Master Skills List
This list is the authoritative reference for skills, knowledges, and talents.

Skills

SKILLS, KNOWLEDGES, AND TALENTS

A **skill** is (generally) a statement of ability based on a job or vocation. For example, Astrogator reflects what an Astrogator knows about doing his job. A **knowledge** is (generally) a body of information based on a field of science or experience. For example, Chemistry reflects the body of knowledge of theoretical and practical chemistry. A **talent** is a personal ability not generally possible for a human, but which may be possible for some specific non-humans. For example, SoundMimic (the ability to exactly reproduce sounds). A personal reflects a strategy or process within the Personals interaction system.

Benchmarks. One level of a skill or knowledge or talent typically represents one year of experience, education, or training. An individual with Skill-4 has four years of experience in that skill; a person with Knowledge-3 has the equivalent of three years of instruction or practical experience with that field of knowledge.
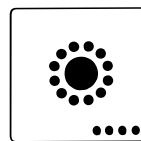
64 SKILLS

The Skills (35)

Admin
Advocate
Animals
Athlete
Broker
Bureaucrat
Comms
Computer
Counsellor
Designer
Diplomat
Driver
Explosives
Fleet Tactics
Flyer
Forensics
Gambler
High-G
Hostile Environ
JOT
Language
Leader
Liaison
Naval Architect
Seafarer
Stealth
Strategy
Streetwise
Survey
Survival
Tactics
Teacher
Trader
Vacc Suit
Zero-G

Starship Skills (7)

Astrogator
Engineer
Gunner
Medic
Pilot
Sensors
Steward

The Trades (10)

Biologics
Craftsman
Electronics
Fluidics
Gravitics
Magnetics
Mechanic
Photonics
Polymers
Programmer

The Arts (6)

Actor
Artist
Author
Chef
Dancer
Musician

Soldier Skills (6)

Fighter
Forward Obs
Heavy Wpns
Navigator
Recon
Sapper

Defaults, Talents, and Personals

Default Skills

Actor
Artist
Athlete
Author
Comms
Computer
Driver
Fighter
Turrets
Mechanic
Steward
Vacc Suit

Talents (16)

Compute
Empath
Hibernate
Hypno
Intuition
Math
MemAware
Memorize
MemPercep
MemScent
MemSight
MemSound
Morph
Rage
SoundMimic

Personals (7)

Carouse
Query
Persuade
Command
Curiosity
Insight
Luck

MANY KNOWLEDGES

Animals
Rider
Teamster
Trainer

Driver
ACV
Automotive
Grav
Legged
Mole
Tracked
Wheeled

Engineer
Jump Drives
Life Support
Maneuver Drives
Power Plants

Fighter
Battle Dress
Beams
Blades
Exotics
Slug Throwers
Sprays
Unarmed

Flyer
Aeronautics
Flapper
Grav
LTA
Rotor
Wing

Gunner
Bay Weapons
Ortillery
Screens
Spines
Turrets

Heavy Weapons
Artillery
Launcher
Ordnance
WMD

Pilot
Small Craft
Spacecraft ACS
Spacecraft BCS

Seafarer
Aquanautics
Grav
Boat
Ship
Sub

The Sciences
Archeology
Biology
Chemistry
History
Linguistics
Philosophy
Physics
Planetology
Psionicology
Psychohistory
Psychology
Robotics
Sophontology

Specialized
Career: Academia
Career: Army
Career: Navy
Career: <Name>
World: Capital
World: Regina
World: <Name>
[others are possible]

The list of Skills is exhaustive; no other skills are available. The list of Personals is exhaustive; no other skills are available. The lists of Knowledges and Talents are advisory; many different and additional Knowledges and Talents are possible.

Skills are quantifications of each individual character's abilities. <u>Skill</u> is a broad label which is further divided into Skills, Knowledges, and Talents. Each has its own usages and restrictions.

Skills are areas of expertise. A character who has a skill is capable of acting within that area. For example, someone with Medic can reasonably be expected to attempt (and sometimes or often succeed) in medical situations. In the general role-playing sense, characters often do things that do not involve tasks but do involve skills. For example, a starship owner will probably not hire an astrogator who does not have Astrogator. There is no task involved, but having the specific skill is nevertheless important.

Skills are Assets in the Resolution of Tasks. A character with a specific skill can attempt tasks that someone without skill is not even permitted to try.

IN THIS CHAPTER

The skills that characters may learn are covered in this chapter alphabetically. Each entry shows the skill name. If the skill is a cluster or cascade skill, that notation is made.

The Skill List. The Skill List presents all available skills in one chart.

Task Examples. Because skills are intimately bound up in tasks, many of the entries in this chapter include examples of tasks using the skills. These examples are not exhaustive… they are shown as guides to proper usage and to encourage the creation of similar tasks for specific situations.

SKILLS

Skills are the primary means by which characters do things in **Traveller**. Each character has a variety of skills, and the higher a skill rating, the more expert the character is with that skill. With training, any character can eventually become proficient at any skill.

Benchmarks. One level of a skill theoretically represents one year of experience, education, or training in that skill. An individual with Skill-4 has four years of education, training, or experience in that skill. In general, a character receives one level of one skill in each year of his or her life.

Skill Format. Each skill is usually a one or two word name (alas, Jack of All Trades is a four word name; it is abbreviated to JOT). Skills are always capitalized (for example, Pilot). Skills are numerically rated by levels from 1 (or sometimes 0) to 9 or more. Any skill attached to a character should show that character's numerical level as well as the name (for example, Pilot-4).

Recording Skills. For simplicity and completeness, all skills (other than the universal Default skills) are recorded on the individual's character record.

Default Skills

There are some situations that an unskilled character will not try: disarming bombs; flying high performance aircraft. And there are some things that unskilled characters may decide to try: painting a picture; shooting a gun.

Default skills represent this base of activity that even an untrained person may be willing to attempt.

A skill identified as a **default** skill may be used by any character. The skill level used is 0 (zero); other penalties also apply when resolving a task using a default skill. But, the chance of success is still better than if the task were not attempted at all.

Default skills are sometimes called Level-0 Skills.

The standardized Default Skills are automatically available to all characters.

Unique Default Skills. In addition to the standardized and widely available Default skills, every character may have a personal area of interest (perhaps a hobby).

An individual who does not already have a hobby (available to Citizens and Functionaries) can, after Career Resolution but before beginning adventuring, designate one skill as a Hobby. It becomes a Default skill-0.

A Hobby cannot be an existing default skill or a skill already held by the character.

Training, Ability, and Technology Level

Individuals come from a variety of technological backgrounds in the **Traveller** universe. The abilities conferred by skills are relatively tech level independent. That is to say, an individual with an appropriate skill is experienced in the repair and maintenance of specific devices, and he understands the basic principles of the devices. When he encounters a device at a higher (or lower) tech level, he probably can puzzle out its use, maintenance and repair, especially if the appropriate manuals or technical supplies are available.

For example, Rollan Burris is native to a TL-6 environment and has Ground Craft-4. Much of his experience is with TL-6 Ground Vehicles. Later in his life, he gets a job fixing cars… and he is equally competent fixing TL-4, TL-6, and TL-9 ground cars. He has access to diagnostic equipment, repair manuals, tools, and parts. Faced with an instrument malfunction on the ground car, he might repair the instrument itself on the TL-4 vehicle. On the TL-6 vehicle, he could replace the instrument. On the TL-9 vehicle, the manuals would tell him the appropriate diagnostic codes which would self-repair the instrument. The value in hi skill, independent of tech level, lies in his ability to diagnose the problem and implement the solution.

Weapons Skills

A variety of weapon skills are included in this chapter. The information presented here deals primarily with the skills in areas other than combat.

The details of personal combat are covered in **Fighting**.

The details of space combat are covered in **Space Combat**.

Knowledge is the Foundation of Skill

Some skills include within them several Knowledges (Animals, Driver, Engineer, Fighter, Flyer, Gunner, Heavy Weapons, Language, Pilot, Seafarer).

Acquisition of these skills (except Language as explained in that entry) follows a standard pattern: the character initially learns a subset of the skill, and only later expands this understanding to the full skill (see Language).

The first two times a character receives one of these Skills (typically in Character Generation), he instead receives one of the Skill's contained Knowledges. When (or If) the character acquires the skill the third time, he receives the Skill at level-1. Until then, he has the Knowledges but only Skill-0.

If a character receives a Knowledge directly (perhaps in an ANM School) he increases that Knowledge, but not the corresponding Skill.

For example, Eneri Dinsha spent his early years (in Character Generation) in the Navy and learned Engineer. The first time he received received Starship Skill he selected Engineer, and he then selected a Knowledge (he chose J-Drive). The second time he received Starship Skill, he again selected Engineer, and again had to select a Knowledge (he chose M-Drive). The third time he received Starship Skill, he selected Engineer; this time he received Engineer-1. Somewhat later, he attended an ANM School. Engineer is not listed, so he selected M-Drive.

He has available for Task Resolution J-Drive-1, M-Drive-2, and Engineer-1. Since Skills and Knowledges stack, he can resolve most Engineer tasks at level-1, but he can resolve J-Drive tasks at level-2, and M-Drive tasks at level-3. No matter how far Eneri progresses, he will always be better at J-Drive and best at M-Drive.

This process reflects the natural specialization of the Education process: a character learns a specialization first (and that specialization always gives an advantage in that area of interest).

Musical Instruments

A character receiving skill in Musician must designate a Musical Instrument as part of his skill.

The Musical Instrument Types List shows the basic types available. This list is not exhaustive and other instruments may be available; the player and the referee can discuss and describe the specific Instrument the player learns (perhaps the Denebian sitar, the Occipitan nose flute, or the grav pulse synthesizer).

MUSICAL INSTRUMENT TYPES
Music Instrument Types

Guitar	Keyboard	Voice	Trumpet	Violin
Banjo	Piano		Trombone	Cello

The first time a character receives Musician skill, he must instead take Knowledge-1 in one of the Musical Instruments and receives Musician-0.

The second time a character receives Musician skill, he must instead take Knowledge-1 in one of the Musical Instruments (including the instrument already taken), and adds 1 to Musican.

All subsequent receipts of Musician can be taken as Musician skill.

KNOWLEDGES

A **knowledge** is a body of information based on a field of science, training, or experience. For example, Chemistry reflects the body of knowledge of theoretical and practical chemistry. The maximum attainable level of a knowledge is 6.

Career Knowledges. A character who has served in a career receives Knowledge equal to the number of terms served (to a maximum of 6).

World Knowledges. A character who has spent time on a world receives Knowledge equal to the number of terms he has lived there (maximum 6).

World Knowledge declines over time: reduce this value -1 every Term (four years) once adventuring begins.

The Sciences. Some characters can learn a specific Science through the Education process (maximum 6).

Stacking Knowledges and Skills

Although Knowledge levels are limited to a maximum of 6, they can be stacked with skills. An Engineer with Drives-7 and P-Plant-4 can perform Power Plant tasks using both Drives and P-Plant.

TALENTS

A **talent** is a personal ability not generally possible for a human, but which may be possible for some specific non-humans. For example, SoundMimic (the ability to exactly reproduce sounds). The maximum level for a specific talent is usually 15.

SPECIALS

The Specials are universally-available abilities related to interactions with other people (the Personals), and with the environment in general (the Intuitions). They are used by characters in their interactions with other (non-player) characters, and to solve puzzles.

The Personals

The Personals are used in personal interactions: they indicate the probable reaction of an individual when approached by a player character. For example, Query governs the response of a non-player character to questions from a character. The four interaction personals are:

Carouse, Query, Persuade, and **Command.**

The Intuitions

There are three Intuitions: Insight, Luck, and Curiosity. Characters from time to time are awarded values for these Intuitions in the current session and cannot be accumulated.

Curiosity relates to the serendipitous acquisition of information.

I**nsight** relates to the processing of information.

