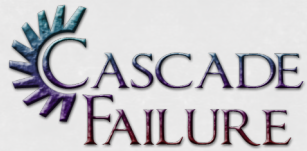


 CASCADE
FAILURE



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DEDICATION

This book is dedicated to all the people who contribute to free online distribution of ideas and content on the Internet. This includes but is not limited to: bloggers, contributors to Wikipedia and other Wiki's, Lolcat creators, open source software developers, artists who make their work available for free on the internet via sites like DeviantArt, podcasters, educational institutions like Sanford University who make video and audio of lectures available online for free, conferences who make video of their conference presentations available online such as TED, websites that accumulate free content for viewing such as Huffington Post and Fora.tv, and other similar creators and distributors.

This book is also dedicated to those who desire to discuss the world in a serious way based on the application of reason and scientific understanding. This includes but is not limited to: Chris Anderson, Dan Areily, Julian Assange, Tim Brown, Richard Dawkins, Alain de Botton, Jared Diamond, Ben Dunlap, Niall Ferguson, Richard Feynman, Dan Gilbert, Malcolm Gladwell, Seth Godin, Jonathan Heidt, Victor David Hanson, Sam Harris, Stephen Hawking, Dean Kamen, Paul Krugman, Larry Lessig, Steven Leavitt, Steven Pinker, James Randi, Ken Robinson, Carl Sagan, Michael Sandel, Barry Schwartz, Michael Shermer, Clay Shirky, Derek Sivers, Gary Vaynerchuk, Jimmy Wales, and Phillip Zimbardo. This book is also dedicated to Lewis Black, Stephen Colbert, Bill Maher, and John Stewart for speaking truth to power at a time when it is needed most.

Finally, this book is dedicated to my wife and our two children. I will love you always.

A NOTE ABOUT CONTRIBUTORS

All of the artwork in this book has been donated by the artists. In addition to the above credits, each image placed in the book links back to the artist's gallery. Please take the time to visit them and consider buying a print. This book would not have been possible without the generosity of these artists. I am eternally grateful for their support. I am also grateful for the constructive criticism of my friends and family.

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CASCADE FAILURE:

a form of complex failure in an interconnected system where the failure of a single or limited number of elements can trigger the failure of additional elements in a sequential fashion that, in the worst case scenario, can result in the failure of the system as a whole.



A POST-APOCALYPSE FUTURE:

Cascade Failure is a roleplaying game set in the post-apocalypse future of 2614 CE, twenty-eight years after a massive war now referred to as the Great War. The majority of human and intelligent alien life was destroyed in this epic cataclysm. The economic systems that had sustained interstellar civilization for generations were crippled beyond repair through the course of the war and the fighting was immediately followed by the breakdown of societies. This period is called the Collapse. Where the Great War was dominated by extreme acts of violence, the Collapse period was defined by supply shortages, mechanical breakdown, hardship, starvation, and ultimately death.

The game occurs in the aftermath of these events. There are some people around who were old enough to remember the apocalypse, but they are few and far between. The populations that managed to survive these events are small, growth is slow, and information on the universe as a whole is severely limited. Technological systems that made interstellar civilization possible have fallen into disrepair. Replacement parts are extremely difficult to acquire, as the manufacturing processes required to produce them require their own inputs that are rare or must be transported in from distant systems.

Cascade Failure is a game about survival in the face of these extreme conditions.

THE GREAT WAR:

For many centuries, civilization moved forward without large scale violence. After leaving Earth, Human civilization discovered intelligent species of aliens and successfully integrated them peacefully into their interstellar community. Peace and harmony reigned for generations. However, all of this came crashing down with the outbreak of violence in the year 2586 CE as a result of conflict between two Human factions.

Weapons technology development had outpaced strategic thinking on how to use those weapons. As a result, the initiators of the war had a lot of delusional beliefs about the consequences of initiating it. Within a few weeks of fighting, over 90% of interstellar transport starships were destroyed by interdiction and strike spacecraft. Bombing spacecraft crippled crucial infrastructural components in every major system.

Without commerce, planets were forced to rely exclusively upon their local stockpiles to survive. However, even those supplies that existed were difficult to transport to those in need due to infrastructural damage and destruction of smaller craft. As things became truly desperate, a handful of planets were invaded or struck with powerful weapons of mass destruction, resulting in even more deaths.

After less than a year of fighting, the Great War ended due the simple fact that no combatant could sustain military operations any longer.

THE COLLAPSE:

Within the first year following the end of the Great War, it is estimated that over 95% of all Humans and large majorities of the other species were killed by starvation, dehydration, disease, and violent altercations resulting from limited access to life-sustaining resources. On almost every planet, large infrastructural systems collapsed. Without fuel, powered transportation has ceased. Those with access to weapons and vehicles used these to establish their own petty fiefdoms. The political systems that used to exist were swept away in a tide of chaos and death.



THE WAY THINGS ARE:

The economic system that sustained life for millennia is destroyed. Medical science and the bounty that it once brought has largely been swept away and simple diseases ravage defenseless communities. Infantry mortality has skyrocketed and life expectancy has dropped to level not seen since soldiers rode horses into battle. The weak have been culled from the herd. Those that remain are hardened and resilient.

Most of the technologies that existed were dependent upon highly complex interdependent trading economies to function. They were composed of materials that are no longer being extracted or refined in any significant quantity, relied upon the expertise of scientists who are long since dead, and assembled in factories that have been looted or destroyed by machines that are no longer functional. Even relatively simple technologies once taken for granted such as water purification and basic agricultural methods are no longer available. The dependence upon machines to harvest food, move components over vast distances, and solve basic problems has proven to be disastrously short sighted.

World after world lies in ruins. Once heavily populated planets inhabited by billions of humans and alien species have been reduced to endless horizons of ruined buildings. Throughout the universe, small outposts cling to what little technology they have left. Most people do not even have a grasp of how many of the technologies they have left function, much less how to repair or maintain them over the long haul. Slowly, these last few systems are shutting down and people are increasingly reliant upon their own wits to survive in a way that has not been common for several millennia.

However, it would be foolish to believe that the light of hope has been extinguished. There are a few brave souls who are willing to leave their isolated existence and move out among the stars again. With starships kept aloft by elbow grease and ingenuity, traders and explorers are rebuilding networks of social interaction. Scavengers dig through the ruins of the civilization that once was, looking for anything they can use.

It is a time of great suffering and despair, but hope somehow survives.



YOUR ROLE IN THIS FUTURE:

In Cascade Failure, you are one of these people who are going out into the new wilderness. Exactly what kind of life you choose to live in this universe of blasted-out crumbling ruins is something you must decide.

A FEW IDEAS TO HELP YOU GET STARTED:

- Explore the abandoned ruins of the old civilization looking for salvage
- Help those in need and bring old infrastructure systems back online
- Fight off the brigands and pirates that prey on the weak, or join them
- Find and restore your own capital ship to use for your own ends
- Seize political power in the vacuum created by the Collapse
- Explore exotic planets filled with strange alien wildlife
- Rescue those trapped on isolated planets with limited supplies
- Establish a small trading company and ply the star lanes for profits
- Become the mercenary fist of a petty political leader
- Liberate people from the fist of that petty political leader instead
- Find and restore your own Mech and use it to enforce your will
- Learn to recreate the technology of the past

THE VASTNESS OF SPACE LIES BEFORE YOU.

GRASP YOUR OWN DESTINY!

THE CHARACTER:

In order to play Cascade Failure, you must create a character. Your character is your avatar in the game universe and you will record information about them on the **CHARACTER SHEET**. You will also need polyhedral dice, available at most hobby shops (or online), in four, six, eight, ten, twelve, and twenty sided varieties. These are denoted with the number of dice, a 'd', and the sides. For example, 3d6 means to roll three six-sided dice.

HOW TO BE A CHARACTER:

Cascade Failure is a roleplaying game. As the player, for you this means interacting with the universe through your character. They are traveling through this imaginary universe looking for adventure, fame, and fortune. The other players each have their own character and collectively your group is called the Party. Your job is to imagine what it would be like to be your character and what decisions they would make, if faced with the universe described to you.

Another person at the table, the Gamemaster (GM) creates the entire universe around the players and everything in it. They are the person who is describing this imaginary place to you. The GM will play the roles of all the people you meet in this universe who are not members of your party. This includes everyone from the business owners and local police to the villains and thieves you may find yourself in conflict with.

There are some common elements of this universe that are described in this book. The GM may override those elements, but they are discouraged from doing so. For example, the GM could decide that the universe has an additional alien species not described in Cascade Failure. This may damage the balance in the species choices already in the game. Then again, it may not do that. The bottom line is that ultimately the universe is the creation of the GM. Cascade Failure merely provides a template for them to work with to build it.

At the start of the game, the GM may provide you with guidance on what you can expect in this universe and maybe some info about what has been happening before the start of the game. For example, the GM might tell you that you are all on a ship together about to dock at a bustling space station. This provides the starting point for the game.

CORE GAME MECHANICS:

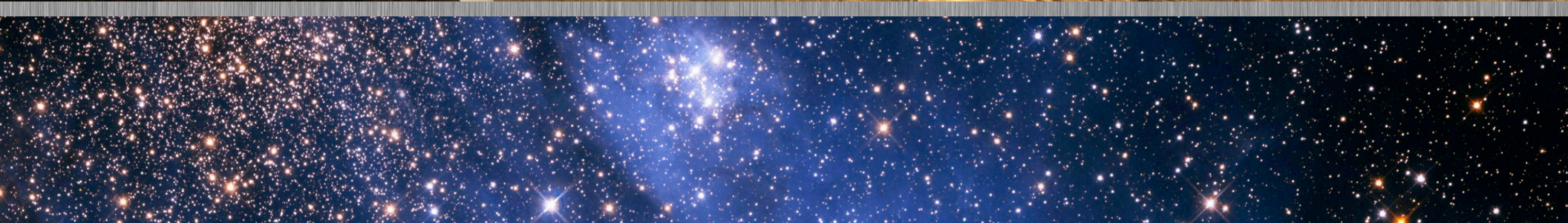
In Cascade Failure, you interact with this imaginary world primarily through two responses; proactive and reactive. Proactive responses are your attempts to exercise your will on the universe, such as declaring you want to open an airlock door and go inside an abandoned ship. Reactive responses are your character's instinctive behaviors over which you have little or no control, such as the instinct to close your mouth to grab a last gasp of air before being dragged underwater.

Proactive responses are almost always governed by **ATTRIBUTES**. In some cases this is a direct test of the attribute itself and in other cases it is a test of a skill or ability based upon an attribute. Reactive responses are governed by **SAVING THROWS**.

Except in combat or when using disciplines or kinetics, you should not voluntarily roll the dice. You should tell the GM what you are trying to accomplish and if a die roll is necessary, they will tell you to make one.

Your decisions about how to interact with the universe are the heart of the game. Though the universe may be the GMs, the story is YOURS. The characters are the stars of the show. Be bold and play it!





CHARACTER CREATION OUTLINE

STEP 1: ATTRIBUTES

Roll up your Attributes and assign them

STEP 2: SPECIES

Choose a Species and adjust the character sheet appropriately

STEP 3: CLASS

Choose a Class and adjust the character sheet appropriately

STEP 4: SAVING THROWS

Determine Saving Throws based on your Species and Class

STEP 5: AMBITIONS

Decide what motivates your character on their adventures

STEP 6: MORALITY

Divide 7 points among the three Impulses

STEP 7: LUCK

Roll your starting Luck

STEP 8: LANGUAGES

Decide which languages your character can speak, read, and understand in addition to their native tongue.

STEP 9: AGE

Choose an age category to determine how much you know about the old civilization

STEP 10: HIT POINTS

Determine starting hit points by rolling your Class' Hit Die

STEP 11: EQUIPMENT

Buy your starting equipment using your starting Value Units

ATTRIBUTES:

Your character has six attributes that define their basic strengths and weaknesses as a person. Attributes range from 3 to 18 and a 10 or 11 in an attribute is an average value. They represent the quirks of your biological inheritance and your own efforts in life so far.

There are three methods of generating attribute scores. Everyone playing the game must use the same method. You should all decide as a group on a method before you make any characters.

GENERATION METHOD 1:

The classic and recommended way of generating attribute scores is by rolling 3d6 a total of six times and then assigning them to the attributes you want. This gives you an average character that fits well into the core mathematical models of the game.

GENERATION METHOD 2:

If you want characters that have above average attribute values, you can roll 4d6 and drop the lowest die. This is a significant enhancement statistically, so be sure that it is what you want to do. The game materials are often balanced based on the assumption of Method 1, so going with this method can result in easier play.

GENERATION METHOD 3:

If you want the flexibility to determine your attributes so that you can get specific outcomes, you can use this method. Each attribute has a starting value of 6. You may then roll 8d6 and add the dice rolled to the attribute of your choice. Dice may not be split between attributes.

For example, if one of the dice rolled was a four, you could add that to an attribute to raise it from 6 to 10, but you could not add 3 to one attribute and 1 to another. You can add as many dice as you want to a single attribute, but no attribute can be raised higher than 18.



ATTRIBUTES

Strength	Muscular Power and Physical Strength
Dexterity	Grace of Movement and Coordination
Constitution	Physical Health and Endurance
Intelligence	Mental Power and Intellectual Capacity
Wisdom	Common Sense and Perception
Charisma	Social Presence and Empathy

TESTING ATTRIBUTES:

In the course of the game, you will describe to the GM what you wish to do. In most cases, no rolling is required. For example, you don't roll dice to walk down the street. However, when something involves risk of failure, the GM can call for a test to determine the outcome of your action. For example, you may wish to smash open a metal locker with some primitive tools. The GM may have you test your **STRENGTH** to do it.

You do not voluntarily make attribute tests. You only make them at the request of the GM when they use the dice to decide the outcome.

When making an attribute test, roll 1d20. If your result is equal to or below the value of the attribute being tested, you succeed. If not, you fail and may suffer consequences of failure. In the above example, failure may mean accidentally injuring yourself in some way or it may not. That is up to the GM to decide.

When you receive a bonus or a penalty to an Attribute test, the modifier is applied to the Attribute, not the die result. Thus if you have a 12 strength and get a +2 bonus, you are trying to roll a 14 or less on the 20-sided die in order to succeed.

YOU ARE STRONGLY ENCOURAGED TO ATTEMPT ANYTHING YOU CAN THINK OF IN THE GAME. EVEN IF THERE IS NO WRITTEN RULE TO GOVERN IT, THE GM CAN DECIDE WHICH ATTRIBUTE APPLIES AND HAVE YOU TEST IT TO DETERMINE RESULTS. NEVER LET A LACK OF RULES HOLD YOU BACK FROM ATTEMPTING SOMETHING!

STRENGTH:

Strength represents your muscular prowess. It determines your ability to lift and push heavy objects, strike opponents in melee, and carry heavy equipment. Strength is not the basis of any skills, but is often used as the base attribute for a wide range of interactions with the physical world.

The GM may ask you to test your strength when you attempt to perform an action that requires muscle power, such as pulling yourself up onto a ledge or knocking down a barricade.

DEXTERITY:

Dexterity represents your grace and coordination. It determines your ability to throw or shoot at objects from a distance, avoid being struck, and perform tasks requiring precision and focus. Dexterity is the basis of the **DISABLE** and **STEALTH** skills, as well as the **BREATH** and **SNAP** saving throws. It also determines the order actions are taken in combat, which can be essential to survival.

The GM may ask you to test your dexterity when you attempt to perform an action that requires agility, such as jumping between two buildings or catching a thrown object without breaking it. Dexterity can also be used to settle a wide variety of rare actions not covered by the rules directly but which would rely upon your innate coordination to resolve, such as reaching through a closing door to snatch an item before your hand would be crushed.

CONSTITUTION:

Constitution represents your health and endurance. It determines your ability to withstand damage, resist poison and disease, and keep your wits through the pain of injury. Constitution is the basis of the **PAIN** and **TOXIN** saving throws. It also determines how long you can wear armor before you become exhausted.

The GM may ask you to test your constitution when you attempt to perform an action that requires endurance, such as pushing yourself to climb one last hill before resting or outrunning someone who is chasing you over a long distance.

INTELLIGENCE:

Intelligence represents your mental prowess and memory. It determines your ability to solve puzzles, make complex assessments, and perform highly specialized tasks.

The GM may ask you to test your intelligence when you attempt to perform an action that requires logic or problem solving, such as figuring out how to use an unknown piece of technology or fixing something using only limited available parts.

WISDOM:

Wisdom represents your common sense and perception of the world around you. It determines your ability to notice things in the environment and make good decisions. Wisdom is the basis of the **ORIENT** skill and the **FEAR**, **SPOT**, and **LISTEN** saving throws.

The GM may ask you to test your wisdom when you attempt to perform an action that requires common sense or perception, such as determining what is proper etiquette when greeting a local magnate or trying to assess the speed of a distant convoy using only your own judgment and a pair of binoculars.

CHARISMA:

Charisma represents your personal influence. It determines your ability to inspire loyalty and confidence, make friends, and cultivate the trust of others. While it may reinforce your physical attractiveness and personality, it does not represent them. Many people can be highly charismatic despite a lack of traditional beauty or attractiveness. Charisma is the basis of the **DECEIT** and **CHARM** skills. Charisma may be best thought of as the baseline level of affection people automatically have towards you, upon which you may build or destroy based upon your actions.

The GM may ask you to test your charisma when you attempt to perform an action that requires influencing people, such as trying to convince the guard to untie you or a retainer to follow you into a dangerous situation. They may also call for a charisma test when you first meet someone and you are attempting to establish a rapport with them.

SPECIES:

Species represents your character's biological and cultural heritage. This choice will have a powerful impact on the game experience that you have with your character. Your species choice may open or close opportunities to your character, bolster or weaken different values, and determine what exactly your character sees when they look at the world around them.

HUMAN:

Humans used to be the most common species in the universe. They had the most economically developed worlds. Human technology was central to progress of all species. After all, they were the first to invent interstellar travel and bring the other species into the light of civilization. They had settled on virtually every kind of planet imaginable. Humans were thriving.

Unfortunately, this dynamism and growth had a darker side. This side showed its true colors during the Great War when even the Earth was destroyed by the anger and brutality of mankind. Humans were slaughtered in great numbers, often by their own species for political goals that now sound hollow. Human civilization is now in ruins, reduced to a mere shadow of its former glory. Their great cities are gone, their culture is destroyed, and their people slain.

However, humans are survivors. They reproduce at a faster rate than other species and have the greatest potential to bounce back. They are highly adaptive and energetic with a talent for technology. In fact, some of the older races blame this trait for contributing to the Collapse.

Out of these dynamic societies emerge a large number of people who are unwilling to settle for a peaceful sedentary lifestyle. These people take up arms and venture out in search of their fortunes. They may even seek to restore that which has been lost, even if it means venturing into places unknown and dangerous.

HUMAN MODIFIERS:

- Roll an additional 1d6 for starting **LUCK**
- 10% bonus to all **EXPERIENCE POINTS** gained
- +1 **CHANCE** to understand any technology



GOLEMS:

Golems are not really a species, but a kind of advanced humanoid robot with artificial intelligence. A Golem's **ATTRIBUTES** represent its fixed design components and they can be damaged just like any other species. It should be noted these are their unarmored core components. Of course, additional armor may be added to the frame but this is considered encumbrance just like it would be for a biological species. The mental attributes of a Golem represent its programming elements. For example, a Golem with a high **WISDOM** has excellent sensory and interpretive software while a Golem with a low **CHARISMA** has poor social software.

Golems must charge frequently to restore their batteries. This involves unconsciousness while connected to a stable power supply for a number of hours, much in the same way that another species recovers their **HIT POINTS** through rest but without consciousness.

Golems can make decisions using a form of intuition software modelled after the human brain. However, they are often accidentally callous or oblivious to emotions and innuendo. A human might express fear of death and the Golem could respond that is definitely a possibility, ignoring the fear and stress. Golems are actually immune to fear, thus making that particular exchange even more difficult.

Due to their non-biological nature, Golems are immune to all forms of toxins designed to work on organisms. Special Golem-affecting toxins are available, but exceedingly rare. They target the Golem's electrical circuits, anti-corrosive systems, hydraulics, and other vital maintenance functions that, if suspended, threaten the Golem's long term survival.

Golems are also only able to detect the infrared spectrum of light. This gives them a heat-based vision that provides excellent sight at night compared to standard vision. However, they are sometimes blinded by heat flares.

A Golem's artificial intelligence has a difficult time learning from experience. As a result, a Golem has a very hard time adapting to new circumstances and cultures. For example, a Golem used to living with the **KUCHIT** for many years would be very disoriented if suddenly uprooted and thrust into a cosmopolitan city on another world, even more so than a human would be in the same circumstance. Golems often use out-of-style slang terminology, have terrible aesthetic taste, and tend to speak down to the people around them. They have a difficult time keeping up with cultural trends in general. This contributes to their perceived callousness.

GOLEM MODIFIERS:

- Requires no standard biological input or output, only electrical energy
- Hit Points regenerate only by charging batteries in complete shutdown
- 1 Hit Point lost per day due to normal operational load
- 1 in 4 chance of accidentally offending someone who is emotional
- **ATTRIBUTE DAMAGE** does not heal over time, it must be repaired
- Infrared vision sensors
- Immune to **PAIN**, **FEAR**, standard **TOXINS**, and **EMPATHIC ABILITIES**
- Cannot take the **EMPATH** or **KINETIC** classes
- Cannot use **CYBERNETIC ENHANCEMENTS**
- 10% penalty to all **EXPERIENCE POINTS** gained
- +2 **ARMOR CLASS**



KUCHIT:

Kuchit are an ancient species of sentient bovines originating from their homework of Quinnarik. They have a very long and slow lifecycle, maxing out at about 500 years of life with excellent medical care. They do not even reach sexual maturity in the first century of life, instead spending large amounts of time engaged in productive pursuits and the accumulation of property.

As a result of this slow lifecycle, Kuchit culture is very stagnant and hierarchical. Elders are revered almost as deities for their wisdom and experience. There are very few opportunities for social advancement, so Kuchit turn their focus to material pursuits. Other races often joke about this, saying *Don't be a Kuchit* when someone is being greedy or egotistical.



Kuchit culture does not value innovation or technological expertise, instead rewarding those who keep their head down and follow the instructions of their elders. They were slow to adopt many of the human technologies, understood very little about how they functioned, nor did they care very much about this shortcoming either.

Those Kuchit who have left their communities to travel the stars tend to shirk this behavior to some degree and show interest in learning about the technology that they encounter. Your character would probably fall into that category.

Kuchit conservatism tends to encourage the accumulation of land holdings and a focus on sustainable long-term development. They are voracious hoarders of anything they can get their hands on. As a result, only a few Kuchit died of starvation in the Collapse. However, the Collapse only served to strengthen this worldview as necessary in the face of such enormous risk. They have not taken great strides to move into the vacuum created by the fall of human civilization, instead they continue plodding forward just as they did in the centuries before Humans even discovered them. They have no desire to adopt humanity's mantle.

Kuchit physiology is significantly different from a Human. Their noses are highly evolved, able to distinguish fine differences in smell and taste between substances. A Kuchit can determine what substances someone has consumed or been exposed to recently. This has led to near perfect policing of vice crimes and Kuchit worlds are known for incredibly powerful police forces, bordering on what some might call totalitarian. Kuchit who travel the galaxy are often resentful of these controls, freely engage in their vices, and avoid their own kind to dodge moralism and consternation for it.

Kuchit are herbivores and consume large quantities of grass and shrubs. They regurgitate indigestible portions of their food to chew as cud and store in the protrusions on the side of their mouths while bacteria break down the material further so that it can be re-digested to provide full nutritional value. This allows them to survive on a minimum amount of calories per acre and eliminates the need for cultivation to sustain their numbers. However, the amount of consumed food is quite large in terms of size, thus Kuchit tend to settle only on worlds with significant grasslands or light forests so that they do not have to ship in a lot of food.

KUCHIT MODIFIERS:

- Automatic recognition of most substances by smell
- 1 in 4 chance of identifying faint or degraded substances by smell
- Only consumes rough plant matter for food
- +2 to **BREATH** saving throw
- +2 to **LISTEN** saving throw
- -2 to **FEAR** saving throw
- +3d10 starting **VALUE UNITS**
- Must begin play as **MATURE**

LIRAPTO:

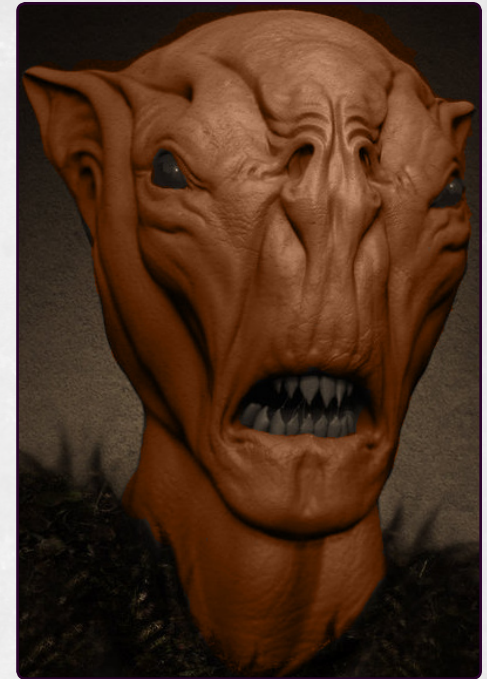
Lirapto are a predatory species originating from their homeworld of Tacuu. They are extremely violent and self-interested. Lirapto reproduce asexually and before discovery by Humans several hundred years ago would leave their young to fend for themselves after only a few weeks. Those that survive are tough and emotionally jaded. Even now, the young are still abandoned by individuals and cared for by the state. Their culture has no concept of pair bonding, sexual relationships, or marriage. Ideas like love and affection are weak and rarely expressed. When exposed to other species with these concepts, Lirapto often misunderstand what is going on and make incorrect assumptions. For example, they might see a young couple kissing in a park at night and assume they are fighting each other.

Without the structures created by a pair-bonded sexual biological system, Lirapto society is extremely hierarchical and merit-based. Since parents treat their children no different from any other being, there is no nepotism of any kind. Corruption is minimal due to high vigilance on the part of all public officials to ensure that nobody else is doing better than they are. Lirapto are highly cognizant of any hierarchical difference between themselves and those around them. They will not even speak to certain individuals if the difference between their social status is large. Without any family connections, Lirapto often have a little more money than the average person due to low overhead.

The Lirapto believe that their monotheistic god Orlam has chosen certain individuals to be predestined for greatness. Evidence of this selection must be uncovered by examining the population for those showing signs of extraordinary ability. When a community reaches a certain size, it forms a Council of Peers that is charged with performing these examinations and marking certain individuals as having been chosen by Orlam. These individuals, referred to as The Elect, are then granted extraordinary social advantages over their fellow citizens.

Nearly every Lirapto aspires to gain membership into this elite status and thus constantly strives to excel in dramatic and public ways. Most common buildings in Lirapto cities, such as sporting arenas and civic structures, are built using donated funds from Lirapto seeking to prove themselves to be a member of The Elect awaiting discovery.

Lirapto are aggressive by nature, preferring to hunt as a past-time even when it is not necessary to survive. Because they see in the infrared spectrum, Lirapto make excellent hunters at night and use this to their advantage. They do not see non-sentient animals as anything other than food and they never keep pets of any kind. The only reason for keeping an animal alive in your possession is to maintain freshness. This has sometimes led to strained relations with local ranchers who claim that a Lirapto's kill was a criminal act of property theft.



Aside from differences in sensory organs, Lirapto are strikingly similar to humans. They have roughly the same body proportions and similar internal biology. Humans of a conspiratorial bent have speculated that the Lirapto are related to humans in some distant way, perhaps both species were planted on their respective planets of origin by a third, as yet unknown, alien species of considerable antiquity. These theories are unsubstantiated but that does not limit their transmission.

LIRAPTO MODIFIERS:

- 1 in 4 chance of misunderstanding social context of sexual pair bonding
- +2 to **LISTEN** saving throw
- +2 to **SPOT** saving throw
- -2 to **KINETIC** saving throw
- Infrared vision
- +2d8 starting **VALUE UNITS**

OREAMNOS:

Oreamnos are a tough species originating from their homeworld of Capra. They are remarkably similar to humans, with the notable exception of large horns that grow out of the back of their heads. Unlike similar animals on Earth, these horns grow equally large on both males and females. The upper forehead of an Oreamnos is extremely thick as well. These horns are symbols of prestige and power in Oreamnos society, which is highly aggressive and based on physical dominance. The horns only grow when the body secretes a particular hormone that is triggered by combat. Young Oreamnos engage in almost perpetual warfare to prove themselves and grow their horns. As with Lirapto, there are theories about the Oreamnos having an ancient commonality with Humans.

The Oreamnos were the least technologically sophisticated intelligent species discovered by humans in their exploration of the galaxy. Their history was rife with conflict and war with few resources devoted to science and technology. Oreamnos can consume virtually any form of organic material and survive, thus the drive to improve agriculture was also weak. They have learned much since then, but they are still fairly backwards. Many Oreamnos died in the Great War serving as soldiers.

Their society was traditionally based on a rigid clan structure, reinforced by systematic violence to maintain dominance over others. Oreamnos have a complex conception of individual honor (*Fideric*) which they refer to in their native tongue, even when conversing in other languages, because they claim that it's true meaning cannot be encapsulated in other modes of thought. They will respond aggressively to anyone who challenges their place in the pecking order. The slightest offence can give cause to violence and duels are a common occurrence within their society. Many Oreamnos find themselves in a cold prison cell more than once in their lives as a result of this behavior.

