilling creature makes an Awareness check against your Awareness DC.

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## STATISTICAL PRESCIENCE

## PINNACLE ABILITY

### MATHEMATICIAN

**Prerequisites** Regression

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**Flow** If you have at least 2 Flow Points, once per turn you can use Regression without spending any  $\Delta$ s. If you use Regression this way, it loses the intensive trait, has a Range of Infinite (you still need line of effect), and has a Duration of 10 minutes.

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### MATHEMATICIAN: ADVICE FOR GMS

Mathematicians are battlefield manipulation specialists, focusing on controlling the enemies, positioning and buffing allies, and reshaping the battlefield. The Mathematician will shine in battlefields where the surroundings matter, and where Eureka thresholds can interact with their complex toolkit.

## Physicist

As a physicist, you study the mechanisms that drive the natural world, from galaxies down to subatomic particles. You might seek practical applications of physics models, or explore how to adjust models based on new data. Many physicists specialize in a particular approach of experiment or theory, but you might find you need a little of both in your adventures.

During an encounter, you use the Create Model action to focus on a particular threat, mystery, or opportunity. You leverage observation into action for both yourself and your allies, and you know how to directly confront a danger head-on. You're probably most active early on in an encounter, and find yourself pivoting to support your allies in later rounds.

### *Physicist Field Progression*

You gain the following benefits at each of the listed levels.

| AT THIS LEVEL... | ...YOU GAIN...   |
|------------------|--|
| 1                | key attribute, background, attribute boosts, create model, force blast, investigate, physicist ability, physicist's kit, physics specialization, repertoire, student of forces |
| 2                | archetype ability, model review, physicist ability, all attributes +1  |
| 3                | general ability, physicist ability, all attributes + 1, 2 additional attribute boosts  |
| 4                | advanced physicist, archetype ability, physicist ability, all attributes +1  |
| 5                | general ability, physicist ability, ready to model, all attributes + 1   |
| 6                | archetype ability, physicist ability, all attributes +1, 2 additional attribute boosts   |
| 7                | general ability, physicist ability, pinnacle physicist, all attributes + 1   |
| 8                | archetype ability, collaborative model, physicist ability, all attributes +1   |
| 9                | general ability, physicist ability, all attributes + 1, 2 additional attribute boosts  |
| 10               | archetype ability, grand unified theory, physicist ability, all attributes +1  |

Physicist Progression Table

### Getting Started as a Physicist (1st Level)

This section guides you through the essential features of creating and playing a physicist at 1st level.

**Key Attribute** Your key attribute is Awareness, or another option available in your specialization. You gain 2 boosts to this attribute at 1st level.

**Background and Attribute Boosts** At 1st level, you gain a background and one boost to two attribute boosts of your choice (see [Chapter 1.4](#) for backgrounds). When you're finished with creating a 1st-level hero, your attribute modifiers should all add to 10, with no modifier greater than +5.

**Hit Points** You begin play with a maximum number of Hit Points equal to 10 + your Fitness modifier.

**Student of Forces** You gain a +2 bonus to your defenses against effects with the force, electromagnetism, or gravity traits. If you discover other types of forces, this bonus applies to their effects, as well.

**Repertoire** You gain a Repertoire of abilities, which represents the collection of knowledge and skills you have developed over the course of your adventure. Your Repertoire starts with all [basic actions](#) included.

**Investigate** Add the Investigate action to your Repertoire. You use this process to learn about your surroundings and prepare for upcoming combat encounters.

## INVESTIGATE

## FIELD ACTION

### HYPOTHESIS | PHYSICIST

**Time** 10 minutes or longer (per GM discretion)

You apply a combination of inductive and deductive reasoning to information that you believe requires an explanation. This information could take one of many forms: You might make an observation, examine a piece of material, review documents, follow up on a rumor, or collect information from a witness or expert. Your GM can tell you if the subject of your investigation is a spurious line of inquiry before you invest the time in this action, or they can suggest a modification to your investigation to make it more beneficial to progressing your adventure. Work with your GM to determine what tools you need to carry out your investigation and how long this process takes. Then, record in your notes a hypothesis that explains the information you have Investigated.

When you roll initiative, you can choose one creature you can see and one hypothesis you have recorded using the Investigate action. Ask your GM if this creature is related to this hypothesis. If it is, you gain 1 Flow Point, regardless of whether the hypothesis is correct. At the start of your turn during this encounter, you can spend 1 Flow Point to become quickened for the turn and use the extra  $\Delta$  to Stride toward the chosen creature. This effect has the traversal trait.

**Create Model** Add the Create Model and Expand Model abilities to your Repertoire.

## CREATE MODEL $\Delta$

## FIELD ACTION

### PHYSICIST

**Targets** 1 creature or object

**Duration** 1 minute or until you Create Model again

You compile your observations of the target into a representative model that allows you to make predictions about its behaviors. Attempt to Recall Knowledge about the target (ask the GM a question about information your physicist may already know, usually requiring an Awareness check). The first time each encounter that you critically succeed at Recalling Knowledge about your model target, you gain 1 Flow Point.

You can have only one model active at a time. When you use this action again, your previous model becomes inactive.

## EXPAND MODEL

## FIELD ABILITY

### PHYSICIST

You progressively add details to your model. When your turn begins and you have an active model, ask your GM one yes-or-no question about the target of your active model. Asking this question does not require any  $\Delta$ s. Your GM answers truthfully. They may give an indeterminate answer, such as “It depends” or “Perhaps.” If they do, you can immediately ask one follow-up yes-or-no question.

**Flow** After resolving your question, you can spend 1 Flow Point to Recall Knowledge about the target of your active model without using any  $\Delta$ s. If you succeed, you gain a +1 bonus to your next attack roll against the target this turn.

**Physicist's Kit** At 1st level, the Noether Society provides you with a kit. You gain your choice of a computational kit, an experimental kit, or a theoretical kit. You never need to purchase equipment for your kit, and any components of your kit that you lose, the Noether Society replaces.

- **Computational Kit** Your kit provides you with equipment you need to carry out computational research and analysis, and use the Investigate action. Your kit includes but is not limited to a small portable portable computational devices, a recording device, portable data storage devices, converters, a portable document scanner, and a satellite router. Your portable computational devices have algorithms needed to carry out analysis, including but not limited to spreadsheets and a compiler for your favorite programming language.



- **Experimental Kit** Your kit provides you with equipment you need to carry out laboratory research on the go, and to use the Investigate action. Your kit includes but is not limited to a stopwatch, a pendulum, a collapsable yard-stick, magnets, a multimeter, a thermometer, and a geiger counter.
- **Theoretical Kit** Your kit provides you with equipment to supplement your theoretical research while in the field, and what you need to use the Investigate action. Your kit includes but is not limited to pens and pencils, parchment, graph paper, a small ruler, a compass, a calculator, a book of common computations, and a reference for formula derivations.

You may be familiar with other tools, like software that can only run on much larger computers and supercomputers, Stern-Gerlach devices, and particle colliders, but such things are generally too large to carry around.

When using your kit as part of an ability, you describe what equipment you use and how you use it. Even when not using a specific ability, you can incorporate your kit into descriptions of what you do and how you interact with your surroundings. Under usual gameplay circumstances, it is assumed that you have your kit with you, but in some rare circumstances, you might not have immediate access to your kit. In such circumstances, your GM should communicate to you how to regain access.

Some physicist abilities expand the contents of your kit and what you can do with your kit. When you gain abilities from an archetype, your kit expands to include the necessary equipment, or you can improvise how to carry out those abilities using your equipment.

In your journeys, you might also gain specific items that you purchase or find. Items might provide specific bonuses to your attributes or offer special actions you can use, going beyond the capabilities of your kit. When describing how you use your kit, you can also integrate the use of an item, but items are never considered part of your kit and are tracked separately in your inventory.

**Force Blast** Add Force Blast to your Repertoire. This is your primary offensive ability as a physicist.

## FORCE BLAST Δ

## FIELD ACTION

### ATTACK | BLAST | FORCE | KIT | PHYSICIST

**Range** 5 meters; **Targets** 1 creature

**Offense** key attribute check vs. the target's Agility DC

Through electromagnetic, gravitational, or mechanical means, you propel debris or a blunt object toward the target. Make a check using your key attribute against the target's Agility DC.

**Critical Success** As success, but double the damage.

**Success** You deal 1d6 bludgeoning damage for every odd level you have, plus the number of Flow Points you have. If the target is within your reach, add your level to the damage as well.

## Physics Specialization

Choose a physics specialization. The following are available in this book, and more will be available in future books.

- **Astrophysics** You gaze at the night sky with both a sense of wonder and meticulous tracking of the movement of stars and planets. This experience gives you facility with large amounts of information, and helps you navigate elegant trajectories. You may choose Agility as your key attribute. Add Scale the Cosmic Ladder to your Repertoire. When you use Force Blast, you can choose to deal cold damage instead of bludgeoning, engulfing your target to the void of space.
- **Condensed Matter** You study the ways in which many individual atoms and molecules move and vibrate to give rise to emergent patterns. You might see beauty in these patterns, or seek to create new materials for people to use. You may choose Agility as your key attribute. Add One from Many to your Repertoire. When you use Force Blast, you can choose to deal electricity damage instead of bludgeoning, bombarding your target with electrons.
- **Particle Physics** You break matter down to its most basic components. You're never quite sure whether you've ever reached that most basic state, but you do know you need more energy to probe each successively smaller

scale. You may choose Fitness for your key attribute. Add Force Interaction to your Repertoire. When you use Force Blast, you can choose to deal fire damage instead of bludgeoning, surrounding your target with particle collisions.

### **Physicist Abilities (Every Level)**

At 1st level and every level thereafter, choose one physicist ability to gain. Some abilities add a new action or reaction to your Repertoire, others enhance actions you already have. At 1st level, you can choose from the beginner physicist abilities. Starting at 4th level, you can also choose advanced physicist abilities. Starting at 7th level, you can also choose pinnacle physicist abilities.

### **Hit Point Increases (2nd-10th Levels)**

Each time you level up, increase your maximum number of Hit Points to a new value of  $(10 \times \text{your level}) + \text{your new Fitness modifier}$ . Since your level increases by 1 and your Fitness modifier increases by at least 1, this means your Hit Points should increase by at least 11 each level.