Luck relates to forcing favorable outcomes.

MODIFICATIONS (MODS)

The Task system charts include more than 30 columns of Mods (from -5 to +5) addressing a wide variety of situations. When Mods are required, the Referee consults the tables and imposes one or two of them, as dictated by the current situation.

The Skills

Skills are the primary means by which characters do things in **Traveller**. Each character has a variety of skills, and the higher a skill rating, the more expert the character is with that skill. With training, any character can eventually become proficient at any skill.

ACTOR

Actor (Act, Acting, Drama) is expertise in the dramatic arts, including an ability to adopt a personality or role, to convince an audience of a viewpoint, and to convey a wide range of emotion while involved in the role or part.

Characters with Actor have learned to conceal their true selves, their motives, and their emotions while manipulating an audience into believing whatever persona or emotion they are portraying.

Actor is a Default Skill. Most people are able to play rudimentary roles when called upon. All characters have Actor-0.

Playing Roles

Actor allows an individual to assume a role and to convince others of the validity or truth of that role.

To portray a role in a play.
Difficult (3D) < Edu + Actor
A true actor is always striving for Spectacular Success, (and dreads Spectacular Failure).

The elements of the task can be varied: Difficulty and Characteristic may be changed.

Mimicry

Actor allows a character to mimic or imitate personality traits with enough realism that they are convincing to the ordinary observer.

To mimic the mannerisms of a well-known person
Difficult (3D) < Dex + Actor

It is easier to mimic a well-known figure because the audience more easily recognizes the specific mannerisms.

Deception

Acting allows a person to deceive others by concealing true emotions and projecting false (but appropriate) ones. Acting allows successful lying (both in words and in actions).

To impersonate the actions of someone.
Difficult (3D) < Dex + Actor

This task addresses the impersonation itself. Others should address proper papers, disguise, or knowledge.

To impersonate the appearance of a specific person.
Difficult (3D) < Dex + Actor
Requires disguise or costume.

Acting In General

Acting is about playing roles (primarily for entertainment). An Actor takes on a part, which may be within a stage, voice, or video production, or may be a component of a live action event.

Acting Tasks. Acting tasks benefit from rehearsal. Many acting tasks are hasty and few are cautious.

Related Skills. Actor is one of the six Arts (Actor, Artist, Author, Chef, Dancer, and Musician).

ADMIN

Admin (Administration, Management) is skill in the management of resources, setting policy, and communicating policy to members of the organization. Admin is the ability to function within an organized structure: a company, a corporation, a crew, a team, a governmental agency, or a military unit, with an emphasis on directing resources toward the achievement of organization goals.

Characters with Administration understand the problems organizations (and organization staff) face, and have an ability to work using an existing structure and available resources. A character with Administration understands how to talk to clerks and functionaries and how to motivate them to put forth their best efforts.

To submit a project proposal to the Scout Service
Average (2D) < Int + Admin

To submit a project proposal to the Imperial Navy
Difficult (3D) < Int + Admin

The difference between the two proposals is arbitrary.

Admin in General

Administration is concerned with managing organizations.

Admin Tasks. Admin tasks often depend on other applicable skills. It is the joining of Admin with another skill that best achieves the stated goal.

Related Skills. Admin is related to **Bureaucrat** and **Leader**. **Admin** is the management of resources and involves setting policy and communicating policy to members of the organization. **Bureaucrat** is the understanding of standardized procedures within an organization, and the ability to interpret and follow those procedures. **Leader** is the ability to express power without regard to position within an organization.

ADVOCATE

Advocate (Advocacy, Law, Legal, Attorney, Lawyer) is skill in formulating and presenting logical and emotional arguments on behalf of themselves and others, primarily in a legalistic setting. Advocate is expertise in the controlling codes of behavior within society. The character has an education in, and familiarity with, the law and its interpretation. While specific details of law vary from world to world and from jurisdiction to jurisdiction, the concept of law is a constant, and the available models under which it is expressed is naturally limited. The individual knows the foundational concepts of law and how they can be applied in a variety of situations.

Characters with Advocate have the ability to formulate and present logical and emotional arguments on behalf of themselves and others.

Law 101

The character knows in what forms laws may be expressed, and how they are created, enforced, and interpreted. Since law must be recorded and somehow made available to those it applies to if it is to be effective, the person knows how to research available resources in order to make judgments on what is legal and illegal and how to make arguments in favor of each position.

Documents. The individual knows how to prepare documents in support of legal activity.

Legal Arguments. The individual knows how to frame arguments on one side of a dispute in order to achieve the best advantage.

Legal Advice. The individual is able to provide reasonable advice to others about the best way to proceed in a legal matter.

Negotiation. The individual is able to negotiate an agreement between two parties.

To negotiate a contract between two parties
Formidable (4D) < Edu + Advocate
Opposed (2).

Court Hearings. The individual can appear in court and argue a case on behalf of a client.

To argue a case in court.
Difficult (3D) < Int + Advocate
Opposed (2).

Related Skills. Advocate and **Counsellor** are related skills. **Advocate** is the ability to formulate and present logical and emotional arguments on behalf of themselves and others, primarily in a legalistic setting. **Counsellor** typically provides assistance in personal or interpersonal matters.

ANIMALS

Animals is skill in working with animals: to use them for sport, recreation, business, or other enterprises.

Characters with Animals can understand animal behavior and see how it can be used to their benefit.

Animals includes Rider, Teamster, and Trainer.

Rider

The individual knows how to ride animals.

To ride a well-trained riding animal
Easy (1D) < Dex + Rider

To ride a wild animal
Staggering (5D) < Dex + Rider

Cautious can reduce difficulty level, which is the same as ensuring the animal is docile and the activity is calm.

Showmanship. The individual is able (at higher levels of skill) to perform feats of greater difficulty involving animals.

To ride fast
Average (2D) < Str + Rider

To perform intricate maneuvers while riding
Formidable (4D) < Dex + Animals

Teamster

The individual knows how to handle animals which serve as beasts of burden, whether as pack animals, or hitched to wagons.

To drive a wagon (animal drawn).
Average (2D) < End + Teamster

Trainer

The individual knows how to train animals to do various tasks.

To train an animal for basic obedience
Average (2D) < Tra + Trainer
Difficult (3D) < Tra + Trainer

Sophont Trainer. Sophont characters with C5= Training do not learn well from teachers (and Teacher skill). They have more success learning from trainers (using Trainer).

Characters with Trainer have the ability to impart knowledge to other characters who have C5 = Tra, and to a lesser extent, to characters who have C5= Edu.

To teach (train) a skill to one student (1 year)
Difficult (3D) < Tra + Trainer

To teach (train) a skill to one C5= Edu student (1 year)
Formidable (4D) < Tra + Trainer

Specify the skill being taught (the trainer must have at least one level higher in the skill being taught). The student receives plus one level at year end. The student need not begin the course with any skill level in the skill being trained.

To train a skill to a class of students (1 year)
Difficult (3D) < Tra + Trainer
Each student must roll Tra or less to receive the skill (thus, a student with C5= Edu uses Edu/2 for Tra).

Enhancements to Trainer. The chance of success of the training task may be improved by a variety of enhancements. For example, Linguistics can be used when teaching Language.

The skill received is in place of the experience skill increase for the year. The advantage is that the skill received may be a totally new one to the student.

Notice that Training is a Knowledge used as a skill.

Notice that Trainer is the equivalent of Educator when the student characteristic C5= Training.

Animals in General

Animals is primarily about interaction with non-sophont domesticated creatures. The skill is generally of little use with wild animals (although Trainer can be used as Wild Animal Tamer). Animals is a relatively one-way communication between the character and the subject.

Related Skills. Teacher and **Trainer** are related skills. **Teacher** is the ability to impart knowledge to characters who have C5= Edu. **Trainer** is the ability to impart knowledge to characters who have C5= Tra.

ARTIST

Art (Artist) is ability to create works of fine art, including an ability to create or capture visual images, and to reproduce images through drawing, painting, or sculpture, and to convey both emotional and realistic content in their works.

Characters with Artist have learned the details of image capture and reproduction in its many different modes (drawing, painting, sculpture, photography, and video), and indicates a natural ability in the creation of fine art. Art includes a familiarity with art works, art styles, and art history.

Artist is a Default Skill. Most people are able to draw or sketch rudimentary images when called upon. All characters have Artist-0.

Supplies and Equipment. Most tasks assume that the artist has a proper supply of supplies and equipment. Special needs (supplies from all natural source, or from appropriate tech levels) are the subject of separate acquisition quests.

Art History

The individual knows the general history of fine art, including the major artists of historical periods. Individual knowledge will vary with the background of the character.

To properly identify a major piece of art
Average (2D) < Education + Artist

Art Technique and Style

The individual is experienced in the use of art materials and media. He understands styles and techniques and can copy them with some degree of faithfulness.

All artists create copies or imitations in order to learn appropriate techniques. A useful exercise is to copy an existing piece of art brushstroke for brushstroke (or chisel mark for chisel mark). To the untrained eye, such a work looks "original."

To create a work in a specified style and technique.
Formidable (4D) < Dexterity + Artist

To identify a copy in a specified style and technique.
Difficult (3D) < Education + Artist

Art Forgery

Art forgery is a deliberate copy of an existing work, or a deliberate new creation in an existing style specifically created to defraud the viewer or buyer.

An Art Forgery is labeled by the difficulty of its detection (Difficult or easier are usually called Copies): An Easy Copy, A Formidable Forgery. A Hopeless [ly Difficult] Forgery.

A Forgery can be detected at one level of difficulty lower using appropriate Education and Skill.

Although Forgery is usually encountered in the world of Art, it can extend to other areas using the same concepts: Counterfeiting, Forgery of Signatures, Forgery of Paperwork.

To create a Difficult Copy of a Painting
Difficult (3D) < Dexterity + Artist

To detect a Difficult Copy of a Painting
Average (2D) < Education + Artist

To create a Formidable Forgery of a Sculpture
Formidable (4D) < Dexterity + Artist

To detect a Formidable Forgery of a Sculpture
Difficult (3D) < Education + Artist

Forgery Masterpieces. A Craftsman with the appropriate skill (Artist for Art Forgery) can create a Masterpiece forgery, which (if Perfect) is near undetectable).

Art Creation

The individual has talent in the field of fine art and can produce works of art which have value to the consuming public.

To create a Work of Art (1 month)
Formidable (4D) < Dexterity + Artist

Art is Primarily Visual. Art depends on the sense of Vision. A character without Vision defaults to expressing any Artist skill as Sculpture.

Non-human senses (vision in range bands other than RGB, alternate hearing, more sensitive touch, and other) influence how non-humans see (or sense) Art. An artwork which is beautiful in RGB may look sloppy in PSU or INA.

Related Skills. Artist is one of the six Arts (Actor, Artist, Author, Chef, Dancer, and Musician).

ASTROGATOR

Astrogator (Astrogation) is skill in the determination of present location and course planning to a selected destination in an interplanetary or interstellar setting.

Characters with Astrogator are responsible for plotting starship and spacecraft courses and ensuring that correct information is available to the pilot and crew as they need it. They are trained in the use of astrogation computer programs and the interpretation of long-range data provided by the ship's sensor system.

Calculating Jumps

To calculate an interstellar jump-1.
Easy (1D) < Int + Astrogator
Uncertain (1D)

To calculate an interstellar jump-2.
Average (2D) < Int + Astrogator
Uncertain (1D)

The dice for difficulty of the interstellar jump calculation equals the distance in parsecs (Jump-1 difficulty is 1D; Jump-6 Difficulty is 6D).

To manually confirm jump-1 calculations (24 hours).
Average (2D) < Edu + Astrogator
Uncertain (1D).

To manually confirm jump-5 calculations (24 hours).
Hopeless (6D) < Edu + Astrogator
Uncertain (1D).

Math (the Talent) is a Mod on Astrogation tasks.