Reputation is also an extremely important aspect of their culture and the word of an Oreamnos, once given, can be considered binding almost to the point of death. Proving oneself unworthy of trust is a shame that most cannot accept and would rather face exile or suicide than publicly break a promise and destroy their reputation. As a result, contract law was a unique niche of the Oreamnos in the professional realm before the Collapse made contracts a thing of the past.

Oreamnos are discriminated against by other species, largely based on the presumption of stupidity, backwardness, and a tendency towards violence. They are frequently prohibited from entering any establishment that serves alcohol or other drugs, usually because the owner was short-sighted enough to lack such a rule in the past and paid a heavy price for that mistake.

Those that travel the galaxy usually do so on a mission to prove themselves or to escape from their misdeeds somewhere else. Oreamnos often fall in with pirates, mercenaries, criminals, and similar types of scum. These kind of associates appreciate the usefulness that an Oreamnos bring to the table.

OREAMOS MODIFIERS:

- Consumes any organic material as food
- +2 to **FEAR** saving throw
- +2 to **PAIN** saving throw
- -1 to **LISTEN** saving throw
- +1 **HIT POINT** per **CHARACTER LEVEL**



SAHAEL:

Sahael are a carnivorous species originating from their homeworld of Raeva. They are covered in a hardened exoskeleton that provides them with some natural protection from damage and they have a vicious mandible bite that can prove decisive in close melee. Despite their insectoid appearance, they are in-fact mammals with extreme adaptations. They are warm-blooded and have standard optical vision.

A Sahael is born without an exoskeleton and then builds one slowly during the course of their development. By the time it reaches puberty, the entire body is covered with a strong rubbery coating that is approximately two centimeters thick. When it reaches full adulthood, this coating is several centimeters thick and hardened to the consistency of industrial-grade plastic.

They live in giant hive-like social structures and they work together to maintain large quantities of their preferred food; smaller mammals with fast reproductive cycles like rabbits or dogs. The fact that this coincides with many of the species kept by humans as pets has caused awkward social situations in the past.

This interdependent nature proved devastating in the collapse following the Great War. Whole hives were lost due to starvation and violent chaos. Their reliance upon meat for sustenance proved to be an Achilles heel. Those that survived are extremely cautious about food security, often to the point of keeping personal stocks of small mammals as reserves.

Sahael have no concept of personal ownership in their society. Everything is done for the good of the group as a whole. If an individual must suffer, that is an unfortunate but necessary consequence. They are fully aware that other species do not follow this social convention and will treat outsiders skeptically and without concern.

A Pre-War media fixation upon a few isolated incidents where injured Humans were left bleeding in the street while Sahael walked by without stopping to provide assistance led to unfair characterization of the species as xenophobic. When in reality, it is more of a reaction to previous experiences with other species that have taken advantage of them than any kind of fear or hatred.



SAHAEL MODIFIERS:

- Consumes only meat as food
- +2 to **PAIN** saving throw
- +1 to **KINETIC** saving throw
- -1 to **SPOT** saving throw
- +1 **ARMOR CLASS**
- 1d6 damage with successful bite attack (treat as an unarmed attack)

TASSARI:

Tassari are an insightful species originating from their homeworld of Prillium. They have extremely close physiology to humans with some very important exceptions. Tassari evolved to breathe methane instead of oxygen, as their homeworld was a warm world rich in the former. To survive in this gaseous whirlwind of an environment, the Tassari developed hyperspectral vision that allows them to see in ultraviolet, visible, and infrared light simultaneously. Few things escape their powerful gaze. For some reason, the idea that Tassari and Humans are genetically related is not very popular. Perhaps because Tassari development suggests a strong evolutionary role.



The Tassari were less affected by the destruction of human civilization than one might suspect. While they had significant commercial interaction with humans, the Tassari tend to live on their own worlds due to their need for methane to survive. On planets without high methane concentrations in the atmosphere, they lived in tightly-knit enclaves based on community and cultural sympathies rather than individual gain.

Before contact with humans, Tassari society was dominated by a religion based on powerful hallucinogenic drugs. The priesthood of this religion would consume these drugs before staring into the colorful clouds that swirled around them for divine guidance. This cultural legacy has left a strong impression on the Tassari mindset. They have no concerns about the consumption of mind-altering chemicals whatsoever, if anything they actually encourage such things as a path to enlightenment. Additionally, the Tassari value eyewitness testimony over anything else and will accept sincere witnesses over hard evidence. Their media was a firestorm of prophetic claims, conspiracy theory, and strange fetishism. What they believe now, after all the chaos of the past three decades, is unknown.

The Collapse has not really affected the accessibility of Tassari among the surviving settlements in the universe. Methane remains a relatively cheap gas that is not too difficult to acquire if one is intent upon it. Additionally, due to the unique requirements of their lungs, production of breath masks and methane refining technologies were fairly centralized to Tassari planets. As a result, methane masks are readily available to anyone with even basic access to the trading networks that are slowly reforming along old star lanes.

Those Tassari that travel the galaxy are typically in search of profound truths, knowledge, or enlightenment. They are inquisitive to a fault, often causing trouble for their more cautious friends. They may travel halfway across the galaxy simply because something intrigues them.

TASSARI MODIFIERS:

- Requires high concentrations of methane to breathe
- +4 to **SPOT** saving throw
- -1 to **TOXIN** saving throw
- Double duration for all inhaled **DRUGS**
- Hyperspectral vision

CLASS:

Class represents your character's training and occupation. This choice will have a powerful impact on the game experience that you have with your character. Your class choice defines your character's role in the world, what they are capable of doing, and often what they aspire to be. As you gain **EXPERIENCE POINTS** and rise in **CHARACTER LEVEL**, you will become more powerful in your class abilities.

MAJOR SAVE:

Each class description specifies a major saving throw in the description. Add your character level to that **SAVING THROW**. For example, a 4th level **EMPATH** would add +4 to their **LISTEN** Saving Throw.

MINOR SAVE:

Each class description specifies a minor saving throw. Add half of your character level to that saving throw, rounded down. For example, a 5th level **KINETIC** would add +2 to their **TOXIN** Saving Throw. Note that at 1st level, there is no bonus because it rounds down to zero.

CLASS SKILLS:

Some class descriptions specify class skills. When using these skills, add your character level to your **ATTRIBUTE**. For example, a 3rd level **Slicer** would add +3 to their **DEXTERITY** when engaged in **STEALTH**. There is a **CLASS SKILLS** section immediately following the class descriptions with more information on exactly how class skills should be used.

WEAPON TRAINING:

Each class comes with a selection of weapons in which you are trained. If you attempt to use a weapon without training, for example an **ENGINEER** attempting to use an assault rifle, apply a -3 penalty to your attribute to reflect your unfamiliarity with the weapon. There are weapons in which no class begins trained, such as grenade-launchers.

STARTING VUS:

Each class comes with a number of dice rolled to determine starting value units. The appropriate number of dice are rolled and multiplied by 10. For example, a **SOLDIER** rolls 5d10 and multiplies the result by 10. If they rolled a 1, 3, 5, 7, & 9, they would start with 250 **VALUE UNITS** to use to purchase starting equipment.



EMPATH:

Empaths are people born with the innate ability to tap into the world around them and the consciousness of others. This connectedness usually brings them a degree of inner peace and love for their fellows. Empaths typically have very strong social skills and interact well with others. They also have incredible control over their own mind and coordination in a way that makes them extremely graceful melee combatants. Some speculate that this is a result of chemical exposure during pregnancy that is not fully studied.

However, empathic abilities are often difficult to control. Over time, the mental projections begin to run together. Near the end of their lives, many Empaths often find themselves trapped inside a hallucinogenic fog, unable to tell the difference between reality and delusion.

HIT DICE: 1d8

STARTING VUS: 3d6

MAJOR SAVE: Listen

MINOR SAVE: Kinetic

CLASS SKILLS:

• Charm • Deceive

WEAPON TRAINING:

• Knives • Swords • Batons

GRACEFUL DANCE: You can spend **HIT POINTS** to enhance your natural grace while in combat and effectively raise your **ARMOR CLASS** and melee **TO-HIT ROLLS** rolls. For each hit point expended, your armor class and your melee to-hit rolls gain a +1 bonus for a minute. You can use this ability to gain a bonus up to your **CHARACTER LEVEL**. Thus a 5th level Empath could raise their armor class by 5 and gain +5 to all their melee To-Hit Rolls by spending 5 hit points. Characters using this ability cannot engage in conversation or use other abilities.

SUGGESTION: You can imprint a new thought on the mind of another person. This thought must be simple and easily conveyed, such as “he already paid for his ticket” or “these are not the ones you are looking for”. The target can save vs **LISTEN** to prevent this tampering. Success on this save prevents access and blocks against all empathic abilities for a 15 minutes. Each use of this ability costs 1 hit point.

MIND READING: You can examine the entirety of another mind to search for specific kinds of thoughts. When you trigger this ability, you must be within 10 meters of the target mind. You must specify what you are looking for in their mind before you start looking. Make a **WISDOM** test and the GM will narrate what you find that is related to the topic you choose. If you choose a topic that is too broad, the GM may give you too much data to process accurately and this could cause you to reach the wrong conclusion. Each use of this ability costs 1 hit point per character level in the target.

The target will save vs **LISTEN** to detect your presence in their mind. If they fail this save, they are unaware that the reading is occurring. If they succeed at this save, they can make a save vs **KINETIC** to try to block access to their mind. Success on this save prevents access and blocks against all empathic abilities for a 15 minutes.

If the Empath fails their wisdom test when using this ability, in addition to not receiving the information they were seeking, they experience a powerful vision from the memories of the target. This vision lasts a full minute and during that time the Empath will fall into a catatonic state. When they awaken, they will not be able to remember anything that occurred while they were out.

However, a powerful memory of pain or suffering from the target’s mind will be pulled into the Empath’s memory as if it were their own. If this memory conflicts with an existing memory, the existing memory is overridden. For example, an Empath may gain a memory of a violent death occurring to one of their family members. Even if that person is actually still alive, the Empath may remember them as being dead and buried. Over time, these failures begin to erode the Empath’s grip on reality.

PASSIVE READING: You can clear your mind of your own thoughts to temporarily allow the ongoing self-reflective mental conversations of others to leak into your consciousness. You cannot choose any specific being to target with this effect, nor specify what you are looking to hear. Anyone within a 100 meter radius will be read simultaneously in this manner, even if they are camouflaged and otherwise undetectable. Using this ability in a congested area with a lot of sentient beings around can sometimes be chaotic and incomprehensible. This ability costs 1 hit point per minute to maintain.

ENGINEER:

Engineers are experts at keeping technology functioning. They have a single specialty field to represent their most focused area of training, but they are also able to repair many things outside of that area of expertise, including Golems. Engineers can also create mechanical components from base materials and craft new technology from available supplies. Where some characters might see a junk heap, an Engineer sees an opportunity.

HIT DICE: 1d6

STARTING VUS: 4d8

MAJOR SAVE: Breath

MINOR SAVE: Listen

CLASS SKILLS:

- Disable
- Orient

WEAPON TRAINING:

- Knives
- Pistols
- Grenades

MACHINIST: An engineer is capable of making basic mechanical components for most devices, provided they have access to adequate materials and tools. The quality of the product will reflect the quality of the materials used to create it. For example, an Engineer with sufficient metal, a hammer, and a blowtorch could fashion some primitive nails. If they had a full machinist shop, they could make professional quality nails.



ENGINEERING EXPERTISE: An Engineer has one area of expertise in which they are highly trained and extremely competent. They can repair any form of technology associated with this expertise without making a roll, provided they have the required parts.

REPAIR: Outside of their area of expertise, an Engineer can usually make repairs to any form of technology that they understand except Golems by making an **INTELLIGENCE** test, adding their **CHARACTER LEVEL** as a bonus. The GM may impose a difficulty for challenging jobs.

REPAIR GOLEMS: Engineers can repair **GOLEMS** much like a **MEDIC** can repair a biological organism. However, since a Golem cannot suffer **TEMPORARY ATTRIBUTE DAMAGE**, there are no time frames over which the injury will gradually become worse. As an Engineer might say, *It is what it is*. An Engineer can repair 1 point of attribute damage suffered by a Golem in about three days, assuming access to adequate materials. In general, 1 point of attribute damage in replacement parts costs 500 VUs. The Golem must be shut down to attempt a repair, thus a Golem Engineer cannot repair damage to their own structure. The attempt is a standard repair use as described above, subject to these special rules.

CRAFT TECHNOLOGY: An Engineer can attempt to make an improvised form of technology, provided they have adequate materials, proper tools, and understanding of the technology. The construction time is based on the technology in question, generally requiring at least 6 hours per point of **COMPLEXITY**.

TECHNICAL UNDERSTANDING: An Engineer gains a number of additional **CHANCES** equal to their character level to understand any technology.

LIGHT ARMOR: Engineers wearing medium or heavy armor cannot use the **DISABLE** skill or attempt any repairs or crafting because they need mobility to perform their tasks.

Areas of Engineering Expertise

Aerospace	Marine
Biomedical	Materials
Chemical	Mechanical
Computer	Nanotech
Electrical	Nuclear
Electronics	Robotics
FTL	Structural
Genetic	Textile
Hydraulics	Vehicle
Industrial	Weapons

KINETIC:

Kinetics are people born with the innate ability to reshape the physical structure of the universe. This gift is powerful and over time it reshapes the relationship the Kinetic has with the society around them. As with **EMPATHS**, some speculate that this is a result of exposure to some kind of chemical or biological agent during pregnancy.

Kinetics have a reputation of using these powers selfishly. They have shortcuts around problems that other people must deal with. Why bother paying for your purchases when you can choke anyone who tries to stop you from leaving with the items? Why bother explaining yourself when you can just push the guard out of the way? Over time, power corrupts.

HIT DICE: 1d8

STARTING VUS: 2d8

MAJOR SAVE: Kinetic

MINOR SAVE: Toxin

CLASS SKILLS:

- Deceive

WEAPON TRAINING:

- Knives
- Batons

KINETIC POINTS: You can create convert 1 **HIT POINT** into 1 kinetic point (**KP**) per character level. Thus a 5th level Kinetic can generate 5 KPs by spending 1 hit point. If unused, these points fizzle after 15 minutes.

KINETIC ABILITIES: You begin play with the kinetic abilities listed on this page. You can gain additional abilities through **GIFTS** as you level up. Anyone targeted by a kinetic ability can save vs **KINETIC** to prevent it's effects (or halve them in some cases). You can spend extra KPs when using an ability to add a penalty to the save for anyone resisting it, equal to the number of extra KPs spent. You can't re-target someone with a kinetic ability for 15 minutes after a successful save.

KINETIC CHOKE You can brutally choke someone for up to five minutes per KP expended. Few organisms can hold their breath for five minutes.

KINETIC NOISE: You can create single false noise that appears to be made at any location within 100 meters for 1 KP.

KINETIC PUSH: You can create and channel waves of energy to lift and push objects around. To pick up an object, you must spend 1 KP per 100 kg of weight. For reference, an average person weighs about 70 kg. Once lifted, you can throw the object for 1 KP per 10 kph of speed you are giving to the object. Results are determined by the GM.

Thus a Kinetic with 5 KPs could use 1 to pick up a person and the remaining 4 to throw that person in a direction of their choice at a speed of 40 kph. Exactly how far the thrown person travels before impact is determined by the GM. Thrown objects suffer damage as if they were falling the distance thrown plus 10 meters. Objects lifted but not thrown are held in space for 1 minute and can be continuously held there for continuous expenditure of KPs.



KINETIC BENDING: You can bend the trajectories of incoming bullets by expending KPs. You must see the shooter and you cannot be surprised. Each KP expended turns the path of a single bullet away from you. For an additional point per bullet, you can control the trajectory as you wish but the general forward direction must be maintained. Thus you could bend a bullet path to strike someone standing next to you, but not turn the bullet around and send it back to strike the shooter. You must make a successful Wisdom test to control the bullet in this way.

METALLIC RESONANCE: Your raw natural energy resonates with metal at close range. Minor metallic objects in your possession vibrate slightly. Anything larger than a knife, such as metallic armors or a rifle, will vibrate strongly enough to be dangerous and potentially cause an injury. Kinetics that attempt to fire a weapon made of metal usually end up only hurting themselves when the weapon malfunctions. This effect has a very limited range (about 10 centimeters away from your skin) and does not affect **GOLEMS** or other people's carried items and possessions.

MEDIC:

Medics are trained field medical personnel operating without the support of a hospital or facility. They are used to operating with minimal supplies and on severe combat wounds. A Medic is a vital component in survival on the edges of space or on worlds that have collapsed into chaos. Medics are so important that they are welcomed almost anywhere. Very few settlements will deny a Medic access to their people.

HIT DICE: 1d8

STARTING VUS: 3d6

MAJOR SAVE: Toxin

MINOR SAVE: Spot

CLASS SKILLS:

- Charm

WEAPON TRAINING:

- Knives
- Pistols
- Batons

TEMPORARY PAIN RELIEF: A patient that has received care from a Medic for at least five minutes gains a bonus to their **PAIN** saving throws equal to the Medic's **CHARACTER LEVEL** for a full hour after care ends.

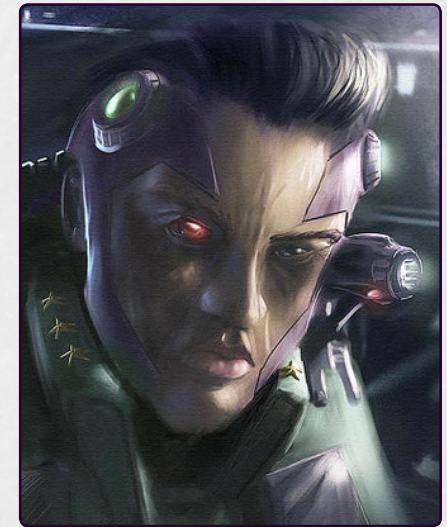
LONG TERM MEDICAL CARE: A Medic is trained to use advanced medical techniques to create the conditions necessary to heal any amount of **TEMPORARY ATTRIBUTE DAMAGE** and restore crippled limbs over time. Severed limbs cannot be reattached.

The injured person must be in a safe, clean, and warm location. The Medic can then clean and dress the wound properly, maintain and replace them as needed, and watch over the patient. At the end of the first day, make an **INTELLIGENCE** test, adding your character level as a bonus.

The entire first day of treatment must be devoted to caring for the patient. For the next week, the Medic must visit them once per day and adjust the treatment as needed. Thereafter, any individual with a few simple orders from the Medic can monitor care and keep the process moving forward. Every week of care heals 1 point of temporary attribute damage. Once all temporary attribute damage is healed, the next week of care will restore a crippled limb to functionality.

FIELD MEDICINE: A Medic is trained in field medical care for the wounded. With proper supplies, a Medic can stop a patient's bleeding after only 1 minute of care. Even using only improvised supplies, they can stop bleeding within a few minutes subject to GM judgment. A Medic can also use any field medical technologies, such as Adrenaline Sticks, without a chance of error. They can also move the wounded around without chance of injury.

CYBERNETICS: A Medic is trained to install and maintain cybernetic enhancements. With access to the proper tools and equipment, they can install cybernetics with an intelligence test, adding their character level as a bonus. They can also repair a cybernetic enhancement by making an intelligence test, adding half their character level as a bonus. Some enhancements may be particularly difficult to repair and the GM may impose a penalty. Some may be too damaged to be repaired at all.



Failure by a large margin on a cybernetic installation may damage or possibly even destroy the enhancement and/or injure the subject. The exact consequences of failure are up to the GM. On a small margin failure, the GM may rule that enhancement was installed, but is prone to malfunction or error, depending on the nature of the enhancement.

You can only install one copy of any particular type of cybernetic implant. However, if you are unsatisfied with the results, it is possible to remove and reinstall it.

MEDICAL UNDERSTANDING: A Medic gains a number of additional **CHANCES** equal to their character level to understand any kind of medical technology that they encounter.

LIGHT ARMOR: Medics wearing medium or heavy armor cannot use Field Medicine, provide Long-Term Medical Care, or work with **CYBERNETIC ENHANCEMENTS** because they need mobility to perform their tasks.

OUTLAW:

Outlaws are people who have lived a violent and dangerous life and developed a wide variety of abilities to help them survive under duress. They operate outside of the rules and regulations of society. Sometimes, this is because they actively engage in illicit activity. However, an Outlaw may just as easily be someone with their own sense of justice.

Outlaws are survivalists of the highest order and tend to carry a hodge-podge assortment of gear and equipment. They can keep most anything running with a little spit and elbow grease. Outlaws can get a few extra miles out of that transport ship, keep you alive in a dangerous situation, and use their underworld contacts to get what they need.

HIT DICE: 1d10

STARTING VUS: 4d6

MAJOR SAVE: Spot

MINOR SAVE: Pain

CLASS SKILLS:

- Deceit
- Disable
- Stealth

WEAPON TRAINING:

- Knives
- Pistols
- Batons
- Rifles
- Grenades
- Unarmed



IMPROVISED MEDICINE: An Outlaw has been around enough fights to know how to perform basic medical care for the wounded. With proper supplies, they can stop a patient's bleeding after 5 minutes of care. They may or may not be able to stop the bleeding with improvised supplies, subject to GM judgment and the nature of the wound. An Outlaw can also attempt to use any field medical technologies, such as Adrenaline Sticks, by making a **WISDOM** test with a penalty based on GM judgment of the difficulty at hand.

IMPROVISED PILOTING: An Outlaw can attempt to pilot any vehicle that they have seen in operation before. Starting the machine is a standard **INTELLIGENCE** test and piloting it is a standard **DEXTERITY** test. Any other class except a **PILOT** suffers severe penalties for this type of action.

BREAK IN: Outlaws can get through most barriers to entry. An Outlaw can make a **STRENGTH** test, adding their character level as a bonus, to break through a mechanical or electronic lock using only physical force. Failure on these rolls may have consequences. The GM may impose penalties as necessary to reflect challenging defenses.

STREETWISE: Outlaws have an uncanny ability to know where illicit activity is going down and how to take part in it. They automatically succeed on any **CHARISMA** tests made to talk to someone about illicit activity. This could be asking questions around town to determine who might be the local crime boss or sweet talking your way into a criminal establishment to engage in some illegal entertainment like gambling or prize fighting. An Outlaw knows how to talk in a way that doesn't startle or alarm people who are trying to keep their affairs secret.

IMPROVISED REPAIR: An Outlaw can attempt to make repairs to any form of technology they have previously been exposed to by making an **INTELLIGENCE** test, adding half their **CHARACTER LEVEL** as a bonus. Some tasks may be particularly difficult and the GM may impose a penalty. Some technology may be too damaged to be repaired at all.

LIGHT ARMOR: Outlaws wearing medium or heavy armor cannot use the **DISABLE** or **STEALTH** skills, attempt any repairs, provide medical care, or pilot anything because they need mobility to perform those tasks.

PILOT:

Pilots are trained in the use of a variety of vehicles, ranging from FTL spacecraft to atmospheric hovercraft to heavy tanks and even Mechs. They are essential to moving around in the universe. After the Collapse, many locations are completely cut off from interstellar contact. Reaching these places will be a feat by itself, much less landing on damaged or poorly maintained spaceport facilities. Some locations may not have spaceport facilities of any kind.

In this kind of challenging situation, a Pilot is invaluable. Pilots tend to be arrogant hot-shots that like to have their skills firmly in the limelight and feel like they have to control of every situation. As such, they typically rise to leadership positions within small groups and exert undue influence.

HIT DICE: 1d8

STARTING VUS: 3d10

MAJOR SAVE: Fear

MINOR SAVE: Snap

CLASS SKILLS:

- Orient

WEAPON TRAINING:

- Knives
- Pistols
- Vehicle-Mounted



PILOTING EXPERTISE: A Pilot has one area of vehicle expertise in which they are highly trained and perfectly competent. They can pilot any vehicle model within this expertise in standard maneuvers without even making a roll. When piloting a vehicle within their expertise under extreme conditions, such as in combat or through difficult terrain, they can make a **DEXTERITY** test, adding their **CHARACTER LEVEL** as a bonus, to maintain control.

AREAS OF VEHICLE EXPERTISE

Starfighter	Capital Ship	Space Transport
Strikecraft	Hovercraft	Tank
Watercraft	Submarine	Mech

PILOTING: Outside of their area of expertise, a Pilot can usually get by simply by making a **DEXTERITY** test, adding their half their character level as a bonus. Some tasks may be particularly difficult and the GM may impose a penalty.

VEHICLE REPAIR: A Pilot can attempt to make repairs to any vehicle within their area of expertise by making an **INTELLIGENCE** test, adding half their character level as a bonus. Some tasks may be particularly difficult and the GM may impose a penalty. Some technology may be too damaged to be repaired at all.

VEHICLE BREAK-IN: A pilot is familiar with the locking mechanisms designed to protect vehicles. They can make a **DEXTERITY** test, adding their character level as a bonus, to pick a lock on a vehicle within their area of expertise. Outside of their expertise, they can make an untrained **DISABLE** test just like any other character. Failure on these rolls may have consequences. The GM may impose penalties as necessary to reflect challenging defenses.

VEHICLE UNDERSTANDING: A Pilot gains a number of additional **CHANCES** equal to their character level to understand any kind of vehicle technology. Double this bonus for vehicles within their area of expertise.

LIGHT ARMOR: Pilots wearing medium or heavy armor cannot attempt any repairs, pilot anything, fire vehicle-mounted weapons, or break into anything because they need mobility to perform those tasks.

SLICER:

Slicers are experts at bypassing security countermeasures, both electronic and mechanical. They often come from dysfunctional backgrounds, hang out with the wrong crowd, and get into trouble with the authorities frequently. Slicers have skills that beg the question of where they came from and what are they going to be used to do. Suspicion is their constant enemy.

Despite all their social problems, Slicers are undeniably good at what they do. A good Slicer can get into places nobody wants them to be, access networks that nobody wants them to access, and generally cause mischief and mayhem for anyone foolish enough to try and stop them.

HIT DICE: 1d6

STARTING VUS: 3d8

MAJOR SAVE: Snap

MINOR SAVE: Breath

CLASS SKILLS:

- Charm
- Deceit
- Disable
- Stealth

WEAPON TRAINING:

- Knives
- Pistols

DOUBLE TAKE: A Slicer using **STEALTH** who is spotted by someone at a significant distance or under unusual weather conditions (subject to GM judgment) can immediately force a re-roll of the **SPOT** saving throw. This ability can be used a number of times per day equal to **CHARACTER LEVEL**.

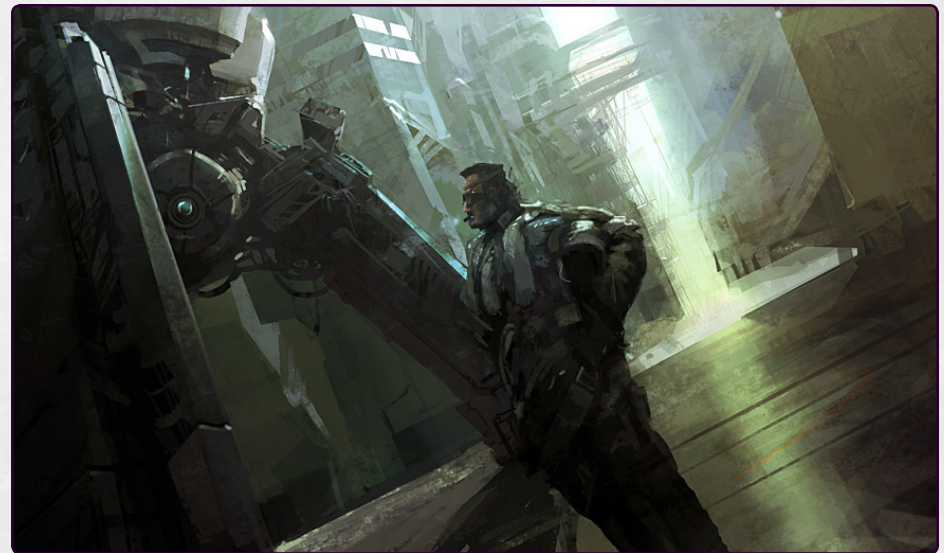
HACKING: Slicers can break into any form of software. Attacks on minimally protected software is automatically successful, such as breaking into a personal device. Breaking into a moderately defended device, such as into a public interface with basic countermeasures, requires making an **INTELLIGENCE** test, adding your character level as a bonus. A strongly defended device functions the same way, but with a penalty applied by the GM in proportion to the difficulty of the hack. For example, breaking through military-grade security might result in a -5 penalty. Hacks made via a direct physical connection to the machine, such as against a main-frame computer that you are directly hooked into, get a +2 bonus.

STREETWISE: Slicers have an uncanny ability to know where illicit activity is going down and how to take part in it. They add their character level to as a bonus to any **CHARISMA** tests made to talk to someone about illicit activity. This could be asking questions around town to determine who might be the local crime boss or sweet talking your way into a criminal establishment to engage in some illegal entertainment like gambling or prize fighting. A Slicer knows how to talk in a way that doesn't startle or alarm people who are trying to keep their affairs secret.

ELECTRONIC LOCKPICKING: Slicers can break into electronic locks and bypass their security features. However, this requires specialized electronic devices designed for this task. For example, a Slicer could open up an electronic keypad casing, tap into the interior connections using their own device, and cause the lock to think the correct code has been entered by manipulating the programming of the lock.

COMPUTER UNDERSTANDING: A Slicer gains a number of additional **CHANCES** equal to their character level to understand any kind of computer technology.

LIGHT ARMOR: Slicers wearing medium or heavy armor cannot use the **DISABLE** or **STEALTH** skills because they need mobility to perform those kind of tasks.