### **Archetype Abilities (2nd, 4th, 6th, 8th, 10th Level)**

At 2nd level, you begin following an archetype that represents your career choices, academic interests, or hobbies. An archetype is a collection of abilities that anyone can draw from if they meet the Prerequisites. At 2nd level, choose an archetype dedication ability you have access to and meet the Prerequisites for. You gain this dedication ability. At 4th level and every 2 levels thereafter, you gain another archetype ability. Each time, you can continue to gain abilities from the same archetype, or you can choose a dedication from a different archetype that you have access to and meet the Prerequisites for. Archetypes are detailed in [Chapter I.8](#).

### **Model Review (2nd Level)**

You present your models to your colleagues for critique and refinement. At any point during Review, you can ask up to one yes-or-no question about the target of your active model. This does not count as taking your review action for the round.

### **Attribute Boosts (3rd, 6th, 9th Level)**

Throughout your adventures, you further develop your foundational capacities. At every level, increase all your attribute modifiers by 1 to factor in your new level. At 3rd, 6th, and 9th level, you also gain 2 boosts to apply to 2 different attributes of your choice. Update the number of boosts and your level in your hero sheet to track these choices. You can consult the [Attribute Modifier Progression Table](#) to check that you have applied all the appropriate attribute boosts.

### **General Abilities (3rd, 5th, 7th, 9th Level)**

Throughout your adventures, you grow as a person in addition to learning more about physics. These personal developments are represented by general abilities. At 3rd level and every two levels thereafter, choose a general ability. General abilities are found in [Chapter I.5](#). Many general abilities are also granted by backgrounds, which you can use to help choose general abilities that are thematically appropriate for your character.

### **Advanced Physicist (4th Level)**

Your knowledge of physics grants you insights into the workings of the universe. Starting at 4th level, you can choose advanced physicist abilities.

### **Ready to Model (5th Level)**

When you are quickened, you can always use the additional  $\Delta$  to Create Model.

## Pinnacle Physicist (7th Level)

You perceive the underlying patterns and symmetries that keep the universe singing in harmony. Starting at 7th level, you can choose pinnacle physicist abilities.

## Collaborative Model (8th Level)

For you, Create Model gains the review trait.

## Grand Unified Theory (10th Level)

You can break down any complex interaction into its most foundational aspects. Once per hour, when you Recall Knowledge about the target of your active model, you can roll twice and take the higher result. This is an edge effect.

### *Physicist Abilities*

At each level, add one of the following abilities to your Repertoire.

### Beginner Physicist Abilities

You can choose beginner physicist abilities at any level.

#### ALTER FRICTION $\Delta$ OR $\Delta\Delta$

#### BEGINNER ACTION

##### MANIPULATE | PHYSICIST | KIT

Using simple tools, applying a layer of new material, or directly manipulating atoms, you alter a nearby surface. Choose a 1-meter square adjacent to you; if you used 2  $\Delta$ s for this action, expand the area to a 2-meter square. This area could be on the ground, a wall, or a ceiling. Describe how you increase or decrease the surface's friction. The effects lasts 2 rounds, or 10 rounds if your description is particularly relevant to an active Eureka Rubric. If you increase the friction on a wall or ceiling, the DC to climb this surface is reduced by 5. If you decrease the friction on a wall or ceiling, the DC to climb is increased by 5. If you increase or decrease the friction of the ground, a creature who first enters the area must attempt an Agility check against your key attribute DC. If your description is particularly relevant to the creature's Eureka Rubric, they treat a success as a failure.

**Critical Success** The creature moves as usual.

**Success** The creature navigates the area with impediment. If you decreased the friction, the creature is vulnerable 1 for 1 round. If you increased the friction, they treat the area as difficult terrain for this movement.

**Failure** The creature fails to account for the surface. If you decreased the friction, the creature falls prone. If you increased the friction, their movement ends. If the area is a 2-meter square, they must attempt another Agility check if they move into another square in the area.

#### BUILD TOY MODEL $\Delta$

#### BEGINNER ACTION

##### HYPOTHESIS | MANIPULATE | PHYSICIST | KIT

**Requirements** You have an active model targeting a creature.

You construct a simple physical representation of your model's target and hold it up to them for comparison. State a hypothesis to your GM about the target's Eureka Rubric. Your GM tells you if this hypothesis is correct, mistaken, or partially correct.

**Correct.** You gain a +2 bonus to one check against the target before the end of your next turn. You must choose to apply the bonus before making the check. You also gain a bonus equal to your level to all damage rolls against the target until the end of your next turn.

**Partially correct.** As correct, but the bonus to the check is +1.

**Incorrect.** You gain a +1 bonus to your DC against one check the target makes against you before the beginning of your next turn. You must choose to apply the bonus before they make the check.

**Flow.** If your hypothesis is partially correct or incorrect, you may immediately ask a yes-or-no question about your model's target.

## CONDUCT EXPERIMENT Δ

## BEGINNER ACTION

### MANIPULATE | PHYSICIST | KIT

**Requirements** You have an active model targeting a creature.

You test the predictions of your model. The target of your model immediately uses one of the actions in their stat block, allowing you to watch carefully. The creature's action can be chosen by you or the GM, if you prefer. If the target makes a check as part of this action, they treat a critical success as a success. If one of your allies must attempt a check in response to this action, they treat a success as a critical success. After the action is resolved, your GM gives you a hint about whether and how this action relates to the Eureka Rubric. The target is hampered until the end of their next turn.

## FORCE FLURRY Δ

## BEGINNER ACTION

### FLOW | FORCE | MANIPULATE | PHYSICIST

**Requirements** You have an active model targeting a creature.

**Targets** your active model's target

**Cost** 1 Flow Point

Having studied the target, you strategically apply forces to its weak points. Choose electromagnetic or gravity for the type of force you apply. The target takes 1d6 force damage. Increase this damage by 1d6 at 3rd level and every odd level thereafter.

## FORCE INTERACTION ΔΔ

## BEGINNER ACTION

### FORCE | PHYSICIST

**Prerequisites** particle physics specialization

**Frequency** once per round

**Targets** 2 creatures, 2 objects, or 1 creature and 1 object. There must be a clear path between the targets.

You imbue the targets with kinetic energy to bring them closer together and observe how they interact. Each target creature must attempt a Fitness check against your key attribute DC. Objects use the result of a failure.

**Critical Success** The target is unmoved.

**Success** The target moves a number of meters equal to your key attribute modifier toward the other target, and you learn one correct piece of information about this target. If they collide, each target takes bludgeoning damage equal to half your level rounded up. This damage combines with any damage from the outcome of the other target's check.

**Failure** As success, but with 1d6 bludgeoning damage. At 3rd level and every odd level thereafter, increase the damage by 1d6.

## KINETIC ENERGY TRANSFER Δ

## BEGINNER ACTION

### PHYSICIST | VELOCITY

**Range** 10 meters; **Targets** 2 creatures, at least one of which must be willing

**Defense** Fitness check vs. your key attribute DC

You set up an elastic collision between two creatures. Choose a willing creature within range. They immediately Stride a number of meters up to your key attribute modifier. They must end their movement adjacent to another creature. The second creature is then pushed up to the same distance as the first creature's Stride. This is forced movement. If the second creature is unwilling, they can attempt a Fitness check against your key attribute DC.

**Critical Success** The creature is not moved.

**Success** The creature is moved half the maximum distance in a direction away from the first creature. If their movement is obstructed, they take bludgeoning damage equal to your level.

**Failure** As success, but they move the maximum distance.

**LAUNCH PROJECTILE Δ****BEGINNER ACTION****ATTACK | FORCE | FLOW | MANIPULATE | PHYSICIST**

**Requirements** You have an active model targeting an object, and the object is adjacent to you.

**Range** 10 meters; **Targets** 1 creature

**Offense** Agility check vs. the target's Agility DC

**Cost** 1 Flow Point

You leverage your knowledge of the target's mass distribution to make it an effective projectile. Describe a damage type that this object would deal if hurled at a creature, then attempt an Agility check against the target's Agility DC.

**Critical Success** As success, but double damage.

**Success** You deal 1d6 of your chosen damage type to the creature, plus an additional 1d6 for each level you have. You may Create a Model about the creature without spending any Δs.

**Failure** If the creature has weakness against the chosen damage type, you apply this weakness.

**ONE FROM MANY Δ****BEGINNER ACTION****MANIPULATE | PHYSICIST**

**Prerequisites** condensed matter specialization

Using your intuition and pattern recognition, you observe an ensemble of elements and extract their emergent features. Create a Model, with one target as usual for the action, and a second target that must be a creature. You still Recall Knowledge once as part of the Create Model action, but you can choose to Recall Knowledge about either target. When you ask yes-or-no questions at the start of your turn, you can ask about either target, or about some way that they might interact. If the two targets are creatures who are allied with each other, you gain a +2 bonus on checks to Recall Knowledge about each of them, and on a critical success, the additional information you learn is about their intentions or plans. If the two targets are a creature and an object, the additional information you learn on a critical success is about the creature's intentions toward the object. When you use an ability that requires an active model, you can choose either target to apply the effects to.

**REDUCE DIMENSIONALITY Δ****BEGINNER ACTION****HYPOTHESIS | MANIPULATE | PHYSICIST**

**Requirements** You have an active model targeting a creature.

You impose upon your model's target a simplification that reduces its degrees of freedom. State a hypothesis about your model's target.

**Correct.** Each time the target Strides on their next turn, that movement cannot change direction. This is a traversal effect.

**Partially correct.** As correct, but the first and last meter of their movement can each be in a different direction from the rest.

**Incorrect.** You learn something about the target that your hypothesis was missing, and they treat all squares as difficult terrain for 1 round.

**RUSH TO DISCOVERY Δ****BEGINNER ACTION****INTENSIVE | PHYSICIST | TRAVERSAL**

**Requirements** You have an active model.

You eagerly rush forward to collect data for your model. Stride toward your model's target, with the distance increased by a number of meters equal to twice the number of Flow Points you have. Then, Recall Knowledge about it.

**SCALE THE COSMIC LADDER ΔΔ OR ΔΔΔ****BEGINNER ACTION****PHYSICIST | TRAVERSAL**

**Prerequisites** astrophysics specialization

**Frequency** once per round

You integrate direct and indirect observations into a cogent model across various scales. Stride twice, or four times if you used 3 Δs for this action. As you Stride, choose two spaces along or adjacent to your path, or four spaces if you used 3 Δs for this action. At each chosen space, use the Search action, or Recall Knowledge about a creature or object in each of them. At the end of your movement, you can Create a Model about something you found or Recalled Knowledge about in this process.