The difficulty of manually confirming the jump calculation is one level higher than the automated calculation difficulty.

For example, Ank Dinsha 888888 Astrogation-3 is plotting out his ship's jump to the next system two parsecs away. Jump-2 makes it an Average 2D task; it has 1D Uncertainty. Ank must roll (8+3 =) 11 or less on 2D. He rolls 1D (=6) and the Referee secretly rolls the Uncertain die (=6). Assuming the Uncertain roll is 3, the Referee says: you have your final Jump input. Arv thinks the situation through (Hmm, if the Uncertain die is 6, the calculations will be wrong) and decides to manually confirm the figures.

Confirmation will take 24 hours and is a Difficult 3D task with 1D Uncertainty. He needs to roll (8+3 =11) on 3D. He rolls 2D (=5) and the Referee rolls the Uncertain die. In this case, even if the Uncertain die is 6, Arv succeeds in confirming the figures. If they were correct, the Referee would tell him they are confirmed. In this case, the Referee tells him that he found an error; the original calculations are not confirmed. Arv needs to start over.

Astrogation has two components: the calculation aspect associated with feeding the proper information into the starship controls, and the planning/ advising aspect associated with determining appropriate destinations and courses.

Related Skills. Astrogator is space-based and involves charting courses for interplanetary and interstellar craft; it is a tedious and laborious undertaking, even when aided by computers and sensors. **Navigator** is concerned with direction finding and world surface travel. **Survey** is world-based, and involves understanding observing and identifying obvious and unobvious details of the terrain.

Starship Skills. Astrogator is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

ATHLETE

Athlete (Athletics) is skill in sports-related physical activity and competition, and with extensive or vigorous physical activity, and with sports competition.

Characters with Athletics have an understanding of physical training and conditioning. The individual knows the best way to use physical characteristics in order to maximize results, and to minimize the potential for injury. The individual can maintain his physical characteristics in peak condition, and is better able to use them in vigorous or stressful situations.

Athlete is a Default Skill. Most people are able to participate in athletics at a rudimentary level. Essentially all characters have Athlete-0.

Physical Conditioning

Athletics includes an understanding of the physical characteristics and how to maintain and improve them (this pursuit is independent of the Experience system).

To increase C1 Strength (1 year)
(3D) < Athlete

Physical Activity

Athletics can help improve a character's chance of success at various physical activities.

Ordinary Physical Barriers. Barriers are expressed qualitatively (low, high, very high) rather than quantitatively (1 meter high, 2 meters high). The qualitative description produces a Mod which makes the task more difficult.

Qualitative Mods for Height or Width are provided in the Mods table in Tasks.

To vault a wall
Average (2D) < Str + Athlete

To vault a Very High wall
Average (2D) < Str + Athlete
Must include the Very High Mod.

Eneri Dinsha (777777 Athlete-0), running from a squad of enforcers, comes upon a fence. Without a thought, he runs to the fence and tries to leap it. The Referee allows +1 for running; he needs to roll (Str = 7 plus Running = 1) = 8 or less to succeed. He rolls 5 and clears the fence.

He immediately encounters a second Very High fence, higher than the first, and he is no longer running. He needs to roll (Str = 7 plus no Mod for Running plus Very High = -3) = 4 or less to succeed.

To leap a trench
Average (2D) < Str + Athlete

To leap Very Wide trench
Average (2D) < Str + Athlete
Must include the Very Wide Mod.

Organized Sports

Athletics includes a familiarity with organized sports, including the techniques of team management and coaching to win. The individual knows the rules and details of most popular sports.

For example, Swimming is governed by Athlete (but its favored Characteristic is Grace; Humans have a natural disadvantage against sophonts who are natural swimmers.

For example, Gymnastics is governed by Athlete (buts its favored Characteristic is Agility; Humans resolve Gymnastics with Dex/2).

Coaching

The individual is able to direct others in athletics, providing them with strategy, tactics, advice, and encouragement which moves them to excel.

Athletics is primarily about personal physical development: developing and using the personal physical characteristics.

AUTHOR

Author (Writer, Writing) is ability in the literary arts. Author is ability to create written works (whether intended to be read, spoken, or heard). The primary concern of Author is the skilled use of language to convey thoughts, ideas, and images in ways which resonate with an audience.

Characters with Author have an ability to tell stories, recording them in some form for later distribution. Higher levels of writing skill represent greater proficiency in the craft of story telling.

Author is a Default Skill. Most people are able to write basic narratives when called upon. All characters have Author-0.

Creating Entertainment

The "writing" aspect of this skill (in the sense of keyboarding or recording) is the least of the ability; the important aspect is the ability to tell a story and be entertaining while doing so.

The Idea. The basic idea for created entertainment is generated with Flux and ranges from -5 Derivative to +5 Truly Inspired.

An ordinary person can roll for an Idea once every quarter. An Author can roll for an idea once per week.

Ideas are provided in the Mods table in Tasks.

To write a novel (one year).
Formidable (4D) < Int + Author + Idea + Mod2

To write a newspaper article (several hours)
Difficult (3D) < Int + Author + Idea + Mod2

To write an advertisement (an hour)
Average (2D) < Int + Author + Idea + Mod2

Author is about creating stories (primarily for entertainment).

Author Tasks. Author tasks benefit from information available in the mind of the writer.

Related Skills. Author is one of the six Arts (Actor, Artist, Author, Chef, Dancer, and Musician).

BIOLOGICS

Biologics (Biologic) is concerned with devices based on living matter. Example biologic devices include grown hull panels, interior shock absorbers, water purifiers, carbon dioxide scrubbers, and motion sensors.

Characters with biologics are skilled in the maintenance, repair, and construction of biologic devices. Biologics conveys an understanding of the principles of device construction and repair.

Fundamental Knowledge. The individual has a basic grasp of what the field of biologics is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Biologics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Biologics and how to use them for Biologics repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about biologic equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair biologic equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble biologic components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Biologics if he also has Designer.

Related Skills. Biologics and Biology are related. Biology is the broad knowledge of the study of life

processes; Biologics is the practical skill in creating and using customized biological processes.

Biologics is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

BROKER

Broker is skill in the marketing of goods, and represents an understanding of the business of buying and selling.

Characters with Broker act as agents for the owner of goods (and may act for themselves); when the sale takes place, the broker receives a commission.

To find a buyer for trade goods.
Difficult (3D) < Int + Broker

Trade and Commerce

Broker is used in the Trade and Commerce process.

Broker is about negotiating the best deal between a buyer and a seller. In its simplest form, the Broker transaction entails very little work while earning a commission. The value of the broker is the knowledge and expertise he provides when problems or exceptions arise.

Broker is a Mod (equals half Broker Skill, rounded up) on the Actual Value Table (to a maximum of Broker-4). Brokers receive 5% of the final sale price per DM.

Broker tasks are essentially administrative in nature; very little physical activity is required, and even communications associated with the situation can be automated or handled through appropriate interfaces.

Related Skills. Broker and **Trader** are related skills. **Broker** is the ability to bring together a seller and a buyer based on interpersonal interactions and an understanding of relative values of goods. **Trader** is the ability to independently appraise and value goods.

BUREAUCRAT

Bureaucrat (Bureaucracy) is skill in the standardized procedures within an organization, and the ability to interpret and follow those procedures.

Characters with Bureaucrat are able to analyze an organization and determine how best to use its standardized procedures to accomplish personal objectives.

Bureaucratic Regulations (BR). Large organizations maintain a bureaucratic book of regulations (BR) which details how any specific situation should be handled bureaucratically. The Book is a Mod to tasks which involve the bureaucracy.

When an organization becomes important in **Traveller** situations, the referee must determine the relative value of the Book. When an organization becomes prominent in **Traveller** situations, the game master must determine the relative value of the Book. Roll flux; it is appropriate to have a distinct value for each world. BR = +5 is more lenient in its outcomes than BR = - 5.

Record the Book for future use; this value is not necessarily known to the characters (although it may become apparent over time).

Specific organizations as published or administered by the Referee may have predefined values for their BR.

To Get A Permit
Difficult (3D) < Soc + Bureaucrat + BR + Mod2

Related Skills. Admin is related to **Bureaucrat** and **Leader**. **Admin** is the management of resources and involves setting policy and communicating policy to members of the organization. **Bureaucrat** is the understanding of standardized procedures within an organization, and the ability to interpret and follow those procedures. **Leader** is the ability to express power without regard to position within an organization.

CHEF

Chef (Cook, Shugili, Food Artist, and Osmancer) is the ability in the culinary arts.

Chef is expertise in food preparation, including the ability to conceive and create tastes and smells for a variety of audiences.

Characters with <u>Chef</u> have learned the foundations of food preparation and transcended it to achieve attractive tastes and smells.

To fix lunch
Easy (1D) < Edu + Chef

To prepare a feast
Difficult (3D) < Edu + Chef

Related Skills. Chef is one of the six Arts (Actor, Artist, Author, Chef, Dancer, and Musician).

COMMS

Comms (Communications) is skill in the use of technological communications equipment with a focus on primary data input.

Communications reflects a deep understanding of the operation of a wide variety of communications devices, including an understanding of the protocols of communication, an awareness of the various limitations of communicators, and an ability to quickly identify why a communication device is not working properly.

Characters with <u>Communications</u> know how to use basic communicators (or can puzzle them out with a minimum of effort) including telephones, radios, laser communicators and other user-friendly devices.

Communications is a Default Skill. The use of most communications equipment is obvious or intuitive.

Essentially any character who has travelled off his homeworld, or whose homeworld is TL10 or greater has the default skill Comms-0.

Other characters do not have Comms as a default.

Use and Operation

The individual has a basic familiarity with the use and operation of communicators (conveying voice, video, and other information). The medium may include radio (broadcast and beamcast), laser, and other media.

Data Input. The characteristic feature of communications equipment is the use of primary data input. Spoken words and current images are captured as they occur and are transmitted to a recipient. The process may be recorded, but it not typically further processed.

Mode Selection. The user understands the available modes of communications equipment operation, including the benefits and drawbacks of each. For example,

broadcast reaches the greatest possible number of recipients, but is susceptible to interception, and reveals the location of the broadcaster; beamcast is relatively immune to interception, but must be aimed at a specific recipient.

Repair and Maintenance. The character has been trained in diagnosis and repair of faults in Communications equipment.

Sophisticated Operations (Tapping, Jamming, Cloning). The individual knows techniques for intercepting communications by others, interfering with communications by others, and imitating other communicator stations.

To intercept all unencrypted broadcasts available.
Difficult (3D) < Int + Comms
This is scanning.

To establish communicator contact with a pinnace crew.
Average (2D) < Edu + Comms + Environ + Mod2

To intercept a specific broadcast.
Difficult (3D) < Edu + Comms

To intercept a specific beamcast.
Staggering (5D) < Edu + Comms
Not possible unless in correct position.

To jam a specific broadcast
Formidable (4D) < Int + Comms
Broadcast must have been intercepted first.

Communications Equipment. Communicating requires a communicator. A task cannot be attempted unless the effect is within the capability of the equipment.

Mods (in the task statement) indicates the task should implement any appropriate modifiers for the specific equipment (generally Ease of Use).

Comms is about the exchange of information. At its most basic, Comms deals with voice information by telephone or radio; at more complex levels, it involves video, text messaging, specialized devices, and cryptography.

Related Skills. Comms, **Computer**, and **Programmer** are related skills. **Computer** is the ability to use technological office equipment and focuses on non-primary data input. **Comms** is the ability to use technological communications equipment and focuses on primary data input. **Programmer** is the ability to configure office equipment or communications equipment (as well as other equipment) to achieve desired functions.

COMPUTER

Computer (Office Equipment) is skill in the use of technological office equipment and focuses on non-primary data input.

Characters with <u>Computer</u> understand how to use the basic office equipment of a technological society. They view computers as essential and helpful interfaces for research, communications, and control of necessary services.