SOLDIER:

Soldiers are masters of tactical combat. They have extensive knowledge of advanced weaponry, small-unit tactical combat experience, and professional training in auxiliary military support operations. Older soldiers may have learned their trade from a formal military before the Great War or received their training while serving in it. Younger soldiers may have been trained by war veterans or remnant militaries.

HIT DICE: 1d12

STARTING VUS: 5d10

MAJOR SAVE: Pain

MINOR SAVE: Fear

CLASS SKILLS:

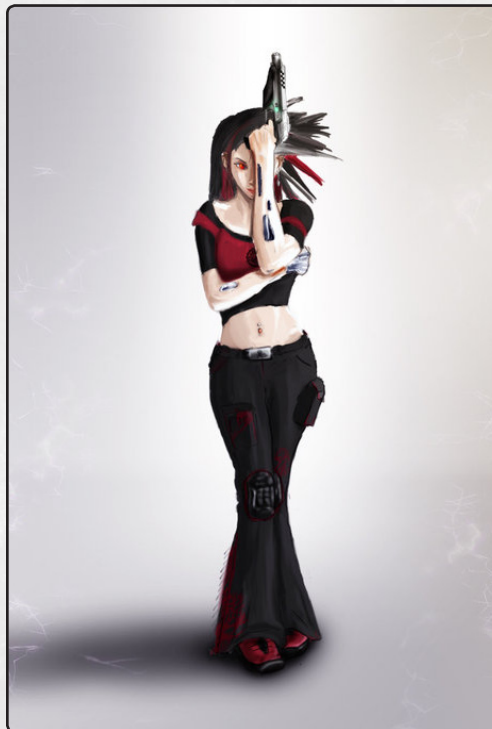
- Orient

WEAPON TRAINING:

- Knives
- Pistols
- Grenades
- Shotguns
- Rifles
- Unarmed

GRENADE TRAINING: Soldiers have been trained in using grenades in combat. Grenades thrown by a Soldier never scatter upon impact as long as the Soldier has at least 1 hit point left and is not suffering from any **TEMPORARY ATTRIBUTE DAMAGE**.

POWERED ARMOR TRAINING: Soldiers can use powered armor without having to make **DEXTERITY** tests to maintain their balance, even underwater, except in the most extreme situations such as when hit by a heavy projectile. They are very accustomed to it's weight and response timing.



TACTICAL COMBAT STYLES: Soldiers have access to specialized combat styles to assist them in tactical combat. Each style reflect the emphasis of one type of fighting maneuver at the expense of another. A Soldier learns a new style every level until they can use them all.

When created, a Soldier can choose two combat styles. At the beginning of any combat round, they can activate a style or switch to a new style. Each style gives a bonus to one combat statistic and a penalty to a different combat statistic. The exact increase or decrease is based on your **CHARACTER LEVEL**, using the chart to the right.

LEVEL	BONUS	PENALTY
1	+3	-2
2	+4	-2
3	+4	-1
4	+5	-1
5+	+ CL	-0

For example, a 3rd level Soldier who is using an Forward Assault style would get a +4 bonus to all damage dealt but suffer a -1 penalty to their **ARMOR CLASS**. If they started losing **HIT POINTS**, they could switch to Keeping a Low Profile to raise their armor class and hopefully avoid further damage until they can be healed.

TACTICAL STYLES	BONUS	PENALTY
Forward Assault	Damage	Armor Class
Holding Ground	To Hit	Armor Class
Firing from Concealment	Armor Class	Damage
Hail of Gunfire	Damage	To Hit
Deliberate Fire	To Hit	Damage
Keeping Low Profile	Armor Class	To Hit

MARKSMANSHIP: Soldiers have been trained in accurate fire patterns, even with automatic weapons. A Soldier can use any weapon in which they are trained in Semi-Automatic **FIRING MODE** without a penalty and Fully Automatic Firing Mode at only a -1 penalty.

EFFORTLESS ARMOR: The weight of any combat armor worn by a Soldier does not count in their **ENCUMBRANCE** calculation, unless they are swimming, flying, or if they are carried by someone else.

CLASS SKILLS:

Class skills represents unique abilities available to your character by virtue of their class. They are specifically described because they represent actions that certain classes perform exceptionally well, that may have special rules to consider, and that should occur in a predictable way. A class skill can be used untrained at a -3 penalty.

When using these skills, make a test of the appropriate **ATTRIBUTE**, adding your **CHARACTER LEVEL** as a bonus. For example, a 3rd level **SLICER** would add +3 to their **DEXTERITY** when engaged in Stealth.

SKILLS	ATTRIBUTE	ROLLED TO
Charm	CHA	Impress and convince others
Deceit	CHA	Deceive and mislead others
Disable	DEX	Disable traps and pick locks
Orient	WIS	Navigate unknown territory
Stealth	DEX	Avoid being noticed by onlookers



CHARM:

The Charm skill is used to positively influence a person's disposition towards you. Each test takes several days of intermittent positive social interaction such as carousing, cooperative work, or play and games. Attempts can only be made on the same person once a month. Successful tests move the target's disposition towards you one step down the chart below.

DISPOSITION	DESCRIPTION
Hateful	Refuses to speak, may use violence if pressed
Distrustful	Speaks to you only to appear graceful
Dislike	Will suffer your conversation for short duration
Neutral	Open to conversation but slightly reserved
Like	Talkative, usually shares information if asked
Trustful	Very Talkative, will share all information if asked
Adoration	Deep companionship, volunteers information

These dispositions are guidelines for the GM to follow. They do not entitle you to any specific pieces of information and can be immediately modified by abrasive actions. For example, if you punch someone who likes you for no reason, they may instantly drop down to being distrustful of you. Charm does not govern any immediate conversational goals, such as convincing someone to give you a key that you need. That would just be a standard **CHARISMA** test.

DECEIT:

The Deceit skill is used to control your own physical reactions to having told an outright lie, a partial truth, or any misleading statement. When you make a deceptive statement, you must test this skill immediately. If you fail, your body somehow gives away that you lied. Perhaps your voice cracked or stuttered, your eyes wandered in an unusual fashion, or hands involuntarily twitched. This reaction is sufficient to force everyone observing you to make a **SPOT** saving throw. If they succeed, they will suspect that you lied.

DISABLE:

The Disable skill is used to circumvent mechanical contraptions of any kind. It can be used to disable traps without triggering them. It can also be used to open mechanical locks. Your GM may impose a penalty on an action if you lack the appropriate tools, such as attempting to pick a lock without a lockpick, or to represent the quality of the contraption you are disabling. Disable is a particularly difficult skill and while it can be used untrained as any other skill, this is done at a -5 penalty instead of -3.

ORIENT:

The Orient skill is used to navigate over unfamiliar terrain. This is often without respect to the development of the area, as you may still find yourself lost while following establish roads if you do not know exactly where the roads lead. When you are traveling overland, the GM will call upon you to test this skill. Reliable directions from someone who is familiar with the area can give you a positive modifier at the GM's discretion. Alternatively, they may also impose a penalty against you if you have weak or incorrect information. Success means that you reach the location you were aiming for.

Before making a FTL jump, the GM should call for an orient test to check the accuracy of the information you are feeding your navigational computer. It is possible to make a manual FTL jump calculation without the aid of a navigational computer, however the odds of error are high and this should be reflected in a penalty imposed by the GM.

STEALTH:

The Stealth skill is used to avoid detection. You can make a stealth test anytime you are not being observed by anyone, excluding your own party members of course. When you make a stealth test, the GM will record your margin of success and later compare it to the margin of success of anyone making a **SPOT** saving throw to detect you.

Pilots can use a modified form of this skill, but only to conceal the presence of the vehicle they are piloting. Certain equipment mounted on the vehicle, as well as vehicle design itself, may give bonuses to this kind of roll. As with a normal test, the margin of success is compared to **SPOT** saves to detect you.



SAVING THROWS:

Saving throws represent your character's instinctive behavior and natural resistances. They will vary significantly between characters, representing their species background, training in their class, and experience.

You cannot take any preparatory actions after you have been informed of a save. Rocks falling down the hill are not going to stop while you dig around in your backpack for something to help you. You have to just roll the dice and hope for the best. Clever players will try to avoid even getting into a situation where they have to make saves by exercising caution and planning ahead.

CALCULATING SAVING THROWS:

Each saving throw is associated with a base **ATTRIBUTE**. **SPECIES** and **CLASS** choices that you have already made will affect the values of your saving throws with bonuses or penalties. The sum of that attribute and all applicable modifiers should be recorded on your character sheet.

Many types of **EQUIPMENT** and **DRUGS** can alter your saving throws temporarily. For example, armored helmets often reduce your **LISTEN** save because they muffle sounds that you might otherwise hear.

MAKING SAVING THROWS:

Events may occur in the game world that your character has a chance to avoid or mitigate. When this occurs, the GM will call for you to make a saving throw. For example, you may be exposed to nerve gas and the GM may have you make a saving throw for breath to avoid inhaling it.

*Except for **DODGING** an attack in combat, you do not voluntarily make saving throws. You only make them at the request of the GM.*

When making a saving throw, roll 1d20. If your result is equal to or below the value of the saving throw being used, you succeed. In some cases, success may only partially prevent or reduce the degree of a negative outcome. In the nerve gas example above, success may only prevent the worse effects of the gas or it may totally prevent the gas from harming you. The exact outcome is up to the GM. If your die result is higher than the value of the saving throw, you experience the full effect of the event.

SAVE	ATTRIBUTE	ROLLED TO
Breath	DEX	Quickly close mouth to hold breath
Fear	WIS	Stay in control despite powerful fear
Kinetic	CON	Prevent kinetic abilities from affecting you
Listen	WIS	Hear something in time to take action
Pain	CON	Keep functioning despite pain
Snap	DEX	Move quickly to evade something
Spot	WIS	See something in time to take action
Toxin	CON	Prevent toxin from harming you



BREATH:

This saving throw represents your ability to close your mouth quickly to prevent things from getting into your system. This may be to prevent your mouth from filling with water as you fall into a river or it may be to avoid inhaling a poisonous gas. If you are injured or otherwise shocked while underwater, the GM may call for a breath save to keep from involuntarily opening your mouth in shock. Failing to make the throw usually results in suffering of some kind.

FEAR:

This saving throw represents your ability to stay focused in the face of overwhelming fear. This may be the fear inspired by an unknown alien or exposure to a wide range of potentially terrifying situations. Failing to make the throw usually results losing control of your character while they attempt to flee the area.

KINETIC:

This saving throw represents your ability to resist a direct kinetic effect upon your body, such as a **KINETIC PUSH** or **CHOKER**. Almost all kinetic abilities allow for the target to make this save to resist its effects. Failing the saving throw means you experience the full effects of the ability.

LISTEN:

This saving throw represents your ability to hear something that you are not specifically listening for and processing what it means. This may be the whispers of shadowy figures in the back of a cantina or the sound of approaching footsteps. Failing the throw means that you either do not hear the sounds at all or you cannot interpret their meaning fast enough to make a difference. For example, failing to hear an enemy coming up behind you might mean that you are surprised for the first round of combat and experience an ambush.

If you wish to simply sit and actively listen for sounds, this saving throw is not used. Instead, the GM can either tell you what you hear or call for a **WISDOM** test if applicable.

PAIN:

This saving throw represents your ability to function despite being in severe pain. This may be pain as a result from injury in battle, environmental hazards like cold or heat, or an effect caused by failing a saving throw like **KINETIC** or **TOXIN**. This might apply to psychological pain, if the stress is severe enough to warrant it. For example, seeing your true love killed before your eyes may trigger this saving throw. Failing to make the throw means that you are completely overwhelmed by the pain and incapable of taking action.

SNAP:

This saving throw represents your ability to quickly move out of the way. This may be pulling your hand back before it gets caught in a trap or it might be avoiding an assassin's strike. **DODGING** in combat relies upon this saving throw. Failing to make the throw means that you did not get out of the way in time to avoid being hit.

SPOT:

This saving throw represents your ability to notice something that you are not specifically looking for and determining what it is. This may be a battery lying on a dusty floor or a combat robot hiding in the shadows preparing to strike. Failing the throw means that you either do not hear the see it at all or you cannot interpret its meaning fast enough to make a difference. For example, failing to see an enemy coming around the corner might mean that you are surprised for the first round of combat.

If you wish to simply look around or search for something, this saving throw is not used. Instead, the GM can either tell you what you see, make a search roll, or call for a **WISDOM** test, if applicable.

TOXIN:

This saving throw represents your ability to resist the harmful effects of a chemical, biological, or alien substance. This may be an ingested poison or concentrated fumes in an enclosed space. Failing the saving throw means you experience the full effects of the toxin.

AMBITIONS:

Every character has two types of ambitions; major and minor. Ambitions represent what drives your character to take actions and should serve as a useful method for shaping development over time. They exist purely for your benefit as the player to provide a framework for you to express what your character wants out of life.

It is important to remember that ambitions should encourage the growth of the character, not restrict them. If you feel like you are being held back by your ambitions, change them.

MAJOR AMBITIONS

At character creation, you must specify the major ambition for your character. This represents an achievement which, if accomplished, would cause the character to retire from the wandering lifestyle and settle down. You gain a +3 bonus to any roll undertaken with a clear and direct linkage to your major ambition.

For example, you might decide that it is your major ambition to acquire a large spacecraft of your own, a small space station, and the means to operate it for the remainder of your days. While many things would ultimately assist in such a goal, any generic effort to acquire money or goods would not get a +3 bonus.

However, a negotiation with a military leader to grant you a specific spacecraft in exchange for finding and returning their son unharmed, would qualify for the bonus. So would combat rolls made to secure such a vessel by force.

The major ambition also shows the GM what your character is generally concerned about doing with their life. They can make efforts to present opportunities to achieve those goals.

As a player, you should keep in mind that this is what your character is really interested in achieving. If the group is spending too much time on tasks that are not related to fulfilling this ambition, perhaps you should try to get the other characters to help achieve your own ambitions.



MAJOR AMBITION EXAMPLES

Acquire powerful cybernetics

Find your True Love

Rise to a Political Position

Defeat an Existential Threat

Acquire an Amount of Money

Avenge a Terrible Wrong

Cleanse a Territory of Predators

Topple a Powerful Villain

Establish a Stronghold

Restore infrastructure in a city

Acquire a Starfighter

Locate Powerful Artifacts

Explore a Large Territory

MINOR AMBITION EXAMPLES

Acquire a minor cybernetic

Form a Romantic Relationship

Bend the Ear of a Politician

Defeat a Minor Threat

Establish Comfortable Savings

Avenge a Minor Slight

Drive Away a Minor Predator

Depose a Minor Villain

Acquire a Small Property

Restore infrastructure in a town

Acquire a small hovercraft

Find a Minor Artifact

Travel to a Distant Place

MINOR AMBITIONS

At any time during the course of play, you can create a minor ambition. This represents a short-term goal that occupies the character's immediate thoughts. When created, you must negotiate an **EXPERIENCE POINT** value with the GM that will be given to the character if they achieve the ambition. This value should represent the relative difficulty of accomplishing the task. You can have up to three different minor ambitions at one time.

EXAMPLE MINOR AMBITION NEGOTIATIONS

These are presented as guidelines to provide reasonable expectations for both the players and the GM.

EXAMPLE 1:

There is rumored to be an alien beast of some kind that inhabits the forest along the ridge line overlooking an isolated colony. The people claim it is extremely dangerous and prone to injure and maim hunters that venture too far into it's territory. Exactly what abilities it has at it's disposal are yet to be seen.

You tell the GM that you wish to make defeating this beast a minor ambition of yours. If defeated, you will be rewarded with 100 experience points. The GM agrees, but offers to pay 250 instead as a wicked grin begins to stretch out across her face. This may be more than you bargained for...

EXAMPLE 2:

A band of space pirates is suspected of stealing cattle from a friendly local town while you were out exploring an old site. It is a risky political gamble to take them on, as they possess more resources than you and are positioned to defend themselves.

You tell the GM you wish to take on the pirates for the reward of 500 experience points if you can shame them in public and perhaps get them to move on to easier pickings. She agrees.

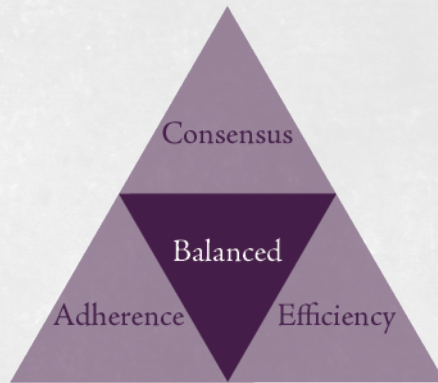
EXAMPLE 3:

A dog is startled when you step on it's tail and bites you. You tussle for a bit before shaking it loose and it runs off. You ask the GM for a reward of 100 XP to punish the dog. Everyone laughs at you and moves on.



MORALITY:

Every character has 7 points to distribute between 3 Impulses. Each impulse represents a natural tendency of behavior and the balance between these three impulses is what defines a character's personal morality. A score of 4 or higher in an impulse is considered high. A score of 0 or 1 is considered low.



Morality is not a straightjacket and represents the tendency towards certain behaviors. Someone with a high Adherence may still violate the law if they feel they have sufficient reason and someone with a high Efficiency may take some time to deliberate over a course of action if they are sufficiently concerned about the outcome. However, the general balance between these impulses provides a guide for what drives your character to take actions.

THE USE OF IMPULSE SCORES IN THE GAME:

The GM may apply an impulse value as either a bonus or a penalty in any situation that they choose if they feel it would make the game more enjoyable. The below example explores a potential moral situation.

EXAMPLE: The party is exploring an abandoned facility when they come across a group of bandits that are wanted by the local authorities. The bandits are not hostile and invite the party to share in a hearty meal.

A party member with a very high Adherence score might want to capture the bandits so that they can be brought to justice. If they were to draw their gun and attempt to intimidate the Bandits into surrender, the GM might give them a bonus on such a roll equal to their Adherence.

Alternatively, a party member with a high Consensus score might try to talk the bandits into coming to some kind of peaceful resolution with the nearby town by providing security in exchange for a regular payment. The GM might give them a bonus on such a roll equal to their Consensus.

ADHERENCE:

This impulse drives one to follow the rules. Whenever there is a conflict over what course of action to take, this impulse pushes you to act as expected by those in power or by the dictates of culture. Individuals with high scores are respectful of traditional authority figures and are extremely hesitant to break the rules. They conform to the expectations of power even when there is no one in sight to observe them. Individuals with low scores are rebellious and often run afoul of the law because of repeated violations. They may flagrantly misbehave just to send the point that they are nobody's slave.

ARCHETYPES: The Crusader, the Aristocrat, & the Sheriff

CONSENSUS:

This impulse drives one to conform to the needs of the peer group over themselves. Whenever there is a conflict over what course of action to take, this impulse pushes you support those closest to you. Individuals with high scores are willing to make sacrifices to help their friends and tend to be concerned about how their decisions affect others. They are deeply bothered when people are angry or disagreeable and will seek reconciliation. Individuals with low scores are selfish, egotistical, arrogant, and often loners as a result of how their behavior is received by others. They are quick to dismiss the opinions of others to promote their own brilliant conclusions.

ARCHETYPES: The Diplomat, the Senator, & the Socialite

EFFICIENCY:

This impulse drives one to seek immediate resolution. Whenever there is a conflict over what course of action to take, this impulse pushes you to solve that conflict quickly by whatever means is required. Individuals with high scores tend to make quick decisions based on their gut instincts and ignoring the long-term consequences of their behavior. Individuals with low scores tend to be indecisive and spend a lot of time planning for the future.

ARCHETYPES: The Mercenary, the Swashbuckler, & the Revolutionary

LUCK:

Luck represents your ability to defy fate. Luck has a starting value determined by rolling 2d6. **HUMANS** can roll an additional die to increase their starting luck. Luck cannot be increased through play unless it is given to a player as a reward from the GM.

Luck can be depleted over time through use. Any time a player rolls a d20 to attempt something and fails, they can spend a point of luck to add the value of their current luck to their total (not the die result). This can allow you to do some pretty amazing things.

For example, a **KUCHIT** is trying to jump across a chasm to escape from a dangerous alien. The GM tells him to make a **STRENGTH** test to do it. Since he is running at a full sprint, the GM gives him a +2 bonus. He has a strength of 10, so with the +2 bonus he needs to roll a 12 or less to make the jump. He rolls a d20 and gets a 19. Rather than endure a potential deadly fall, he lowers his luck from 9 to 8 and adds 9 points to his 12 bringing his total up to 21. The 19 rolled is now beneath his total. He barely makes the jump and escapes a tragic death.

At the beginning of the game, you will have a lot of lucky breaks. Over time, this will fade and you must stand on your own merits.

LANGUAGES:

Every character begins play with the ability to speak, read, and comprehend in at least one language. A character always begins play knowing the vernacular language of their home region or planet. To use a real world example, a character raised in France would speak French.

The choices of additional languages available is left to the GM and the setting. Talk about this with your GM before play begins.

A character with a **WISDOM** or **INTELLIGENCE** higher than 13 can also choose an additional language. If both attributes are higher than 13, choose two additional languages.

AGE:

Due to the relatively recent nature of the Collapse, the age of your character is extremely important because it determines your exposure level to old technologies. Older characters will remember more about the civilization that existed before the Collapse and have an easier time operating technological devices. There are three choices for age, each representing a range of possibilities. Choosing your precise age is up to you.

MATURE:

Characters of this age were fully grown when the Collapse occurred. They are now over the age of 45. They are familiar with a wide range of technology, even if only tangentially, and have an easier time using technological devices due to a stronger intuitive understanding of how things used to operate.

- +3 **CHANCES** to understand any technology

ADULT:

Characters of this age were children at the time of the Collapse. They are now between 30 and 45 years old. They retained a partial understanding of the civilization in which they were born, but were not exposed to the full range of technologies that an adult at the time would have seen in actual operation.

- +1 **CHANCES** to understand any technology
- +1 **CONSTITUTION**

YOUNG:

Characters of this age born shortly before or sometime after the Collapse. They are still under 30 years old. They were not exposed to the civilization in its pre-Collapse form and have no instinctive understanding of how the technologies in operation at that time were functioning.

- +1 **CONSTITUTION**
- +1 **STRENGTH** or **DEXTERITY**

HIT POINTS:

Hit points (**HP**) represent your character's ability to endure physical hardship. Maximum hit points are determined by rolling the **HIT DICE** for your **CLASS**. For example, a **SOLDIER** rolls 1d12 to determine their hit points. You roll this die another time and add the result to your hit point maximum each time you gain a **CHARACTER LEVEL**.

You may temporarily lose hit points when you are struck with a weapon, affected by a **KINETIC ABILITY**, or the subject of a variety of events. A character with all of their hit points is fresh and rested. A character with no hit points is battered and bruised to the brink of injury. It is important to remember that a character with zero hit points remaining is still not seriously injured. Instead, they are winded, exhausted, bruised, battered, or slightly bloodied.

Hit points regenerate at a rate of 1 per 6 hours of serious rest in a warm, safe environment. Anything more strenuous than occasionally getting up to put wood on the fire is considered work and not rest.

Once your hit points are totally exhausted, further attacks will result in **TEMPORARY ATTRIBUTE DAMAGE**. This represents actual injury.

ARMOR CLASS:

Armor Class (**AC**) represents how difficult it is to hit you in combat. Note that this is different from actually touching you. Your weapon may be making contact with someone wearing armor, but not hurting them. An unarmored person has an armor class of zero. You can raise your armor class by putting on armor. Body armor bonuses do not stack, however helmet and shield AC are added to your body armor AC to give a combined value. In combat, AC is subtracted from your opponent's attack attribute, making it hard to deal a damaging blow.

For example, a **SOLDIER** wearing a set of assault power armor (AC 7) and a combat helmet (AC 2) has a total armor class of 9. Someone who would normally roll against a 15 to hit in combat would instead roll against an 6. This is very strong protection from damage. Specialized armors may exceed normal armor values and may even provide further special abilities beyond AC.

ARMOR TYPES: Armors are divided into three types; light, medium, and heavy. These categories represent the relative difficulty of performing tasks while wearing the armor. Some classes cannot use certain abilities while wearing certain kinds of armors.



ATTRIBUTE DAMAGE:

True injury occurs when your character is affected in a way that normally would cause hit point loss but they are out of **HIT POINTS**. Typically, this is a result of being struck by a weapon while at low or zero hit points. If you have to lose hit points but have none left to give, your character will suffer **TEMPORARY ATTRIBUTE DAMAGE** instead. If this damage would reduce the attribute in question to zero or less, the blow ends your character's life.

Temporary attribute damage is determined randomly, rolling on the table to the right. Whatever damage you would have sustained in hit points is taken instead from the attribute rolled. Your attribute is thus temporarily lowered until you can have it medically treated. If treatment is not begun within 12 hours of the injury, you must make save vs **TOXIN** every 12 hours or the damage will become permanent. Certain class abilities can be used to help you make these saves.

ATTRIBUTE DAMAGE: ROLL 1D10

1	Strength	Arms
2	Strength	Legs
3	Dexterity	Hands
4	Dexterity	Feet
5	Constitution	Chest
6	Constitution	Stomach
7	Constitution	Back
8	Intelligence	Head
9	Wisdom	Eyes / Ears
10	Charisma	Face

You may notice that it is much more likely that you will be sustain injury to your physical attributes than your mental attributes. This is because a physically powerful person is more likely to survive injuries while a physically weak person can be killed more easily.

For example, while at zero hit points you are struck a blow that would normally deal 2 hit points of damage. You roll 1d10 and get an 8, indicating **INTELLIGENCE** damage. Your intelligence is reduced by 2. If you don't get treated within 12 hours, you could have permanent brain injury!

Permanent attribute damage can only be reversed by using advanced technology. Unfortunately, most of that technology is now scrap metal. If you are lucky, maybe you can find someone who has something that is still functioning.

ACTING WHILE INJURED:

Taking actions while having suffered temporary attribute damage requires making a save vs **PAIN** at a penalty equal to the total of all your temporary attribute damage suffered thus far. A failed roll means you are incapacitated for the round.

BLEEDING OUT:

A wound that deals more than 3 points of temporary attribute damage will bleed significantly. Without treatment, such a wound will cause death by bleeding after 15 minutes per **CONSTITUTION** point remaining (i.e. reduced by temporary attribute damage, if applicable). Such injuries are very serious and require immediate treatment to survive.

CRIPPLED AND SEVERED LIMBS:

A wound that deals more than 5 points of temporary attribute damage to a limb will cripple that limb. While crippled, you cannot use the limb for any purpose. A wound that deals more than 7 points of temporary attribute damage to a limb will sever it completely.

Since this only applies to limbs, any amount of **CONSTITUTION** damage is never crippling or severing. However, if this occurs with **INTELLIGENCE**, **WISDOM**, or **CHARISMA** damage, then crippling results in a coma (until restored) and severing will result in decapitation.



EXPERIENCE POINTS:

Experience points are used by the game to measure the progression of your character's power and skill over time as a result of practice and repetition. The method and reason for receiving experience points is left solely to the GM. The most common reasons are listed below, however your GM can do whatever they want.

DEFEATING ENEMIES: Every enemy has an experience point value associated with them. Whenever that enemy is defeated, the GM may award these points and everyone in the party that survived the combat divides these experience points equally. As more characters participate in the combat to defeat the enemy, each individual will receive less experience points from the victory.

ACHIEVING MINOR AMBITIONS: Every time you accomplish a minor ambition, the GM may award you an amount of experience points as negotiated when the ambition was defined.

QUESTS AND PUZZLE SOLUTIONS: When you complete a quest or solve a particularly difficult puzzle, the GM may award you an amount of experience points to represent the challenge of the task. The GM may make the players aware of what potential rewards exist when the characters first learn about the quest or puzzle, or they may keep that information secret until the quest or puzzle is completed.

RECOVERED EQUIPMENT: When you recover equipment or technology from a wilderness location, the lair of an alien, ruins lost to time, or similar locales, the GM may award you an amount of experience points equal to the value units of the equipment recovered.

EXCELLENT ROLEPLAYING: The GM may grant experience points to someone who is engaged in excellent roleplaying. This is defined as acts that reinforce characterization. For example, a player may make a decision that is detrimental to their objectives, but would make sense for the character to do, such as giving a donation to charity or destroying a powerful technology to keep it out of the hands of villains.

LEVEL	EXPERIENCE POINTS TOTAL	NEEDED TO REACH NEXT
1	0	1,000
2	1,000	2,000
3	3,000	3,000
4	6,000	4,000
5	10,000	5,000
6	15,000	6,000
7	21,000	7,000
8	28,000	8,000
9	36,000	9,000
10	45,000	10,000
+	+10,000	+10,000

CHARACTER LEVEL:

A character has a character level that is an indication of how powerful they are. Higher level characters have more resources and abilities at their disposal than a lower level character. When a character accumulates enough experience points to reach the next level, they will increase in power in the following ways:

ROLL ADDITIONAL HIT POINTS: Each class has **HIT DICE** listed in the class description. When you reach a new level, roll a die of the indicated size and add that number to your **HIT POINT** maximum.

INCREASE APPLICABLE MODIFIERS: Each character also has a number of modifiers that are dependent upon their level. For example, **CLASS SKILLS** provide a bonus that is based on character level. Raise these modifiers by one point since you are now one level higher.

GAIN GIFTS: Each character gains a gift every other level. They choose their first gift at second level, another at fourth level, etc. All gifts are listed in the **GIFT APPENDIX** so that you can reference them later at your leisure.

In order to advance a level, you must rest in a safe, warm area.