## SIMPLIFY Δ

## BEGINNER ACTION

### PHYSICIST

**Requirements** You have an active model targeting a creature.

**Frequency** once per round

You impose a simplifying assumption on your model's target. You learn which of your model target's attribute modifiers is highest. The target takes a -1 penalty to the identified modifier and its DC until the start of your next turn. If more than one modifier is highest, you learn this and choose one of them to impose the penalty on.

## TRACE TRAJECTORY ↩

## BEGINNER REACTION

### PHYSICIST | KIT

**Requirements** You have an active model targeting a creature.

**Trigger** The target of your active model makes a ranged attack against you.

You extrapolate the likely direction of your model target's attacks. You gain a +2 bonus to your Agility DC against the triggering attack made by your model target. If this attack misses you, you may immediately ask another yes-or-no question about them.

**Flow.** If you have at least 1 Flow Point when you use this reaction, you may immediately Recall Knowledge about the target, instead of asking a yes-or-no question.

## Advanced Physicist Abilities

You can choose advanced physicist abilities starting at 4th level.

## DESIGN EXPERIMENT Δ

## ADVANCED ACTION

### HYPOTHESIS | MANIPULATE | PHYSICIST | KIT

**Requirements** You have an active model.

You arrange a structure of mechanisms, counterweights, and probes to test some aspect of your model's target. Describe your experiment's design, and state a hypothesis your experiment is designed to test. Also choose whether a correct hypothesis will result in the target being forcibly moved a number of meters equal to your key attribute, knocked prone, or inhibited 1 until the end of their next turn.

**Correct.** You achieve the specified outcome, and you may choose a second outcome.

**Partially correct.** You achieve the specified outcome.

**Incorrect.** You gain a +2 bonus on your DCs against the target's checks until the start of your next turn.

## LOCK ATTACK VECTOR ↩

## ADVANCED REACTION

### FLOW | PHYSICIST

**Trigger** The target of your active model damages a creature with an attack.

You restrict the triggering creature's next attack. Choose to restrict direction or magnitude; you may spend 1 Flow Point to choose both. The effect listed below applies to their next attack before the end of their next turn.

**Direction.** Record the direction of the attack relative to the triggering creature's space. Their next attack can only be made in a direction no more than 45 degrees from this direction relative to their space. So, if the triggering attack was to a creature directly north of them, the next creature they attack must be between northwest and northeast of them, but could not be directly east of them.

**Magnitude.** Record the amount and types of damage. If their next attack hits, it deals the same amount and types (doubled on a critical hit as usual). This is a mishap effect.

#### REFINE MODEL $\Delta$

#### ADVANCED REACTION

##### HYPOTHESIS | MANIPULATE | PHYSICIST

**Prerequisites** Build Toy Model

**Requirements** Your last action this turn was to Build Toy Model.

You make observations and reason through different possibilities for your model. If your hypothesis from Build Toy Model was correct or partially correct, attempt a blast against the target and Recall Knowledge about them, in either order. If you choose to apply your bonus from Build Toy Model, it applies to both your attack roll and Awareness check. If your hypothesis was incorrect, Recall Knowledge about the target and your allies also gain the benefits of your incorrect hypothesis.

#### SEEK EMERGENCE $\Delta$

#### ADVANCED REACTION

##### HYPOTHESIS | PHYSICIST

**Prerequisites** Force Interaction, One from Many, or Scale the Cosmic Ladder

**Requirements** Your last action this round was Force Interaction, One from Many, or Scale the Cosmic Ladder.

You focus your attention on interactions over individual elements, noticing emergent patterns. State a hypothesis to your GM that involves two targets of your previous action. Your GM tells you if this hypothesis is correct, mistaken, or partially correct.

**Correct.** For 1 minute, any bonuses that you or your allies would gain to a check made involving one target also applies to the other.

**Partially correct.** As correct, but the bonus sharing lasts for 1 round.

**Incorrect.** For 1 round, when one of the targets damages you or an ally, reduce the damage by your level. The other target takes this amount of damage.

#### TELESCOPIC REACH $\Delta\Delta$

#### PINNACLE REACTION

##### PHYSICIST

**Prerequisites** astrophysics specialization

**Requirements** You have an active model and have an unobstructed line toward the target.

You contract the fabric of space-time to scale distance with ease. Use an action that requires a single  $\Delta$  that would usually require you to be adjacent to the target of your active model. For example, you could Manipulate to steal from the target, or use Force Blast and gain the bonus to damage when the target is within your reach.

**Flow.** If you have at least 1 Flow Point, you can use  $\Delta\Delta\Delta$  for Telescopic Reach and choose an action that requires  $\Delta\Delta$  and would usually require you to be adjacent to the target.

#### ZERO-ORDER APPROXIMATION

#### ADVANCED ABILITY

##### PHYSICIST

No time you spend developing your model is ill-spent. When you Recall Knowledge about the target of your active model and you roll a failure, you can immediately ask a yes-or-no question about the target.

#### Pinnacle Physicist Abilities

You can choose pinnacle physicist abilities starting at 7th level.

#### INVERT LATTICE STRUCTURE $\Delta$

#### PINNACLE ACTION

##### FLOW | PHYSICIST | TELEPORTATION

**Prerequisites** condensed matter specialization



**Requirements** You have an active model, and one of your allies is the same distance from your model target as you are.

**Targets** your active model's target

**Defense** Influence check vs. your key attribute DC

**Cost** 1 Flow Point

You invoke a fundamental symmetry of your surroundings to move your target to a different location. First, you and your ally may swap places immediately. Then, if your model target is a creature or an object being held by a creature, the creature must attempt an Influence check against your key attribute DC. The creature can choose to fail instead of attempting the check. Unattended objects automatically fail.

**Critical Success** No effect.

**Success** The creature resists the movement but becomes vulnerable 2 for 1 round.

**Failure** Your target is immediately moved to an empty space the same distance from your designated ally and you. If a creature attempted the check, they become vulnerable 3 for 1 round.

## PARTICLE DECAY $\Delta$

## PINNACLE ACTION

### FLOW | PHYSICIST | KIT

**Prerequisites** particle physics specialization

**Requirements** You have an active model targeting a creature.

**Targets** your active model's target

**Defense** Fitness check vs. your key attribute DC

You initiate a process of breaking down your model target's matter. They must attempt a Fitness check against your key attribute DC.

**Critical Success** No effect.

**Success** They take damage equal to your level.

**Failure** If they did not take damage from your Particle Decay in the previous round, they take 1d6 damage per level you have and become inhibited 1 until the end of your next turn. Otherwise, they take half the damage from the previous round (rounded down) and, instead of their inhibited condition ending, its value increases by 1, up to a maximum of 3.

## SPLIT QUASIPARTICLES $\Delta$

## PINNACLE ACTION

### PHYSICIST | KIT

**Prerequisites** condensed matter specialization

**Requirements** You do not have a duplicate active.

You divide the emergent elements of your being into two independent forms. A duplicate of you appears in an empty adjacent space. Your duplicate shares your Repertoire, your  $\Delta$ s, your Hit Points, your attributes, your kit, and your inventory. Choose two of your attributes. Your duplicate takes a -3 penalty to these attributes, while you take a -3 penalty to the other two attributes. If both you and your duplicate are required to attempt a check to avoid a harmful effect, you attempt the check once with the penalty and apply the effects once. You use a  $\Delta$  to end this effect, at which point your duplicate dissipates.

**Flow.** If you have at least 1 Flow Point, decrease the penalty to -1.

### PHYSICIST: ADVICE FOR GMS

The physicist is designed to be inquisitive and exploratory, with a focus on their model. As GM, you are encouraged to guide this exploration as appropriate.

**Have Fun:** When your physicist player uses Create Model and chooses a target that is irrelevant to the encounter, feel free to tell them this, or encourage them to ask questions about the model that are related to something relevant. If they explain their reasoning for why they think the target is important, consider incorporating elements of this explanation into the encounter.

**Learn Together:** When your physicist asks a follow-up question about their model, feel free to ask, “Why do you want to know?” or a similar follow-up question. Doing so provides you additional time to develop an answer, and can help you guide your physicist’s subsequent actions and questions.

## Chapter I.7 Equipment - Not for 2026 playtest

Your hero carries an inventory of items that they use throughout their adventures. Equipment will be introduced in a future iteration of the playtest.

## Chapter I.7 Archetypes

No two scientists or engineers follow the same trajectory in life, and the same is true for *Adventures with Emmy* heroes. The **archetype** feature in each field progression lets you take abilities that represent your hero's interests outside the field: Perhaps they have a particular career aspiration, a secondary interest in another subject area, or a hobby they are particularly invested in. Perhaps they are a member of a special organization, or have learned special techniques from a unique instructor. Or perhaps they have uncovered esoteric knowledge from a long-forgotten civilization, or made a pact with a benefactor for special insight or power. Each of these archetypes can help you tell a unique story with your hero.

Each archetype starts with a **dedication** ability that represents your hero investing in this aspect of their identity. Many dedications specify a set of prerequisites, such as a level, attribute modifier, or ability you need. These prerequisites are not intended to set up a barrier for your hero, but they communicate what your hero needs in order to get the most out of this archetype from the perspective of game mechanics. All archetype abilities have the archetype trait to help you track where you obtained the ability from.

Some archetypes will list "Additional Abilities" that are printed elsewhere in this book or other *Adventures with Emmy* game materials. An ability included in this list is part of this archetype, with any modifications to their prerequisites listed. Any ability added to the archetype in this way gains the archetype trait, if it didn't already have that trait, and loses its field trait or general trait, if it had one.

### Interdisciplinary Archetypes

An interdisciplinary archetype is a special type of archetype that allows you to take abilities from another field. In the final version of *Adventures with Emmy*, each field has an interdisciplinary archetype; we have three for the 2026 playtest. An important distinction for interdisciplinary archetypes is the level at which you can select advanced and pinnacle abilities: You can choose advanced abilities from this field starting at 6th level, and you can choose one pinnacle ability at 10th level. When an action from your interdisciplinary archetype refers to "your key attribute," it refers to your key attribute, even if that's different than the key attribute usually associated with the field. You cannot take an interdisciplinary archetype for your field.

When you gain an ability from an interdisciplinary archetype, it gains the archetype trait.

### Multiple Archetypes

There is no rule limiting the number of archetypes you can choose, aside from the usual rate of gaining a new archetype ability at every even level. However, players might find that choosing many archetypes could dilute their concept for their hero, and leave them with many less-than-effective options during an encounter. It is recommended that players take two additional abilities from an archetype before they start another archetype.