Computer is a Default Skill. At the most fundamental level, computers are transparent to the user; no skill is required: the use of computers is entirely unsupervised.

Essentially any character who has travelled off his homeworld, or whose homeworld is TL7 or greater has the default skill Computer-0. Other characters do not have Computer as a default.

Use and Operation

The individual has a basic familiarity with the use and operation of office equipment, including computers and information processors, graphics processors, duplicators, scanners.

Data Input. The characteristic feature of office equipment is the use of non-primary data input. Words are entered by keyboarding or data entry procedures rather than as spoken. Images are scanned or acquired rather than viewed. Data which has been input is then inserted into data bases, accounts, or files, and may subsequently be manipulated to produce reports or records. It may also be data mined to find relationships or insights.

File Access. An essential part of Computer is file retrieval.

To retrieve a specific file
Difficult (3D) < Int + Computer

Computer skill is about information processing: information capture, manipulation, storage, and retrieval.

Related Skills. Comms, **Computer**, and **Programmer** are related skills. **Computer** is the ability to use technological office equipment and focuses on non-primary data input. **Comms** is the ability to use technological communications equipment and focuses on primary data input. **Programmer** is the ability to configure office equipment or communications equipment (as well as other equipment) to achieve desired functions.

COUNSELLOR

Counsellor (Advisor) is skill in providing advice, guidance, or recommendations to individuals, with its emphasis on personal or interpersonal behavior.

Characters with Counsellor are able to listen to other characters and assist them in understanding their options as to behavior.

Counteracting Losses Of Sanity. Sessions with a Counsellor may increase or restore Sanity.

To Restore Sanity (one hour)
Difficult (3D) < Int + Counsellor
Uncertain (2D)
Success increases the subjects San +1 (not to exceed original San).
This is the equivalent of Grief Counselling or Traumatic Event Counselling.

To Restore Sanity (1D hours over 1D weeks)
Difficult (3D) < Int + Counsellor
Uncertain (1D)
Success increases the subjects San +1D (not to exceed original San).

Personal Advice. Sessions with a Counsellor may provide understanding of proper courses of action.

To Understand A Situation (one hour)
Difficult (3D) < Int + Counsellor
Uncertain (1D)
Success provides a Mod +Good Flux on an upcoming vital task.
Failure provides a Mod Bad Flux in an upcoming vital task.
Ignoring Advice: The character may decide to ignore the advice (and the unknown Mod).

Session Frequency. Counsellor sessions are weekly or monthly.

The Costs Of Counselling

Counsellors are professionals equivalent to Advocates or Doctors. A typical one-hour session is Cr100.

Counsellors available as ship crew typically provide their services as part of their duties.

Related Skills. Advocate and **Counsellor** are related skills. **Advocate** is the ability to formulate and present logical and emotional arguments on behalf of themselves and others, primarily in a legalistic setting. **Counsellor** typically provides assistance in personal or interpersonal matters.

CRAFTSMAN

Craftsman (Craftsperson, Craftsophont, Craftsbeing) is concerned with the production of high quality work output.

Appreciation. The character can appreciate quality and workmanship in objects, and can evaluate the degree of quality such an object has.

To evaluate the general workmanship of an object
Easy (1D) < Int + Craftsman

Evaluation. Craftsman can evaluate the specific components of QREBS.

EVALUATING QREBS

		Difficulty	Char	Skill
Q	Quality	3D	C5	Craftsman*
R	Reliability	4D	Ins	Craftsman*
E	Ease of Use	2D	C2	Craftsman*
B	Burden	2D	Str	Craftsman*
S	Safety	2D	Int	Craftsman*

* or substitute Trader.

To evaluate Quality
Difficult (3D) < C5 + Craftsman
Uncertain (1D)

To evaluate Reliability
Formidable (4D) < Ins + Craftsman
Uncertain (1D)

To evaluate Ease Of Use
Average (2D) < C2 + Craftsman
Uncertain (1D)

To evaluate Burden
Average (2D) < Str + Craftsman
Uncertain (1D)

To evaluate Safety
Average (2D) < Int + Craftsman
Uncertain (1D)

Workmanship. An individual with Craftsman can use it to improve the quality of a successful task (although it does not improve the possibility of success for a task; Cautious can achieve that result).

When creating (building, crafting, constructing) an object (but not when buying one, or evaluating one), the individual may distribute the total Craftsman skill level as Mods to the determination of QREBS rolls.

For example, Filis Ten is building a crossbow (from a kit); she has Craftsperson-6. She completes the weapon; when the game master rolls for the five QREBS values, Filis says she wants this item to be of good quality and reliable. She specifies DM +3 for Quality and +3 for Reliability on the rolls. The Referee rolls 0, 0, 0, 0, and 0. The QREBS values for the Crossbow are +3 +3 0 0 0. To confirm them (or determine them), Filis needs to go through the evaluation process.

Masterpieces
A character with Craftsman may attempt to produce a Masterpiece (using this Masterpiece process).

Designate a **Controlling Characteristic** C1 C2 C3 C4 C5 C6 which governs creating the current Masterpiece..

Master Points. Master Points available to a Craftsman include: the Controlling Characteristic, Craftsman Skill, and up to FIVE skills with level 6 or greater.

A Masterpiece cannot be attempted unless Master Points equals 40 or above.

The Masterpiece Creation Process. Roll 9D for Masterpiece Points or less for success in creation.

For example, the Craftsman has 45 Master Points when creating a Masterpiece; he must roll 45 or less (on 9D) for success.

If The Creation Fails, the Piece (not Masterpiece) is flawed and worthless.

If The Creation Is Successful, a beautiful Masterpiece has been created. Name an object capable of being lifted or carried by the Character, and reasonably created using the Skills applied. Allocate the Masterpiece points to QREBS (for the ranges -5 to +5, -5 = 1 point; +5 = 11 points). If all QREBS values are set at the Maximum, excess Master Points can be allocated equally in excess of +5.

A Perfect Masterpiece has 55 or more Master Points.

A Masterpiece can be sold at Cr150,000 plus Cr10,000 per Master Point over 39. A Perfect Masterpiece (=55 points) sells for Double (= Cr600,000). A Masterpiece increases in value about 5% per year, but subject to Flux when sold.

A Masterpiece can be created in about three years of steady, dedicated work. This time can be reduced by about one month per Master Point diverted from the work.

Craftsman is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

DANCER
Dancer (Dance) is ability in the arts associated with body movement. Dance is the ability to move one's body with rhythm and grace.

Characters with <u>Dancer</u> have a familiarity with dance styles and techniques, and an ability to dance as a performer.

Dance History
The individual knows the general history of dance, including the major regional and ethnic types of dance. Individual knowledge will vary with the background of the character.

Dance styles vary across the universe. For obscure styles, the task needs to reflect its distance from the current territory.

To identify a dance by ethnic or regional origin
Hopeless (6D) < Edu + Dancer + (Dance) Fame
Dancer is optional for this sort of trivia question.

Identifying a Waltz (Fame= 25) is probably automatic for an average person (= 6D < 7 + 25 = 32)

Identifying a Hurap (an obscure dance from the backwaters of a world on the Trailing Frontier [Fame = 7] is harder. For an average person, (=6D < 7 + 7 = 14) its maybe 6% = Hopeless if his life depended on it. For University of Regina Professor of Dance Ingles Yreva 7778C9 Dancer-9 the task is easier (6D < 12 + 9 + 7 = 29): close to 98%.

Dance Technique and Style. The individual is experienced in the techniques and styles of dance.

To perform a dance in a specific style.
Average (2D) < Dex + Dancer
Complex dance styles and techniques may be harder.

Dance Choreography. The individual has talent in the field of dance and can lead or instruct others in specific techniques and routines.

Ballroom Dance. The individual has an acquaintance with traditional forms of ballroom dance (which may include modern dances, ethnic dances, and folk dances).

To have a nice dance with a partner.
Average (2D) < Dex + Dancer
Co-operative (2).
Success is having a good time and not looking foolish.

Related Skills. Dancer is one of the six Arts (Actor, Artist, Author, Chef, Dancer, and Musician).

DESIGNER
Designer (Design) is skill in creating new objects using available principles, components, and concepts.

Designer is used in conjunction with other skills to create new objects: Designer plus Communications can be used to create a new design for a communicator (or to build one from components otherwise on hand).

Characters with <u>Designer</u> understand the concepts and details of the creative process. They can create new objects by combining existing components.

For example, the shuttle from the Imperial Exploratory Cruiser Gibiluur has crashed on a world surface and its three communicators are disabled. A character with Electronics could attempt to repair any one of them. A character with Comms and Designer could combine three broken communicators to produce one functioning comm.

To combine several broken Communicators
Difficult (3D) < Dexterity + Designer + Comms

Related Skills. Designer is the ability to create new objects using available principles and concepts. Each of the Trades is the ability to use tools to create objects based on plans created by a Designer. Craftsman modifies the ability to create objects to make the resulting object of higher quality.

DIPLOMAT

Diplomat (Diplomacy) is skill in formal negotiation between governments or large organizations. Diplomacy involves communication of organizational views, the negotiation of agreements, and the resolution of disputes between governments and between large organizations.

Characters with Diplomat are able to present the views of his superiors, receive the views of other organizations, and communicate them back to his superior.

Diplomat reflects activities which specifically and formally represent a large organization; a character engaged in diplomacy is speaking for such a government or organization.

First Contact. The first contact between any two governments or large organizations is a crucial event. If poorly handled, relations between the organizations can be crippled for a long time. Diplomat attempts to gauge attitudes and opinions and react to them before misunderstandings occur.

To initiate a first contact with an organization
Formidable (4D) < Int + Diplomat
Uncertain (1D).

Negotiations. Diplomat is used in the art of negotiation enhance the negotiating position.

To negotiate a preliminary understanding
Formidable (4D) < Soc + Diplomat
Uncertain (1D).

To negotiate a win-lose agreement.
Formidable (4D) < Edu + Diplomat
Opposed (2).

To negotiate a win-win agreement.
Formidable (4D) < Int + Diplomat
Cooperative (2).

The Diplomacy Handbook (DH). Governments and large organizations maintain a bureaucratic regulation book which details how any specific situation should be handled diplomatically. Members of the organization can defend their actions to their superiors if they can demonstrate that they have used the Handbook as support of their actions. If actions succeed, then there is no need to defend them.

When an organization or government becomes prominent in **Traveller** situations, the game master must determine the relative value of the Diplomacy Handbook. Roll Flux to create a common organization-wide DM for use in Diplomat tasks. Because this value can range from +5 to - 5, the effectiveness of the DH (and Diplomacy tasks which use it) depends on its value. A government with DH +5 is very effective in diplomatic activity, regardless of the skill of its diplomats; DH -5 severely handicaps the activities of diplomats.

Record the DH value for each organization for future use. This DH is not necessarily known to the members of the organization (although it may become apparent over time).

To negotiate a preliminary understanding
Formidable (4D) < Soc + Diplomat + DH
Uncertain (1D).

The Diplomacy Handbook represents hidebound policy constraints imposed by functionaries in the upper levels of the Diplomatic Service (and ultimately governmental rulers). While the DH cannot be changed, Admin, Bureaucracy, or Liaison (as appropriate) can be used to counter some of its effect.

For example, Force Commander Dame Arlane Titanium 88789B is negotiating a preliminary understanding, but is handicapped by the Diplomatic Corps' DH -4 (and unusually restrictive set of regulations). She, however, is able to work behind the scenes for an exchange of favors with the other side (Admin-2, Bureaucracy-3 as Mods), essentially countering the negatives of the DH.

Related Skills. Liaison and Diplomat are related skills. Liaison is skill in informal coordination of relationships between different cultures or organizations. Diplomat is skill in formal negotiation between governments or large organizations.

DRIVER

Driver is skill in the operation of ground vehicles. It includes the physical aspects of driving vehicles, an awareness of the standards of driving, including with or near other vehicles, and basic procedures of preventative and curative maintenance.