The image features a central figure of a soldier in a dark, tactical suit with glowing red visor and chest lights. The soldier is positioned in a dimly lit, industrial or urban environment with smoke and debris. The entire scene is framed by a border of a starry night sky.

WEAPONS AND EQUIPMENT

THE BARTER SYSTEM:

The entire universe is in a dark age. Market economic logic does not apply to this situation. There is no “market” to price goods and services accurately. Classic stores of values, such as metal coins & precious gems, are no longer useful because centuries of mining huge quantities of these materials have diluted their value. There is no political system to provide a standardized currency. In the absence of these forces, the majority of economic activity is performed using a barter system.

VALUE UNITS:

In the absence of market forces, we use an imaginary currency to measure the relative value of objects. Your character does not have a concept of value units; this is purely a unit of account for game system purposes. Everything in this book is listed as having a value represented in these units, however all your actual barter in the game will use Standard Mediums of Exchange.



STANDARD MEDIUM OF EXCHANGE:

Economic transactions based on barter lack a common currency and are based on relative assessments of the value of different goods involved. Creating precise values for all possible trades is impossible in this kind of environment. Therefore, most communities have established a standard value based on something which they can locally produce.

This item is called the Standard Medium of Exchange (**SME**). Each SME will be correlated to an exact number of value units, based on the decision of the GM. The GM is encouraged to vary SMEs widely across different locations to create a dynamic and interesting barter environment.

COMMON STANDARD MEDIUMS OF EXCHANGE

Quinerium	Ammunition	Agricultural Products
Fuel	Water	Animal Products
Gases	Soil	Textiles
Chemicals	Rare Metals	Drugs / Medicine

EXAMPLE BARTER ECONOMY:

A small town on a backwater planet has an economy based primarily on goat herding in the hills surrounding the town. These goats are used for milk, cheese, and meat products. Since most of the residents in the town have access to these goods, they use goat cheese as the SME.

People in that town will then judge the value of any goods presented to them in terms of relative value to a kilogram of goat cheese. A box of rifle ammunition may be assessed to be worth six kilograms of goat cheese. When they go to a local shop to purchase supplies, they are charged for their purchases in kilograms of goat cheese. The GM knows that one kilogram of goat cheese is worth 2 value units. However, the characters do not know this and must discover the value of goat cheese through interaction with the townsfolk and making trades.

There are, of course, drawbacks to this standard. Goat cheese is perishable, albeit with a much longer shelf life than milk or bread. It is difficult to transport or store in large amounts. Thus an economy built on this basis has inconsistencies and fluctuations. Some trades may involve establishing the value of both sides in relation to a fictitious amount of goat cheese. It is extremely difficult to use this method to establish prices for large items like vehicles or structures. Purchasing such items should be complex negotiations over extended periods of time.

This system may seem cumbersome, but it reflects the extreme difficulty of economic transactions in an economy without a standard store of value. The presence of this system is a constant reminder that the universe is in a very Dark Age and should encourage the characters to strive for a better life.

FIREARMS	DAMAGE	RANGE	VUS	WEIGHT
Assault Rifle	2d8	500m	400	4 kg
Combat Shotgun	2d12	40m	300	4 kg
Hunting Rifle	2d8	750m	150	5 kg
Machine Gun	2d10	800m	500	10 kg
Pistol	2d6	50m	100	1 kg
Shotgun	2d12	40m	175	3 kg
Sniper Rifle	2d10	1,000m	500	8 kg
Submachine Gun	2d6	75m	150	3 kg

SPECIAL WEAPONS	DAMAGE	RANGE	VUS	WEIGHT
Flame Thrower	3d6	25m	650	25 kg
Frag Grenades	3d8	5x STR	40	0.5 kg
Gas Grenades	1d4	5x STR	~	0.5 kg
Plasma Grenades	5d10	5x STR	120	0.5 kg
Rocket Launcher	4d8	200m	700	5 kg
Smoke Grenades	1d4	5x STR	~	0.5 kg
Stun Grenade	1d4	5x STR	75	0.5 kg

ARMOR	AC	TYPE	VUS	WEIGHT
Ballistic Vest	+1	Light	100	10 kg
Dense Ballistic Vest	+2	Medium	250	15 kg
Ceramic Vest	+3	Medium	450	20 kg
Dense Ceramic Vest	+4	Medium	750	30 kg
Field Power Armor	+5	Heavy	1,000	25 kg
Assault Power Armor	+7	Heavy	2,800	80 kg
Standard Helmet	+1	-	75	1 kg
Combat Helmet	+2	-	300	2 kg



ENERGY WEAPONS	DAMAGE	RANGE	VUS	WEIGHT
Laser Pistol	3d6	40m	300	1 kg
Laser Rifle	3d8	100m	600	3 kg
Plasma Pistol	3d8	30m	450	1 kg
Plasma Rifle	3d10	75m	1,000	4 kg
Rail Gun	2d12	600m	600	4 kg

MELEE WEAPONS	DAMAGE	RANGE	VUS	WEIGHT
Axe	1d8	~	10	4 kg
Baton	1d6	~	1	3 kg
Energy Sword	3d10	~	500	2 kg
Knife	1d4	~	1	1 kg
Spear	1d6	~	1	2 kg
Sword	1d8	~	275	2 kg

AMMUNITION	VUs	WEAPON ENHANCEMENTS	VUs
Energy Cells (10)	4	Flash Suppressor & Silencer	300
Flame Thrower Fuel (1 liter)	15	Grenade Launcher Attachment	1,200
High-Explosive Rocket	40	Size Reduction Measures	~
Hydrogen Gas Canisters (2)	5	Targeting Laser	100
Pistol Bullets (8)	2	Targeting Software & Integrated HUD	1,000
Rifle Bullets (20)	8	Telescopic Sight	250
Shotgun Shells (12)	3	Thermal Sight	450
		CYBERNETIC ENHANCEMENTS	VUs
		Cardiological Muscle Reinforcement	1,200
		Fight-or-Flight Suppression Module	1,600
		Frontal Lobe Integration	3,000
		Infrared Receivers	800
		Inner Ear Implants	1,600
		Language Implant	2,400
		Machine Interface Module	200
		Mech Coordination Integration Module	250
		Mirror Neuron Transplants	3,000
		Neural Pathway Expansion	3,000
		Neurofiber Muscular Strengthening	3,000
		Ocular Implants	1,600
		Oxygenation Filter	750
		Pain Suppression Module	1,600
		Primary Motor Cortex Integration	3,000
		Red Blood Cell Reinforcement	3,000
		Reflexive Trigger Module	1,600
		Skin Density Enhancement	1,800
		Weapons Training Implant	400
		White Blood Cell Integration	1,600



COMMON ITEMS	VUS	WEIGHT
Adrenaline Stick	50	-
All-Weather Tent	7	5 kg
Backpack	2	1 kg
Binoculars	15	1 kg
Blowtorch	130	1 kg
Bottle / Small Container	2	-
Box of Matches (20 matches)	10	-
Breath Mask	120	1 kg
Clothing (common)	3	1 kg
Clothing (heavy)	12	2 kg
Compass	25	-
Crowbar	4	2 kg
Fission Power Cell	75	4 kg
Flashlight	30	1 kg
Grappling Hook	3	1 kg
Steel Ladder (5m)	4	4 kg
Lighter	35	-
Lock (exceptional)	10	1 kg
Lock (standard)	3	1 kg
Lockpicks (Mechanical)	20	-
Lockpicks (Electronic)	80	-
Medical Pack	300	1 kg
Rope / Cord (25m)	5	2 kg
Shovel	3	1 kg
Sleeping Bag	16	1 kg
Steel Pole (5m)	2	1 kg
Toolbox	100	3 kg
Torch	1	1 kg
Two-way Radio	25	1 kg



FIREARMS:

ASSAULT RIFLE: This is a magazine-fed weapon that fires rifle rounds in semi-automatic or automatic firing modes. Standard magazines hold 30 rounds. This was a common weapon among pre-war militaries and many working models remain in service throughout the galaxy. It has fixed sights, but telescopic sights can be mounted with a little ingenuity.

COMBAT SHOTGUN: This is a magazine-fed weapon that fires shotgun shells in semi-automatic firing mode only. However, unlike most other magazine-fed weapons, the magazine is internal and individual rounds must be breech-loaded to refill it. This is an uncommon weapon used only by specialized forces like elite police units and heavy assault teams.

HUNTING RIFLE: This is a breech-loaded bolt-action weapon that fires rifle rounds in single action mode only. It has fixed sights, but telescopic sights can be mounted with a little ingenuity. This rifle was common as an individual weapon rather than a military one and thus can be found on many planets with extensive frontier regions where individuals might engage in hunting regularly.

MACHINE GUN: This is a magazine or belt-fed weapon that fires rifle rounds in automatic firing mode only. Standard magazines hold 50 rounds. This was an uncommon weapon used by pre-war militaries in combat support roles. It has fixed sights, but telescopic sights can be mounted with a little ingenuity.



PISTOL: This is a magazine-fed weapon that fires pistol rounds semi-automatic firing mode only. This weapon was common as an individual personal defense weapon as well as a military side-arm. It can be found almost anywhere, from highly urbanized regions to the frontier.



SHOTGUN: This is a breech-loaded pump-action weapon that fires shotgun shells in single action firing mode only. This weapon was common as an individual personal defense weapon as well as in close-quarters military operations. It can be found almost anywhere, from highly urbanized regions to homesteads on the frontier.

SNIPER RIFLE: This is a breech-loaded bolt-action weapon that fires rifle rounds in single action mode only. It has telescopic sights for long-range accuracy. This rifle was only used for military purposes and it thus extremely rare. Anyone using this weapon from a calm and safe position far away from their target can fire at +5 **To-Hit**.

SUBMACHINE GUN: This is a magazine-fed weapon that fires pistol rounds in semi-automatic or automatic firing modes. This weapon was uncommon before the war, primarily used only by specialized military units and organized crime. This weapon is essentially a lighter and less powerful version of the assault rifle.

FIRING MODE RULES

Some weapons are described as only operating in specific Firing Modes. When using a weapon that supports two firing modes, you can switch the firing mode between combat rounds. Each firing mode has it's own effects, described below.

FIRING MODE	BONUS	PENALTY
Single Action	None	None
Semi-Automatic	+1 damage die	-3
Automatic	+2 damage die	-5

ENERGY WEAPONS:

LASER PISTOL: This is a energy cell weapon that fires coherent bolts of light in single action or semi-automatic firing modes. This weapon was rare before the war, in use almost exclusively among military officers and remains rare today. It can fire 15 times per energy cell before needing to be reloaded.

LASER RIFLE: This is a energy cell weapon that fires coherent bolts of light in single action, semi-automatic, or automatic firing modes. This was a uncommon weapon among pre-war militaries. It has fixed sights, but telescopic sights can be mounted with a little ingenuity. It can fire 30 times per energy cell before needing to be reloaded.

PLASMA PISTOL: This is a energy cell weapon that fires globs of super-heated plasma in single action or semi-automatic firing modes. This weapon was very rare before the war and difficult to find today. It can fire 20 times per energy cell before needing to be reloaded. In addition to it's power supply, this weapon needs a hydrogen gas canister attachment to provide fuel for the plasma. It will deplete a gas canister in approximately 200 shots.

PLASMA RIFLE: This is a energy cell weapon that fires globs of super-heated plasma in single action, semi-automatic, or automatic firing modes. This was an extremely rare weapon before the war and virtually impossible to find today. It has fixed sights, but telescopic sights can be mounted with a little ingenuity. It can fire 40 times per energy cell before needing to be reloaded. In addition to it's power supply, this weapon needs a hydrogen gas canister attachment to provide fuel for the plasma. It will deplete a gas canister in approximately 200 shots.

RAIL GUN: This is a magazine-fed weapon that fires hard metallic projectiles at extreme speeds using electromagnetic resonance. It is capable of firing in single action mode only. The magazine is internal and individual projectiles must be breech-loaded to refill it. In addition to the projectiles, this weapon requires an energy cell to function. It will deplete an energy cell in approximately 2000 shots, thus a cell is exhausted very infrequently. This is an extremely rare weapon used only by specialized military units.

MELEE WEAPONS:

AXE: This is a common weapon made of high-quality steel. It was widely available as a tool before the Great War and many survived.

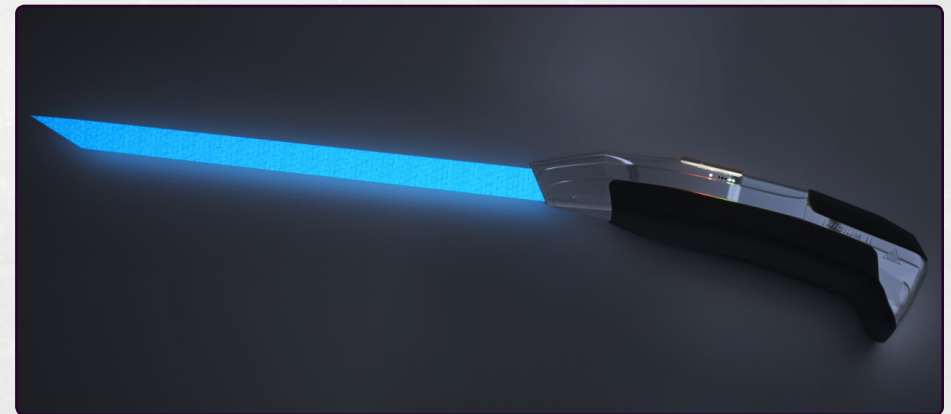
BATON: This is the most simple and basic weapon available, essentially a large stick. Many police forces used to use these weapons for non-lethal crowd management. Many objects can be used as a baton in an improvised manner.

ENERGY SWORD: This is a powerful form of a sword where the blade is a focused beam of plasma instead of steel. It is exceptional but rare weapon with incredible killing power. This weapon can function for 1 hour per energy cell before needing to be reloaded. In addition to it's power supply, this weapon needs a hydrogen gas canister attachment to provide fuel for the plasma. It will deplete a gas canister in approximately 10 hours.

KNIFE: This serves as a standard basic weapon as well as an all-purpose tool and utensil. It is available almost everywhere.

SPEAR: This serves as a standard basic weapon of simple construction. Improvised spears are available almost everywhere.

SWORD: This serves is a weapon used almost exclusively by military officers before the Great War and then only in a ceremonial sense. Since the Collapse, the value of a powerful weapon requiring no ammunition or fuel has risen enormously and they are in high demand.



SPECIAL WEAPONS:

FLAME THROWER: This is an uncommon weapon used for clearing entrenched military positions and terrorizing civilian populations. It shoots a stream of flaming liquid out of a nozzle. This liquid will ignite any flammable materials it comes into contact with. This weapon uses 1 liter of fuel every five trigger depressions. If the operator of this weapon is damaged in any way, there is a 1-in-6 chance that the stored fuel will ignite and explode, causing 10d6 damage minus 1d6 per meter distance from the explosion. So someone standing 6 meters from the explosion would take 4d6 damage.

FRAG GRENADE: This is a grenade that contains a high-explosive charge inside of a metallic shell so that when it is detonated small metal fragments (shrapnel) are scattered in the blast area.

GAS GRENADE: This is a grenade that contains a toxic gas, usually nerve gas but sometimes other varieties. When the grenade detonates, the gas billows out into the blast area. Anyone within the half-damage radius gets +2 to their saving throw against **TOXIN**. Anyone within the quarter-damage radius gets +4 to their saving throw against toxin.

PLASMA GRENADE: This is a grenade that contains a small battery, a high-explosive charge, and a small quantity of hydrogen gas. When the grenade detonates, these elements combine to fill the blast area with super-heated plasma. This is the most powerful anti-personnel weapon available.

ROCKET LAUNCHER: This is an uncommon weapon that fires rockets at ground and air targets. The default rocket type is high-explosive that deals damage in the same manner as a grenade does when exploding. Other rocket types may be available, but you will have to look for them.

SMOKE GRENADE: This is a grenade that contains an incendiary component that generates large quantities of smoke when detonated. The smoke is impenetrable and causes total vision loss to anyone within the half-damage and full damage areas. It also poses a severe choking hazard within this range. Anyone within the quarter-damage radius can see objects up to 1 meter away, but no further. The smoke dissipates within 10 minutes in normal conditions or less than that if there is a strong wind.



STUN GRENADE: This is a grenade that contains an phosphorous core that creates a deafening boom and brilliant flash when detonated. Anyone within the full damage radius is completely deafened and blinded, with no chance for a save, for 5 minutes. Within the half-damage radius, a **SPOT** saving throw is allowed to prevent blindness (still no chance to avoid deafening) and the effects last for only 1 minute. In the quarter-damage radius, a spot saving throw is also allowed, this time at a +4 bonus and the deafening effect is only partial. The effects last only 2 combat rounds at this range.

GRENADE SCATTER: Roll 1d6 After Failed Grenade Throw

Bounces back at you quarter of distance thrown	1-2
Bounces perpendicular eighth of distance thrown	3-4
Bounces further away half distance thrown	5-6

FOR GRENADES AND ROCKETS THAT DEAL DAMAGE

Within 10 meters of the blast	Full Damage
Between 11 and 20 meters of the blast	Half Damage
Between 21 and 25 meters of the blast	Quarter Damage

ARMOR:

BALLISTIC VEST: This is a light vest of textile construction. It provides minimal protection against damage. This was a common form of armor in widespread use by police and military forces before the war.

DENSE BALLISTIC VEST: This is a heavier vest of textile construction. It provides decent protection against damage, but it weighs more. It was used less frequently than its lighter version because of its bulk.

CERAMIC VEST: This is a light textile vest that has been reinforced with ceramic plates. It provides good protection against damage, but it is a little heavy and fairly expensive. This was a standard vest for an infantry soldier in the Great War and can be found in many locations.

DENSE CERAMIC VEST: This is a heavier textile vest that has been reinforced with ceramic plates. It provides very good protection against damage, but it weighs a lot and is more expensive. This kind of protection was really only used by elite military and police forces before the war.

FIELD POWER ARMOR: This armor is composed of interlocking steel alloy plates connected to an underlying mesh that protects a light exoskeleton. It uses powered servomotors to keep the operator upright and assist in their movements. As a result, it only adds one-fifth of its weight towards encumbrance. This is a heavy infantry armor used very sparingly and of enormous value. This armor comes with its own enclosed helmet system.

ASSAULT POWER ARMOR: This armor is composed of interlocking steel alloy plates connected to an underlying mesh that protects a heavy exoskeleton and sealed space suit. It uses powered servomotors to keep the operator upright and assist in their movements. As a result, it only adds one-eighth of its weight towards encumbrance. This armor is designed primarily for combat in a space environment, usually in boarding actions between starships. It is exceptionally rare and valuable. This armor comes with its own enclosed helmet system.

STANDARD HELMET: This is a light helmet made of hardened fiber materials. It provides reasonable protection against head injuries and shrapnel.



COMBAT HELMET: This is a heavy enclosed helmet made of hardened fiber materials and ceramic reinforcements. It also has integrated communication systems for battlefield coordination. It provides excellent protection against head injuries and shrapnel.

WEAPON ENHANCEMENTS:

FLASH SUPPRESSOR AND SILENCER: This can be added to any firearm that uses pistol or rifle rounds for ammunition. Anyone attempting to **LISTEN** to the sound of the shot or **SPOT** the muzzle flash suffers a -5 penalty.

GRENADE LAUNCHER ATTACHMENT: This can be added to any long-barrelled firearm that can support it. You can use this to fire specialized grenades that are twice as valuable as a regular grenade but otherwise have the same characteristics. The launcher has a range of 20 meters, regardless of the range of the weapon on which it is attached.

SIZE REDUCTION MEASURES: These are special modifications to a weapon that make it easier to conceal by reducing barrel length, removing stocks, and reducing the size of the magazine. The value of this enhancement varies with the type of weapon it is used on. The exact consequences to weapon functionality are up to the GM, however this generally causes -2 **To-Hit**.

TARGETING LASER: This is a small attachment that clips to the barrel of the weapon. It generates a pinpoint laser out to a range of 10 meters that assists in aiming, granting +3 **To-Hit** on any target on which you can see the laser.

TARGETING SOFTWARE AND INTEGRATED HUD: This is two-part system that can only be attached to weapons designed to accommodate it. An electronic component is installed in the weapon itself that feeds data to a Heads-Up Display (HUD) that integrates onto a Combat Helmet or Powered Armor Helmet. The HUD projects targeting assistance onto the interior of the helmet visor to assist the user in aiming (+4 **To-Hit**) and providing real-time target assessment by identifying armed individuals with a red highlight. The assessment system can automatically highlight known allies in green if they are programmed into the system ahead of time.

TELESCOPIC SIGHT: This is a telescopic mounting that can be attached to weapons that support it. It provides a +2 **To-Hit** against targets over 25m from the shooter.

THERMAL SIGHT: This is a telescopic sight that allows infrared vision.

CYBERNETIC ENHANCEMENTS:

CARDIOLOGICAL MUSCLE REINFORCEMENT: This involves implanting cybernetic tissues in cardiological muscle groups to strengthen endurance and maintain physical function through minor injury. The installer rolls 2d6 and adds the higher result to your permanent **HIT POINTS**.

FIGHT-OR-FLIGHT SUPPRESSION MODULE: This involves implanting cybernetic nerves within the cerebral cortex to suppress anxiety and fear. The installer rolls 2d4 and adds the higher result to your **FEAR** saving throw.

FRONTAL LOBE INTEGRATION: This involves implanting cybernetic nerves within the frontal lobe to improve memory and logic functions. The installer rolls 2d4 and adds the higher result to your **INTELLIGENCE**.

INFRARED RECEIVERS: This involves implanting infrared receivers within the eye and providing cybernetic nerves to interpret the signals and transmit the data into the optic nerve. Once installed, the eyes appear to have a slight bluish hue from the exterior. This allows seamless infrared vision.

INNER EAR IMPLANTS: This involves implanting cybernetic sound detection implants within the inner ear to assist in hearing. The installer rolls 2d4 and adds the higher result to your **LISTEN** saving throw.

LANGUAGE IMPLANT: This involves implanting cybernetic nerves in the brain to use an additional language. Once installed, the user can speak, write, and understand in the new language. Each implant comes encoded with a specific language and this cannot be changed by the installer.

MACHINE INTERFACE MODULE: This involves implanting cybernetic attachments to the brain stem that allow direct interface with a computer system. The system can wireless connect to a computer system within 100 meters and interact with it without having to use peripherals.

MECH COORDINATION INTEGRATION MODULE: This involves implanting cybernetic attachments to the brain stem that allows hard-wire interface with a Mech. All rolls made while controlling that Mech get a +2 bonus.

CYBERNETIC ENHANCEMENTS (CONTINUED):

MIRROR NEURON TRANSPLANTS: This involves implanting cybernetic nerves within the cerebral cortex to function as mirror neurons. The installer rolls 2d4 and adds the higher result to your **CHARISMA**.

NEURAL PATHWAY EXPANSION: This involves implanting cybernetic nerves throughout the nervous system to accelerate nerve transmission. The installer rolls 2d4 and adds the higher result to your **WISDOM**.

NEUROFIBER MUSCULAR STRENGTHENING: This involves implanting cybernetic tissues within the core muscle groups to increase their power. The installer rolls 2d4 and adds the higher result to your **STRENGTH**.

OCULAR IMPLANTS: This involves implanting cybernetic rods and cones within the eyes that enhance visual perception. The installer rolls 2d4 and adds the higher result to your **SPOT** saving throw.

OXYGENATION FILTER: This involves implanting a mechanical filtration system in the throat above the larynx that only allows oxygen to pass through to the lungs. It must be manually deactivated by the user in order to eat. However, this allows the user to breathe underwater and in many atmospheres that might normally be toxic to their lungs. A specialized version of this filter is available that filters methane instead, intended for use by the **TASSARI** that is worth twice as much as the standard type.

PAIN SUPPRESSION MODULE: This involves implanting cybernetic controls that partially shut down neural transmission of pain. The installer rolls 2d4 and adds the higher result to your **PAIN** saving throw.

PRIMARY MOTOR CORTEX INTEGRATION: This involves implanting cybernetic nerves within the primary motor cortex to enhance coordination. The installer rolls 2d4 and adds the higher result to your **DEXTERITY**.

RED BLOOD CELL REINFORCEMENT: This involves implanting cybernetic tissues that enhance the production of red blood cells in the body. The installer rolls 2d4 and adds the higher result to your **CONSTITUTION**.

REFLEXIVE TRIGGER MODULE: This involves implanting cybernetic triggers within the nervous system that accelerate the high-speed reflexive muscle responses. The installer rolls 2d4 and adds the higher result to your **SNAP** saving throw.



SKIN DENSITY ENHANCEMENT: This involves implanting a network of hardening nodes in the skin that improve skin density and raise the force threshold of skin penetration by objects. The installer rolls 2d4 and adds the lower result to your **ARMOR CLASS**.

WEAPONS TRAINING IMPLANT: This involves implanting cybernetic nerves in the brain so that you can use a single type of weapon as if you had extensive training. Once installed, the user is considered fully trained in the weapon. Each implant comes encoded with training in a specific weapon type and this cannot be changed by the installer.

WHITE BLOOD CELL INTEGRATION: This involves implanting cybernetic tissues that enhance the production of white blood cells in the body. The installer rolls 2d4 and adds the higher result to your **TOXIN** saving throw.



LIFE AMONG THE RUINS

BASIC SURVIVAL:

As a character in Cascade Failure, a significant portion of gameplay can revolve around the reality of living in a harsh and unforgiving environment.

MOVEMENT SPEEDS:

On foot, an unencumbered person can hike a number of kilometers in a day equal to their **CONSTITUTION**, minus a penalty provided by the GM to represent the difficulty of the terrain. A party travels at the speed of it's slowest member. Animal mounts usually travel at double or triple their Constitution in kilometers per day, but this can vary by animal.

ENCOUNTERS:

While traveling across the surface of a planet or within a site, the GM may roll dice to determine the likelihood of encountering a special situation. This could be running into a group of locals, coming across an alien creature or it's lair, or a pirate ambush. It could just as easily be finding a small frontier homestead or a waystation that provides a safe place for trade and re-supply.

If such an encounter occurs, every party member must make a save vs **SPOT**. If it occurs while the party is in a vehicle, only those who are looking out the windows or monitoring sensor arrays get a save. The GM makes similar rolls for the other side. Whoever succeeds by the largest margin notices the other first. This may give you an advantage or result in you running right into an ambush. The GM can simply decide the intentions of those encountered or they may roll randomly from the table to the right. You will have to watch those encountered to try and deduce what they intend.

INTENTIONS: ROLL 1D10

1	Looking for Help
2	Eager to Interact
3	Cautious: Guard Down
4	Cautious: Weapon Drawn
5	Avoidance and Retreat
6	Avoidance and Retreat
7	Avoidance and Retreat
8	Attacks after Stalking
9	Attacks after Preparation
10	Attacks Immediately

ENCUMBRANCE:

The most weight that any character can carry and still move is equal to three times their **STRENGTH** in kilograms. The most weight that any character can carry comfortably is equal to their Strength. Therefore an average person can carry about 10 kg without having to worry about getting tired and a maximum of 30 kg before they cannot move. Some technology can help.

If you are carrying more weight than you can manage comfortably, you lose 1 **HIT POINT** per hour per multiple of your strength above your comfort limit. The average person in the example above would lose 1 HP per hour carrying 11-20 kg, 2 HP per hour carrying 21-30 kg, and 3 HP per hour holding 31-40 kg. If your HP is reduced to zero in this way, you collapse and fall unconscious. You will then begin recovering HP as if you are resting.



DAILY SUSTENANCE:

The degree to which you track the demands of daily life is up to the consensus of the group. You may decide that you want to keep track of the source of every meal, the exact number of days spent foraging for food, and exactly how much water you are carrying in your pack. The rules below are provided for guidance if you choose to track these variables in your game.

FOOD: Each character must consume at least one ration per day in order to stay alive. You must consume a number of rations equal to one fourth your **STRENGTH**, rounded down, in order to heal **HIT POINTS** normally. Rations can be purchased through barter from an NPC for a cost or they can be generated by searching for food.

WATER: Each character must consume at least one drink per day in order to stay alive. They must consume two drinks per day in order to heal hit points normally. Drinks can be purchased from the equipment lists for fixed costs or they can be generated by searching for water.

SEARCHING FOR FOOD AND WATER: The GM will assign a die value to each region of a planet to indicate the relative abundance of that area and another die value to indicate the presence of water. A rich lowland might have a value of d10 for both food and water while a frozen tundra might have a food value of d4 but a water value of d12. Most characters can hunt for food or search for water in that region by devoting an entire day to the process and rolling the appropriate die. Their labor yields a number of rations or drinks equal to the die result.

SWIMMING:

Every character is assumed to have basic swimming ability. Swimming in calm waters without encumbrance requires no rolls. However, the GM can call for a **STRENGTH** or **DEXTERITY** test if the water is dangerous. Your **ENCUMBRANCE** penalty is applied to any such tests, so avoid going into the water with a heavy load. If you lose enough hit points to fall unconscious while swimming, you may drown.

SLEEP:

As with sustenance, the degree to which you track the demands of daily life is up to the consensus of the group. You may decide that keeping track of every hour of sleep and exactly long each party member stays up on the night watch. These rules are provided for guidance if you choose to track these variables in your game.

A character needs 6 hours of sleep every day in order to function effectively. Any time a character fails to meet this standard, temporarily lower all attributes by 1 for the entire following day. If they fail to get enough sleep for two days in a row, temporarily lower all attributes by 5 for the entire following day. Each successive day without sleep results in another 4 cumulative penalty applied, so the third day reduce attributes by 9, by 13 on the fourth day, and so on.