### Access to Archetypes

Some archetypes list an **access** entry that specifies how your hero learns the abilities in this archetype. Access entries aren't as strict as prerequisites. While prerequisites codify necessary mechanics, access entries are intended to help your group tell a coherent story, and signal when an archetype might be more or less relevant to a particular type of adventure. Archetypes without an access entry are generally considered accessible to all heroes. Ultimately, a GM has the final say in what archetypes are available to heroes.

### Chemist Interdisciplinary Archetype

As the "central science" that studies the matter that every engineer and scientist works with, chemistry is a helpful archetype choice for any hero.

## ARCHETYPE | DEDICATION | INTERDISCIPLINARY

**Archetype** Chemist

**Prerequisites** 1 boost to Agility or Awareness, 2nd level

You study the properties of substances based on how their constituent elements combine and react to each other. You gain Prepare Chemical Reaction and Activate Chemical Reaction, and you can Collect Reagent when you Investigate.

### CHEMIST SPECIALIZATION

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Chemist

**Prerequisites** Chemist Dedication

You have particular insight into a specific subfield of chemistry. Choose a chemistry specialization. You gain this specialization for the purpose of meeting prerequisites, and you gain one beginner chemist ability that requires this specialization in its Prerequisites.

### CHEMIST EXPANSION

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Chemist

**Prerequisites** Chemist Dedication

You integrate chemistry-related knowledge and techniques into your practices. You gain a beginner chemist ability of your choice. If you take Chemist Expansion at 6th level or higher, you can instead gain an advanced chemist ability. If you take it at 10th level, you can instead gain a pinnacle chemist ability.

**Special** You can select this ability more than once. Each time you select it, you gain another chemist ability.

## Co-op Archetype

STEM is never advanced alone, requiring prior work of predecessors and the strength of a community. Members of a collaboration share ideas, provide feedback, and distribute tasks to achieve a common goal. Many STEM collaborations transcend the hierarchies of experience or institutional rank, with even the newest members contributing practices and viewpoints that uniquely strengthen the whole.

**Additional Abilities** Tutor's Aid

### CO-OP DEDICATION

### ARCHETYPE ABILITY

#### ARCHETYPE | DEDICATION

**Archetype** Co-op

**Prerequisites** 2nd level

You coordinate with your allies to achieve a shared vision. Add the Collaborative Contribution reaction to your Repertoire.

**Collaborative Contribution** ↔ **Trigger** The GM determines that an ally's design or hypothesis action requires additional Δs. **Effect** You contribute to your ally's design or hypothesis action. Reduce the number of required Δs by 1. You can Manipulate an Item or Stride as appropriate for how you contribute.

### BLAST CONTRIBUTION ↔

### ARCHETYPE REACTION

#### ARCHETYPE | KIT

**Archetype** Co-op

**Prerequisites** Co-op Dedication

**Trigger** An ally succeeds at a blast action, and the target is within range of your blast.

You join a small blast to your ally's. The triggering blast deals additional damage equal to your level, of a damage type that your blast could usually deal.

**CALL A GROUP MEETING Δ****ARCHETYPE REACTION****ARCHETYPE****Archetype** Co-op**Prerequisites** Co-op Dedication**Frequency** once per round

You briefly coordinate plans with your allies. You gain an additional ↺, which you can use only on a co-op reaction before the start of your next turn.

**SYMPATHETIC STORY ↺****ARCHETYPE REACTION****ARCHETYPE | EDGE | LINGUISTIC****Archetype** Co-op**Prerequisites** Co-op Dedication**Frequency** once per day**Trigger** An ally attempts a check affected by a mishap effect.

You relay a story of a time you faced a similar adversity. The mishap effect is suppressed for this check.

**Equipment Hacker Archetype**

Equipment hackers have a keen eye for improvisation, kludging together equipment and resources in ways that defy expectations. They see each new hack as fulfilling a personal challenge. They might later refine and record their off-the-cuff designs, but they find the biggest thrill in seeing a new hack work for the first time.

**EQUIPMENT HACKER DEDICATION****ARCHETYPE ABILITY****ARCHETYPE | DEDICATION****Archetype** Equipment Hacker**Prerequisites** 2nd level

You improvise with equipment to achieve unconventional purposes. You gain the Hack Blast action.

**Hack Blast** Δ (kit, manipulate) **Targets** 1 willing creature within your reach who does not have the jumbled condition.**Duration** 1 round. **Effect** You retrofit the target's kit to deliver a specialized effect. Choose a type of damage. The next time the target uses a blast, they can choose this damage type instead.**HACK BOOTS Δ****ARCHETYPE ACTION****ARCHETYPE | KIT | MANIPULATE | TRAVERSAL****Archetype** Equipment Hacker**Prerequisites** Equipment Hacker Dedication**Targets** 1 willing creature within your reach

You modify the target's footwear to speed them across the battlefield. The target gains a +2 meter bonus each time they Stride on their next turn.

Alternatively, you can add the design trait to this action and identify a type of difficult terrain you can see, like fallen rubble or underbrush. If you do, describe a design to overcome the difficult terrain. If the problem is solved, the target ignores the difficult terrain for 1 minute. Otherwise, they gain the +2 meter bonus as above.

**Grant Officer Archetype**

Firms and agencies that award contracts and grants to external parties rely on the leadership and communication skills of grant officers to solicit applications, review proposals, and determine awards. Grant officers maintain a balance between established expectations and negotiating with applicants and awardees throughout the grant's lifetime.

**GRANT OFFICER DEDICATION****ARCHETYPE ABILITY****ARCHETYPE | DEDICATION****Archetype** Grant Officer**Prerequisites** 2nd level

You shape the direction of your allies' design and research efforts to best fit your needs at hand. You gain the Request Proposals action.

**Request Proposals** Δ (auditory, review) Describe a request for design or research you would like your allies to pursue. Your request for proposals could be centered around gaining information ("Find out whether the monster is weak to fire.") or enacting a strategy ("Kill it with fire."). For 1 minute, allies who use a design or hypothesis action that supports this request for proposals gain temporary Hit Points equal to your level that last for 1 minute. You can have only one request for proposals active at a time; if you Request Proposals again, the previous request ends, but any granted temporary Hit Points retain their original duration.

**APPLICANT CONFERENCE Δ****ARCHETYPE ACTION****ARCHETYPE | AUDITORY | TRAVERSAL****Archetype** Grant Officer**Prerequisites** Grant Officer Dedication**Requirements** You have an active request for proposals.

You coordinate your allies to produce the best possible proposals. Choose yourself or a creature or object related to your request for proposals. Allies who can hear you can Stride 1 meter toward the chosen creature or object.

**COLLECT PRE-PROPOSALS****ARCHETYPE ACTION****ARCHETYPE | AUDITORY****Archetype** Grant Officer**Prerequisites** Grant Officer Dedication**Time** 1 minute**Requirements** You are not in combat.

You announce an intention to collect proposals so your allies can prepare for the process. Describe a request for proposals you would like to use in the future. When you roll initiative, instead of asking your GM about one hypothesis you have recorded using the Investigate action, you can choose to make this Request for Proposals.

**GRANT OFFICER CONSULTATION ↩****ARCHETYPE REACTION****ARCHETYPE | AUDITORY****Archetype** Grant Officer**Prerequisites** Grant Officer Dedication**Trigger** An ally uses a design or hypothesis action that supports your request for proposals.

You offer a quick consultation to support the fulfillment of your request. Recall Knowledge about a question relevant to your ally's design or hypothesis. Your ally can adjust their design or hypothesis based on the information you recall.

**RENEW SUPPORT ΔΔ****ARCHETYPE ACTION****ARCHETYPE****Archetype** Grant Officer**Prerequisites** Grant Officer Dedication, 6th Level

**Requirements** You have an active request for proposals and at least two allies with temporary Hit Points from your active request for proposals.

You announce a surge of renewed support. Your allies who have any number of temporary Hit Points from your active request for proposals regain their temporary Hit Points, up to your level.

## Mathematician Interdisciplinary Archetype

Math can be used to abstractly model anything, and is useful to a wide variety of scientists and engineers.

### MATHEMATICIAN DEDICATION

### ARCHETYPE ABILITY

#### ARCHETYPE | DEDICATION | INTERDISCIPLINARY

**Archetype** Mathematician

**Prerequisites** 1 boost to Awareness, 2nd level

You learn to break down complex premises into simple, abstract assumptions as a foundation for your work. You gain the State Axiom action.

### MATHEMATICIAN EXPANSION

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Mathematician

**Prerequisites** Mathematician Dedication

Your understanding of math grows, and so does your ability to apply it. You gain a beginner mathematician ability of your choice. If you take Mathematician Expansion at 6th level or higher, you can instead gain an advanced mathematician ability. If you take it at 10th level, you can instead gain a pinnacle mathematician ability.

**Special** You can select this ability more than once. Each time you select it, you gain another mathematician ability.

### MATHEMATICIAN'S BLAST

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Mathematician

**Prerequisites** Mathematician Dedication, 4th level

You gain the Numerical Blast action.

### ADAPTABILITY

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Mathematician

**Prerequisites** Mathematician Expansion, 6th level

As your breadth in mathematics grows, you learn to adapt more of it into your toolkit. You gain one additional beginner mathematician ability. Each day during your Daily Preparations, you may swap out this ability for another beginner mathematician ability. You cannot use this ability to meet the prerequisite for another ability that you pick while levelling up.

### FIND THE SOLUTION

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Mathematician

**Prerequisites** Mathematician Dedication, 6th level

You develop a more rigorous understanding of axiomatic theory, and can incorporate it better into your work. You gain the Solve Equation action.

## Pen Pal Archetype

Oftentimes, scientists and engineers must work at physical distance from their collaborators, and they develop strong abilities to communicate over written media.

### PEN PAL DEDICATION

### ARCHETYPE ABILITY

#### ARCHETYPE | DEDICATION



### Archetype Pen Pal

**Prerequisites** 1 boost to Influence, 2nd level

Through coded messages, hand signs, or radio signals, you can quickly and effectively communicate with a single creature without others discerning your message. During your daily preparations, choose one creature to be your pen pal. You gain the Message Pen Pal action.

**Message Pen Pal**  $\Delta$  (linguistic, review) **Requirements** Your pen pal is within 25 meters. **Effects** You Convey a brief message to your pen pal, which they can discern or hear clearly but others cannot. They can give a brief response that only you can discern or hear.

**Special** Your pen pal can also use Message Pen Pal to contact you.

### REDIRECT FLOW

### ARCHETYPE ACTION

#### ARCHETYPE

**Archetype** Pen Pal

**Prerequisites** Pen Pal Dedication

**Trigger** You would gain a Flow Point.

**Requirements** Your pen pal is within your range for Message Pen Pal.

You provide quick guidance to your pen pal. They gain a Flow Point instead of you.