Characters with Driver are qualified to operate most ground vehicles.

Knowledge is the Basis of Driver Skill. The first two times a character receives Driver (typically in character generation), he instead acquires one of the Skill's contained Knowledges.

Driver is a Default Skill. Most people are able to operate vehicles at a basic level. Essentially all characters have Driver-0.

To avoid an accident
Average (2D) < Dex + Driver

Types of Vehicles. The use of Drives skill requires knowledge on a specific type.
ACV. Air Cushion Vehicle.
Legged. Multiple jointed Legs
Mole. Underground burrowing vehicles.
Tracked. Endless tracked vehicles.
Wheeled. Ground vehicle repair knowledge.

Grav. Gravitic supported and propelled. Grav Knowledge associated with Flyer or Seafarer is equally applicable to Grav Driver.

Characters with Driver are qualified to operate most ground vehicles.

Vehicle Identification. The character can identify vehicles in general terms and often in specific terms based on education and experience.

To identify an vehicle by type and function.
Average (2D) < Edu + Driver

Vehicle Operation
Although ground craft are built to be easily operated, they are complex machines.
Ground vehicle operations tasks are detailed under Vehicle Operations in the Vehicle Chapter.

Vehicle Maintenance. Automotive is the Knowledge of ground vehicle maintenance and repair. It contrasts with the other Knowledges under Driver in that it is deeply concerned with repair, modification, and maintenance rather than operation.

ELECTRONICS
Electronics (Electronic) is concerned with devices based on electron flow. Example electronics devices include signal processors, controllers, and sensors associated with the electromagnetic spectrum.
Characters with Electronics are skilled in the maintenance, repair, and construction of electronic devices. Electronics conveys an understanding of the principles of device construction and repair.
Fundamental Knowledge. The individual has a basic grasp of what the field of Electronics is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Electronics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.
Advanced Tools. The individual has a familiarity with sophisticated tools of Electronics and how to use them for Electronics repair.
Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about electronics equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair electronics equipment which he has previously diagnosed as malfunctioning.
Construction. The individual can assemble electronics components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).
Device Design. The individual can design devices which make use of Electronics if he also has Designer.
Electronics is one of the Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). Electronics is one of ten Trades: Biologics, Electronics, Fluidics, Gravitics, Polymers, Magnetics, Mechanic, Photonics, and Programmer.

ENGINEER
Engineer (Engineering) is skill in the operation, maintenance, and repair of the drives of starships and spacecraft.
Characters with Engineer are capable of proper operation, adjustment, and maintenance of starship maneuver drives, jump drives, and power plants. The person who does this work is an Engineer (if an officer) or Drive Hand (if not an officer).
Some ships and craft are small enough that they do not require an Engineer. In such cases, the drives are automated. Although operation does not require an Engineer (or Drive Hand) to be always present, the services of an Engineer are necessary for maintenance and overhaul.
Governing Characteristics. Engineering is divided into four distinct areas: Maneuver Drives (M-Drives and G-Drives), Jump Drives (J-Drives), and Power Plants (P-Plants), and Life Support. The governing characteristic for Engineering depends on the component being serviced.

Maneuver Drives	Int
Jump Drives	Edu
Power Plants	Str
Life Support	Dex

Drive Operation Tasks. The operation of starship and spacecraft drives requires the services of an Engineer. He or she understands the procedures and the principles behind the procedures, and can make the equipment operate reliably and efficiently.
Typical Engineer tasks and associated difficulties include:

Pre Operation Checks	Average	2D
Power Up	Average	2D
Routine Operation	Easy	1D
Overload Operation	Formidable	4D
Emergency	Difficult	3D
Power Down	Easy	1D
Basic Maintenance	Difficult	3D
Basic Repair	Difficult	3D

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about drives, their function, and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair engineering equipment which he has previously diagnosed as malfunctioning.
Starship Skills. Engineer is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

EXPLOSIVES
Explosives (Demolitions) is skill in the use of high energy devices for destructive purposes.
The individual is experienced in the proper handling, placement, and efficient use of explosives.
Recognition and Identification. The character can recognize and identify explosives and can describe their capabilities and potential effects.

To disarm a complex device.
Average (2D) < Dex + Explosives

To disarm a booby-trapped device.
Difficult (3D) < Dex + Explosives

To identify a booby-trapped package:
Average (2D) < Int + Explosives

To recognize the characteristics of the explosive used:
Difficult (3D) < Edu + Explosives

FIGHTER

Fighter (also called Fighting) is skill in conflict resolution through violence.

Characters with <u>Fighting</u> understand the basic elements of fights: how to attack and defend; how to select and employ weapons; and when to engage and when to withdraw.

Fighting is a Default Skill. Most people are able to engage of a fight and use basic personal weapons when called upon. Essentially all characters have Fighting-0.

To win a brawl
Difficult (3D) < Str + Unarmed
Opposed (up to 4). Resolves the brawl in one task.
All losers receive 2D hits. The winner is unscathed.

A more extended resolution of a brawl determines the loser of a specific round. The highest result (provided that result is unsuccessful) is the loser, receives 3D in damage, and is eliminated from the brawl. If no one is unsuccessful, repeat the task.

To resolve one round of a brawl.
Difficult (3D) < Str + Unarmed
Opposed (up to 6). Resolves one round of the brawl
Highest Roll (if unsuccessful) is the Loser (= 3D Hits).

Use of the Fighter skill is discussed in considerably greater detail in the Personal Combat chapter.

Soldier Skills. Fighter is one of the Soldier skills: Fighter, Forward Obs, Heavy Wpns, Navigator, Recon, and Sapper.

Related Skills. Fighter, Heavy Weapons, and Gunner are related skills. Fighter concerns personal combat, including attacking and defending using various personal weapons (defined as weapons which a person can carry). Heavy Weapons relates to the use of battlefield weapons (defined as weapons carried or deployed by vehicles or launchers). Gunner relates to the weapons installed on starships and spacecraft (and which may be installed on other large vehicles).

FLEET TACTICS

Fleet Tactics is concerned with the command and control of groups of ships for naval combat operations.

Characters with Fleet Tactics understand the planning concepts required to assemble and deploy starships in order to defeat an enemy. It necessarily includes an understanding of siege operations (including planetary bombardment), search and detection operations, and small and large battles.

Related Skills. Strategy, Tactics, and Fleet Tactics are related skills. Strategy addresses the reasons for a military or naval encounter and planning the deployment of

resources to achieve an intended result. Tactics is the specific activities within a battle which help achieve victory. Fleet Tactics is the direction of multiple ships in space combat.

FLUIDICS

Fluidics (Fluidic, Hydraulic) is concerned with devices based on fluid flow and interaction. Example fluidics devices include force amplifiers (based on hydraulics), pumps, and signal processors.

Characters with <u>Fluidics</u> are skilled in the maintenance, repair, and construction of fluidic devices. Fluidics conveys an understanding of the principles of device construction and repair.

Fundamental Knowledge. The individual has a basic grasp of what the field of Fluidics is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Fluidics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Fluidics and how to use them for Fluidics repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about fluidic equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair fluidic equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble fluidic components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Fluidics if he also has Designer.

Fluidics is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

FLYER

Flyer is skill in the operation of flying craft. It includes the physical aspects of flyer operation, an awareness of the standards of flyer operation, including air traffic control, and basic procedures of preventative and curative maintenance.

Types of Flyers. The use of Flyer skill requires knowledge on a specific type.

Aircraft Types
Flapper. Ornithopter. Aircraft which fly making use of flapping wings (essentially in imitation of birds).
LTA. Lighter-Than-Air.
Rotor. Rotary Wing.Helicopter.
Wing. Fixed Wing.
Aeronautics. Repair and maintenance of Flyers.
Grav. Gravitic supported and propelled. Grav Knowledge associated with Driver or Seafarer is equally applicable to Grav Flyer.

Characters with Flyer are qualified to operate most flying craft or aircraft.

Aircraft Identification. The character can identify aircraft in general terms and often in specific terms based on education and experience.

To identify an aircraft
Average (2D) < Edu + Flyer + Visibility

To identify an aircraft flying high overhead.
Difficult (3D) < Edu + Flyer + Visibility + Speed

Aircraft Operation
Aircraft are complex machines. Although an individual can never know the details of all possible aircraft, it is possible to know the general details of aircraft operation as well as know how to operate a specific type of aircraft well.
Licensing. An individual is licensed by an appropriate authority if he or she has skill-2 or greater. Worlds with Population 6+ and Law 5+ require a license before allowing operation of an aircraft.
Aircraft Operation Tasks. The Aircraft Operations Tasks are detailed under Vehicle Operations in the Vehicle Chapter.
Related Skills. Flyer and Pilot are related skills. Flyer is the operation of vehicles in atmosphere or in vacuum near world surfaces. Pilot is the operation of starships, spacecraft, and small craft which travel between worlds (and may involve some near world travel).

FORENSICS
Forensics (Forensic Science, Investigation) is skill in investigation, especially when related to legal matters.
Characters with Forensics understand the process of investigating situations, crime scenes, and disaster sites with the purpose of determining the circumstances which created them.
Evidence Gathering. The individual is trained to evaluate a crime scene and to gather evidence appropriate to the matter at hand.

To gather samples
Average (2D) < Dex + Forensics

Samples or evidence includes more than physical evidence; it can include a report of the nature or circumstances present at the scene.
Is There Something Else? The individual can decide that there is additional information present at the scene, and can search harder for it.

To try to find something else (additional samples)
Average (2D) < Edu + Forensics   Uncertain (1D)

To gather additional samples
Average (2D) < Edu + Forensics

Drawing Conclusions. Forensics is the study of evidence; it can reasonably be expected that a character using forensics can come to conclusions about the causes of the evidence.

To draw conclusions

Formidable (4D) < Edu + Forensics
Uncertain (2D)

FORWARD OBSERVER
Forward Observer (Fwd Obs, Fire Director, Fire Controller) is skill in directing military or naval attacks against targets. A Forward Observer is trained to locate potential military targets and to direct military fire support at them. He or she is the forward eyes and ears of a military organization.
Characters with Forward Observer direct the firepower of indirect fire weapons (artillery, ortillery, gunnery).
In traditional usage (pre-starflight Terra), a Forward Observer is a military officer deployed forward of an artillery unit who locates targets and radios instructions to the unit to conduct attacks.
In current usage, a Forward Observer is any individual who is assigned to locate targets and direct attacks against them. He may be a military officer directing attacks from an artillery unit 20 km away, a clandestine agent inputting target coordinates to an ortillery ship in orbit, or an individual scouting out targets to be attacked at a later date.

The Interaction of the FO and the Gunner
An attack in which the Gunner can see (or sense through sensors) the target has no need for a Forward Observer. The attack is resolved using the skill of the Gunner.
A Forward Observer is useful if
The weapon is firing in Indirect Mode. The Gunner cannot directly see or sense the Target, and the Forward Observer substitutes his visual (or sensory) input for the Gunner's.
The weapon is subject to Scatter. The (in)accuracy of the weapon scatters the impacting projectiles. The Forward Observer substitutes his visual (or sensory) input for the Gunner's.

Traditional Fire Control
The individual knows the procedures used to call in indirect fire weaponry. The first step is to call in a preliminary (or targeting) round. If that is not a direct hit, then a second round is called in (and a third or however many are required). When a preliminary round hits the target center, then the Forward Observer commands Fire For Effect.

To call in indirect fire weaponry on a target (preliminary)
Average (2D) < Edu + Fwd Obs

Success places the first hit 100 times Flux meters from the target center. The character is observing the target and observes where the hits land. Failure indicates that the character does not see the hits impact. The task must be repeated.
If the first round is not a direct hit, standard practice calls for the point of impact to be shifted 400 meters toward the target. The second shift is 200 meters; the third shift is 100 meters.