If these penalties reduce your **STRENGTH**, **DEXTERITY**, or **CONSTITUTION** to zero, the character falls asleep despite the desires of the player. Anyone forced to sleep in this manner will sleep for a number of hours as dictated by the GM, unless forcefully roused in some manner. If these penalties reduce your **INTELLIGENCE**, **WISDOM**, or **CHARISMA** to zero, the character becomes insane and transfers to GM control until they are restored above zero. Serious sleep deprivation can have extreme consequences on the stability of the mind.

TIME:

In the wake of the collapse, exact timekeeping can be extraordinarily difficult. The batteries that powered most personal timepieces have been depleted, many locations are without power and thus cannot use clocks either, and in many ways time is no longer as important as it once was. It is probable that your character may lose track of the exact day if they are away from civilization for an extended period of time. At a shorter scale, most people do not even attempt to keep track of the passing of hours except in developed or restored areas.

As a result, it may be difficult or impossible to coordinate arrivals or meetings with a third party. You might tell a friend that you will meet them on the planet of Lumbe next Thursday at noon. If they even show up on the right day, you might consider yourself lucky.



VISION AND LIGHT:

The ability to see is vital to survival. Unfortunately, a large portion of an spacefarer's life is not spent in brightly lit open areas. They tend to go into caves, buildings, underground complexes, and dangerous environments like jungles and swamps. They may camp in the wilderness at night. As a result, they often find themselves in situations where things within their normal range of vision may be obscured, distorted, or completely hidden.

What you actually see in the world around you, how far the light your torch or flashlight extends, what heat levels are detected by infrared vision, and whether you see that alien hiding in the corner is exclusively determined by the GM. Your GM may provide you with guidelines, such as a primitive torch's light extends five meters in every direction, or they may set such distinctions aside and simply speak in vague terms.

However, the GM will call for you to make a save vs **SPOT** when they want you to have a chance to notice something that most people might meet. This might be a tripwire running across the floor, it might be an enemy hiding in the shadows, or just whether you notice a battery lying in the dirt. Generally, you will only get one chance at this. The GM may impose a penalty on this save to represent situational factors like shadows or camouflage.

THE EFFECTS OF DARKNESS AND BLINDNESS:

As your vision becomes worse, the GM will impose progressively worse penalties on anything you do that requires vision, such as attacking a target in combat or spotting an approaching enemy. Some **TOXIN AND DRUG** effects may completely blind you as well. If you are completely blind, the GM may impose a large penalty or simply decide that the task is impossible to accomplish without sight.

Some mechanical tasks like lockpicking may be accomplished completely by feel, but also at a penalty imposed by the GM. Some tasks are obviously unaffected by darkness, such as talking. Ultimately, what you can and cannot accomplish in the dark or while blinded is up to the GM's judgment of the situation.

TOXINS:

The universe is the home to a wide range of noxious substances. It is important to know how these substances affect your system so that you can react appropriately if inflicted.

A toxin is a substance that inflicts temporary attribute damage on the victim. It could be a poison or a disease, but the rules are the same for both. This must be treated with medical care under the same rules as combat damage of this type, including saves vs **Toxin** every 12 hours.

A toxin is introduced through the body via an exposure method. This determines how you can become infected. For example, you cannot inhale a respiratory toxin if you are holding your breath. The toxin will wait a period of time before becoming active. This is called gestation. A toxin with a gestation of 1 minute would begin affecting you 1 minute after exposure, however some toxins (especially diseases) may have gestation periods measured in days.

A toxin will inflict damage to one or more **Attributes**. The amount of damage is random and based on the toxin, but it will occur one point at a time at a frequency called an interval. Once all the damage has been dealt, the toxin is considered to have run its course and you are no longer affected by it. Of course, you will need to get the damage treated quickly or else it could become permanent.

Finally, each toxin has symptoms that will begin to express themselves when the gestation period is over. This may actually be your first actual indication that you are even infected, so pay attention.

EXAMPLE: TORI SCORPION VENOM

Exposure	Bloodstream
Gestation	3d8 Minutes
Attribute Damage	1d8 Charisma, 1d10 Wisdom
Interval	1 per Hour
Symptoms	Purple Skin Tone, Disorientation, Delusions

DRUGS:

A drug is similar in many ways to a toxin but it does not always damage you and it may provide some beneficial effects. Drugs can affect the mind, the body, or both. Drugs can also create physical and or psychological dependency. Alcohol is an example of a drug.

A drug has the exposure, gestation, and symptoms characteristics of a toxin, but does not deal damage to you over interval periods. Instead, it has a simple duration after which the effects expire. A drug can raise or lower any number of your characteristics; from attributes to saving throws to any number of other effects. Advanced pharmaceutical drugs can do some amazing things. Exactly what a drug does is completely up to the GM.

A drug also has the potential to be addictive. The likelihood that the user will become addicted to the drug is represented by an addiction factor. This is a dice that is rolled per dose of the drug consumed with the user becoming addicted if they roll a 1. For example, an addiction factor of 1d4 means that they have a 1 in 4 chance of becoming addicted per use. A drug with a 1d12 addiction factor is much less likely to be addictive.

Someone who is addicted to a drug must consume it every week or suffer withdrawal symptoms. Withdrawal effects intensify, plateau, and eventually fade. This rise and fall occurs over 1d10 days for all drugs. The GM can force save vs **Pain** to see if you can resist the temptation to consume the drug to stop the withdrawal symptoms. If you fail this save, you will do anything to get your fix.

EXAMPLE: MICROBREWED LIRAPTO PALE ALE

Exposure	Oral Consumption
Gestation	4d6 Minutes
Symptoms	Drunkenness, Combat Hallucinations
Effects	-3 Wisdom, +10 Hit Points, +6 save vs Pain
Duration	4 Hours
Addiction Factor	1d10
Withdrawal	Headaches, Slight Nausea

EXPLORING A SITE:

The achievement of your character's ambitions will likely take you into locations that the average person would do well to avoid, such as abandoned bases or dank caverns. These locations are referred to as sites, though they may vary widely. An underground research facility might just as easily be considered a site as an abandoned space station or a pirate hideout dug out of the side of an asteroid.

While moving around in a site, in addition to the very real possibility of encountering aliens and villains, you could encounter the following non-combat hazards.

ROLLING FOR DISCOVERIES: The GM may have a piece of equipment, technology, clue, or any variety of things tucked away in parts of the site. For example, a small flashlight may have fallen into a grating in the floor and remains stuck there for you to find, hopefully.

In such a case, the GM may roll a die in secret to assess the odds of discovery. On a die result of 1, you accidentally discover the secret. The GM can change the size of the die to reflect the likelihood of finding it. Getting a result of 1 on a d4 is much easier than on a d20. The GM may also roll dice just to keep you on your toes.

If you are not actively searching for anything, the GM will typically use a larger die like a d10 or a d12. If you tell the GM you are actively searching the area for hidden objects, they will typically use a smaller die to reflect your diligence, like a d6 or a d4.

Keep in mind that actively searching an area requires spending several minutes engaged in that task and you may be making noise that attracts attention from aliens or NPCs that are nearby.

POISONS AND DISEASE: You may encounter natural or biochemical poisons and diseases in sites with much greater frequency than you do in the outside world. Abandoned or isolated areas are often the home of apex predators and typically have an above-average amount of decaying corpses than a normal location. Be careful about what you touch.

LOCKED OR STUCK OBJECTS: You may encounter a door that has swelled in the heat and prevents passage forward or a locked container that might have valuables hidden inside. You can make a **STRENGTH** test to simply force something open or you can make a **DISABLE** roll to bypass a locking mechanism. Some objects may be locked in a manner that cannot be disabled, such as a door being barred from the other side. The GM may assess a penalty to your rolls based on the challenge presented and/or give you a bonus for having appropriate tools. Be advised that the use of extreme force to open an object usually creates a lot of noise and may attract unwanted attention.

COLLAPSED STRUCTURE: You may discover structures above ground that have collapsed or you may find collapsed tunnels in an underground location. You can dig through loose dirt and rock at a rate equal to your **STRENGTH** in cubic meters per hour of work. Heavier materials take more time to dig through, based on the judgment of the GM. This process also constitutes searching that material as it is removed and you will be given the appropriate chance to discover anything hidden within it. Be aware that cutting through obstructions like steel or solid rock take a long time without good tools.

TRAPS: Sometimes intelligent beings can set up traps to injure those who try to sneak up on their lairs or hideouts. These traps can range from simple deadfalls and pit traps to intricate mechanical triggers that can shoot out poisoned darts. Anyone approaching the trap can get a save vs **SPOT** at the GM's discretion to notice it. If detected, someone may disarm the trap using the **DISABLE** skill. Failure may or may not trigger the trap mechanism. Some traps may be unnoticeable and/or unable to be disabled.

FALLING FROM HEIGHTS: You may accidentally lose your footing and fall from an elevated position. You will suffer 1d6 points of damage per 3 meters of distance travelled. A successful save vs **SNAP** will halve that damage. Any fall of 100 meters or greater is automatically fatal unless you have technological protection of some kind.

FOOT COMBAT MECHANICS:

As a part of the game, you will find yourself in situations that may become violent. In those circumstances, special rules apply to make sure that the game is adjudicated fairly. You may wish to use miniatures in combination with a battle mat to represent your characters and the environment of the conflict, but this is not required.

HOW A COMBAT ROUND WORKS:

Combat is divided into combat rounds that represent approximately six seconds of game time. Each round is composed of two steps; taking actions and applying damage.

TAKING ACTIONS: Within each round, everyone can take one combat action. Actions are taken in reverse order of **DEXTERITY** with the lowest Dexterity combatant going first. This allows the faster combatants to benefit from the foreknowledge of how the round will resolve when they make their own decisions about what to do.

Taking actions while having suffered temporary attribute damage requires making a save vs **PAIN** at a penalty equal to the total of all temporary attribute damage suffered. A failed roll means incapacitation for the round. You can attempt to act again next round, making another save.

APPLYING DAMAGE: Once all actions have been taken and all damage has been rolled, it is applied simultaneously. Even if this results in the death of a combatant, their attacks that round will still deal damage if they hit their target.

BETWEEN ROUNDS: Some ability effects can expire between rounds. Otherwise, combat continues round-by-round until only one side remains committed to fighting.

COMBAT ACTIONS

Attack
Draw & Attack
Move & Attack
Move
Using an Ability
Parry
Dodge
Hold
Charge
Grapple
Reload Magazine
Surrender

COMBAT ACTIONS:

These are defined action types and do not represent everything you can do in combat. However, if you want to attempt anything outside of these guidelines, the GM must determine how it is adjudicated.

ATTACK: Taking this action means you are spending the entire round attempting to injure a targeted opponent with your weapon. The opponent must be within range of your weapon. Attacking is an attribute test against **STRENGTH** for melee weapons and against **DEXTERITY** for ranged weapons. This is also called a **To Hit** roll. The **ARMOR CLASS** of your opponent is applied as a penalty to your attribute and there are some other modifiers that might apply depending on your character design. If you are successful, you hit your opponent and roll the appropriate amount of damage dealt by your weapon. The GM will reduce their **HIT POINTS** accordingly at the end of the round.

DRAW AND ATTACK: Taking this action means you are either dropping your current weapon and drawing a new weapon or that you began the round unarmed and drew a weapon to attack. The weapon must be easily accessible to do this. A pistol strapped to under your arm or a sword in a scabbard is considered accessible. A knife in a pouch at the bottom of your backpack is not accessible. This is adjudicated as if it were a normal attack, but at a -3 penalty **To Hit**.

MOVE AND ATTACK: Taking this action means you are moving closer to an opponent and then attacking them. The opponent must be within a number of meters equal to half your **DEXTERITY** to take this action. You must already have your weapon in hand to take this action. This is adjudicated as if it were a normal attack, but at a -5 penalty **To Hit**.

COMBAT ACTIONS (CONTINUED):

MOVE: Taking this action means you are only moving around on the battlefield. This could be in any direction but you must remain at least a meter away from any enemy. If you want to move close to an enemy or through their immediate area, you must use a **CHARGE** instead. You can move up to your **DEXTERITY** in meters. While moving about, you gain a bonus to **ARMOR CLASS** equal to one-half your Dexterity.

USING AN ABILITY: Taking this action means you are using an ability of some kind. The mechanics of using the ability are dependent upon your class description or as described in the **GIFT APPENDIX**. While using the ability, you get no benefit from any armor you are wearing and have an Armor Class of zero. This is because you are so wrapped up in performing the task that you are not able to take even basic steps to defend yourself from attack. If you are hit before the end of the round, the ability fizzles with no effect.

PARRY: Taking this action means you are attempting to block an incoming blow from an enemy. You can only parry a combatant who has attacked you earlier in the round with a melee weapon. Parrying involves making a normal Attack roll. However, instead of applying their **ARMOR CLASS** as a penalty, you use their margin of success when they attacked you as a penalty instead. If you succeed, you have merely stopped the blow from hitting you. Even if successful, you have not actually hit your opponent and deal no damage.

DODGE: Taking this action means you are attempting to avoid an incoming blow from an enemy. You can only dodge a combatant who has attacked you earlier in the round. Dodging involves making a save vs **SNAP**, with a penalty applied equal to the margin of success on the opponent's attack roll. Firearm and Energy Beam attacks cannot be dodged except at extreme range, but it is possible to dodge melee weapons, thrown weapons, and unarmed attacks.

HOLD: Taking this action means you are waiting to strike next round. You will be able to act last in the next round (if multiple combatants hold, ties are broken by **DEXTERITY**). You will also get a bonus on that action equal to your character level.

CHARGE: Taking this action means you are running into their immediate vicinity and using the force of your movement to aid in the attack, such as when charging with a heavy baton. The opponent must be within a number of meters equal to the sum of your **DEXTERITY** and **STRENGTH** to take this action. You must already have your weapon in hand to take this action. This is adjudicated as if it were a normal attack, but it deals double damage. You are considered stunned in the round immediately following a charge.

GRAPPLE: Taking this action means you are attempting to wrestle your opponent to the ground. If your opponent is making an armed attack against you in the same round that you attempt to grapple, you will still suffer damage if the blow connects.

Resolve a grapple by making opposed **STRENGTH** tests and comparing the margin of success. The difference between the two margins of success becomes a penalty to all future d20 rolls by the weaker grappler, until the grapple is broken. For example, while grappling you succeed on your Strength test by 5 and your opponent only succeeds by 1. The opponent now suffers a -4 penalty to all actions while you have them in your grip. While grappled, an opponent can still attack you with a knife or similar weapon.

These penalties can be stacked and/or combined with the grappling efforts of other combatants. If a grappling penalty becomes larger than an opponent's strength, they are considered pinned and completely unable to take actions. Thus a wrestling match would consist of successive grappling rolls until one wrestler is slowly overcome and pinned.

RELOAD MAGAZINE: This action allows you to remove and replace a magazine in a weapon that is dependent upon limited ammunition.

SURRENDER: Taking this action means you are dropping your weapon, raising your hands to show your intent to surrender, and stepping away from combat. Most intelligent beings will respect your surrender, but attempting to surrender to a wild animal will likely have no effect whatever. Of course, you are now a prisoner.



UNDERSTANDING TECHNOLOGY:

When a character encounters a piece of technology that they do not understand, they have a number of **CHANCES** that can be used to understand it. A character always has 1 chance to understand a new technology and even penalties cannot take away this chance. Additional chances may be granted by certain factors (see bonus chances below).

The character rolls a number of six-sided dice equal to the number of chances they have, thus if you have 4 chances you roll 4d6. For each die result of 1, the character gains 1 **INSIGHT** which accumulates over time and represents knowledge of the technology. The degree to which you truly understand the technology is ultimately the GM's decision. After you make a roll for understanding, the GM will tell you what you learned.

A character can use their chances to attempt to understand a technology once per day and each attempt takes a few minutes per point of **COMPLEXITY**. Rolling just a single chance per day for several months could eventually result in understanding of a fairly complex item.

BONUS CHANCES:

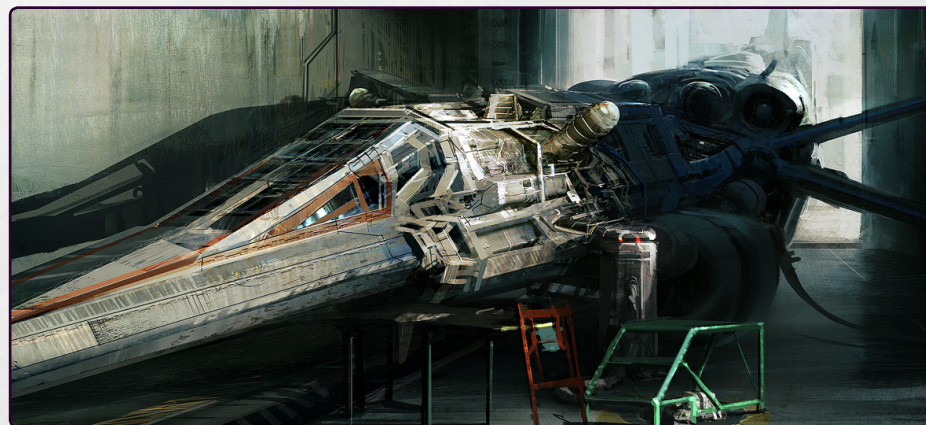
In many cases, knowing how a similar technology operates may give you an edge in understanding a new technology. The GM may give you additional chances depending on just how closely the technology you are learning is related to what you are already know. In addition to this effect, a character can gain additional chances to understand a technology from the below factors. These bonus are cumulative.

- +3 for any technology if **MATURE**
- +1 for any technology if **ADULT**
- +1 for any technology if **INTELLIGENCE** greater than 13
- +1 for any technology if **WISDOM** greater than 13
- +1 for any technology if **HUMAN**
- +1 per level for any technology if an **ENGINEER**
- +1 per level for any medical technology if a **MEDIC**
- +1 per level for any vehicle technology if a **PILOT**; double if in expertise
- +1 per level for any computer technology if a **SLICER**

CORE FUNCTIONS: A character with as little as 1 **INSIGHT** may be able to understand a core function of the technology they are studying. A core function is what the device was intended to perform on a regular basis. For example, the core function of a modern cell phone is to make telephone calls. Some technology may have multiple core functions, each requiring additional Insight to understand. The GM may decide that the core function of many technologies are blatantly obvious and require no Insight to understand. For example, it may be obvious that you pull the pin out of a grenade in order to activate it or depress the trigger of a firearm to fire it.

ANCILLARY FUNCTIONS: As additional insight accumulates, the character will begin to understand a number of ancillary functions available in the technology they are studying. Ancillary functions represent additional technologies that support the core functions or allow additional tasks to be performed. For example, an ancillary function of a modern cell phone is to operate the built-in camera element. The GM will tell you how many ancillary functions you learn as you gain insight.

SYSTEM FUNCTIONS: Once a character has an amount of insight equal to the **COMPLEXITY** of the technology, they begin to understand it's system functions. These are the kind of sophisticated changes which alter the way the technology operates in a fundamental way. For example, changing in the telecommunications network that a modern cell phone accesses to perform it's tasks would be a systemic function. This level of mastery is also required to perform repairs or build a copy of the technology using scrap materials.



TECHNOLOGICAL COMPLEXITY:

All technology in the universe has a **COMPLEXITY** value. This represents the difficulty of understanding how the technology really works, not just how to operate it. Most of the time, you do not need to know the complexity of a technology you are using. Someone is perfectly capable of using an assault rifle without understanding how it really works. They just need to know how to aim and pull the trigger.

Certain tasks require that you have accumulated more **INSIGHT** than the Complexity value of the technology; making repairs, altering systemic functions, and creation of the object from scratch. However, until you reach that level of understanding, the GM should not tell you the exact Complexity value. You will only know that you lack the understanding to accomplish such feats.

EXAMPLE COMPLEXITY VALUES

1	Fork
5	Handheld Electronics
10	Personal Computer System
20	Large Home Appliance
30	Assault Rifle
40	Mainframe Computer
50	Small Vehicle Engine
70	Astronavigation Computer
80	CTF Engine
100	Hydrogen Reactor



INTEGRATED SYSTEMS:

Some types of technologies are components of large **INTEGRATED SYSTEMS**. For example, a spacecraft is composed of a large number of technological components that are integrated together to function as a whole. In these instances, merely understanding one component may be inadequate to interacting with the system as a whole. You may have a deep understanding of the targeting computer used by a weapon system, but if the hydraulic motivators that keep the weapon steady are failing to perform their task, you may be unable to repair or alter the weapon system in any meaningful way.

Accumulating the knowledge of every component within an Integrated System may border on the impossible. For this reason, the GM may allow you to treat an Integrated System as a single technology for the purpose interacting with the systems a whole. If you accumulate enough Insight towards the whole system, you can determine which components of the system need to be worked on and you may replace bad parts with functional ones. However, actually repairing an individual part would require understanding of the specific individual component. You can also attempt to assemble a new system from the appropriate component subsystems, without having to fully understand each part. Finally, this level of understanding is required to make any systemic function changes.

EXAMPLE OF AN INTEGRATED SYSTEM:

A Civilian Hoverbike is an integrated system with three components:

- Light CTF Engine & Fuel Assembly
- Graphene Chassis Structure
- Piloting Computer & Interface

A character can study the Hoverbike as a whole to determine how these systems work together. This would allow them to make changes to the Hoverbike's systemic functions. If a component was damaged and they had an undamaged replacement, they could remove the damaged parts and replace them. If they lacked a replacement, they would not be able to repair it unless they gained the understanding of how it worked as a separate technology. If they had working versions of all three components on hand, they could assemble a new Hoverbike from those parts.

CORE TECHNOLOGIES:

The development of certain essential technologies by **HUMANS** enabled them to explore the stars and bring civilization to the alien species they discovered. These technologies provided the energy required to keep things functioning, the food inputs to keep population growth from becoming problematic, the recycling techniques to keep things clean, and the transportation methods to move people among the stars. Since these were developed first by Humans, the infrastructure to produce them and the educational institutions that provide the training to operate them were nearly monopolized by Human society. Thus even though other species may have survived the violence, in most cases they cannot maintain or reproduce the technology.

THE CTF REVOLUTION:

Methods for the creation of Chlorine Trifluoride (CTF) have been known since the early 20th century. However, the compound was so volatile that it was deemed unsuitable even for use as a battlefield weapon due to the inability to reliably contain it. It is explosively reactive with a large range of materials and even slight errors in handling could result in unplanned combustion and cause enormous damage.

This uselessness conveniently ended in the mid-21st century just as the rising costs of petrochemicals were beginning to cause economic problems. Advances in material science produced a new alloy composition of platinum and osmium called **SYNERIUM** which was extraordinarily resistant to corrosion, yet still highly malleable. Fuel tanks and feed lines constructed of Synerium were able to contain **CTF FUEL** with minimal risk of critical failure.

This initiated a dramatic leap forward in vehicle propulsion. Spacecraft utilizing CTF fuel could reduce fuel volume by a factor of 100 compared to liquid hydrogen fuels and eliminated the need for enormous fuel tanks to exit Earth's atmosphere. A commercial aircraft could operate at supersonic speeds for several hours with a fuel tank the size of a suitcase and at a fraction of the cost to use petrochemical fuels.



THE HYDROGEN ECONOMY:

Once the reliable and low-cost method of using CTF fuel to get into space was developed, enormous mining colonies were established on the Moon and in the Asteroid Belt within a generation. These mines provided huge inputs of hydrogen and oxygen fuels which revolutionized the production of electrical power. Hydrogen and oxygen based fuels burned clean and reliably, displacing the petrochemical economy within a few decades and a new era of civilization had begun.

MICROBIAL RECYCLING:

Due to the widespread implementation of Hydrogen fuel, the climate changes that occurred during the 20th and 21st centuries as a result of petrochemical energy were able to be halted and eventually reversed. This opened a door, previously closed due to high CO2 production, for the widespread implementation of microbial recycling techniques. A combination of microbes had been discovered for some time that was capable of consuming a variety of materials, including plastics, within a few months. The microbes produced only carbon dioxide as waste when fed this diet, however this by product was holding back the technology when humans were struggling with climate change.

As the climate change danger faded away, microbial recycling took off. The ecological impacts of this change were enormous. The garbage problems that had been only partially managed by landfills and dumps were eliminated. Plastic debris that had been accumulating in the Pacific was dissolved. Households were able to create recycling chambers into which waste could be cast instead of having that waste transported to another location. Sewage and Sanitation systems were dramatically improved. In general, this technology revolutionized the very concept of waste management. Environmental damage quite simply stopped.



AGRICULTURAL ENGINEERING:

As the time and energy requirements to travel to and from Mars dropped to reasonable levels, experimental colonies were established to test viability of expanding Human civilization to a second planet. It was decided that hydroponics would have to play a central role in feeding people in such an environment and major investments were made in researching such alternatives. Techniques were developed to easily sift essential minerals out of Martian soil and add them to a hydroponic solution to provide the necessary nutrients to support plant life. This allowed the construction of self-sustaining greenhouses on the Martian surface that relied only upon the local soil for nutrients and the light of the sun.

Within a half-century, Martian agriculture would develop breakthrough yields based upon the use of plants with highly modified genetics. These plants were reliant upon chemical inputs created by local refining facilities, thus leading to the abandonment of the goal of self-sufficiency.

The development of high-yield food production allowed Mars to export huge quantities of food off-world to support other planets. As the ecology of Earth improved due to clean energy and the duplication of the techniques developed on Mars, their crop yields improved as well. The rising economic development of the entire planet would also reduce birth rates to sustainable levels in line with food production. The famines of the past finally ended.

FASTER THAN LIGHT (FTL) TRAVEL:

One of the mining colonies in the Asteroid belt discovered a new crystalline rock formation called **QUINERIUM**. This crystal was initially disregarded as functionally worthless. However, when an accidental exposure to flame caused the complete destruction of an ore hauler, serious investigation of the rock was conducted. It was discovered that when ground into a powder form, Quinerium could be burned to generate enormous amounts of energy.

Attempts to harness this energy for electrical generation were fruitless, however within a few years of discovery an engineer added the powder to a standard CTF engine using a modified fuel injector. This caused the CTF engine burn to accelerate to an unbelievable level. When mounted on a starship, it was discovered that the craft could use Quinerium injections to accelerate to incredible speeds. After playing around at speeds previously unimaginable, an experimental flight was conducted where the fuel was burned until the craft accelerated past the speed of light. For reasons unknown to science, the predicted effects of relativity did not occur.

This boosting process was studied and standardized. Different engine models require more or less fuel for the same trip, however as a rule of thumb 1 kilogram of Quinerium will get a standard transport ship up to a speed of 0.005 Light Years per Hour. At that rate, it would take 1000 hours or about 42 days to travel 5 light years, a fairly standard distance between two adjacent stars. Burning larger amounts results in higher speeds, but obviously at a cost.

Since there is no friction in the void, the same amount of Quinerium must be burned in a counter-thrust to decelerate the craft before arrival at the destination. Most ships do not carry enough sublight fuel to decelerate from an FTL speed, so if you lack this secondary amount you could be flying through space forever. Rumors tell of ships lost in the void, sailing into eternity.



THE BREAKDOWN OF THE CORE TECHNOLOGIES:

The Great War undermined the system of production that made the core technologies functional. It is important to understand exactly how this occurred if you wish to re-establish these technologies using what is left behind in the ruins of civilization.

THE CHALLENGES OF CTF FUEL:

Production of **CTF FUEL** in large amounts requires equally large amounts of the elements Chlorine and Fluorine. This requirement is not challenging from an issue of availability as these elements exist on virtually every world that is colonized to any great degree. However, refining them from their natural state requires a strong understanding of chemistry and sophisticated tools. Chlorine is easy enough to acquire as it is a component of salt. However, Fluorine is not found in an easily accessible form except in space nebulae. The traditional way of acquiring it is from rock formations, such as fluorite crystals. This requires both the ability to locate the rocks and then the mining equipment to extract them to surface to be refined.

Even with the necessary components to produce the elemental forms, they must be combined in a safe controlled manner in a high sophisticated laboratory environment. You must also have **SYNERIUM** to contain the resulting product. Producing Synerium requires access to two metals that are both extremely rare on almost any world; platinum and osmium. Additionally, you would need to be knowledgeable about the exact alloy mixture percentages to ensure that the alloy you produce will actually contain the CTF compound once it is created.

Failure to take proper safety precautions could result in uncontrollable chemical fires, massive physical destruction, and if anyone manages to survive the incident they will most likely suffer from severe permanent injuries. The CTF compound is probably the most hazardous material that an individual will encounter in their entire life. Producing it without the technological expertise to assure safety is a recipe for disaster.

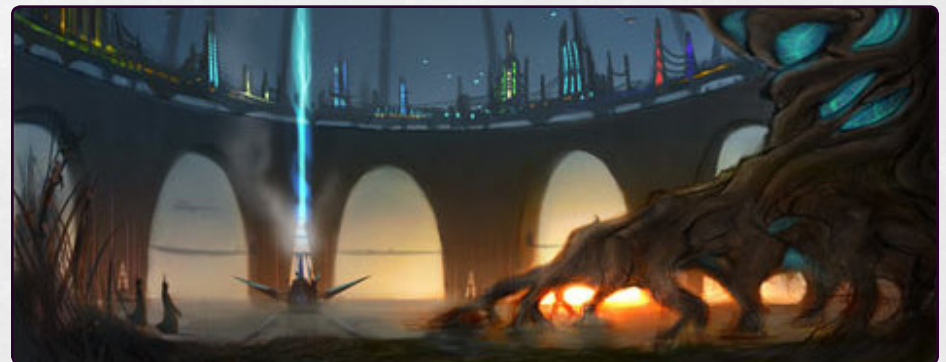
As a result, the primary method of acquiring CTF fuel at this point in time is by scavenging it from abandoned vehicles.