### WARDING HYPOTHESIS $\Delta$

### ARCHETYPE ACTION

#### ARCHETYPE | HYPOTHESIS

**Archetype** Pen Pal

**Prerequisites** Pen Pal Dedication

**Requirements** Your pen pal is within your range for Message Pen Pal.

You share insights and predictions to warn your pen pal. Choose a creature or trap and Message your Pen Pal a hypothesis about how the creature or trap could endanger your pen pal. If your GM requires this hypothesis to be tested, your pen pal can use an action requiring a single  $\Delta$  to participate in that test during your turn.

**Correct** Your pen pal gains a +2 bonus to their defenses against the creature or trap for 1 minute.

**Partially Correct** As correct, but the bonus is +1.

**Incorrect** Your pen pal can Stride 1 meter away from the creature or trap without using any  $\Delta$ s. This has the traversal trait.

### COORDINATING MESSAGE

### ARCHETYPE ABILITY

#### ARCHETYPE

**Archetype** Pen Pal

**Prerequisites** Pen Pal Dedication, 4th level

When you use Message Pen Pal, your pen pal can immediately Stride or use a 1- $\Delta$  Blast as a reaction.

### Physicist Interdisciplinary Archetype

Scientists and engineers find that much of their work is based in physics principles, so this archetype makes an excellent addition for any hero.

### PHYSICIST DEDICATION

### ARCHETYPE ABILITY

#### ARCHETYPE | DEDICATION | INTERDISCIPLINARY

**Archetype** Physicist

**Prerequisites** 1 boost to Awareness, 2nd level

You see how your work is grounded in the fundamental principles of the universe, and you have trained to build complex models out of basic conceptual elements. You gain the Create Model action and the Elaborate Model action.

**Elaborate Model  $\Delta$**  (interdisciplinary, review) **Requirements** This is your first action this turn, or you are in Review. **Effects** Ask your GM one yes-or-no question about the target of your active model. Your GM answers truthfully. They may give an indeterminate answer, such as “It depends” or “Perhaps.” If they do, you can immediately ask one follow-up yes-or-no question.

## PHYSICIST SPECIALIZATION

## ARCHETYPE ABILITY

### ARCHETYPE

**Archetype** Physicist

**Prerequisites** Physicist Dedication

You focus your studies of physics in a particular subfield. Choose a physicist specialization. You gain this specialization for the purpose of meeting prerequisites, and you gain the physicist ability it grants.

## PHYSICIST EXPANSION

## ARCHETYPE ABILITY

### ARCHETYPE

**Archetype** Physicist

**Prerequisites** Physicist Dedication

You ground physics-related knowledge and techniques into your practices. You gain a beginner physicist ability of your choice. If you take Physicist Expansion at 6th level or higher, you can instead gain an advanced physicist ability. If you take it at 10th level, you can instead gain a pinnacle physicist ability.

**Special** You can select this ability more than once. Each time you select it, you gain another physicist ability.

### Science Communicator Archetype

Science communicators leverage their disciplinary knowledge and penchant for capturing attention to enhance others' scientific literacy. Many science communicators work with researchers and developers of various fields to make their findings accessible to others, spurring general interest and sharing insight to other fields. They might engage in public communication in tandem to pursuing their own research, or they might pursue full-time employment as a journalist or media creator.

## SCIENCE COMMUNICATOR DEDICATION

## ARCHETYPE ABILITY

### ARCHETYPE | DEDICATION

**Archetype** Science Communicator

**Prerequisites** 1 boost to Influence, 2nd level

You promote knowledge of scientific principles, history, and application to the general public. Choose one science communicator ability to add to your Repertoire.

## “DID YOU KNOW?” $\Delta$

## ARCHETYPE ACTION

### ARCHETYPE | LINGUISTIC

**Archetype** Science Communicator

**Prerequisites** Science Communicator Dedication

**Frequency** once per round

Your first instinct when you learn something new is to share it with others. Recall Knowledge about a creature or object you can see. Add the following effects to the usual outcomes of Recall Knowledge.

**Critical Success** Each of your allies gains a +1 bonus to a check of their choice related to the creature or object before the start of your turn. They must choose to gain the bonus before making the check.

**Success** Choose one ally to gain the effect of critical success.

**Failure** Choose one ally. The first time the creature or object attacks them before the start of your turn, the attack roll resolves against your Influence DC instead of your ally's Agility DC.

**HELPFUL METAPHOR Δ OR ΔΔ****ARCHETYPE ACTION****ARCHETYPE | LINGUISTIC**

**Archetype** Science Communicator

**Prerequisites** “Did You Know?”

**Requirements** Your last action was to use “Did You Know?” and you succeeded at your check to Recall Knowledge.

You excel at comparing new concepts to existing knowledge, helping others take action. Choose an ally who gained the benefits of your “Did You Know?” They can immediately take an action requiring the number of Δs you used for this action. The action must involve the subject of your “Did You Know?”

**INSPIRE COLLABORATION Δ****ARCHETYPE ACTION****ARCHETYPE | LINGUISTIC**

**Archetype** Science Communicator

**Prerequisites** Science Communicator Dedication, an ally with a hypothesis or design action

**Frequency** once per round

**Requirements** Since your previous turn, an ally has made a correct hypothesis or a design that solved a problem.

As a science communicator, you help other scientists spread their findings to a broader audience. Choose an ally who made a correct hypothesis or who solved a problem with a design since the end of your previous turn. Each other ally can choose to describe a course of action they plan to take on their next turn based on this hypothesis or design. Each ally who does becomes quickened on their next turn and can use the additional Δ to carry out an action that fits into that plan.

**SURPRISING FACT Δ****ARCHETYPE ACTION****ARCHETYPE | LINGUISTIC**

**Archetype** Science Communicator

**Prerequisites** Science Communicator Dedication

**Frequency** once per round

**Range** 10 meters; **Targets** 1 creature

**Defense** Awareness check vs. your Influence DC

As a science communicator, you amaze as well as inform. State a surprising science fact. The target must attempt an Awareness check against your Influence DC. If the GM believes this science fact would be well outside the target’s likely knowledge, they take a -2 penalty to the Awareness check.

**Critical Success** No effect.

**Success** The target becomes vulnerable 1.

**Failure** The target becomes vulnerable 2.

# II. Game Master's Guide

## Adventures with Emmy 2026 Playtest Document

### Chapter II.1 What is *Adventures with Emmy*?

<repeated text>

### Chapter II.2 Game Rules

<repeated text>

### Chapter II.3 Game Philosophy

As you plan and run sessions for *Adventures with Emmy*, it's helpful to keep in mind the philosophy behind the game's design. There's no one singular right way to run *Adventures with Emmy*, but the more you align your planning and practices as a GM with these philosophy elements, the more fun everyone will have at your table.

**Learning is the goal.** A player might learn during an encounter in two ways: Incorporate new knowledge, or reinforce existing knowledge through a new application. This means encounters are never designed to trick or punish players, but always to encourage the development and use of knowledge.

**Modular character design leads to modular teamwork solutions.** The modularity of *Adventures with Emmy* allows your players to build a unique party, and develop unique solutions to the problems you pose. This means you can always expect your players to surprise you at the table. Use your own STEM-related knowledge in the moment to help your players resolve the story.

**Problem-solving precedes mechanics.** The mechanics of *Adventures with Emmy* (making checks, imposing conditions, reducing Hit Points) work best after the players have had time to learn about their heroes' situation and work out a solution based on their knowledge. This means encounters are rarely resolved by repetitive checks.

### Chapter II.4 Eureka Rubrics

As a GM, the encounters you run are centered around a Eureka Rubric. If you're running a pre-written adventure, review the rubrics as you prepare, and use them to respond to your heroes' actions.

Eureka Rubrics are designed to be **cumulative**. When you have two different creatures in an encounter, the players might reach their thresholds at different rates. Depending on how the encounter plays out, they might exhaust all of one creature's Eureka Thresholds before starting on another's, or they might reach Eureka 1 for each, then Eureka 2 for each, and so on. For many pre-written adventures, an encounter will add a Eureka Rubric about the environment, or a constraint, or the particular goals or backstory of the individual creatures involved. Track the players' advancement along each Eureka Rubric separately.

When evaluating whether your players have reached a Eureka Threshold, consult the rubric's claim and evidence entries and ask yourself whether the heroes' actions and overall strategy seem to be based on these ideas or similar. If this is ever unclear, ask your players to elaborate on their reasoning, using questions like, "Why do you think that would be particularly effective?" or "What makes you think that?" or the simple request, "Tell me more." Remember: You don't need to be an expert in the subject represented in the Eureka Rubric. You just need to respond to your players' descriptions and dialog at the table.

When you design an encounter or build a creature, take a few minutes to outline the Eureka Rubric. Your rubric doesn't have to be terribly detailed or lengthy. In fact, briefer is better, since it leaves you more room to improvise and respond to your heroes' surprising actions. Try to make each example of claim and evidence an indivisible nugget that you can clearly evaluate whether the heroes have accomplished. Avoid making a claim or evidence in the form of a list (the

heroes do this *and* that), prerequisite actions (once the heroes do this *then* they can do that), and degrees of accomplishment (if the heroes do this *well enough*).

[Jenise's Field Guide](#) lists a Eureka Rubric for each creature. If you want to quickly assemble an encounter, you can use its Eureka Rubric or modify it minimally to integrate it into your story. Below is a generic Eureka Rubric you can use for *any* encounter.

#### GENERIC ENCOUNTER

#### EUREKA RUBRIC

**Claim** The heroes draw a conclusion based on appropriate STEM principles.

**Evidence** The heroes identify a relevant feature of their surroundings, their possessions, or a creature.

**Eureka 1** Choose a creature in the encounter. The heroes gain a +2 bonus to their defenses against this creature. You can award this Eureka Threshold once per creature in the encounter.

**Eureka 2** Choose an attribute and a creature previously chosen for Eureka 1. The heroes gain a +2 bonus to checks made using this attribute against this creature. You can award this Eureka Threshold once per creature in the encounter.

**Eureka 3** Choose a type of damage and a creature previously chosen for Eureka 2. This creature gains weakness equal to its level against the chosen damage type. You can award this Eureka Threshold once per creature in the encounter.

## Chapter II.5 Rewarding your Players

During and after an encounter, you will want to reward your players for creative applications of their STEM knowledge and collaborative gameplay. While there are rewards built in to adventures like a progression of the story and accumulation of treasure, it's important to periodically present special rewards directly tied to the players' decision-making and roleplaying. This section discusses how you can reward your players with special items called *quantum crystals* and special bonus actions that you can award once or twice per campaign.