To call in indirect fire weaponry on a target (adjusted).
Average (2D) < Dex + Fwd Obs + Mods

Character states the increment of shift (400 meters, 200 meters, 100 meters). Game master shifts the fire and indicates if it hit or missed.

To call fire for effect (final)
Easy (1D) < Dex + Fwd Obs

Local conditions can influence the accuracy of Forward Observers: climate, the confusion of combat, atmospheric effects, and others.

Non-Traditional Fire Control
The Forward Observer knows the procedures and equipment necessary for directing attacks against targets.

He knows how to place homing devices or beacons to guide attacking weapons fire. A beacon may be placed on a target to attract incoming missiles. A beacon may be placed near a target (with coded instructions to impact at some point relative to the beacon).

He knows how to identify targets by planetographic co-ordinates and forward them to the attacking weapons.

In Non-Traditional Fire Control, Forward Observer Skill is a Mod on the Attack.

Soldier Skills. Forward Observer is one of the Soldier skills: Fighter, Forward Obs, Heavy Wpns, Navigator, Recon, and Sapper.

GAMBLER
Gambler (Gambling) is skill in variety of games of chance, and includes a familiarity with the degrees of risk involved.

Characters with Gambler understand the rules and underlying laws of probability for gambling games.

Situational Analysis. The individual is able to observe and analyze gambling games and evaluate them for their degree of risk and for their legitimacy.

Spending The Evening Gambling. In cases where the referee wants to gloss over the events ("Okay, you spent the night gambling"), the character declares the total amount to be gambled.

To win a casual game
Average (2D) < Dex + Gambling
Gamble Cr1 to Cr10 per event. Winning pays double.

To win a low risk game
Difficult (3D) < Dex + Gambling
Gamble Cr10 to Cr100 per event. Winning pays triple.

To win a high risk game with opponents
Formidable (4D) < Dex + Gambling
Opposed (5). Each participant bets the same (between Cr1,000 and Cr10,000). Winner takes 90% (the remainder goes to the house).

To win a high risk game against the house
Staggering (5D) < End + Gambling
Opposed (5). Each participant bets the same (between Cr1,000 and Cr10,000). Winner takes 90% (the remainder goes to the house).

Compulsive Gambling. Some people feel they are destined to win and routinely play at gambling games.

To play the lottery (once per week)
Hopeless (6D)

Pay Cr10 for a ticket. Roll 6 ones and win Cr250,000. Roll 5 ones to win Cr25,000. Roll 4 ones to win Cr2,500. Roll 3 ones to win Cr250. Roll 2 ones to win Cr25. Gambling skill does not affect the lottery.

GRAVITICS
Gravitics (Gravitic) is concerned with devices based on gravity control. Example gravitics devices include lifters, grav plates, and inertial compensators.

Characters with Gravitics are skilled in the maintenance, repair, and construction of gravitic devices. Gravitics conveys an understanding of the principles of device construction and repair.

Fundamental Knowledge. The individual has a basic grasp of what the field of Gravitics is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Gravitics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Gravitics and how to use them for Gravitics repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about Gravitics equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair Gravitic equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble Gravitic components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Gravitics if he also has Designer.

Gravitics is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

GUNNER
Gunner (Gunnery, Ship's Guns) is skill in the targeting, operation, and maintenance of the weaponry typically used by starships and spacecraft.

Characters with Gunner are familiar with the basic operation of the weapons installed on starships.

Turret is a Default Knowledge. Most people can be assigned to operate a turret on a starship and function with at least a minimal level when called upon. Essentially all characters have Turret-0.

Types of Gunnery. The use of Gunner skill requires knowledge on a specific type.

Gunnery Types
Bay Weapons
Ortillery
Screens
Spines
Turrets

Starship Skills. Gunner is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

Related Skills. Fighter, Heavy Weapons, and Gunner are related skills. Fighter concerns personal combat, including attacking and defending using various personal weapons (defined as weapons which a person can carry). Heavy Weapons relates to the use of battlefield weapons (defined as weapons carried or deployed by vehicles or launchers). Gunner relates to the weapons installed on starships and spacecraft (and which may be installed on other large vehicles).

HEAVY WEAPONS

Heavy Weapons (Heavy Wpns) is skill in the targeting, operation, and maintenance of the large military weapons systems. Heavy Weapons are any military weapons larger than those carried by a single person, and include Launchers, Artillery, Ordnance, and WMD (Weapons of Mass Destruction).

Characters with Heavy Weapons understand their principles of operation, the techniques of their use, and the basics of their maintenance.

Weapon Use. The individual can operate Heavy Weapons. The skill is used in personal combat.

Weapon Repair. Gun Combat skill is sufficient to allow basic repairs to weapons (primarily replacing assemblies).

Types of Heavy Weapons. The use of Heavy Weapons skill requires knowledge on a specific type.

Heavy Weapons Types
Artillery
Launchers
Ordnance
WMD

Soldier Skills. Heavy Weapons is one of the Soldier skills: Fighter, Forward Obs, Heavy Wpns, Navigator, Recon, and Sapper.

Related Skills. Fighter, Heavy Weapons, and Gunner are related skills. Fighter concerns personal combat, including attacking and defending using various personal weapons (defined as weapons which a person can carry). Heavy Weapons relates to the use of battlefield weapons (defined as weapons carried or deployed by vehicles or launchers). Gunner relates to the weapons installed on starships and spacecraft (and which may be installed on other large vehicles).

HI-G

Hi-G (High-Gravity, Hi-Gravity) is skill in functioning in High-Gravity Environments. High Gravity is defined as any environment with a Gravity higher than 1G.

Characters with Hi-G are familiar with the activities and precautions associated with Hi-G environments.

Familiarity. The individual understand the effects of High Gravity, including the higher potential for loss of balance, trips, falls, and mishaps. He understands the potential for injury if a fall occurs, and he understands that unfamiliar circumstances may distort normal reflexes and reactions.

To avoid mishap in High Gravity

Average (2D) < Dex + Hi-G

Reactions. The individual is trained to react properly in High Gravity situations. He knows how to fall to best avoid or minimize injury; he knows the behavior of objects in High Gravity.

To react to a High Gravity mishap
Average (2D) < Dex + Hi-G
Success avoids injury.

Related Skills. High-G, Hostile Environment, and Zero-G are related skills.

HOSTILE ENVIRONMENT

Hostile Environ (Hostile Environment) is skill in functioning in environments which are hostile to life. A typical Hostile Environment includes poisonous or unbreathable atmospheres, corrosive or insidious local conditions, extremes of temperature, or extremes of weather.

Familiarity. Characters with Hostile Environment understand the proper steps to protect themselves from difficult environments. The individual understand the effects of unbreathable atmospheres, of local contaminants or poisons, and of weather and temperature. He understands the potential for injury and the protective measures that should be taken.

Evaluation. The individual can recognize and identify potentially hostile environmental effects. While some may be obvious, he can identify less likely effects and bring them to others attention.

To identify potential dangers in a Hostile Environment
Difficult (3D) < Edu + Hostile Env
Properly identifies protective equipment necessary.

Reactions. The individual is trained to react properly in Hostile Environment situations. He knows how to react to best avoid or minimize injury; he knows the behavior of the elements of a Hostile Environment.

To react
Difficult (3D) < C5 + Hostile Env

Related Skills. High-G, Hostile Environment, and Zero-G are related skills.

JACK OF ALL TRADES

Jack of all Trades (JOT, rarely JOAT) is skill in acting competently in many different undertakings.

Characters with Jack of all Trades have a general education and wide experience which allows him or her to attempt many different tasks with some expectation of success in each.

Attempting Tasks. A character may attempt any task for which he or she has no other skill. The character may not use Jack-of-all-Trades in place of a skill which is already held.

Jack of All Trades can be used as a shield against the effects of the **This Is Hard! Rule.** If Skill plus JOT is equal to or greater than the number of dice being rolled on a task, then the TIH! rule does not apply. But, JOT does not directly increase the skill level used for task resolution.

Limits on Jack-of-All-Trades. A character may not use a level of Jack-Of-All-Trades which is higher than the associated personal characteristic. For example, if a task calls for Mechanics and Strength, the level of Jack-of-All-Trades used cannot exceed the character's Strength.

Jack-of-all-Trades may not be learned by experience; it must be acquired through the prior career process.

LANGUAGE

Language is skill in communications between sophonts using a commonly accepted symbol set.

Native Language is (usually) Anglic. Every character has a native language: the one learned in childhood and the one currently used. The level of skill in a native language is equal to the higher of the character's Intelligence or Edu (not C5).

Native Language is Default Language. A character's native language in **Traveller** is, by default, Anglic. Anglic is a form of English evolved over the course of thousands of years and heavily influenced by other languages it has encountered. If a character does not specifically choose another language, his or her native language is the default language.

Additional Languages. When Language is received, the individual selects a specific foreign language other than his or her native language. The first receipt of Language is at one level less than the character's Native Language. Each additional receipt of Language allows selection of another language at one level less than the previous. Language skill level received = Native minus number of Language receipts. For example, a character 777777 has English as his native Language. He receives Language five times, and takes each in a separate language: He has English-7, Spanish-6, French-5, German-4, Italian-3, Swedish-2.

If the character elects, additional receipts of Language can instead increase a non-native language, but never to more than Native Language.

For example, Eneri Dinsha's native language is Anglic; his skill is Language (Anglic)-7. He can speak it well, with a reasonable vocabulary. He occasionally makes simple grammatical errors. During one of his careers, he receives Language. He selects Vilani (the other major language in the Imperium) and receives it at on level less than his Native Language. He has Language (Vilani)-6. He receives Language a second time: he uses it to increase Vilani (to Language (Vilani)-7. He receives Language a third time. It cannot be used to increase Vilani beyond his Native Language, so he selects Gvegh and receives (level= Native minus number of receipts = 7-3= 4) Language (Gvegh)-4.

Recording Languages A Character Knows: Record this skill as Language (Specific). For example, Language (Spanish) or Language (Geonee).

Related Skills. Language and Linguistics are related skills. Language is the ability to hear, speak, and use a specific language. Linguistics is the specialized study of all languages.

LANGUAGES

!kee:	K'kree	The trade language spoken by most space-faring K'kree.
Anglic	Imperial	One of two standard Imperial languages: derived originally from the English spoken in the Rule of Man (then called Galanglic).
Battle	Imperial	The battlefield language of the Imperial Star Marines.
Gvegh	Vargr	The most commonly encountered Vargr language, spoken by most Vargr.
Oynprith	Droyne	Ancient ritual language of the Droyne.
Sagamaal	Sword Worlds	The common language of the Sword Worlds, derived from Icelandic spoken on Terra after the collapse of the Rule of Man but before the founding of the Third Imperium.
Tezapet	Darrian	The Darrian spoken language.
Trokh	Aslan	The Aslan spoken language.
Vilani	Imperial	One of two standard languages spoken in the Third Imperium, derived originally from the language spoken in the First Imperium.
Zdetl	Zhodani	The Zhodani spoken language.

LEADER

Leader (Leadership) is skill in expressing personal power to persuade or command others to perform specific tasks.

Characters with <u>Leader</u> know what actions are required in order to lead others.

Appointed Leaders. Within organizations, leaders are appointed (for example, military or naval officers). These individuals have rank and position, but they may not necessarily have Leadership skill.

Emergent Leaders. Individuals who have Leader, regardless of their rank or position, are emergent leaders. They are natural leaders with an ability to know what steps to take and what orders to give.

Related Skills. Admin is related to **Bureaucrat** and **Leader**. **Admin** is the management of resources and involves setting policy and communicating policy to members of the organization. **Bureaucrat** is the understanding of standardized procedures within an organization, and the ability to interpret and follow those procedures. **Leader** is the ability to express power without regard to position within an organization.

LIAISON

Liaison is skill in informal coordination of relationships between different cultures or organizations; it includes an ability to guide them toward achievement of a common purpose.