THE CHALLENGES OF HYDROGEN ENERGY:

Hydrogen is an extremely common element that is available on nearly any planet ever discovered. However, methods of extracting it in a pure elemental form are extremely difficult and require highly complex equipment. The most common method of pre-War extraction was by mining rocks with high hydrogen content and then separating it from the rock in a smelter or a high-pressure industrial process.

Once extracted, hydrogen must be transported to where it will be used. This was commonly done either through extremely high pressure and cryogenic temperatures that converted the hydrogen to it's liquid form or by moving the gas through a pipeline over a land surface. The supporting technologies to accomplish this may be difficult or impossible to acquire. Hydrogen tends to permeate most materials used to store it, requiring their replacement over time. Thus any stored hydrogen is most likely gone by this point in time and scavenging it may be impossible.

Finally, hydrogen is highly flammable and is even easier to ignite than gasoline. The slightest spark, even low-charge static electricity, can trigger an explosive ignition. Obviously, this adds a level of handling complexity similar to that for CTF fuel (though the hazard is obviously not as severe).



THE CHALLENGES OF MICROBIAL RECYCLING:

The use of microbial recycling has created two equally challenging issues for anyone attempting to deal with sanitation problems.

First, reliance upon the technology as resulted in abandonment of previous sanitation techniques. Wastewater reclamation and basic sewage treatment has largely been abandoned in favor of microbial solutions. Restoring these alternatives would be fairly straightforward if there were systems in place to restore, however the prospect of re-building an entire sewer system to accommodate these older technologies is probably going to be beyond anyone's capacity to achieve.

Second, the microbial mixtures that were in place are largely destroyed. Maintenance of their pools was abandoned when those responsible had to choose between feeding their families and staying at their posts. Since they are delicate biological organisms, this abandonment resulted in irreversible destruction of the colonies. Using genetic engineering techniques to create new batches of the microbes may be possible, assuming proper equipment and scientific knowledge. However, considering the lack of utility such knowledge and equipment would be to people trying to survive economic collapse, it is likely that acquiring them will be very difficult at this point.

THE CHALLENGES OF AGRICULTURAL ENGINEERING:

The chemical and hydroponic solutions to agricultural production resulted in the abandonment of traditional unmodified crops. Each generation of plants required new chemical inputs to survive and when the industrial systems that provided those inputs failed, the plants died. The only unmodified plants are those growing in the wild. Massive tracts of cleared farming land are now largely overgrown with unproductive weeds and shrubs.

Furthermore, classical irrigation was replaced by spray distribution systems and chemical fertilizers. There is no more power to operate the distribution systems, nor is there any pressure in the water lines anymore. Anyone attempting to restore large-scale agriculture would probably need to develop irrigation systems from scratch, assuming they even know what to do. Most individuals are going to be unfamiliar with farming methods that have not been used in several centuries.



THE CHALLENGES OF QUINERIUM PRODUCTION:

Quinerium is extremely rare and must be mined from asteroids. Small amounts can be found on some barren planets where asteroid impacts have deposited it, but relying upon this kind of recovery method would be impractical. Space mining is dependent upon both **CTF FUEL** to move around and Hydrogen power to operate the installation itself.

Luckily, **QUINERIUM** does not decay or evaporate like most fuels. This means that salvaging it may be a viable enterprise, provided you can locate a spaceship that has significant quantities remaining.

COMMUNICATION TECHNOLOGIES:

The **HUMAN** civilization developed an extensive range of communication technologies for personal and civic use.

COMPUTER NETWORKS:

After its development in the late 20th century, the Internet would continue to expand to accommodate communication. Over time, almost all communication was routed through the global network. Access barriers were removed and most people conducted their internet usage through personal data systems that they carried on their person.

Despite their best efforts, Humans were unable to discover a method of FTL communication aside from a courier. Once a colony is developed on a new planet, it must eventually set up server farms to form the backbone of a local Internet for communication traffic. Each network is therefore different in its own special way. They reflect the interests and needs of the people living on that planet.

Of course, private networks have existed since before the Internet itself. Governments, corporations, and other entities with a need for privacy developed their own networks with highly secure access nodes.

When the power on most planets failed, these systems went down as well. Wireless access is impossible if the primary servers are offline. In order to access computer systems, you will probably need to find the server locations and manually provide them with power. You may also need hardware access.

SPACE COMMUNICATION:

Communication across the void of space is still conducted with radio waves, either in S-Band for simple transmissions or Ku-Band for large quantities of content. Hailing another craft is always conducted in S-Band.

LANGUAGE TRANSLATION:

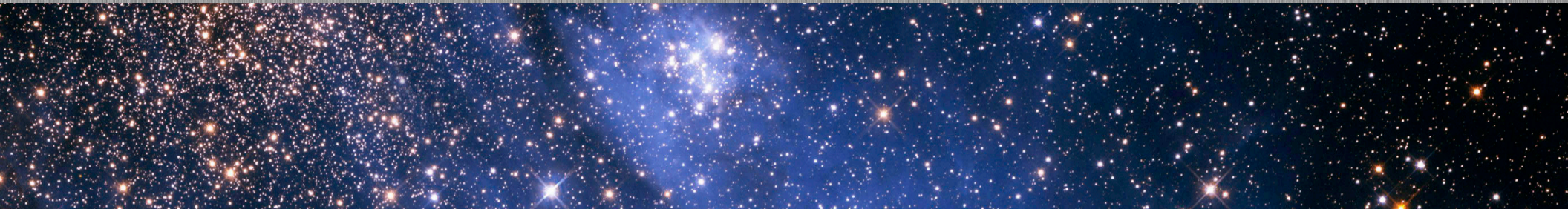
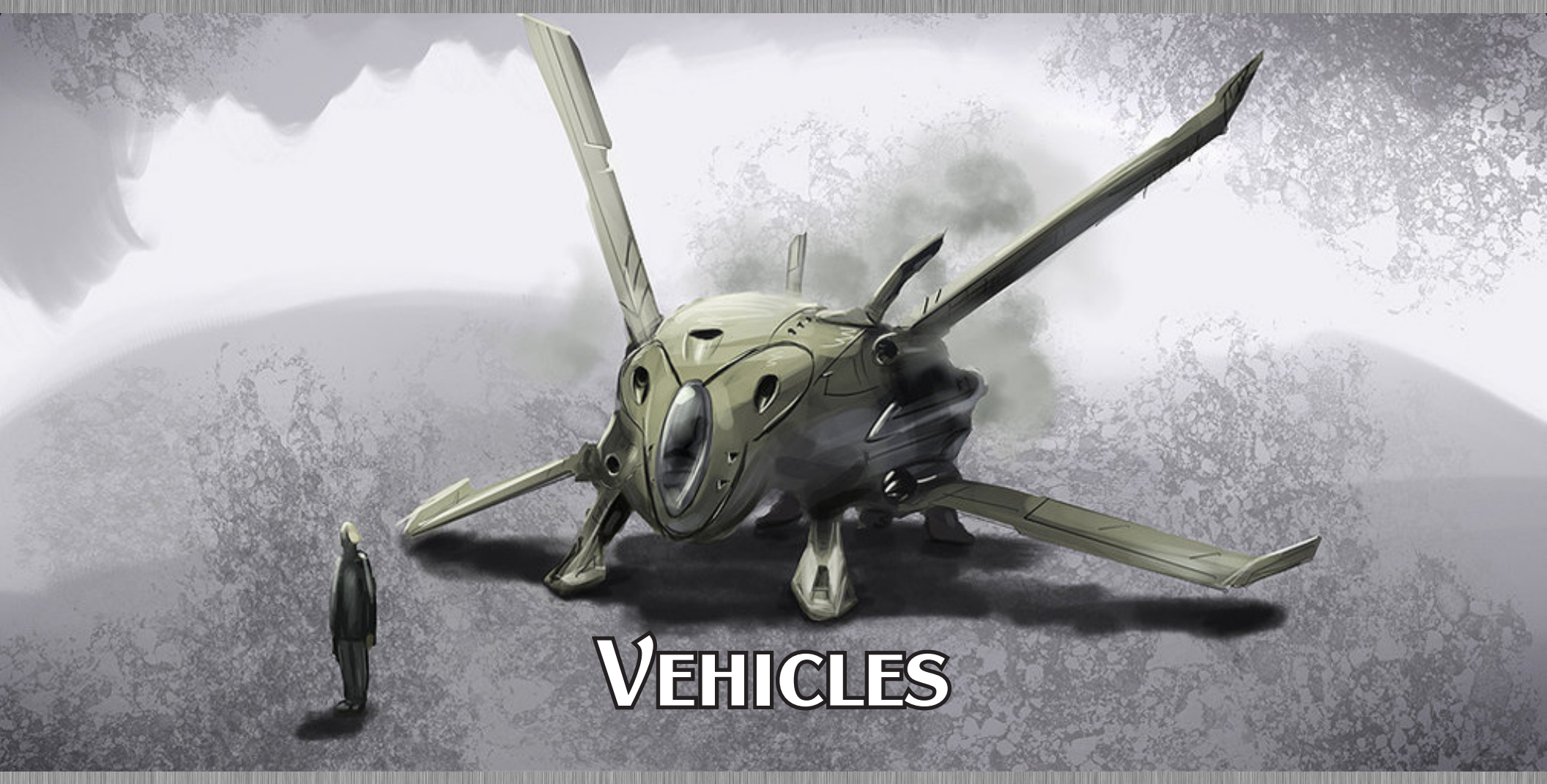
Most computer systems have a standard language translator installed that can convert written or spoken material into a language of your choice. However, the inability to power these devices has left many in dire need of language translation services.

PERSONAL COMPUTING:

As cell phone technology expanded and device functionality grew, most people migrated their computer use to a handheld device of some kind. This device accessed the local Internet and picked up on short-range communication. They typically operate on a rechargeable internal battery, however it requires hard-wire access to an electrical grid to recharge. As a result, most units that exist today are drained of power and must be recharged in order to be of any use.

These devices can store significant quantities of information and may prove more useful to access than mainframe servers. A student may have placed their course texts in their personal device that you could now access to learn about the topic yourself. They were also used for security purposes and a door may not open unless it can detect the correct device code or access permissions.





VEHICLE TECHNOLOGIES:

FLEET CARRIERS:

A Fleet Carrier is a large spacecraft capable of carrying several squadrons of Starfighters. It was believed that these vessels would do the bulk of the fighting in space warfare, however when the shooting started that proved to be wishful thinking. A Fleet Carrier is so large that it is nearly impossible to conceal and as combat heated up it became apparent that surprise was far more important than firepower.

The majority of Fleet Carriers in existence were destroyed during the war by attacks from Strikecraft. Many star systems have a few lifeless hulks that still float in slow orbits waiting for emergency assistance that never came. These hulks may very well be exploration sites of their own.

Fleet Carriers tend to use sublight speeds around 15 kilometers per second and tend to travel FTL at 0.02 Light Years per Hour, depending on the willingness of the commander to expend fuel.

STARFIGHTERS:

Starfighters are small spacecraft designed to destroy large well-defended targets like Fleet Carriers, orbital platforms or ground installations. Their size and high maneuverability were believed sufficient to overcome the barrage of firepower unleashed by a large spacecraft or orbital platform. They lack Quinerium injection systems because there were intended to be transported between stars by Fleet Carriers and only carry a small armament. Most were equipped with heavy missile weapons intended to be released at close range against a target with point-to-point defenses that would destroy such a missile if fired from a significant distance. They move at sublight speeds of around 20 km/sec.

In reality, these vehicles proved of limited use in the war. Large numbers were destroyed while docked within the Fleet Carrier to which they were assigned. Those that managed to survive by virtue of luck or being stationed to a fixed orbital or planetary facility were largely abandoned due to their lack of FTL capability, the exhaustion of their weapon systems, or because they were left damaged or in disrepair.



VEHICLE TECHNOLOGIES (CONTINUED):

STRIKECRAFT:

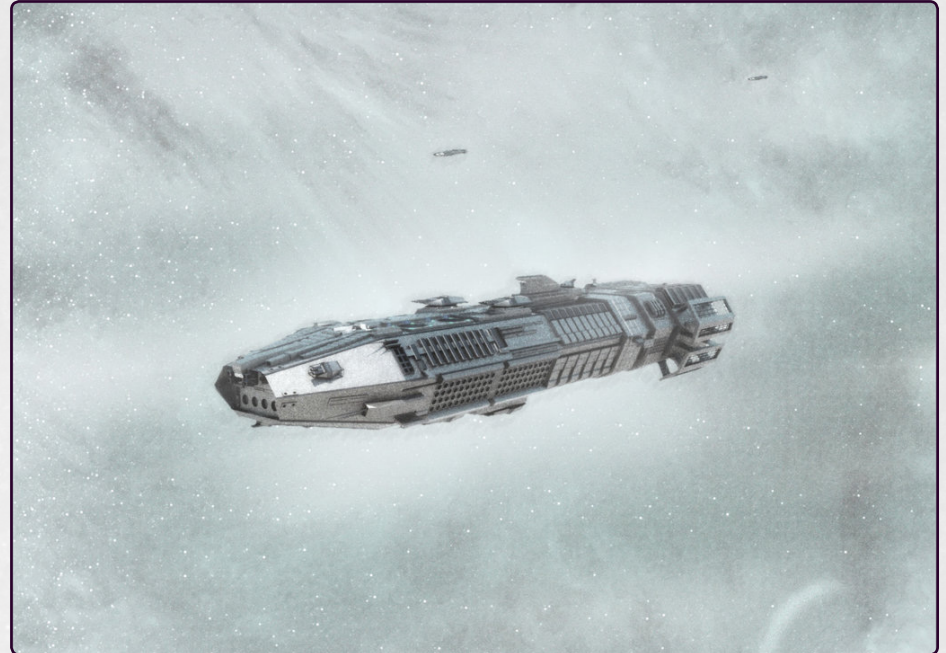
Strikecraft are medium-sized spacecraft designed to operate in a way that prevented their detection by most sensor arrays. They have a long narrow fuselage with a small forward surface that absorbs virtually any form of light or radiation. Captains were trained to employ a tactic of intense engine burns and then coast through space at sublight speeds over extreme distances to approach the target without making a heat signature. This stealthy approach is combined with the deployment of heatless weapons capable of dealing very heavy damage, allowing a Strikecraft to attack and destroy virtually any opponent while avoiding detection. Strikecraft tend to use sublight speeds around 20 kilometers per second and tend to travel FTL at 0.01 Light Years per Hour, depending on the willingness of the commander to expend fuel.

This craft was almost completely unappreciated by the military leadership of major combatants before the war began. Enterprising captains proved their merit in the field, using Strikecraft to decimate enemy fleets. Some credit the Strikecraft with causing the Collapse by making large-scale interplanetary trade grind to a halt.

TRANSPORT SPACECRAFT:

Prior to the war, the bulk of commercial trading was conducted using medium-sized transport spacecraft. These were usually unarmed and designed to carry bulk goods or animals in large containers that could be individually added or removed from the cargo bay. They tend to use sublight speeds around 10 kilometers per second and tend to travel FTL at 0.005 Light Years per Hour, depending on the willingness of the pilot to expend fuel. They generally do not fly as fast as military craft.

When the Strikecraft began destroying everything of significant size moving through space, the larger classes of transports were quickly decimated. Remaining smaller craft designed to carry expensive luxury goods in a secure manner survived and they are more likely to be armed with a few light weapons and have lower fuel requirements than their larger brethren, making them ideal for the kind of shipping required now.



VEHICLE TECHNOLOGIES (CONTINUED):

MOBILE ARMOR:

Mobile Armor constituted the bulk of ground firepower available to the major combatants in the Great War. Critical worlds were defended with huge quantities of mobile armor units. This category includes not just tanks but armored personnel carriers, missile and ballistic artillery, and similar vehicles. During the long peace leading up to the Great War, these types of units were transformed from the lightly armored vehicles of the 21st century to heavily armored vehicles of significant tonnage. With space transport, weight considerations were reduced dramatically and the opportunity cost of adding more armor to ground vehicles declined.

The majority of vehicles in this class rely upon a large gas turbine CTF engines for energy and propulsion. Destroyed units may be hazardous for this reason, in addition to the dangers of unexploded munitions. However, they could be a source of **CTF FUEL**.

MECHS:

Mechs carry less armor than a mobile armor unit, but have the advantage of speed and maneuverability in virtually any environment. They range in size from about 10 to 25 meters in height and generally have humanoid design features. Originally intended to function as light combat support, Mechs proved to be extraordinarily versatile weapons of war when conflict spread to planets with extremely rough terrain, inhospitable atmospheric gases, and similar dangers. Large numbers of Mechs were deployed in the Great War and can be found almost anywhere.

As with mobile armor, Mechs generally rely upon a large gas turbine CTF engines for energy and propulsion. Destroyed units may be hazardous for the same reasons, but again they could be a potential source of **CTF FUEL**.

Functional Mechs are invaluable to people who want to extort other people for support instead of relying upon their own work, due to their flexibility and power. Thus they are commonly the weapons of pirates, raiders, brigands, and outlaws.



VEHICLE TECHNOLOGIES (CONTINUED):

HOVERCRAFT:

Hovercraft are lightweight unarmored vehicles that are able to move around within the atmosphere above a planetary surface, sometimes up to reasonably high altitudes, but that cannot operate in the vacuum of space. This was a popular personal mode of transportation before the Great War and thus a large number of these vehicles exist today.

However, they require **CTF FUEL** to maintain altitude and maneuver using a multitude of small thrust jets. Using CTF fuel to operate a hovercraft when it could be used for space travel is a rare choice, thus most of these vehicles now sit lifeless among the ruins of old cities. They could be a potential source of salvage though.

Most hovercraft can move at speeds up to somewhere between 200 to 400 kilometers per hour in open environments. In confined environments like a canyon or city, maintaining maximum speeds may be impossible. The GM will tell you what the maximum speed for your vehicle is based on your surrounding environment.

WHEELED VEHICLES:

Wheeled vehicles are small unarmored vehicles that move along a planetary surface using hardened rubber wheels. They typically use old petrochemical fuels and were a common choice for those that lacked the wealth for a personal hovercraft. A large number of these vehicles remain in existence today, mostly derelict inside abandoned cities. If restored, they could be a viable form of short-range transportation.

Most wheeled vehicles can move at speeds up to somewhere between 100 to 200 kilometers per hour in open flat terrain. In confined environments like a canyon or city, or in rough terrain, maintaining maximum speeds may be impossible. The GM will tell you what the maximum speed for your vehicle is based on your surrounding environment.



VEHICLE TECHNOLOGIES (CONTINUED):

WATERCRAFT:

Watercraft is a broad category encompassing several types of vehicles that operate on the surface of liquid oceans; traditional naval vessels, foil-based assault craft, and submarines.

TRADITIONAL NAVAL VESSELS: This type of vessel employs a solid hull design with propeller propulsion systems. It is only used for bulk goods transportation and recreational purposes such as pleasure cruises or racing. Military uses are extremely limited and these vessels are almost always unarmed and unarmored.

FOIL-BASED ASSAULT CRAFT: This type of vessel uses foil lifts to skim across the water at high speed. It is used exclusively by police and military authorities. Typical configurations employ chaingun and short-range missile armaments for combat purposes. These vessels are extremely fast and primarily used for interdiction purposes.

SUBMARINES: This type of vessel travels beneath the surface and relies upon stealth to deliver strikes without a chance of return fire. Due to the inability of surface vessels to hide from orbital sensor scans, submarines have high rates of survivability and many working models still exist today. They are typically equipped with torpedo armaments to defend themselves against surface vessels and other submarines. However, their primary payloads are often long-range missile systems mounted midship and launched from shallow depths.

Submarines were highly valued defensive weapons due to their stealth capabilities. An enemy might approach a ground target that is seemingly undefended, only to find themselves targeted by submarines hundreds of kilometers away using special forces spotters on the ground for targeting.

To maximize secrecy, submarines were usually stationed to large underwater submarine pens dug out of coastal shelf. Rumors of large weapons caches stored in these locations often find their way into tall tales.



VEHICLE SYSTEMS:

Every vehicle has four **SYSTEMS**. These systems can be damaged through either combat or simply bad piloting. Whenever a vehicle takes damage, it is first applied to the vehicle's **ARMOR**. Once that value has been reduced to zero, it is applied to another system randomly, by consulting the chart to the right.

SYSTEM DAMAGE: ROLL 1D6

1	Propulsion
2	Propulsion
3	Propulsion
4	Weapons
5	Weapons
6	Communications

ARMOR: This is a representation of the general sturdiness of the vehicle and it's resistance to damage. This could be a result of actual armor plates or just a strong internal structure. Anyone trying to attack your vehicle is going to be suffering this value as a penalty. Therefore as this value depletes, you become easier to hit.

PROPULSION: This is a representation of the ability of your vehicle to accelerate. In a frictionless environment like space, your speed can be increased by the full propulsion value every round. However, in any environment in which friction exists, your propulsion value represents your maximum **SPEED** and it takes two full rounds to accelerate to that value. You must also maintain propulsion to stay at that speed.

Every vehicle has a point value in propulsion that represents the fragility of the mechanism that is performing this function. For example, tank tracks are much more resilient than rubber tires and thus have a higher point value. Once damage reduces this value to zero, you cannot move the vehicle in any way.

WEAPONS: This is a representation of the weapon systems attached to the vehicle. It could be a light weapon like a machine gun or a much heavier weapon like a long-range autocannon. Every weapon on the vehicle is worth 1 point in this category. Every time you sustain a point of damage to this category, you must choose 1 weapon to be destroyed.

COMMUNICATIONS: This is a representation of the technology used to communicate with the outside world, such as a radio antennae. Each type of communication device is worth 1 point. As with weapons, they are destroyed in turn as damage is dealt to this category.

SPEED:

Every vehicle has a speed value as a consequence of it's movement. This value is always measured in kilometer per second, or **KPS**. It is applied as a damage factor in a ramming action, but most often it will be used to calculate trip durations over long period of time.



VEHICLE COMBAT MECHANICS:

If you are in possession of a vehicle, the time may come when you will need to engage in combat against other vehicles. In those circumstances, special rules apply to make sure that the game is adjudicated fairly. You may wish to use miniatures in combination with a battle mat to represent your vehicles and the environment of the conflict. In general, vehicle combat is similar to foot combat, simply with more defined choices and greater distances involved. Because vehicle combat occurs on a variable scale, you must rely on the GM a lot to help describe the action instead of hard guidelines.

HOW A COMBAT ROUND WORKS:

As with **FOOT COMBAT**, Vehicle Combat is divided into combat rounds that represent approximately six seconds of game time. Each round is composed of two steps; taking actions and applying damage.

TAKING ACTIONS: Within each round, everyone can take one vehicle combat action. Actions are taken in reverse order of **DEXTERITY** with the lowest Dexterity combatant going first. This allows the faster combatants to benefit from the foreknowledge of how the round will resolve when they make their decisions about what to do. Some vehicles give a bonus to Dexterity for purposes to determining action order.

VEHICLE COMBAT ACTIONS

Attack
Control
Control & Attack
Evade
Hold
Ram
Reload
Surrender

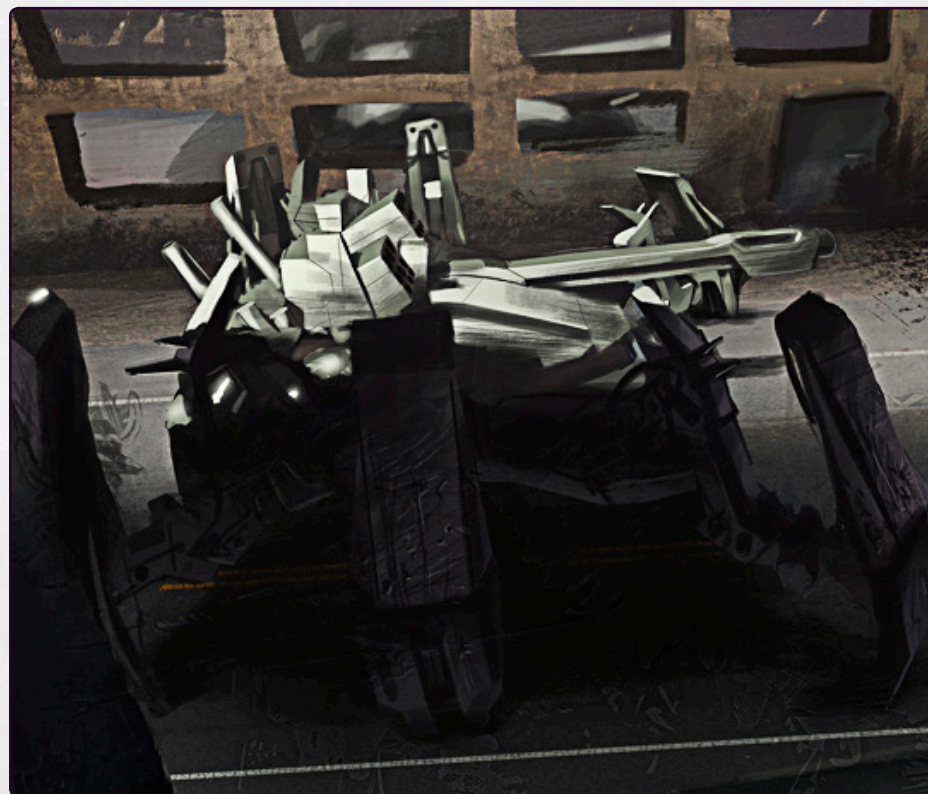
If you are piloting a vehicle and taking actions while having suffered temporary attribute damage, this requires making a save vs **PAIN** at a penalty equal to the total of all **TEMPORARY ATTRIBUTE DAMAGE** suffered just as it does in foot combat. A failed roll means incapacitation for the round. You can attempt to act again next round, if you can make the save.

APPLYING DAMAGE: Once all actions have been taken and all damage has been rolled, it is applied simultaneously to all vehicles. Even if this results in the destruction of a vehicle, their attacks that round will still deal damage if they hit.

BETWEEN ROUNDS: Combat continues round-by-round until only one side remains committed to fighting.

MULTIPLE CREW MEMBERS:

So long as the vehicle has separate control systems for the actions performed, multiple characters within the same vehicle can take actions using that vehicle. For example, a Space Transport may have a weapon mounting on the rear of the ship with it's own control system. One character could be piloting the movement of the ship from the cockpit while a second character uses this alternate control system to fire the weapons from the rear position. Exact control layouts are specified in each individual vehicle's description.



VEHICLE COMBAT ACTIONS:

These are defined action types and do not represent everything you can do in combat. However, if you want to attempt anything outside of these guidelines, the GM must determine how it is adjudicated.

ATTACK: Taking this action means you are spending the entire round attempting to damage a targeted opposing vehicle with one of your vehicle weapons. You are not focusing on actually driving, flying, or otherwise maneuvering the vehicle.

The opponent must be within range of your chosen weapon. Attacking is a **DEXTERITY** test for all vehicle-mounted weapons, as if it was a standard ranged **To-Hit** roll. The **ARMOR** of your opponent's vehicle is applied as a penalty to your test and most characters are untrained in vehicle-mounted weapons, so the **UNTRAINED PENALTY** (-3) will often apply.

If you are successful, you hit your opponent's vehicle and roll the appropriate amount of damage dealt by your weapon. The GM will reduce the vehicle's **SYSTEMS** to reflect the damage. If this reduces any system to zero, the vehicle will probably crash.



CONTROL: Taking this action means you are only focused on controlling the movement of your vehicle. This could be in any direction but you must remain a few meters away from any enemy to avoid collision. If you want to move so close to an enemy that you actually make contact with them, you must use **RAM** instead.

For the untrained, controlling a vehicle is a **DEXTERITY** roll with a penalty reflecting the challenge of what you are trying to accomplish. Getting a car to drive down a straight highway on a sunny day should have a very low penalty. Flying a starfighter through an asteroid field while it is being hit by a meteor storm would be nigh-on-impossible, thus resulting in a huge penalty. Ultimately the GM must decide on this penalty and they are encouraged to be harsh.

If you are a **PILOT** operating within your expertise, you would be immune to this penalty. Even outside of your expertise, you are only subject to half the penalty for an untrained person. An **OUTLAW** would also only be subject to the half penalty, if it fell under their **IMPROVISED PILOTING**.

Success on this roll means that you accomplish whatever you are trying to do. Failure can mean a variety of things, subject to GM judgement. A failure by a small margin may mean that you brush up against an object as you pass by it, causing some minor damage to a **SYSTEM**. A large margin of failure may mean an outright crash.

CONTROL AND ATTACK: Taking this action means you are trying to control the movement of the vehicle while also attacking a target with a vehicle weapon. This is adjudicated as if both actions were attempted, but at a -5 penalty on the vehicle weapon **To-Hit** roll and a -3 penalty on the piloting control roll.

EVADE: Taking this action means you are attempting to avoid all incoming attacks from your enemies. Once you have declared you are evading, you can make a save vs **SNAP** against a specific attack made against you already this round, with a penalty applied equal to the margin of success on the opponent's attack roll. The GM may determine that certain close-range attacks cannot be evaded. If you are successful on the saving throw, you have dodged the attack and your vehicle is not hit. You cannot evade attacks that occur after you have made your declaration.

HOLD: Taking this action means you are waiting to see what happens before you do anything. You can step in before another combatant's turn and declare your action at any time after you place your actions on hold. This can allow you to act last in the next round even if your Dexterity would never allow it (if multiple holds, ties are broken by **DEXTERITY**).