### Rewards on Checks

Since you, as the GM, adjudicate the outcome of dice rolls throughout the encounter, each time a player rolls a d20, you have an opportunity to reward their creative reasoning and gameplay. If a player takes a course of action that is particularly appropriate for their hero's field or lived experience, consider giving them a +1 or +2 bonus on a roll that this course of action depends on. Remember: Each bonus increases the probability of a success *and* the probability of a critical success.

If a player already has a bonus to apply to that check, you can instead reduce the DC. When you do this, it's important to tell the player that you're doing so (otherwise they don't know they're being rewarded), but it's up to you whether you communicate the amount. As discussed in "Setting Difficulty Classes," a typical DC adjustment is 2 or 3.

Finally, if you really want to raise the sense of excitement, consider offering the player an adjustment to the outcome of their check. This typically looks like adjusting a failure to a success, or a success to a critical success. Specify which of these adjustments you want to apply: Upgrading a failure to a success communicates a sense of security ("You can't fail, but I want to see if you make something special happen") while upgrading a success to a critical success communicates a sense of excitement ("If this works, it's going to work great"). Don't offer both upgrades, since this amounts to a +10 bonus on the check. If the player's action requires a roll from an enemy creature, you can also apply the reverse effect: Tell them you will treat a critical success as a success, or a success as a failure.

### Quantum Crystals

A **quantum crystal** is a mysterious embodiment of the fluctuations found within the Quantum Caverns. They appear in each connected world seemingly at random, and bind themselves to a particular individual. A hero can have only one quantum crystal at a time, and they cannot sell or otherwise part with the quantum crystal, and once they activate a *quantum crystal*, it vanishes. The color of the quantum crystal determines its effect, as described in the stat block below. You can award *quantum crystals* on a somewhat regular basis, even as frequently as once per session, usually after a particularly challenging encounter. Encourage your players to use their quantum crystals so that you can award them

more. Note that *quantum crystals* have the **awarded** and **singular** traits, meaning they can only be obtained via GM reward, and a hero can possess no more than one at a time.

## QUANTUM CRYSTAL

## ITEM

### AWARDED | SINGULAR

This crystal seems to shift its shape as you look at it. The color of the quantum crystal determines its requirement and effect, listed below.

**Activate** Δ (edge) **Requirement** Listed below. **Effect** Listed below.

| Quantum Crystal Color | Requirement                         | Effect  |
|-----------------------|-------------------------------------|---|
| Black                 | You just failed a Fitness check.    | Roll again, with a +4 bonus, and use the second result.                     |
| Blue                  | You just damaged a target.          | Add another d6 to the damage.   |
| Green                 | None.                               | You receive a useful piece of information regarding your current situation. |
| Orange                | You just failed an Awareness check. | Roll again, with a +4 bonus, and use the second result.                     |
| Red                   | None.                               | You regain half your total HP.  |
| Purple                | You just failed an Influence check. | Roll again, with a +4 bonus, and use the second result.                     |
| Yellow                | You just failed an Agility check.   | Roll again, with a +4 bonus, and use the second result.                     |

### Bonus Abilities

Central to the design philosophy of *Adventures with Emmy* is the players' progressively amassing abilities that expand what they can do on their turn. This modular design allows players to customize their characters throughout the storytelling process. As the GM, you can collaborate with your players in this process by rewarding them with **bonus abilities**.

A bonus ability is an ability you believe would be helpful to a hero that they might not otherwise gain, which you award to the player for free. A bonus ability doesn't replace an ability they would otherwise gain from their background or field; it's simply added to their hero. You can choose bonus abilities from any source (general, field, archetype, or other sources in future materials), and you can ignore prerequisites as you like, although it's generally a good idea to keep advanced and pinnacle field actions to their usual level restrictions. You can usually award 1 or 2 bonus abilities per adventure without ruining your story by overpowering your heroes. Overall, it's always better to overpower the heroes and then slightly turn up the encounter difficulty! You can even design your own abilities, using the abilities in this book as examples.

Consider choosing bonus abilities that complement the player's design for their hero, or that fit well into the hero's ongoing story. For example, if a hero has demonstrated moments of exceptional bravery, consider giving Bold Try as a bonus ability. Or, if a mechanical engineer is always building devices that interact with animals, consider giving them an animal-related biologist action. You might also consider awarding the same bonus ability to all heroes at the same time, perhaps tied to a common theme among the group.

## Chapter II.6 Setting Difficulty Class

Many player actions say the GM will set a Difficulty Class (DC). If the check is against a creature, use the relevant attribute DC from the creature's stat block: For example, attempting to forcibly move a creature requires a Fitness check against the creature's Fitness DC; attempting to avoid a creature's notice requires an Agility check against the creature's Awareness DC. But some actions require you to think about the degree of difficulty associated with the task. That's when

you should use **level-based DCs**, given in the table below. For example, if a hero wants to Recall Knowledge about a creature, use the standard DC for the creature's level. If it's a task not related to a creature (like climbing a rock wall), think of what minimum level a hero would need to have a reasonable chance of succeeding at the check, and use that level to identify the DC. Standard DCs are set so that a hero of that level has around a 50% chance of succeeding, depending on their modifier. If you want to make a challenge easier, lower the DC by 2; if you want to make a challenge more difficult, raise the DC by 2.

| LEVEL | STANDARD DC |
|-------|-------------|
| 0     | 12          |
| 1     | 13          |
| 2     | 14          |
| 3     | 16          |
| 4     | 17          |
| 5     | 18          |
| 6     | 19          |
| 7     | 20          |
| 8     | 21          |
| 9     | 23          |
| 10    | 24          |
| 11    | 25          |
| 12    | 26          |

Level-Based DCs Table

## Chapter II.7 Building Creatures

*Emmy's Field Guide* is designed to give you plenty of options to create your encounters and populate your story with engaging challenges. But what if you have in mind a creature who isn't represented in the published material? You have three options: reskin, revise, or build.

**Reskin.** If you like the stats and abilities of a creature, but you want something that looks different or fits in a different type of environment, you can simply change the name and description of the creature.

**Revise.** If you like most of what you see in a stat block, but need to make a few tweaks, go ahead! You might swap the creature's Fitness and Agility modifiers, lower its attack damage and add a condition on a critical hit, or trade out one of its abilities for an ability from another creature's stat block. As long as you keep the overall challenge of the creature the same (average modifier values, number of abilities), you aren't in much danger of affecting the creature's balance and the challenge it poses to the party. Just try to balance an improvement in one aspect of the creature with a reduction elsewhere.

**Create.** If reskinning and revising won't meet your needs, it might be time to build your own creature. This is a fairly straightforward process! The rest of this chapter is dedicated to describing this process, which follows different steps than when a player creates a hero.

### *Adventures with Emmy* Creature Builder

A good resource for building creatures for *Adventures with Emmy* is the Creature Builder, a [spreadsheet available here](#). This Google Sheet will walk you through the process described below, help you fill out all the necessary numerical values, and provide you with an organized stat block you can use during your game.

### Start with a Name and Concept!

When building a creature for *Adventures with Emmy*, the numerical values are secondary. The most important thing for you to start with is a concept for your creature. A cool name that summarizes this description is pretty handy, too! Try



writing 2-3 sentences that describe your creature. What does it look like? What is it good at? What science concepts does it relate to? Is it a humanoid, an animal, a monster from a dark cavern, or an alien visitor? Finally, when the heroes meet your creature, how is it likely to respond?

These questions help you think through the **concepts** (What STEM topic does it relate to?), **fiction** (What role does it fill in the game world?), and **mechanics** (What does the GM get to do with it?) of your creature. All these dimensions are important, but you'll probably find you have a clear idea of one of them to start with. For example, the sola boar was created from a fiction-first perspective: The author wanted to create an animal-plant hybrid to occupy a particular place within the world, and then determined its connection to photosynthesis. On the other hand, the design for the dipolar bear started with the concept of electric dipoles. Finally, the grabblin and proxlin were developed using a mechanics-first process to create a gravitational ability that depended on mass and separation; after initial drafting, the author determined that this ability should be split up among two separate creatures to represent two separate concepts.

The authors of this book designed many of our creatures around **disciplinary core ideas** from the [Next Generation Science Standards](#). If you'd like to follow that example, we recommend starting with [this searchable table](#) of disciplinary core ideas, or [this pdf](#) with all disciplinary cored ideas listed.

### Is this Creature Part of a Family?

You might find your idea could apply to creatures of different levels, or that you could express the same scientific concept with complementary creature ideas. In that case, you might choose to design a **family** of creatures with different stat blocks that all represent the same idea, and perhaps even design them to support each other in an encounter. If that's the case, you can simplify your future GM's work by writing the **same Eureka Rubric** to apply to this entire family of creatures.

### Write the Creature's Eureka Rubric

A creature's Eureka Rubric should be based directly on the science principles the creature is designed to teach, and broad enough to apply to any encounter the creature is placed in. Think about a few different ways that principle might play out in an encounter with the creature. What are the general trends in Claim, Evidence, and Reasoning that you see? And remember: You or another GM will likely need to add to or modify the rubric anyway! Use your ideas from the Eureka Rubric to help you decide the creature's statistics and abilities.

### Choose a Level and Traits

Your creature has a level, just like the heroes, although the creature's level can be as low as 0 or as high as 12. In general, this number should be within 2 of the level of the heroes you want this creature to fight. For example, a 3rd-level creature would be a significant threat to a 1st-level party, but would pose little threat to a 5th-level party.

As you choose a level, keep in mind that the different tiers of player abilities (beginner, advanced, and pinnacle) tend to draw on different levels of STEM knowledge. While a group can start an adventure at any level, a group who starts playing at 1st level and progresses from there has developed more STEM knowledge and has become more fluent in applying that knowledge to gameplay. It's recommended that creatures of level 1-3 represent concepts appropriate for middle school, creatures of level 4-6 represent concepts appropriate for high school, and creatures of level 7-10 represent more advanced concepts. Representing a higher-tier concept doesn't mean the creature needs more complex game mechanics. In fact, simpler game mechanics with a nuanced Eureka Rubric can help players focus on the relevant STEM principles.

Identify the traits that would appropriately describe your creature. You can use existing creatures as examples. You can invent a new trait if you need, but keep in mind that a new trait likely won't interact with existing game materials, such as bonuses that heroes receive against creatures with a specific trait.