Characters with Liaison are trained in the art of dealing with others; this skill is usable in relations with members of military units, citizens in a community, and with alien or foreign cultures.

This individual is trained to subordinate his own views and prejudices where they may conflict with those opinions held by the individuals he is dealing with. As a result, greater cooperation can be achieved and progress in mutual projects made.

Related Skills. Liaison and Diplomat are related skills. Liaison is skill in informal coordination of relationships between different cultures or organizations. Diplomat is skill in formal negotiation between governments or large organizations.

MAGNETICS

Magnetics (Magnetic) is concerned with devices based on magnetism and magnetic fields. Example magnetic

devices include manipulators and bearings, and sensors.

Characters with Magnetics are skilled in the maintenance, repair, and construction of magnetic devices. Magnetics conveys an understanding of the principles of device construction and repair.

Fundamental Knowledge. The individual has a basic grasp of what the field of Magnetics and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Magnetics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Magnetics and how to use them for Magnetics repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about Magnetics equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair Magnetics equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble Magnetics components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Magnetics if he also has Designer.

Magnetics is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

MECHANIC

Mechanic (Mechanics, Mechanical) is concerned with devices based on mechanical interaction. Example mechanical devices include motors, drive trains, and structural components.

Characters with Mechanic are skilled in the maintenance, repair, and construction of mechanical devices. Mechanic conveys an understanding of the principles of device construction and repair.

Mechanic is a Default Skill. Most people are able to accomplish basic mechanical tasks when necessary. Essentially all characters have Mechanic-0.

Fundamental Knowledge. The individual has a basic grasp of what the field of Mechanics is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Mechanics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Mechanics and how to use them for Mechanics repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about Mechanics equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair Mechanics equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble Mechanics components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Mechanics if he also has Designer.

Mechanic is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

MEDIC

Medic (Medical, Medicine, Doctor, Healer) is skill in the healing arts.

Characters with Medic understand injuries and illnesses and how they are treated. They can diagnose physical and mental illnesses and they can prescribe treatment to improve or cure them.

Treating Injury and Illness

When a Doctor (or Medic) examines a patient, he must determine three elements: Location, Severity, and Diagnosis.

The Referee determines the three elements (through a process of logic, or through consultation of the Malfunctions Table).

Location details the anatomical or the biological location of the illness or injury. Injuries are typically anatomical; illnesses are typically biological.

Severity details how serious the illness is, and how difficulty the treatment task is.

Diagnosis details how difficult the task of defining the illness is.

Palliative Treatment. Until the Medic succeeds in Diagnosis, he can only provide palliative treatment (pain relief, basic physical support, stopping bleeding).

To provide palliative treatment (Variable Hours)
Average (2D) < C5 + Medic

Success stabilizes the patient. Failure increases Severity 1D.

Diagnosis. The Medic resolves the Diagnosis task.

To Diagnose an Illness (Variable Hours)

To diagnose an injury or illness.
Difficulty (nD) < C5 + Medic
Uncertain (Difficulty minus 1). Anyone may try to diagnose an illness or injury.

Difficulty (nD) < C5 + Medic + Diagnostic Tools
Uncertain (Difficulty minus 3).

The result of the successful task reveals the Severity of the injury or illness. If the task fails, the diagnosis is Unknown, and a repeat attempt at diagnosis must be made the following day.

Each successive diagnosis receives a Mod +1 (the third diagnosis receives Mod +2).

If the Diagnosis task fails, the Referee creates a false Diagnosis (roll 1D for the Severity).

Treatment. The Medic resolves the Treatment task.

To replace an injured anatomic location
Severity (nD) < Dex + Medic +1 + Equipment
Item must be available as a spare.

To repair an injured anatomic location
Severity (nD) < Dex + Medic
Uncertain (1D)

To treat a diseased biological component
Severity (nD) < C5 + Medic
Uncertain (1D)

Treatment of anatomic locations is governed by Dextrerity. Treatment of Biological location is governed by C5.

Improper treatment (created by a false or incorrect diagnosis) worsens a patient's Severity +1 D per day.

For example, a soldier appears at the military aid station complaining of muscle pain. The referee rolls for Location (= 6 = Respiration), Severity (=1 = Easy treatment), and Diagnosis (= 4 Formidable diagnosis).

Doctor Emerald 777777 Medic-2 prescribes palliative treatment and then attempts a diagnosis with Tools+2).

To diagnose an injury or illness.
Formidable (4D) < C5 + Medic + Diagnostic Tools+2
Uncertain (Difficulty minus 3).

Doctor Emerald needs to roll (=7 + 2 + 2 =) 11 or less on 4D. He rolls 3-3-3 and the Referee rolls the uncertain die = 1). Assuming the Uncertain Roll = 3, the Referee tells the Doctor the Diagnosis fails (although it actually succeeded).

Meanwhile, the Doctor resolves palliative therapy.

To provide palliative treatment (Variable Hours)
Average (2D) < C5 + Medic

He needs to roll (7 + 2 = 9 or less on 2D. He rolls 11 and fails. The patient's condition worsens to Severity = 2D.

Doctor Emerald 777777 Medic-2 tries a new diagnosis the next day.

Doctor Emerald has a Mod + 1 for the second diagnosis and needs to roll (=7 + 2 + 2 +1=) 12 or less on 4D. He rolls 2-3-4 and the Referee rolls the uncertain die = 6. Assuming the Uncertain Roll = 3, the Referee tells the that the Severity is (= roll 1D = 3 =) Difficult, and that the location is Biological Digestion (the Doctor thinks "Can that be right?").

The Doctor begins treatment.

To treat a diseased biological component
Difficult (3D) < C5 + Medic
Uncertain (1D)

He needs to roll (= 7 + 2 =) 9 or less on 3D. He rolls 5 + 5 which indicates success despite the Uncertain die. The patient's condition worsens to Severity = 3D.

Xeno-Medicine. Medics are routinely educated (or trained) in the treatment of sophonts beyond their own species. Nevertheless, they encounter situations beyond their experience. Xeno-Medicine (on the Mods table) provides a Mod for such encounters.

Starship Skills. Medic is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

MUSICIAN
Musician (Music) is ability in the auditory arts.
Musician is a skill in the creation of entertaining sounds, including the ability to play a musical instrument, to sing (or hum, or whistle), and to convey a wide range of emotion while playing music.

Music Appreciation. The individual enjoys music and understands its power and its interest. He or she has a background in the field which allows reasonable discussion with others who also appreciate music.

Performing. The individual can play one or more musical instruments (or can sing).

Musical Instruments. The use of Musician skill requires knowledge on a specific type.

Music Instrument Types

Banjo	Keyboard	Trumpet
Cello	Mandolin	Viola
Guitar	Piano	Violin
Horn	Synthesizer	Voice

Other instruments are also possible

The first time a character receives Musician skill, he must instead take Knowledge-1 in one of the Musical Instruments and receives Musician-0.

The second time a character receives Musician skill, he must instead take Knowledge-1 in one of the Musical Instruments (including the instrument already taken), and adds 1 to Musican.

All subsequent receipts of Musician can be taken as Musician skill.

Related Skills. Musician is one of the six Arts (Actor, Artist, Author, Chef, Dancer, and Musician).

NAVAL ARCHITECT
Naval Architect is skill in design of starships and spacecraft.

The individual is trained in the design of starships and small craft. Knowledge of the requirements for accurate, usable ship design plans and of the details of ship design are part of this skill.

The use of this skill is governed by the starship design and construction rules and does not allow the invention of new devices or equipment.

Ship Identification. Naval Architect enables an individual to identify starships by mission (and to estimate weapons, drives, or performance) based on an external examination.

NAVIGATOR
Navigator (Navigation) is skill in the determination of present location and course planning to a selected destination in a world surface setting.

Characters with <u>Navigator</u> know how to use navigation instruments (compass, inertial navigator, maps, direction finders), and have developed spatial sense that helps determine position.

Map Reading. The individual can find his or her current position on a map.

To find current position on a map
Average (2D) < Edu + Navigator   Uncertain (1D)

Course Plotting. The individual can determine and express the best (or most efficient, or most useful) course to be taken (for vehicles in association with a world surface).

To plot a course
Difficult (3D) < Int + Navigator   Uncertain (1D)

Soldier Skills. Navigator is one of the Soldier skills: Fighter, Forward Obs, Heavy Wpns, Navigator, Recon, and Sapper.

Related Skills. Astrogator is space-based and involves charting courses for interplanetary and interstellar craft; it is a tedious and laborious undertaking, even when aided by computers and sensors. **Navigator** is concerned with world surface travel. **Survey** is world-based, and involves understanding observing and identifying obvious and unobvious details of the terrain.

PHOTONICS

Photonics (Photonic) is concerned with devices and materials based on light, electromagnetic radiation, and photon flow. Photonics devices include those which emit or radiate photons externally (including radio frequency devices, lasers, and illuminators), or which make use of photon flow internally (as in fiber optics, photon cascades, and vision devices).

Characters with <u>Photonics</u> are skilled in the maintenance, repair, and construction of photonic devices. Photonics conveys an understanding of the principles of device construction and repair.

Fundamental Knowledge. The individual has a basic grasp of what the field of Photonics is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Photonics and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Photonics and how to use them for Photonics repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about Photonics equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair Photonics equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble Photonics components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Photonics if he also has Designer.

Photonics is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

PILOT

Pilot is skill in the maneuver of ships and small craft.

Characters with <u>Pilot</u> can operate a ship, directing its launch, its movement from place to place, and its landing at a starport or other suitable location.

To perform a preflight check on a deep space fighter.
Easy (1D) < Edu + Pilot

To launch/take-off a deep space fighter.
Average (2D) < Dex + Pilot

To travel to a destination in a deep space fighter.
Easy (1D) < Dex + Pilot

To maneuver against an opponent in a space fighter.
Average (2D) < Dex + Pilot
Opposed (2). Success provides Advantage-3 in Dogfight.

To attack a target with a deep space fighter
Average (2D) < Dex + Pilot
A successful attack drives off the defender.

To return to base with a deep space fighter.
Average (2D) < Dex + Pilot

Starship Skills. Pilot is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

POLYMERS

Polymers (Polymer, Plastics) is concerned with devices and materials based on plastics. Many polymer uses are structural, including coatings, adhesives, and rigid, flexible, or transparent panels. Polymer devices include fittings (hinges, gaskets), textiles, and impact absorbing armor.

Characters with <u>Polymers</u> are skilled in the maintenance, repair, and construction of polymer devices. Polymers conveys an understanding of the principles of device construction and repair.

Fundamental Knowledge. The individual has a basic grasp of what the field of Polymers is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic tools of Polymers and as a matter of course carries with him rudimentary tools which allow basic fault diagnosis.

Advanced Tools. The individual has a familiarity with sophisticated tools of Polymers and how to use them for Polymers repair.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about Polymers equipment and whether it is functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair Polymers equipment which he has previously diagnosed as malfunctioning.

Construction. The individual can assemble Polymers components into operating pieces of equipment (assuming adequate components are available and an appropriate design is on hand).

Device Design. The individual can design devices which make use of Polymers if he also has Designer.

Related Skills. Chemisty and **Polymers** are related. Chemistry is the broad knowledge of the study o f matter; Polymers is the practical skill in creating and using plastics.

Polymers is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics, Polymers, and Programmer.

PROGRAMMER

Programmer (Programming, Coding, Coder) is concerned with the operating and control systems of both analog and digital devices. Programmer includes installation of devices, adjustment to operate with within prescribed parameters, and detailed configuration for specific tasks.

Characters with <u>Programmer</u> are skilled in the process and procedures of programming devices to correctly accomplish their functions. Programmer conveys an understanding of the principles of programming languages, analysis of systems, writing programs in higher level languages, and debugging of problems.