You can also hold your action forward to the next round, remaining on hold as long as you wish. Any action held over for a full round will also get a bonus on that action equal to your **CHARACTER LEVEL** to reflect its deliberateness and your concentration.

RAM: Taking this action means you are moving into the opponent's immediate vicinity and using the force of your movement and the bulk of your vehicle as a form of attack. The opponent must be within your vehicle's movement range to take this action. This attack deals damage to your opponent equal to your **ARMOR** minus your opponent's armor, multiplied by your vehicle's **SPEED**. Your own vehicle receives damage equal to one-half the amount dealt. If the damage amounts are negative, they are applied to the opposite vehicle instead (i.e. if you ram a vehicle with a stronger defense than your vehicle, you will be taking the higher amount of damage dealt). You are considered stunned in the round immediately following a ramming action.

For example, if you are in a vehicle with an armor of 5 and your opponent is in a vehicle with an armor of 2, ramming them deals 150 points of damage if you have a **SPEED** of 50 ($3 \times 50 = 150$). The ramming also deals 75 points of damage to your own vehicle. If the opponent had an armor of 8 instead, you would be receiving 150 to your vehicle ($-3 \times 50 = -150$) and your opponent would suffer 75 damage.

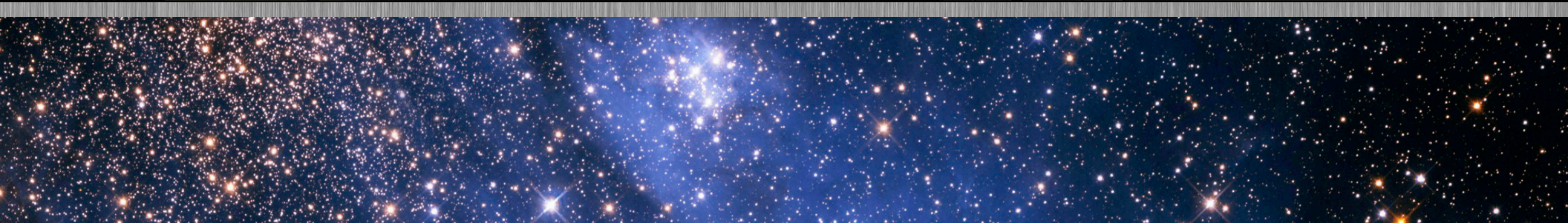
RELOAD: Some vehicles are dependent upon manual reloading of a weapon, such as placing a new shell in a tank cannon. This action reloads such a weapon.

SURRENDER: Taking this action means you are deactivating your weapon systems, raising the enemy on communication technology to relay your intent to surrender, and ceasing engagement in combat. Whether your surrender is acknowledged or not will vary with the personality of your opponent. How they treat you from this point on is up to the GM.





FACTIONS



FACTIONS:

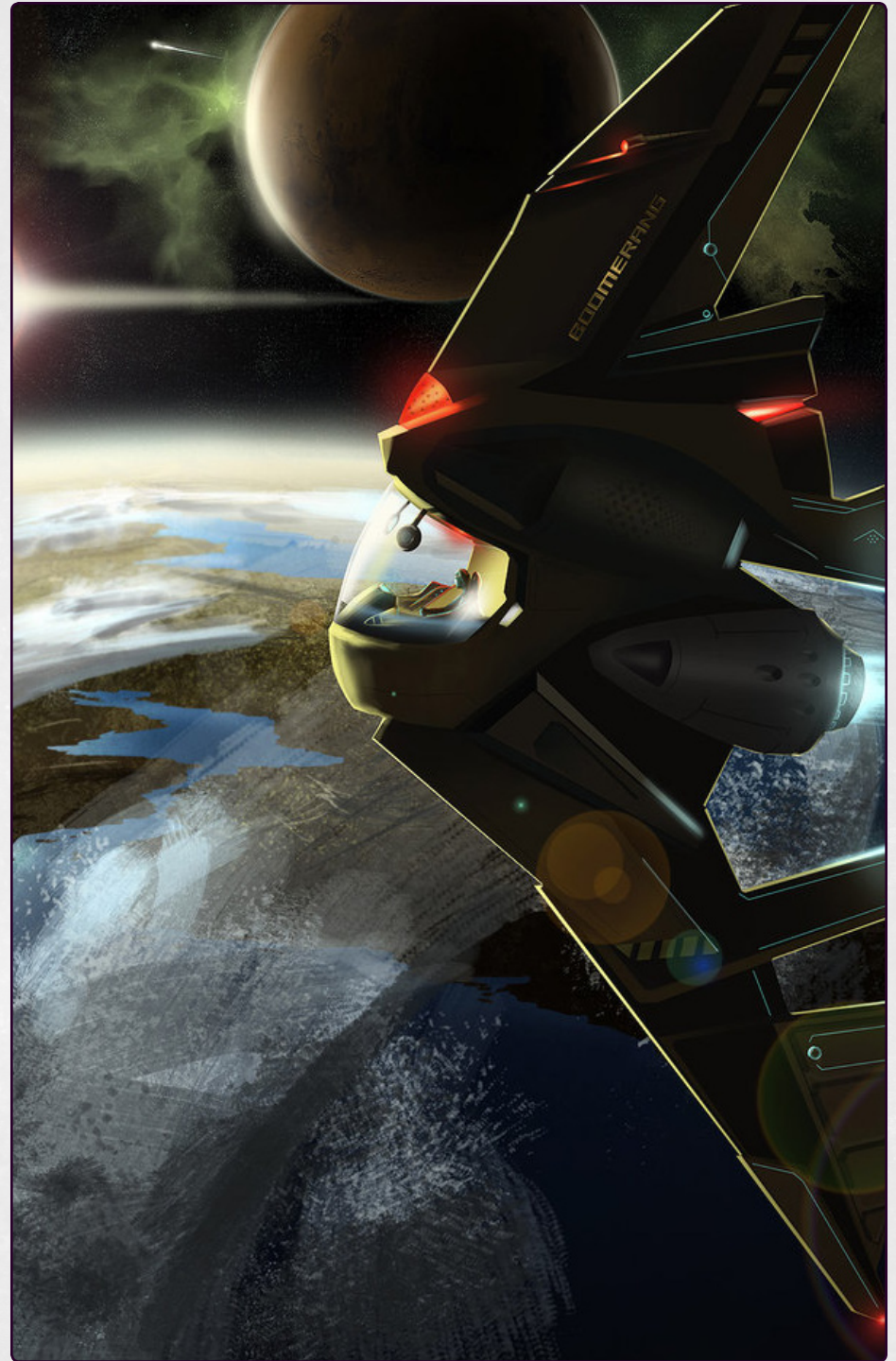
Factions are optional setting elements that your GM may choose to include in your campaign. They exist to provide hooks upon which you can build your character's backstory and upon which the GM can develop plots if they are not inclined to build everything on their own. Before play begins, the GM will inform you which factions you are able to utilize. For example, your GM may tell you that only the Triarii and Nighthawks are known to you. Alternatively, the GM may create their own factions for you to use.

Each faction represents a group of people that have brought a level of organization back into their affairs. Typically they are groups that had incentives to build parallel organizations before the Great War; secret societies, organized crime, dissidents, mercenaries, and so on. Each faction has a limited territorial presence and some form of internal organization. The actual location of the planets and stars mentioned are intentionally left ambiguous and should be positioned in the universe by the GM as they wish.

There are two levels of association with a Faction; Affiliation and Operative. Affiliation represents membership status in the Faction. They consider you to be one of their own. If the GM tells you that the Faction exists before play, you are able to take this level of association at no cost and without negotiation with the GM. Operative status involves not just membership, but actually working for them in some capacity. The terms of this relationship must be negotiated with the GM before play begins. There will certainly be requirements such as regular reports or recovery of a certain type of salvage, as well as possible wages paid.

Some play groups may wish for everyone to be a part of the same faction. This allows a form of troupe play that is familiar to some veteran roleplayers. Other groups may wish for everyone to be from a different faction; either cooperating towards a common goal or perhaps simply wandering as a group looking for opportunities to exploit.

Even if the GM has made factions available to you, there is no obligation to take them. You can always be someone with no place to call home and who is just working for themselves. Feel free to cut your own path.



THE TRIARII:

The Triarii have existed since before Humans invented FTL travel. Fearful that non-European nationalities they viewed as barbaric were taking control of Human affairs, a group of wealthy Europeans formed a secret society to maintain their unique culture.



Their name is derived from the ancient Roman military unit composed of the oldest and wealthiest citizens, primarily reserved as the last line of defense. The Triarii maintain a belief of values that mirror those of ancient Europeans from before expansion into the stars. These include strong conceptions of personal honor, public service, physical fitness, industriousness, self-control, and conservation for future generations.

The Triarii believe that the Collapse was a form of punishment for Human society's abandonment of these virtues. They rigidly enforce this code and view anyone who fails to live by it is considered a profligate, lacking in moral value and unworthy of consideration as a person. If allowed to live, a profligate is only useful as a slave until they show themselves worthy of elevation to citizenship status. Despite what this might suggest, the Triarii are not slave traders. They do not actively seek out victims to enslave, but they do offer it as an alternative surrender option to death. Life as a Triarii slave is not entirely bad and may be preferable to living in the chaos that dominates the universe at this time.

The organization's affairs are controlled by a seven member Council of Praetors. These are elected offices with one year terms, subject to the vote of all Triarii citizens. The Praetors provide both legislative and judicial functions, as well as electing executive officers to enforce the laws on their behalf. An extensive legal code is available for review by all citizens at any time they wish and this results in very little corruption.

The Triarii are in possession of excellent military equipment, including a few functional mechs and some mobile armor units. They also have a good assortment of spacecraft, including a number of Starfighters and a Strikecraft that lies in deep orbit around Tetnas waiting to surprise anyone who comes looking for a fight.

The Triarii are based out of an outpost on the rugged planet of Tetnas. Referred to only as The Basilica, it used to be an opulent personal residence purchased by the organization before the Great War. The Basilica is built into a rocky outcropping in the middle of a colossal waterfall. Durable hydroelectric systems are built into the base of the structure and provide clean reliable power. They also have a number of small towns and cities in the surrounding area which look to them for protection and pay tribute to maintain it. The Triarii also have a few outposts in the local system that are typically small and austere, limited to a few individuals and modest supplies.

The Triarii believe in diplomacy and employ a large number of operatives to scour the universe looking for opportunities to advance their cause. They have intact production facilities of small arms ammunition and typically leverage that trading potential to secure that which they lack. These operatives also look for weakly defended targets to be raided for resources, but of course never reveal this aspect of their occupation.

They are one of the few factions to mint their own currency; the Denarii. While appearing to be a silver coin, close examination reveals it is actually made of nickel. The location of their mining operation remains unknown.



THE NIGHTHAWKS:

The Nighthawks was the nickname of a mercenary assault regiment that was deployed to the planet of Carumar during the Great War. Their objective was to secure a naval base located adjacent to the commercial port city of Davik to prevent naval units from engaging in resupply operations during the battle.



However, shortly after landing on the planet everything went haywire. Vital logistical spacecraft were destroyed in orbit, leaving the invasion force stranded with no possibility of resupply. Lacking the resources to properly subdue the enemy, the invasion stalled and both sides suffered from severe attrition as they flailed at one another hopelessly.

By virtue of their mercenary nature, the Nighthawks had extra supplies and their own parallel communication channel, neither of which were disrupted by this unforeseen event. They were able to take control of the naval base while only encountering token resistance. Unable to predict how things were going to shift, the Nighthawks decided to maximize their defensive position by digging in and drawing upon Davik's resources.

The situation continued to deteriorate until the Nighthawks were the only intact military force remaining on the planet. Units on both sides were either destroyed in the fighting or dissolved under the pressure of desertion. The Nighthawks were left as the dominant power on Carumar, possessing a functional geothermal power plant in Davik and an intact naval yard.



Despite these advantages, the Nighthawks only have a few working transport spacecraft and thus rely upon visiting merchants for certain rare supplies. They also operate a few small outposts in the local solar system for interstellar trading purposes and they have occupied a communications relay on one of Carumar's moons, Zylo. Nighthawks that leave the system are almost always looking for something specific, usually fuel or ammunition. Rumors tell of operatives sent to spy on developments in other factions, but as of yet these reports are confirmed. On Carumar itself, they are actively engaged in the salvage of military and civilian assets abandoned in the fighting and the subsequent Collapse. Davik suffered severe damage in the rioting that occurred as food distribution broke down and recovery of useful salvage from the ruins is common.

Since they did not engage in heavy fighting during the war, the Nighthawks are still in possession of a significant quantity of functional hardware. They have a number of heavy tanks, mech units, hovercrafts, and their infantry are armed with state-of-the-art weapons. They even deploy Starfighters both as scouts and to provide ground support if they encounter serious resistance.

The Nighthawks are currently led by General Phoenix, a veteran of the Carumar campaign. She served as a Captain under General Sabazt during the invasion, but was quickly promoted up to become his right hand due to her resourcefulness in the face of the chaos that unfolded. When he died four years ago from typhoid fever, she took command at the request of the officer corps. Phoenix is highly respected and enjoys almost fanatical loyalty from her soldiers.



The Nighthawks enforce strict military discipline within their ranks, which have swelled with defectors from other units in the battle and civilians looking for security. There is no concept of personal freedom, democracy, or civil rights. Some decisions are delegated to lower officers but ultimate authority rests with Phoenix alone. She rules with a firm but reasoned hand and few speak ill of her decisions.

LA HERMANDAD:

The Catholic Church was one of the great beneficiaries of space travel. Large populations of Hispanics in North America were able to keep the faith alive through the transitional exploration period by turning to an exciting new worshipping format that appealed to the throngs of youth yearning for a better life.



La Hermandad ("the Brotherhood") was a branch of the Catholic Church that specialized in intensive youth programs. They established their own mission on the planet of Neotum and Catholics throughout the galaxy would send their youth to this mission for religious study. Almost a kind of boot camp for God, La Hermandad's mission was isolated, protected, and self-sufficient.

When the Collapse occurred, the priests of La Hermandad believed that they had been chosen by God to keep the flame alive through the disaster. Their leader, Cardinal Leon dePartimatre, ordered the Mission to seek self-sufficiency in every manner possible. For the most part, this was successful. Only a few isolated systems failed and they learned to live without them. As a result, La Hermandad has little reason to send it's people out into the stars for trade or exploration. For now, they enjoy peaceful solitude.

After the destruction on Earth, the Cardinal declared the Mission to be incommunicado of the Church and broken the normal reliance upon direction from Rome. Until such time as the Papacy can be restored, the Cardinals of the Church are the Vicars of Christ and able to forge their own path without consultation. Of course this strikes outside observers as self-serving, but to those within it appears to be the best choice of many bad options available at the time.

Since his successor could not be appointed by the Pope, for the obvious reason that there was no Pope, Cardinal dePatrimatre created a small replication of the Roman authority structure within the Mission to ensure future stability. He appointed a council of 7 Bishops beneath him to serve as a temporary Conclave to appoint Cardinals until such time that the College of Cardinals can reconvene on Earth to appoint a new Pope. Now the Cardinal is aging rapidly and his new structure is about to be tested.



THE SYNDICATE:

The intergalactic economy was not perfect. Sometimes, rules and regulations prevented trafficking in a certain type of good or service. For example, some local ruler might decide to ban a certain kind of drug. In the absence of legal remedies to get what you needed, you turned to the Syndicate.



The Syndicate was a massive criminal organization of unprecedented scale and scope. For the most part, it no longer exists. However, the threat of police action against them caused the founders of the organization to put certain redundancies and countermeasures in place. These would prove instrumental in saving their lives as the economy collapsed.

On a nameless rocky moon in the Zargan system, they built a fortress to survive the most determined effort that a national government could muster. With over 20 levels carved deep into the surface, this fortress was the repository for excess weapons, ammunition, equipment of all kinds, and most importantly, a large emergency stockpile of food.

When the Syndicate bosses retreated here with their families as the collapse, they found themselves kings in a galaxy of destitution and misery. The collected spoils of decades of criminality were the seed corn to found a new civilization. They were in possession of several reliable ships and they used them to look around for a suitable place to establish themselves as a powerful political force.



They chose the world of Nazarth, a placid planet that has been recently terraformed into a virtual paradise. With the benefit of an excellent climate and abundant water resources, they quickly established a stable agricultural system for future generations. For the most part, their old criminal ways have fallen to the wayside as economic gain in the traditional sense is no longer possible.

The Syndicate is in possession of significant military-grade assets. They have a few hovercrafts and they can field infantry armed with high-tech weapons. Their primary defense is a collection of Starfighters and a Strikecraft called *the Justicar*.

The Syndicate is run by a nine seat Board of Directors. They make all executive decisions and they form a tribunal for the trial of law. The legal code is simple and reasonably fair. However, punishments are extreme to establish a credible deterrent. As they know, perhaps better than anyone, criminals will only respect the law if they fear it.

Nazarth is a peaceful sanctuary in the chaotic storm that has brought down the Human civilization. They are self-sufficient for the most part, but they send out traders to barter away the surplus for more valuable goods. Representatives rarely identify themselves as working for the Syndicate, instead saying they come from a small settlement on Nazarth. They don't want to bring their past to the attention of anyone who might conclude they have something worth stealing.

THE WALKABOUTS:

There were some categories of criminal deemed too dangerous for conventional prisons. National governments had a variety of answers to these problems, but it remained a problem until an entrepreneur named William Kuntz came along.



Kuntz was a history buff, particularly of the old British Empire, and it the folds of an old history text he found a solution for these extreme criminals. Attempting to recreate the British colony in Australia, Kuntz bought up the small half-terraformed dusty moon of Varene and renamed it Oceania. On it's southern continent, he established an outpost called Botany Bay. Then he went to national governments with an offer to solve their criminal management problems.

For a reasonable fee, Kuntz would pick up any problematic prisoners from a host government using his own transports and then take those prisoners to Botany Bay. Upon arrival, they would be provided with a standard set of equipment and then sent out into the wilds. The land was capable of supporting light agriculture and these convicts would be able to forge their own life out of the dusty soil. No personal weapons of any kind were to be allowed either. They would be self-sufficient and pose only a danger to themselves. Kuntz would come to call these convicts the *Walkabouts*, as an homage to the aboriginal peoples of Australia.

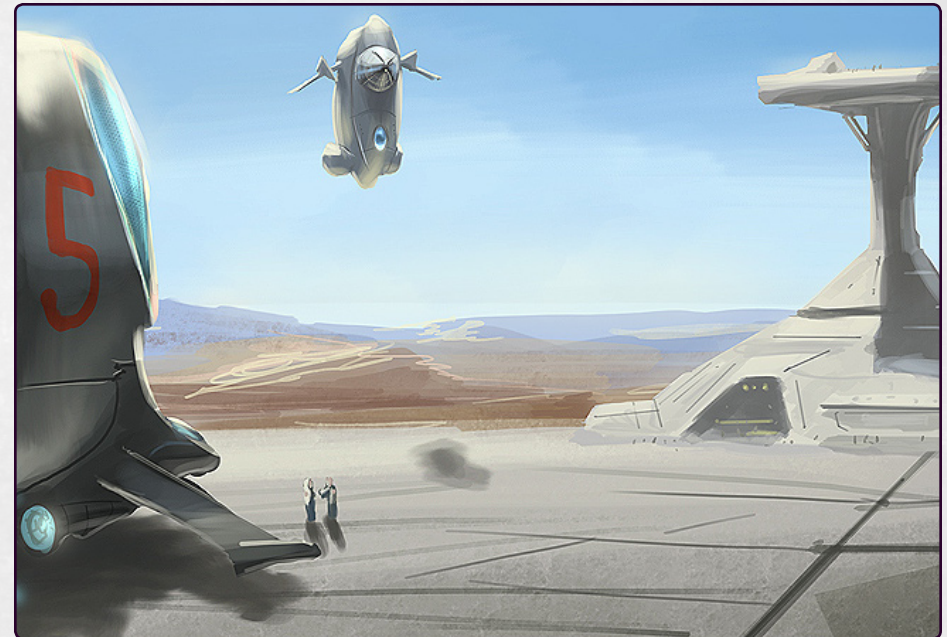
Governments saw this as a quick way to relieve themselves of their most problematic individuals and jumped on the opportunity. At one point, Kuntz had to put a quota on the number of convicts he would accept per year, simply because he was having trouble keeping up with demand. Over a period of about five years, the outpost at Botany Bay processed over two million convicted criminals and released them onto Oceania.

Then the Collapse came and Kuntz was killed in an uprising on Probst. The caretakers of the outpost fled in the spacecraft that were available, leaving behind nothing of value to the Walkabouts. Most spacecraft flying by don't even notice the planet anymore, because there is nothing even sending out a tracking beacon signal. They are, in a very real sense, completely forgotten.

The Walkabouts are essentially an ancient agrarian civilization. They have established a stable cultivation system that yields strong surpluses of grain each season and thus encourages steady population growth. They have been intentionally trapped in time, without access to anything that would allow them to move forward. They have no mining facilities of any kind, no way to prospect for anything that isn't within a few meters of the surface, and no knowledge to take advantage of it anyway.

Their life expectancy is short, only about 40 years, and they have their own unique pidgin language which is unknown off planet. They have no weapons aside from simple spears. They have no education system, no formalized training of any kind, and most of those who knew something before they were incarcerated have either died or largely forgotten what they knew. It is difficult to teach your child to use a computer or to keep the knowledge fresh in your mind, when you don't have one.

Any Walkabouts that have made it off planet have done so through the kindness of others or taken away as slaves. They do not see themselves as representatives of anything, simply free agents who know of a place where food can be found if you are in need.



HYDARIA STATION:

Inside the gas giant of Banoi lies a small research facility named Hydaria Station. At the time of the Collapse, it was drawing on the abundant local supply of hydrogen to test newer and more efficient methods of hydrogen energy generation.

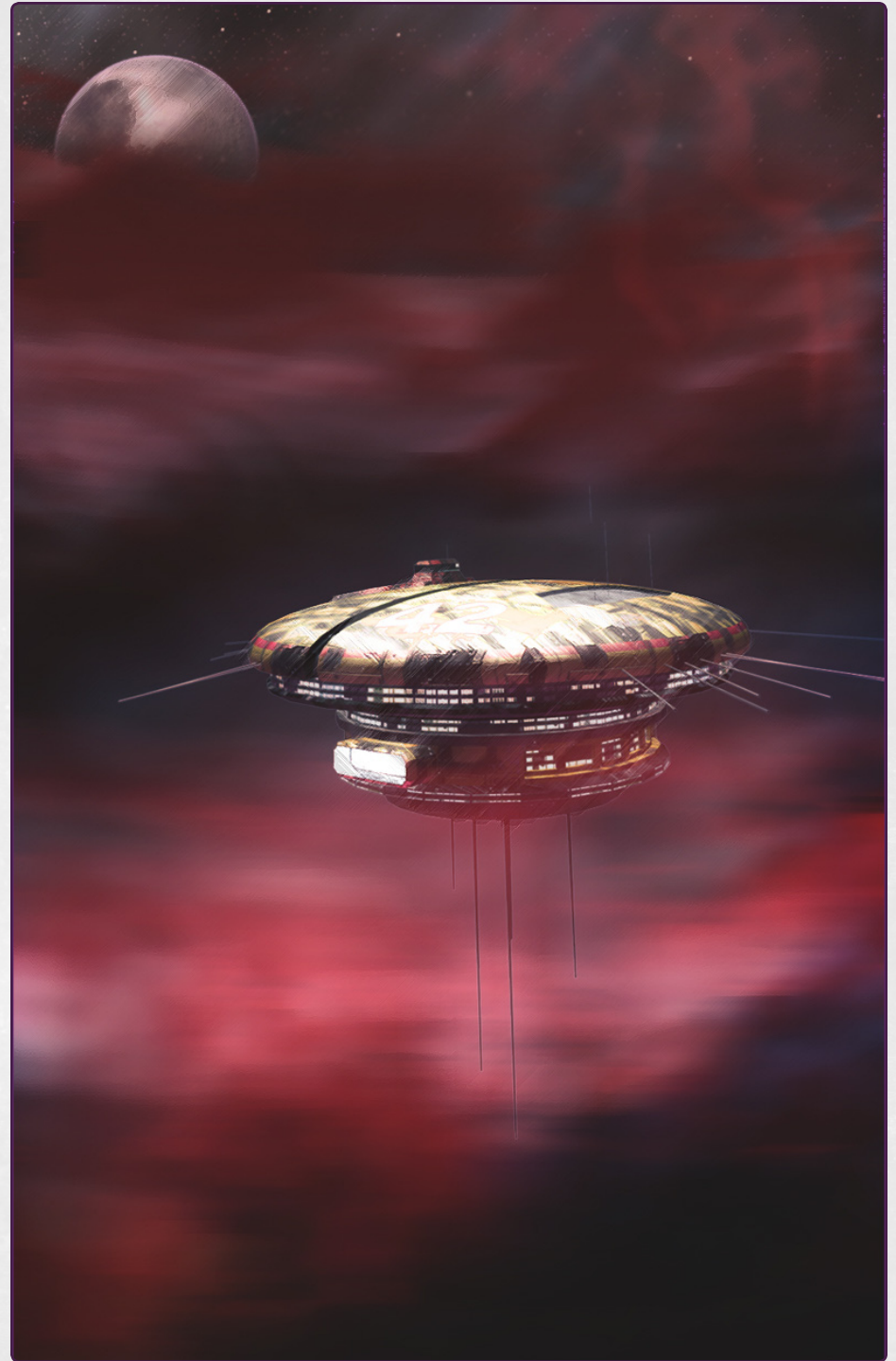


The station was a secret project of a small company and thus unknown to all major combatants. It was unmolested in the course of the conflict and remains crewed by its original staff, plus a few later arrivals. All of the inhabitants are **TASSARI**. Concealed from discovery by the dense swirling clouds that surround it and stocked with a vibrant hydroponics system for nutrients, Hydaria is almost completely self-sufficient. It only requires occasional methane replenishment from a nearby moon with a strong methane atmosphere and small inputs to balance out the imperfections of the closed system.

A heavy transport vessel was docked at the station when the Great War began and it has served well in meeting these material needs. However, after nearly three decades of isolation and quiet, some of the inhabitants grow restless to start exploring what has occurred in the outside universe. Of course, there are conservative voices within the population that caution against anything that might reveal their presence to potentially hostile outsiders. However, ultimately they are Tassari and this leaves their internal politics in a constant state of flux and curiosity about the outside world is powerfully rampant. It certainly cannot be denied forever.

Hydaria is very lightly armed and its leadership has begun sending small parties out looking for potential weapons purchases in a few skiffs that they control. Thus far they have only brought back some reliable individual firearms and energy weapons, but nothing strong enough to defend against a serious boarding attempt. The exterior of the station has no mounted weapons and is lightly armored, making it highly vulnerable to any kind of armed spacecraft if one was to threaten the inhabitants.

The Tassari of Hydaria believe in peaceful resolution of conflicts and have no desire to take things by force. They will take in anyone in distress and give them remedial care. However, unless you are from this faction there should be virtually no chance of you ever ending up here.



THE LOST FLEET:

During the Great War, a fleet of warships was assembled in the uninhabited system of Perthani in preparation for a large scale invasion. That invasion never happened. The exact reason is unknown, but several different versions exist.

Some rumors say that vital supply ships never arrived to resupply the warships before they could move to attack the target. Other tales tell of assassinated commanders, a breakdown in the chain of command, and large scale refusals to follow orders. Ultimately, it doesn't matter. The fleet now lies dead in space.

There is a small community of people that have taken up residence on the flagship *Excelsior* to scavenge whatever they can from the remains of this once mighty force. They are something of a hodge-podge body politic, a whirling quasi-democracy of rugged individuals that have agreed to live by a few limited rules in order to co-exist in this endeavor. There is no formal government or military force, but anyone who thinks that they can impose their will upon this band of survivalists is going to regret it.

Occasionally a family or individual leaves the community to look for greener pastures. Often they are disillusioned and bitter, having given up hope of finding that big score they had been holding out for.



THE CUTLASS:

The Cutlass is a Tiberia Class Heavy Cruiser that was once commanded by Colonel Leon Trivi of the 4th Marine Lance of Tanibris. It was taken from the Colonel during the invasion of Tammar in a mutiny by the disgruntled crew.



In the face of chaos and death, they formed a pirate democracy of old with an elected captain that could be deposed by a majority of the crew. They agreed to fight together for the welfare of the group and engage in piracy and raids against the survivors of the war for sustenance.

The Cutlass does not have a location, it is always on the move. However, given the necessities of life in this harsh universe, they tend to remain close to civilization at all times. They prefer to threaten force rather than use it, as ammunition is limited but fear springs eternal. Occasionally, they take people with unique skills as prisoners and force them into service on the ship.

Anyone who has left the Cutlass has done so through great personal risk, as anyone leaving the crew is considered a deserter and will be put to death if caught. Potential reasons for giving up a life of piracy are many. The reasoning of an escaped prisoner is much simpler and more obvious to any observer.



THE YAMOSHIRO:

The Yamoshiro is a Tonako Class Fleet Carrier that survived the Great War. It was part of a strike force destined to take the planet of Tadrin, however it miscalculated it's FTL jump path and ended up several light years off course. By the time this error was corrected, the strike force was completely annihilated.



Going against his orders, Captain Narugama determined his cause to be lost and hid for a time orbiting the uninhabited planet of Natal. It possessed a vibrant local ecology capable of providing food and water in large quantities. Supplies were conserved and the crew lived off the bounty of nature. After the conflict died down, Narugama moved the enormous vessel back into inhabited space. At least, what used to be inhabited space.