### Assign Attribute Modifiers

Then, choose a modifier for each of the creature's attributes (Agility, Awareness, Fitness, Influence). Based on the creature's level, their attribute modifiers can fall within the range given in the second column of the [Creature Building Statistics Table](#), and they should add to the total given in the third column.

| CREATURE LEVEL | RANGE OF ATTRIBUTE MODIFIERS | TOTAL OF ATTRIBUTE MODIFIERS | HIT POINTS | STANDARD DAMAGE |
|----------------|------------------------------|------------------------------|------------|-----------------|
| 0              | 0 – 4                        | 6                            | 9 – 13     | 1d6             |
| 1              | 1 – 5                        | 10                           | 10 – 14    | 1d6             |
| 2              | 2 – 6                        | 14                           | 14 – 22    | 2d6             |
| 3              | 3 – 8                        | 20                           | 20 – 32    | 3d6             |
| 4              | 4 – 9                        | 24                           | 28 – 42    | 4d6             |
| 5              | 5 – 10                       | 28                           | 36 – 56    | 5d6             |
| 6              | 6 – 12                       | 34                           | 46 – 70    | 6d6             |
| 7              | 7 – 13                       | 38                           | 56 – 84    | 7d6             |
| 8              | 8 – 14                       | 42                           | 67 – 101   | 8d6             |
| 9              | 9 – 16                       | 48                           | 80 – 120   | 9d6             |
| 10             | 10 – 17                      | 52                           | 92 – 140   | 10d6            |
| 11             | 11 – 18                      | 56                           | 106 – 160  | 11d6            |
| 12             | 12 – 20                      | 62                           | 121 – 183  | 12d6            |

Creature Building Statistics Table

You might find you want to deviate from these values slightly to fine-tune a creature. For example, perhaps you want to create a unique 9th-level quantum dragon that should have a high Agility modifier to support its maneuverability in flight, but also needs a high Awareness modifier to represent its supreme grasp of how complex wave functions evolve over time. You could exceed the usual total of 48 and arrive at a total of 50 if you compensate with weaker stats elsewhere: Perhaps the quantum dragon's claws deal less damage than is typical for 9th level (see Creature the Creature's Attack below) because they phase in and out of existence. Or perhaps this quantum dragon takes a penalty to its defenses against mental effects or the Interfere action because its quantum sight is a perpetual distraction. The key to such variations is to always give the heroes some means of getting the upper hand.

### Assign Hit Points, Immunities, Resistances, and Weaknesses

Determine the number of Hit Points your creature begins the encounter with. The Hit Points column in the [Creature Building Statistics Table](#) gives a range of Hit Point values a creature of this level might have. Creatures with the lower number of Hit Points for their level might have other defenses, such as a high Agility or resistance to some damage types. Creatures with higher number of Hit Points for their level might be vulnerable in other ways, such as a low Agility modifier or weakness to some damage types.

Also check the [damage types](#) and determine whether the creature has immunity, resistance, or weakness to certain damage types. Immunities should be used sparingly, as they can entirely negate a party's strategy or a hero's primary damage type. Any choice of immunity, resistance, or weakness should help communicate the creature's STEM concept, and you should consider modifying these properties through Eureka Thresholds, such as players discovering a weakness, or strategizing how to overcome a resistance. Each resistance and weakness requires a numerical value to communicate how many fewer or additional Hit Points the creature loses from the damage type. These values should range between half the creature's level (for a minor resistance or weakness) to the creature's level (for a significant resistance or weakness). These values can also be modified through Eureka Thresholds.

### Create the Creature's Attacks

Most creatures have at least one melee or ranged attack, which cost 1 Δ and require an attack roll against the target's Agility DC and a damage roll. Many creatures will have both a melee and a ranged attack, but it's all right to have only one of the two to match your concept. Most animals, for example, aren't going to have a ranged attack.

A creature's melee attack bonus is equal to its Fitness modifier, and its ranged attack bonus is equal to its Agility modifier. You can adjust these values if needed to, but consider adjusting the damage amount in the opposite direction to compensate.

Use the Standard Damage column in the [Creature Building Statistics Table](#) to determine the damage for each attack based on the creature's level. Standard Damage represents a moderate amount of damage for the creature's level. If you want to make this attack more powerful, add the creature's level as a static modifier to the damage. So, for example, a powerful attack for a 3rd-level creature would be 3d6+3. You should then compensate with a weakness somewhere in the creature's defenses. On the other hand, if you want to make this attack impose a condition (for example, inhibited 1 for 1 round on a hit), you should lower the damage by either reducing the number of damage dice by 1, or by subtracting a modifier equal to half the creature's level.

## Write the Creature's Special Abilities

Each creature needs a set of abilities that mechanically enact the STEM concept that the creature represents. These abilities need to engage the players' attention and communicate the creature's concept to them through a narrative description and in-game effects. As you design your creature's abilities, think about how players will respond to them: What questions might they ask? What hints might they pick up?

To promote investigation and introduce variety at the table, each creature should have 2 to 4 abilities related to their concept, or one ability with different facets for the players to engage with. Each of these abilities can be an action, a reaction, or a passive effect. A creature with 5 or more abilities might beset a GM with decision paralysis, and the combat is likely to be over before the GM has opportunity to use them all. If you do give a creature a high number of abilities, consider lowering the damage its attacks deal to compensate.

Write a description for each ability that your creature has. This description should include...

- A name. What terrifying or intriguing name will the GM announce when they invoke this ability?
- If the ability is an action, determine the number of  $\Delta$ s (1 to 3) required. No action can cost more than  $\Delta\Delta\Delta$ . You should think about how the GM will use these actions and in what order. If the creature's optimum strategy requires more than  $\Delta\Delta\Delta$ , think about whether it's feasible to be distributed across multiple rounds, where the creature sets up a condition that they capitalize on in the next round.
- The range and targets of the ability (if applicable).
- What kind of check the heroes can make to avoid or reduce the effect of the ability, or what kind of check the creature needs to make for the ability to be successful. To determine the type of check, use the following guidelines:
  - Fitness checks allow a hero to withstand harm or absorb damage, and enable the creature to make a physical aggression.
  - Agility checks allow a hero to dodge away from harm, and enable the creature to move with precision.
  - Awareness checks allow a hero to discern attempts to deceive or avoid notice, and enable the creature to gain information.
  - Influence checks allow a hero to withstand mental assaults or confusion, and enable the creature to exert its will.
- How this special ability relates to a STEM concept.
- What conditions and damage the ability deals. Use the same range of damage for attacks. If an ability inflicts a strong condition (like inhibited 2 for 1 minute), use the small damage amount.

Instead of developing your own special ability, you can reuse an ability from an existing creature, or use a hero's ability. If your special ability causes damage, use the same damage dice as the creature's stronger attack.

When designing a creature's special action, keep the following design principles in mind.

- Think about incorporating the basic actions. Perhaps the creature can Stride or Interfere while they carry out another effect. If your ability significantly enhances what a creature can accomplish with their  $\Delta$ s, consider giving the ability the intensive trait to avoid overwhelming their turn.

- Don't use contested checks. A creature and hero should never "roll against" each other. With the exception of initiative, a check is always resolved against a static DC. Contested checks bring in more randomness than *Adventures with Emmy* is designed to handle.
- A creature's special ability should do something visibly interesting in the narrative. An ability that gives the creature a static boost or allows it to change something the heroes can't see is only interesting from the GM's side, and the game is designed for the players' engagement. A special ability should be something the creature *does* that advances the story in the game.
- An encounter in *Adventures with Emmy* is most likely to last around 3 rounds. If your creature would require more than this number of rounds to accomplish its goal or build up to an interesting moment, consider scaling down the number of  $\Delta$ s its abilities require, or consider how you might accomplish these narrative outcomes differently, or how you might divide your ideas among different creatures.
- The goal of any creature or encounter is for the players to have fun learning about science. Creatures shouldn't be designed to punish, trick, or overwhelm the players.

### Final Review and Description

Look back over your creature's stat block. Do the design features match your concept? Do you need to tweak any numbers? Does it read like a coherent document? Keep making revisions as you need to.

Once your stat block is finished, make any notes or descriptions you need about the creature's place in the world: What lore exists that the heroes might recall? What sort of hooks might attach this creature to an adventure the heroes would be interested? What information does the GM need to signal to the players as they approach this creature?

### Helping GMs use your Creature

If you're building a creature for one session that you're running, you probably have a good idea by now of how to use this creature at the table with your players. But if you want to publish this creature, consider providing supporting information like relevant STEM facts, additional plot hooks, and suggested encounters with additional Eureka Rubric content.

## Chapter II.8 Building Traps

A trap represents a physical hazard, impediment, or danger localized to an area. A trap might be intentionally laid, like a covered pit or a hanging sandbag, or it might occur naturally, like a landslide. A trap usually remains dormant until a hero triggers one of its reactions. Traps have levels and stat blocks much like creatures, although they don't usually have an Awareness or Influence modifier, but there can be exceptions to this general principle. A simple trap might have a reaction that is used only one time, but a complex trap might have a routine that specifies how the trap behaves each round of an encounter after it is triggered.

Most traps begin play hidden from sight, requiring a creature to Search to find them. The Search DC is specified in the trap's stat block.

While traps have an Agility DC and HP and can therefore be destroyed with damaging effects, they are objects instead of creatures, so their stat blocks usually specify a resistance to all types of damage. Instead, heroes can disable a trap directly as outlined in their Eureka Rubric.

## Chapter Sir not appearing yet - Building Encounters

[use XP based on level differential to evaluate threat levels; will need different XP amounts for boss and standard creature]

## Chapter Sir not appearing yet - II.8 Running an Adventure

### How Much does a GM Write Ahead of Time?

#### Adventure Scales

Sessions → Quests/Objectives → Adventure → Campaign

#### Adventure Design Principles

Consider: Design adventure around a broad scientific theme, or outline a compelling story and identify the main scientific principles along the way.

#### Session Zero

Players don't just build heroes, they build a party. Help your players consider how their fields complement each other, and how their choice of attribute modifiers complement each other. Help them think about how each character is providing support, debuffing enemies, healing or mitigating damage to allies, and damaging enemies. If one of these facets of gameplay seems like a struggle either now or throughout the first level of play, consider how the group might round out their abilities through strategic archetype selection at the next even-numbered level.

#### The First Session

Finish hero introductions before asking for actions.

#### The GM's Role

A GM can help clarify hypotheses/descriptions players give. For example, "Did you mean larger or heavier?" This helps both mechanically and pedagogically.

You might find it helpful to keep a copy of your players' hero sheets.