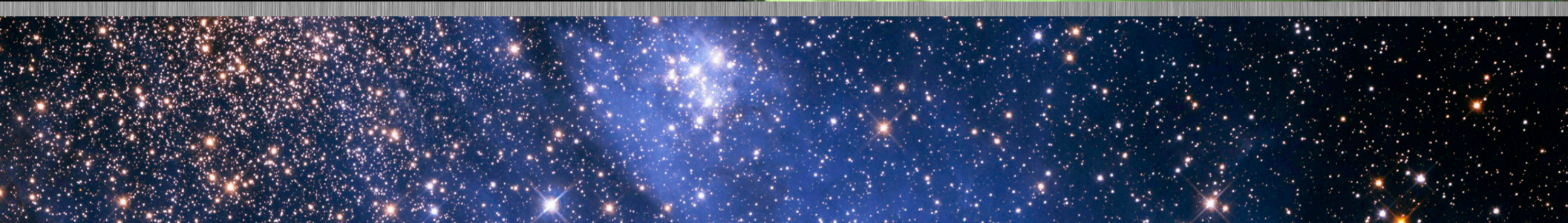
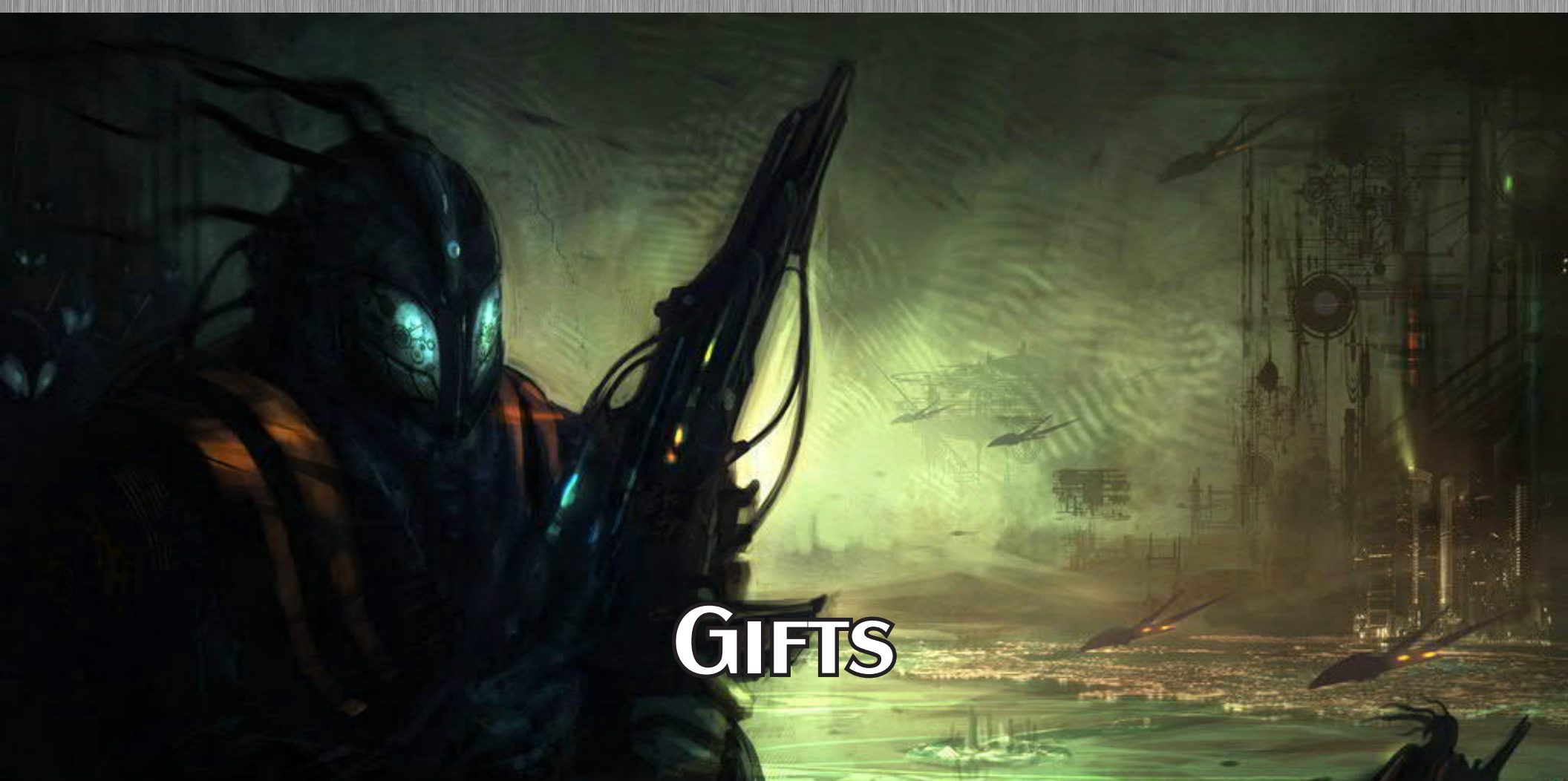
In the wake of the war, Narugama found people desperate and starving. He took in huge numbers of people, feeding them upon the abundant resources available to him, and finding a way to survive in the chaotic aftermath of the titanic conflict for which he felt partially responsible.

The Yamoshiro is a safe haven for those in need. It travels from system to system, trading and gathering up resources where it can. It still makes occasional visits to Natal for resupply on key staples and fresh water. It is a floating city of hope to many that struggle with depression in this dark time. It is a positive force to all that it touches.

Narugama now grows old. He has given his subordinates the task of creating a plan to establish a permanent settlement somewhere. It is a burden that he no longer wishes to bear. They have sent agents throughout the stars, looking for suitable sites and potential opportunities that can be exploited for the good of all.

Attacking the Yamoshiro directly is a fools errand. It is heavily armed and armored, as well as possessing a full sixteen flights of starfighters and numerous support craft. Anyone approaching it's vicinity is intercepted and questioned on their purpose. Friendlies are allowed to dock on the ship for trade and resupply, but not for more than three days. Selected individuals are granted asylum here, though typically this is only offered to those with specialized skills. The crew of the Yamoshiro is kind, but nothing in this universe is free.





GIFTS:

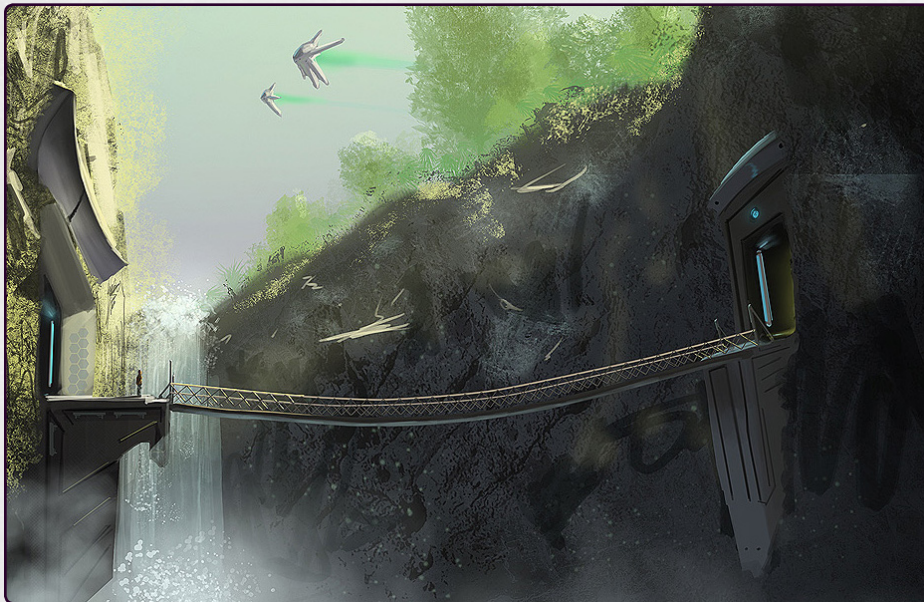
Every character gains a gift every other level. They choose their first gift at second level, another at fourth level, etc. Your GM may require some training be undertaken before a gift can be taken.

ACROBATICS: You can perform amazing feats of balance where others would fall. You can usually walk across narrow beams, tightropes, ice slicks, and surfaces covered with liquid without falling. In most cases, you automatically keep your balance on these kinds of surfaces. However, extreme situations may result in a **DEXTERITY** test if called for by the GM.

ANIMAL EMPATHY: You are received well by animals. Normal animals do not react negatively to your presence, though this protection does not extend to anyone traveling with you. Any tests to control a normal animal for work or as a mount are done at a +3 modifier. Extremely large or aggressive animals are unaffected by this gift.

ASTROGATOR: You have a knack for spatial navigation and FTL path projections. Add +3 to **ORIENT** tests made to perform an FTL jump.

AWARENESS: You are unusually perceptive. Add +1 to both **LISTEN** and **SPOT** saving throws. You can take this gift multiple times.



LIST OF GIFTS

Acrobatics	Fearless	Lockjaw
Animal Empathy	Flinch	Mimicry
Astrogator	Forger	Mule
Awareness	Fortune Finder	Negotiator
Brute	Gambler	Numb
Carouser	Grounded	Palm
Catcher	Haggler	Pathfinder
Catfall	Hardy	Pickpocket
Cautious	Hawkeye	Programmer
Climber	Hiding	Quick
Common Sense	Indomitable	Quick Draw
Crook	Innocent Face	Rage
Debonair	Interrogator	Resilient
Digger	Jumper	Sniper
Disguise	Kinetic Disorientation	Timid
Dowser	Kinetic Interference	Tongues
Dual-Wield	Kinetic Lightning	Toughness
Duelist	Kinetic Shield	Tracking
Eavesdropper	Kinetic Sight	Weapon Training
Eidetic	Kinetic Suppression	Timid
Endurance	Lawgiver	Tongues
Escape Artist	Leadership	Toughness
Etiquette	Light Sleeper	Tracking
Fast Metabolism	Light Step	Weapon Training
Faster Healing	Lip Reading	Wrestler

GIFTS (CONTINUED):

BRUTE: You always seem to hit harder than most. Add +1 to all damage rolls using melee weapons & fighting unarmed. You also get +1 to all rolls made while grappling. You can take this gift multiple times.

CAROUSER: You have a way of keeping your wits despite consuming large quantities of alcohol or other social **DRUGS**. If there is a rumor to be learned in a social gathering where alcohol or social drugs are being consumed, it will inevitably find its way to your ears.

CATCHER: You have a knack for catching flying objects. You automatically catch anything intentionally thrown to you. You also have a 50% chance of catching anything thrown within reach of you. This ability does not cover things thrown at you or someone near you, nor does it allow you to catch objects moving at extreme speeds. You cannot catch flying knives or bullets.

CATFALL: You have a knack for landing on your feet. You take half damage from all falls. If you fall over 100 meters, you are still doomed.

CAUTIOUS: You have a cautious way about you. Whenever the GM calls for a roll to see if you set off a trap, roll twice. If you succeed on either roll, the trap doesn't go off.

CLIMBER: You are an adept climber. You can attempt to climb surfaces that most people would simply write off as too difficult, such as a sheer rock face. You make all tests involving climbing with a +3 bonus.

COMMON SENSE: You just know the right thing to do. If you commit a social faux pas by saying something inappropriate, you can take back what you said and replace it with an alternative statement.

CROOK: You look like a miscreant. Law enforcement naturally suspects you in any criminal investigations, even if you are not remotely involved. However, you fit right in with the underbelly of society and can easily locate a fence or black market vendor.

DEBONAIR: You have a certain swagger in the presence of young people. They want to be around you whenever possible and will sometimes foolishly follow you just to see what you are doing. Any **CHARISMA** test against a young person of your species has a +3 bonus.

DIGGER: You have a special bond with the earth. You love to get dirty, either in a garden or digging underground. You can dig through loose dirt and rock at a rate equal to twice your **STRENGTH** (instead of the normal rate of just your strength) in cubic meters per hour of work. Heavier materials take more time to dig through, but you still dig at double the rate of a normal person.

DISGUISE: You have a knack for changing your appearance. With access to adequate materials, you can change your appearance so thoroughly that those looking upon you do not even get a roll to notice your ruse. With improvised materials or when under time pressure, you still get a +3 bonus to attempt to disguise yourself.

DOWSER: You just seem to know where water is. You roll two extra dice when **SEARCHING FOR WATER** in the wilderness. You also have an uncanny sense for predicting when a rainstorm is coming.

DUAL-WIELD: You can use two weapons simultaneously in combat, provided each weapon can be used in one hand. This does not give you two attacks, but makes you more likely to land a blow. You gain a +3 bonus **TO-HIT** and if you hit you roll damage for both weapons. However, you deal 2 less damage total because you are slightly off balance when using two weapons.

DUELIST: You are an expert swordsman. When using a sword, you get +3 to your **PARRY** attempts.

EAVESDROPPER: You have a hard time not paying attention to other people's conversations. You get +2 to **LISTEN** saving throws. You can take this gift multiple times.

EIDETIC: You have a perfect photographic memory. You can ask the GM for any information they have previously told you and you will be assured to get a reliable answer.

ENDURANCE: You are able to endure more hardship than the average person before breaking down. You gain 1d6 extra **HIT POINTS**. You can take this gift multiple times.

ESCAPE ARTIST: Ropes and chains cannot hold you down. You can make a **DEXTERITY** test every 15 minutes to escape from bonds of any kind. The GM may impose a penalty for really good bonds.

GIFTS (CONTINUED):

ETIQUETTE: You always know how to react properly in a social situation. You are familiar with the customs of various species and people of all walks of life. The GM will tell you if you are about to do something that would offend any people that are present.

FASTER METABOLISM: Your body processes occur at a faster rate compared to others. All time units that affect **TOXINS AND DRUGS** are halved. They gestate faster and they do not last as long.

FASTER HEALING: Your body is able to mend itself faster than most. You heal one **HIT POINT** every four hours instead of the usual six.

FEARLESS: You are difficult to scare. You get +2 to **FEAR** saving throws. You can take this gift multiple times.

FLINCH: You are able to react quickly to sudden danger. You get +2 to **SNAP** saving throws. You can take this gift multiple times.

FORGER: You have a talent for duplication. You can reproduce any written document if you have an original copy, even if you don't know the language. However, you may require certain tools to do this if it is a specialized form of technology, like placing a hologram into a document.

FORTUNE FINDER: You have a knack for finding random discoveries. Any time the GM rolls to see if anyone finds such things, you roll twice.

GAMBLER: You have a gift for games of chance. Any time you gamble, you come out ahead in the end. Be careful though, sore losers may accuse you of cheating.

GROUNDED: You are naturally resistant to kinetic effects. You get +2 to **KINETIC** saving throws. You can take this gift multiple times.

HAGGLER: You have a way of getting a great deal. Most merchants will sell you equipment at their best price. Any time such things are settled by dice, you get a +3 bonus.

HARDY: You are unusually tough. Add +1 to both **PAIN** and **TOXIN** saving throws. You can take this gift multiple times.

HAWKEYE: You notice just about everything. You get +2 to **SPOT** saving throws. You can take this gift multiple times.

HIDING: You are adept at concealing yourself in strange places. In mere seconds, you can stuff yourself into barrels, pipes, chests, closets, ventilation ducts, and underneath beds. Unless your pursuers are truly dedicated, they are unlikely to look in the kind of places you pick.

INDOMITABLE: You have an unusually strong soul. Add +1 to both **FEAR** and **KINETIC** saving throws. You can take this gift multiple times.

INNOCENT FACE: You have cultivated a look of innocence. When suspicion exists, you are overlooked. When evidence surfaces, it is mistrusted. You must be caught red-handed to even be a suspect.

INTERROGATOR: You have a talent for getting information out of people. You don't have to use force to do it. Something about you just compels a confession. A prisoner is putty in your hands.



GIFTS (CONTINUED):

JUMPER: You can jump farther and higher than a normal person. For most jumps, you automatically succeed. Whenever the GM forces a roll to see if you leap a certain distance, you get a +3 bonus.

KINETIC DISORIENTATION: You can disorient a single person. The target feels a powerful ringing in their ears and discomfort in their body cavities. This completely disables them for 1 minute per **KP** expended. Only **KINETICS** can take this gift.

KINETIC INTERFERENCE: You can cause radiation interference on electronic devices around your location. Wireless communication between electronic devices is severely impaired within a 1 kilometer radius per **KP** expended. For example, radio communication is impossible due to interference on the band. Only Kinetics can take this gift.

KINETIC LIGHTNING: You can cause static electricity to concentrate in your hand and then flash outward in bolts of lightning. For 1 **KP**, the lightning only reaches a single target within a cone 10 meters in length and deals 1d4 damage. You can extend its reach by an additional 10 meters, target an additional individual within range, or increase the damage by another 1d4 per additional **KP** expended. For example, for 7 **KPs**, you can deal 3d4 damage (1 **KP** plus 2 additional) to three targets (plus another 2 **KPs**) within a 30 meter long cone (another 2 **KPs**). Exact boundaries of the cone are left to the GM. Only Kinetics can take this gift.

KINETIC SHIELD: You can create an energy field around your body that protects you from harm. For 1 minute, you can raise your **ARMOR CLASS** by 1 point per 2 **KPs** expended. Only Kinetics can take this gift.

KINETIC SIGHT: You can see energy waves in the environment. This allows you to see perfectly under any conditions, even complete darkness. Kinetics glow in amber hues with a brightness that rises with their level and power. Only Kinetics can take this gift.

KINETIC SUPPRESSION: You can suppress Kinetic energy in others. You can expend one of your **KPs** to discharge a single **KP** in the body of a target Kinetic. Powerful Kinetics can use this ability to drain the smaller energy reserves of their opponents and render them helpless to resist. Only Kinetics can take this gift.

LAWGIVER: You have a natural air of authority. In a chaotic town hall meeting, people look to you for guidance. Your word can stop a vigilante in their tracks. Even legal officials occasionally seek your guidance in difficult situations. You are respected. The GM may bar you from taking this gift if you are not behaving in a way to support it.

LEADERSHIP: You have a tactical ability in small unit combat. If everyone on your side of a conflict acknowledges your leadership, they gain +1 **To-Hit** in combat. You must be able to give orders in order to have this effect (e.g. you cannot be wearing a helmet that muffles your voice).

LIGHT SLEEPER: You only need 4 hours of sleep each night to feel rested instead of the usual 6 hours. You always wake up immediately if there is an audible disturbance.

LIGHT STEP: You walk softly. Anyone trying to **LISTEN** to you suffers a -2 penalty. You also do not leave tracks when you walk in the wilderness. Anyone attempting to track you automatically fails.

LIP READING: You can try to read someone's lips if you cannot hear what they are saying. The GM will roll dice in secret to determine what you think you see them say. You have a 40% chance of getting a good idea of what is being said, a 40% chance of being unable to glean any useful information, and a 20% chance of completely misunderstanding what they are saying and drawing wild conclusions.

LOCKJAW You tend to keep your mouth closed. You get +2 to **BREATH** saving throws. You can take this gift multiple times.

MIMICRY: You can imitate the voices of other people. This can extend to other species if they are close to your vocal pattern. Anyone who is very familiar with the person you are imitating can make a **LISTEN** saving throw to detect your ruse.

MULE: You can carry more weight than an average person. You can carry up to six times your **STRENGTH** before becoming immobilized and you can carry three times your strength comfortably.

NEGOTIATOR: You have a talent for negotiating with strangers in strange places. If you are in front of the party and able to speak to those encountered, subtract 1 from any result you have on the Intentions table when starting an encounter.

GIFTS (CONTINUED):

NUMB: You are cold and unfeeling. Add +1 to both **FEAR** and **PAIN** saving throws. You can take this gift multiple times.

PALM: You have a knack for hiding objects on your person, especially in your hand. You can palm small objects without a roll if no one is looking. If someone is looking or the object is difficult to reach, you can do so with a +3 bonus.

PATHFINDER: You have a talent for finding the best way through an unknown area. When you succeed at an **ORIENT** roll, you find a natural game trail or path through the area. You can locate this path on a future journey to pass through without another orient roll.

PICKPOCKET: You can easily lighten the wallet of innocent passersby. In a crowded urban environment, you can successfully pickpockets without even making a roll. In other circumstances, you can do so with a +3 bonus.

PROGRAMMER: You have learned a single computer programming language through focused study. You are capable of programming appropriate devices using this language to perform new tasks. The length of study required to learn this gift is up to the GM, as is the length of time necessary to program a device.

QUICK: You can move around faster than most. You can take a **MOVE AND ATTACK** or **MOVE** combat action and move twice as far as someone with your **DEXTERITY**. This does not remove the **To-HIT** penalty of the Move and Attack or affect your **ARMOR CLASS** bonus while doing a Move.



QUICK DRAW: You can draw a weapon with incredible speed. You can take a **DRAW AND ATTACK** combat action without the normal -3 penalty **To-HIT**. You can also reload a magazine at any time without having to use a combat action to do so.

RAGE: You are hot-headed with a loose temper. You tend to lose control of yourself when discussions get heated. However, you do not have to make **PAIN** saving throws when injured in combat.

RESILIENT: You are naturally resistant to toxin. You get +2 to **TOXIN** saving throws. You can take this gift multiple times.

SNIPER: You have practiced careful and deliberate long-range sharpshooting. When using a rifle with a scope against a target at least 250 meters away, you gain a +3 bonus **To-HIT**.

TIMID: You don't have to pull back or lock down because you are already withdrawn. Add +1 to both **SNAP** and **BREATH** saving throws. You can take this gift multiple times.

TONGUES: You are able to speak a single language. You must be exposed to the language for a significant period of time to take this gift.

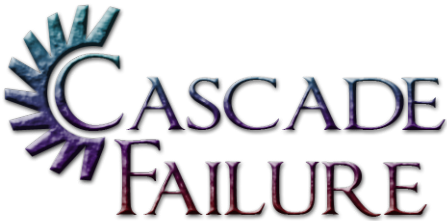
TOUGHNESS: You are able to endure a lot of suffering. You get +2 to **PAIN** saving throws. You can take this gift multiple times.

TRACKING: You are able to pursue someone by following their tracks. You can make **ORIENT** rolls to hunt down a specific person if you locate their tracks. Also, you roll an extra die when **SEARCHING FOR FOOD** in the wilderness.

WEAPONS TRAINING: You have learned how to use a certain weapon in combat. This can even be with weapons that no class has training in, such as flamethrowers. You can also use this gift to learn how to use a normal weapon as a thrown weapon, such as throwing knives. You can throw a weapon a number of meters equal to half your **STRENGTH**. Throwing attack rolls use your **DEXTERITY**. You can take this gift multiple times, each time for a different weapon.

WRESTLER: You are experienced at grappling combat. Add +3 to all attack rolls made while grappling.

CHARACTER SHEET



Name: _____

Attributes:

Strength
Dexterity
Constitution
Intelligence
Wisdom
Charisma



Saving Throws:

Breath DEX
Fear WIS
Kinetic CON
Listen WIS
Pain CON
Snap DEX
Spot WIS
Toxin CON



Species: _____

- ☐ 10% Experience Point Bonus
- ☐ 10% Experience Point Penalty
- ☐ 1 Hit Point lost per Day
- ☐ 1 in 4 chance of emotional offense
- ☐ +2 Armor Class
- ☐ Automatically identify most smells
- ☐ 1 in 4 chance to identify faint smells
- ☐ 1 in 4 chance to misunderstand gender
- ☐ +1 Armor Class
- ☐ 1d6 Bite Damage
- ☐ Breathes Methane
- ☐ Double Drug Duration
- ☐ Infrared Vision
- ☐ Hyperspectral Vision

Class: _____

- ☐ Charm
- ☐ Deceit
- ☐ Disable
- ☐ Orient
- ☐ Stealth ☐ Vehicle

Luck: _____

Languages: _____

Age: _____

Weapon Training: _____

HP



AC

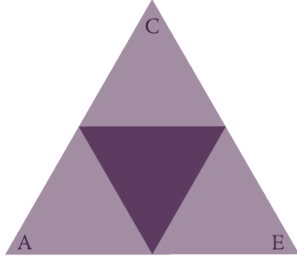


Ambitions:

Major _____
Minor _____
Minor _____
Minor _____

Class Abilities:

Character Level
Experience Points
Next Level



CHARACTER SHEET (CONTINUED)



Starting VUs: _____

Worn Equipment:

Weapon 1

Weapon 2

Armor

Helm

Accessory

Accessory

Other

Other

Other

Known Technologies:

Insight

Bonus Chances

- ☐ +3 for any technology if Age = Mature
- ☐ +1 for any technology if Age = Adult
- ☐ +1 for any technology if Intelligence greater than 13
- ☐ +1 for any technology if Wisdom greater than 13
- ☐ +1 for any technology if Human
- ☐ +1 per level for any technology if an Engineer
- ☐ +1 per level for any medical technology if a Medic
- ☐ +1 per level for any vehicle technology if a Pilot (*double within expertise*)
- ☐ +1 per level for any computer technology if a Slicer

Carried Equipment:

Additional Description of Character:

Gifts:

Level 2

Level 4

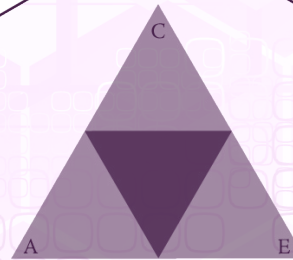
Level 6

Level 8

Level 10

CHARACTER SHEET (STYLIZED)

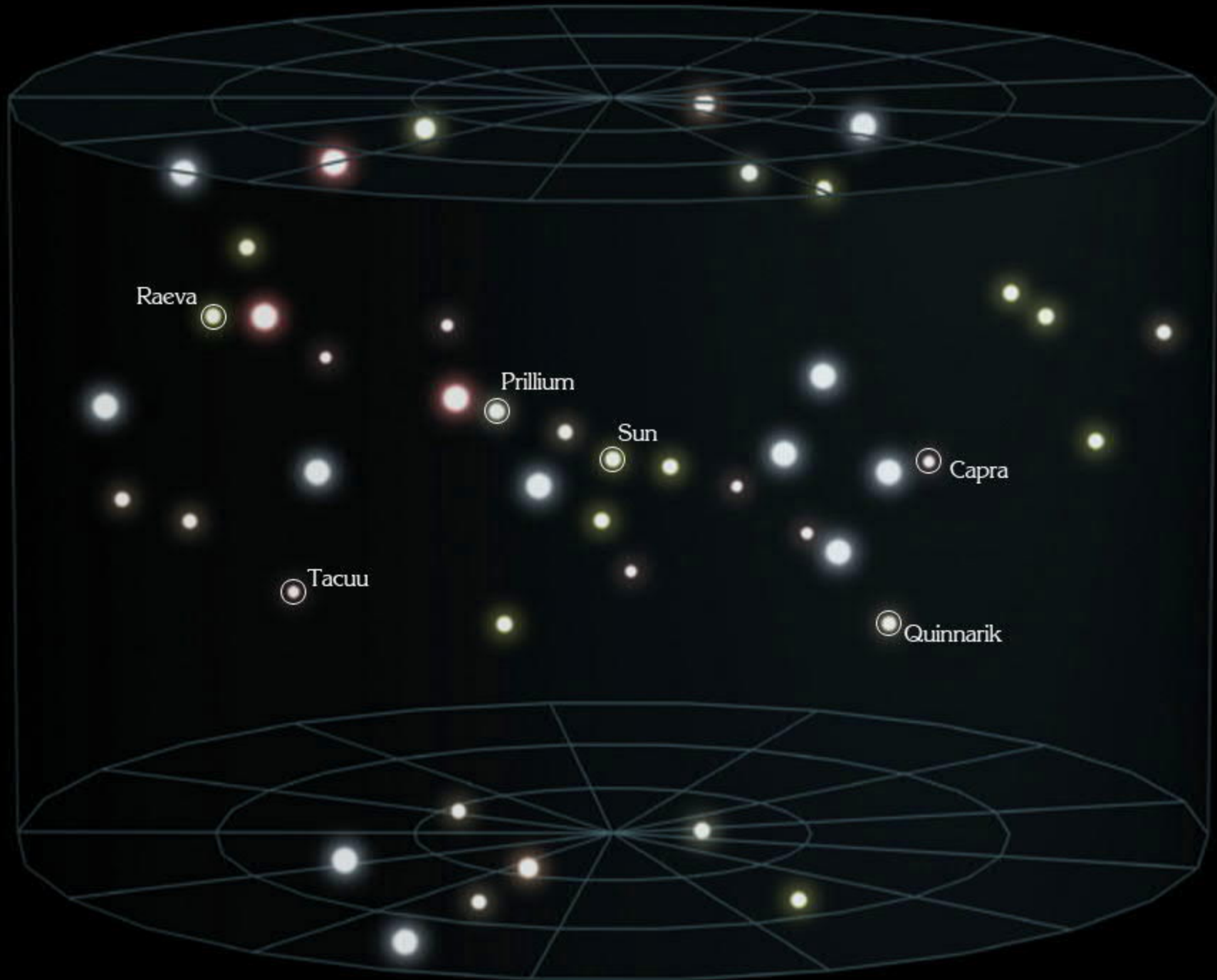
STRENGTH	DEXTERITY	SPECIES	CLASS	LUCK	AGE	HP	AC
CONSTITUTION	INTELLIGENCE	SPECIES ABILITIES	CLASS ABILITIES	MAJOR AMBITION	MINOR AMBITION		
WISDOM	CHARISMA	WEAPON TRAINING	LANGUAGES	MINOR AMBITION	MINOR AMBITION		
BREATH	FEAR	KINETIC	LISTEN	LEVEL	XP	NEXT	
PAIN	SNAP	SPOT	TOXIN				



Name: _____



STARMAP



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