Describe all 5 senses.

Use reference materials.

Decide how much gamified information you give players. Do you want to just announce the last Eureka Threshold, or communicate how many there are ahead of time?

#### Alternate Rule Sets

The rules presented for Adventures with Emmy represent the style of play that seem appropriate for most groups. However, you might determine that your players would enjoy some of the following modifications. You should discuss the adoptions with your players and reach consensus before implementing.

##### *Multiple-Choice Investigation*

Consider giving players a set of options for what their heroes Investigate. These prompts do not have to be long.

##### *Prescient Investigation*

The Investigate action helps your heroes transition from exploring or navigating an area to an encounter. Each hero can use Investigate to record a hypothesis and potentially start a combat with 1 Flow Point, which represents a significant advantage! However, some player groups might prefer to jump right into combat at the start of a session, or might feel like they're guessing more than Investigating. To accommodate such a preference, you can use **Prescient Investigation**.

In this alternate rule set, each player can, once per encounter at the start of their turn, describe an investigation that they conducted before arriving at the current encounter. This description does not require them to use any Δs, because this is not an action they are taking right now. Instead, they are invoking a flashback to before the encounter began. Take 3-5 minutes to work with the player to develop an appropriate description and record the hypothesis their hero made during this flashback.

In order to receive the 1 Flow Point described in Investigate, the hero must then, on the same turn, carry out a test of their recorded hypothesis. They receive the Flow Point regardless of the outcome of the test. You as the GM determine what sort of actions are necessary for them to carry out the test, but the process should require 1 or 2 Δs and be resolved by the end of the player's current turn. Starting on their next turn, they can spend the Flow Point to become

quicken and use the extra  $\Delta$  to move toward a creature or object related to their hypothesis, or spend it on abilities as usual.

While Prescient Investigation allows your group to jump right into the action, it does extend the time a given player spends in the spotlight when they invoke their flashback. This is why it's important that you keep your discussion with the player limited to 3-5 minutes so other players don't feel disengaged. Of course, if every player invokes a flashback in one session, the additional time can equalize across the table, but the last player might feel demotivated to invoke a flashback if the others have already taken a long time. Discuss this dynamic with your group when deciding whether to use Prescient Investigation.

## Hero Retraining

There might come a point where a player expresses a desire to change some of the decisions they made about their hero. They might like to trade one field ability for another, replace their archetype, or change their field entirely. Players should be allowed to make these decisions to ensure they're enjoying the game and telling the story they want to tell. But that story might feel disjointed if in the middle of walking from one room to another a computer technician suddenly becomes a chemist science communicator. When a player expresses this desire, work with them to identify a point in the story when their hero could revisit old notes, or undergo intensive training, or adopt a mentor. Also help them make choices that fit the adventure that you plan to stage. If their original choices are about to become extremely irrelevant, it's not a spoiler to ask them to hold off and see what the adventure reveals!

## Chapter II.9 Jenise's Field Guide

The creatures below are a sample of what challenges await your heroes in *Adventures with Emmy*.

### Dipolar Bear

Dipolar Bears can be seen peppering the arctic landscapes where strong electric storms are common. Ecologists have observed an inexplicable behavior of theirs to, without warning, point like a bloodhound in a particular direction. It took some collaboration to notice that dipolar bears inhabiting the same area will point in unison, facing the same direction for the same amount of time, even if they are unable to see one another. This fascinating behavior requires more study.

#### DIPOLAR BEAR

#### CREATURE 2

##### LARGE | ANIMAL | ELECTROMAGNETIC

**Claim** The dipolar bear has opposite charges at each end. The dipolar bear is an electric dipole. The dipolar bear will rotate to align itself in an electric field.

**Evidence** The charges at each end of the dipolar bear behave oppositely. Opposite charges make a dipole. Dipoles rotate to point opposite of an electric field.

**Eureka 1** Each hero can Manipulate an Item adjacent to the dipolar bear to increase its charge level. Each time they do so, its resistance and weakness values increase by 1.

**Eureka 2** The heroes can design an electric field to lock in the dipolar bear's position. Doing so makes the dipolar bear unable to move for 1 round. They can expand on this design each round to increase the duration.

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**Agi** +4, **Awa** +2, **Fit** +6, **Inf** +2

**Electric Grounding** ⚡ (electricity) **Trigger** A creature hits the dipolar bear with a melee attack. **Effect** The dipolar bear roars its electric charges into action. The triggering creature takes 1d6 electricity damage.

**HP** 20; **Immunities** electricity; **Resistances** see dipolar defenses; **Weaknesses** see dipolar defenses

**Melee**  $\Delta$  claw +6, **Damage** 2d6+2

**Dipolar Defenses** (electromagnetic) The dipolar bear is bookended by two opposite charges: a positive charge at the front and a negative charge at the back. Each time a creature attacks or attempts to damage the dipolar bear, ask whether they attack the bear's front or back side.



If front (positive), the dipolar bear has resistance 3 to fire, mental, and sonic damage, and weakness 3 to acid and cold damage.

If back (negative), the dipolar bear has resistance 3 to acid and cold damage, and weakness 3 to fire, mental, and sonic damage.

## Gremlins

Gremlins are small in stature, but they exert a powerful command over the most fundamental forces of nature. Intensely self-driven and passionate, they use these forces to further their ends. Gremlins live in small communities beneath the world's surface, and typically those with more altruistic motivations stay behind to care for the problems left by the more selfish gremlins who journey to the surface.

### Grablin

The squat, craggy-skinned gremlins known as grabblins live in small villages set up in pockets deep underground. There, they grow only basic subsistence needs, ever dreaming of the riches of the surface far above. Their time spent beneath the surface has brought them an attunement with gravity itself. Some grabblin mages master the art of shifting and swirling the earth above to attract the items of their desire toward them, sharing their sifted gains with their villages and vexing the surface dwellers who find their items to be mysteriously lost amid a pile of loose stone and sand. However, more impatient grabblins strike out to the surface to steal items directly, using their gravitational attraction in shorter bursts. Regardless of how they obtain them, grabblins' gravitational prowess grows in power with each new item they amass, and they are usually seen with a host of baubles, gems, and tools hanging from their person.

#### GRABBLIN THIEF

#### CREATURE 2

#### SMALL | GRAVITY | GREMLIN

**Claim** Taking the grabblin's stolen goods will lower their gravitational strength.

**Evidence** The grabblin controls an attractive force like gravity, and gravity increases in strength with mass.

**Eureka 1** Each hero chooses one of the following boons: Gain a +2 bonus on Influence checks to persuade or trick the grabblin into releasing items; gain a +2 bonus on Agility checks to steal from the grabblin.

**Eureka 2** Once, each hero can apply an edge effect to their attempt to relieve the grabblin of mass.

**Eureka 3** Ask the heroes to choose a condition and describe how they impose this condition on the grabblin. Use a value of 2 for a condition with a numerical value. The condition applies for the remainder of the encounter.

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**Agi +2, Awa +2, Fit +6, Inf +4**

**HP 20**

**Melee**  $\Delta$  massive fist +2, **Damage** the grabblin's Mass value

**Ranged**  $\Delta$  hurled object (range 3 meters) +6, **Damage** 3d6 plus reduce Mass by 1

**Amass**  $\Delta\Delta$  or  $\Delta\Delta\Delta$  (force, gravity) The grabblin attempts to gravitationally steal an item from a creature within 10 meters. If the grabblin uses  $\Delta\Delta\Delta$  for this action, they can target any number of creatures within range. Each target must attempt a DC 18 Fitness check.

**Critical Success** The target is unaffected.

**Success** The target is pulled a number meters closer to the grabblin equal to the grabblin's mass value. This is a velocity effect. They also lose some equipment from their kit. This makes the target jumbled and increases the grabblin's Mass value by 1.

**Failure** As success, and the target takes force damage equal to the grabblin's Mass value. The grabblin's Mass value increases by 2 instead of 1.

**Mass** The grabblin grows stronger with each item they steal. Most grabblins start combat with a mass value of 2 and increase this value by using their Amass ability, or by otherwise stealing items. A creature can reduce this value (to a minimum of 0) by using the Manipulate action to steal from the grabblin.



**Ride the Gravitational Wave** The grabblin instinctively navigates gravitational effects with ease. They gain a +2 bonus to defenses against gravity effects.

### *Proxin*

Lanky and sneaky, proxins love establishing their dens in the spaces between wall panels. Many use this positioning to play pranks on residents as they walk by, using their command over gravity to knock handheld objects loose, or create a tripping hazard at just the right moment. This leads some homeowners to consider certain corners or passageways in their homes cursed or haunted, especially as the embedded proxin muffles a raspy laugh.

Proxins are distant cousins of grabblins, and unwary adventurers might confuse the two, thinking that a powerful proxin holds a secret stash of items they must be relieved of, or that keeping their distance from a grabblin will help them resist the creature's pull. Confusion runs especially rampant when grabblins and proxins stalk their prey together, stealing and pranking with equal glee.

## PROXIN LOUT

## CREATURE 2

### SMALL | GRAVITY | GREMLIN

**Claim** Getting farther from the proxin will weaken its gravity effects.

**Evidence** The proxin controls an attractive force like gravity, and gravity decreases in strength with separation.

**Eureka 1** Each hero gains a +1 bonus to movement when they Stride away from the proxin. This has the traversal trait.

**Eureka 2** Each hero gains a +1 bonus to ranged attack rolls against the proxin, and a bonus to ranged damage equal to their level.

**Eureka 3** The heroes can impose a condition with value 2 on the proxin.

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**Agi** +6, **Awa** +2, **Fit** +2, **Inf** +4

**HP** 20

**Melee**  $\Delta$  fist +2, **Damage** 2d6

**Ranged**  $\Delta$  gravity projectile (range 10 meters) +6, **Damage** 2d6

**Attraction at a Distance**  $\Delta\Delta$  or  $\Delta\Delta\Delta$  (force, gravity) The proxin attempts to gravitationally pull a creature within 6 meters.

If the proxin uses  $\Delta\Delta\Delta$  for this action, they can target any number of creatures within range. Each target must attempt a DC 18 Fitness check. Creatures within 2 meters take a -2 penalty to their check, and creatures between 4 and 6 meters away gain a +2 bonus to their check.

**Critical Success** The target is unaffected.

**Success** The target is pulled 2 meters closer to the proxin.

**Failure** The target is pulled 4 meters closer to the proxin and takes 2d6 damage.

**Ride the Gravitational Wave** The grabblin instinctively navigates gravitational effects with ease. They gain a +2 bonus to defenses against gravity effects.

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