Fundamental Knowledge. The individual has a basic grasp of what the field of Programmer is and how it can be applied to the world in general. He understands basic concepts, units of measure, and safety procedures. He is familiar the basic software tools of Programming.

Advanced Tools. The individual has a familiarity with sophisticated tools of Programming and how to use them.

Device (or Program) Design. The individual can design complex programs from scratch (or using existing code modules) if he also has Designer skill.

Diagnosis and Repair. The individual's skill and experience allows him to reach basic conclusions about Programming problems, determine whether specific programs are functioning properly (or if not, the probable cause of the fault). The individual can attempt to repair Programs which he has previously diagnosed as malfunctioning.

Related Skills. Comms, **Computer**, and **Programmer** are related skills. **Computer** is the ability to use technological office equipment and focuses on non-primary data input. **Comms** is the ability to use technological communications equipment and focuses on primary data input. **Programmer** is the ability to configure office equipment or communications equipment (as well as other equipment) to achieve desired functions.

Programmer is one of the ten Trades. A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). The ten Trades are Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanic, Photonics,, Polymers, and Programmer.

RECON

Recon (Reconnaissance) is skill in gathering information about military and naval operations and units.

Characters with <u>Recon</u> collect information on or near the battlefield in support of their military forces and report it to higher headquarters. The individual is skilled in military scouting and is capable of moving about in the wilderness without being detected.

Collecting Information

The individual can move through Terrain, and Local Hexes avoiding detection by locals or natives, or by military or civil authorities.

The individual travels through individual hexes in search of military information.

Recon In A Terrain Hex. The individual may determine the presence of military forces in the Terrain Hex. A proper recon takes about a day.

To Locate Military Forces in a Terrain Hex (if any)
Difficult (3D) < End + Recon

Success indicates the presence of the military force and the Local Hex in which it is located.

Recon In A Local Hex. The individual may determine the presence of military forces in the hex. A proper recon takes about a day.

To Assess Military Forces In A local Hex (if any)
Difficult (3D) < End + Recon

Success indicates the size of the military force, its weapons and vehicles, and its apparent mission or purpose.

Recon In A Single Hex. The individual may precisely identify military forces or civilian targets with sufficient precision to allow planning attacks, or for targeting by artillery or ortillery.

To Identify Potential Targets
Average (2D) < Edu + Recon

Identifying a potential target by its location in a Single Hex is sufficient for it to be targetted and attacked by artillery or ortillery.

Soldier Skills. Recon is one of the Soldier skills: Fighter, Forward Obs, Heavy Wpns, Navigator, Recon, and Sapper.

SAPPER

Sapper (Combat Engineer) is skill in rapid construction or demolition under military conditions.

Characters with <u>Sapper</u> can perform a variety of tasks under combat conditions, including bridge-building, placing and clearing minefields, building defenses, and constructing roads and bases.

Soldier Skills. Sapper is one of the Soldier skills: Fighter, Forward Obs, Heavy Wpns, Navigator, Recon, and Sapper.

SEAFARER

Seafarer (Sailor) is skill in the operation of watercraft. Seafarer is skill in the operation of watercraft. It includes the physical aspects of operating watercraft, an awareness of the protocols of watercraft traffic, and basic procedures of preventative and curative maintenance.

Types of Watercraft

The use of Seafarer skill requires knowledge on a specific type of watercraft.

Boat. A small watercraft suitable for use on rivers and lakes, or in the ocean or sea portion of shore terrain. A Boat is a vehicle of less than 100 displacement tons.

Submarine. A vessel capable of operating underwater.

Ship. A large watercraft suitable for operation in oceans and seas, including the ocean or sea portion of shore terrain. A Ship is a vehicle of more than 100 displacement tons.

Grav. A watercraft equivalent in size to a Boat, which additionally is moved by Grav technology and capable of moving through atmosphere above water surfaces. Grav Knowledge associated with Driver or Flyer is equally applicable to Grav Seafarer.

Characters with Watercraft are qualified to operate all types.

Watercraft Identification. The character can identify watercraft in general terms and often in specific terms based on education and experience.

To identify an watercraft
Average (2D) < Edu + Seafarer + Visibility

To identify an watercraft far out to sea.
Difficult (3D) < Edu + Watercraft + Visibility

Watercraft Operation

Watercraft operation tasks are detailed under Vehicle Operations in the Vehicle Chapter.

SENSORS

Sensors is skill in the use of technological sensory equipment: the artificial devices which extend and enhance the natural senses. Sensors detect a variety of stimuli and provide it in readable form to the sensor operator; this skill reflects the ability to understand and use that information.

Characters with Sensor understand the role of sensors in military, naval, scout, and commercial activity, He or she can discuss intelligently a variety of sensors and their functions.

Starship Skills. Sensors is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

STEALTH

Stealth (Clandestine, Spycraft) is skill in moving or functioning without being detected.

Characters with Stealth understand how to move silently and unobserved.

Stealth Movement. The individual is able to move undetected.

To move undetected
Difficult (3D) < End + Stealth

Stealth Equipment. Unfortunately, Stealth itself is of no benefit against automated electronic surveillance devices or robots. There are pieces of equipment which frustrate automated surveillance, and Stealth is of value in their use.

Evaluation. The individual is able to evaluate the difficulty of penetrating the defenses of a location.

To evaluate the defenses of a location (from outside)
Difficult (3D) < Int + Stealth
Uncertain (2D). Result is a difficulty level.

To evaluate the defenses of a location (from a tour).
Difficult (3D) < Int + Stealth
Uncertain (1D). Result is a difficulty level.

Penetrating Defenses. The individual is able to overcome or bypass the defenses of a location.

To enter premises.
Difficult (3D) < Dex + Stealth
Difficulty level is set from previous evaluation.

To sneak past a guard into a nuclear power plant.
Staggering (5D) < Int + Stealth
Uncertain (1D)

STEWARD

Steward (Servant, Purser) is skill in meeting the personal needs of others.

Characters with Steward understand the basic elements of personal service. They can receive basic instructions and execute them. Higher levels of Steward involve personal initiative and anticipation of the needs of the employer.

Steward is a Default Skill. Most people are able to attend to the personal needs of others when necessary. Essentially all characters have Steward-0.

Servant. The individual has training as a servant, and knows the details of personal service, including meal preparation, domestic duties (cleaning, laundry), and general help.

Executive Assistant. The individual has training and experience as an executive assistant or secretary, and knows the details of service within the business environment, including scheduling, note taking, and correspondence.

Starship Skills

Steward is a vital role aboard merchant ships.

Steward (typically 4th Officer). The individual has training and experience as a steward (the passenger service oriented crew position on starships), including meal service, entertainment, and general assistance.

Although starship officer responsibilities vary from ship to ship, the 4th Officer is typically the Steward. He sells tickets and arranges accommodations for passengers when in port; during voyages, he tends to the needs of the passengers (especially the High Passengers).

A good Steward can arrange advance accommodations for passengers (for a "fee" of 1% of the ticket price).

A good Steward can make reasonable tips from satisfied passengers at the end of the voyage.

Tips (in Credits) =
Good Flux * Steward * 10 * High Passengers

FreightMaster. The individual has training or experience in the handling of freight (designates goods carried for a fee by a ship) and cargo (trade goods bought by the ship owner and carried as speculation), including knowledge of proper stowage, environmental conditions, and quarantine and health requirements.

Freightmaster is an additional duty for the Steward.

Related Skills. Steward is one of the seven Starship skills (Astrogator, Engineer, Gunner, Medic, Pilot, Sensors, and Steward).

STRATEGY

Strategy is skill in formulating long-range or high level plans for business, military, or athletics. Strategy deals with the planned reasons for the encounters or confrontations and with the intended results; strategy is much more the realm of the players, rather than of the characters.

Strategic Planning. Players make general plans for their characters' actions. When they make such plans, the level of Strategy skill the characters have must be considered by the game master when those plans are implemented.

Strategy is not to be confused with Tactics (naval tactics concerns the operation of starships and spacecraft).

Naval Strategy

The individual is trained and experienced in the deployment and operations of groups of naval spacecraft.

Analysis. The individual can analyze information about spacecraft deployment and arrive at an understanding, based on that information, of the strategies and tactics that those forces will use.

Space Combat. Fleet Tactics is used in space combat.

Related Skills. Strategy, Tactics, and Fleet Tactics are related skills. Strategy addresses the reasons for a military or naval encounter and planning the deployment of resources to achieve an intended result. Tactics is the specific activities within a battle which help achieve victory. Fleet Tactics is the direction of multiple ships in space combat.

STREETWISE

Streetwise is skill in interacting with local subcultures.

Characters with Streetwise are acquainted with the ways of local subcultures and are capable of dealing with strangers without alienating them. Close-knit subcultures generally reject contact with strangers or unknown elements. Streetwise allows interaction for the purposes of obtaining information, hiring, purchasing or selling contraband or stolen goods, and other shady or borderline activities .

SURVEY

Survey (Exploration) is skill in the art of wilderness exploration and mapping, which includes an ability to move through rough areas with ease and to evaluate the resources and features of the territory.

Characters with Survey understand the details of exploring, mapping, and otherwise recording information about worlds.

Exploratory Survey

The individual can move through territory which is not clearly mapped or explored, and note its key geographic features. If there are intelligent beings in the territory, the character can make contact and evaluate them as well.

Individuals conducting Planetary Surveys produce reports in the form of a hex map of the territory being explored.

World Hex Survey. The character enters a World Hex and proceeds to populate its constituent Terrain Hexes on a map.

An individual entering a Terrain Hex can discover and record the basic Terrain identification for the hex in about a day. An individual with Survey can discover (or deduce) and record the basic Terrain identification for the hex (and for adjacent hexes equal to his Survey skill) by traveling through it.

In addition,

To Locate Resource Hexes in a World Hex (if any)
Difficult (3D) < Edu + Survey

To Locate Population Centers in a World Hex (if any)
Difficult (3D) < Edu + Survey

To Locate Military Forces in a World Hex (if any)
Difficult (3D) < Edu + Survey

To Locate Natives in a World Hex (if any)
Difficult (3D) < Edu + Survey

Upon exiting the World Hex, the individual produces a Report consisting of a Map of the Terrain Hexes in the World Hex.

Terrain Hex Survey. The individual can conduct a rigorous Resource Survey of a Terrain Hex, populating it with Local Hexes in much the same manner as a World Hex Recon.

An individual with Survey can discover (or deduce) and record the basic Terrain identification for a Local hex (and for adjacent Local hexes equal to his Survey skill) by traveling through it.

Upon exiting the Terrain Hex, the individual produces a Report consisting of a Map of the Local Hexes in the Terrain Hex.

Related Skills. Astrogator is space-based and involves charting courses for interplanetary and interstellar craft; it is a tedious and laborious undertaking, even when aided by computers and sensors. **Navigator** is concerned with world surface travel. **Survey** is world-based, and involves understanding observing and identifying obvious and unobvious details of the terrain.

SURVIVAL

Survival is skill in remaining alive in the face of dangerous situations or locations.

Characters with Survival expertise are adept at locating food and water, constructing natural weapons and shelter, setting simple wildlife traps, and travelling across country, in a wilderness or hostile environment.

In The Wild. The individual knows the basic steps to be taken when cast into the wild without standard resources.

To determine the best direction to travel.

Average (2D) < Int + Survival

To locate suitable food and water.
Average (2D) < Int + Survival

To create suitable shelter
Average (2D) < Int + Survival

In Emergencies. The individual has an ability to respond in emergencies (vehicle crashes, surprise attacks, disasters).

To pick the right course of action.
Difficult (3D) < Int + Survival

Hunting and Fishing. Survival is concerned with wilderness activity. It necessarily includes the ability to hunt animals and gather foodstuffs. Hunting itself is a situation rather than a skill.

TACTICS
Tactics is skill in engaging and defeating an opponent in conflict situations.

Military Tactics
The character has training and experience in small unit tactics and operations (for military units of up to company size, or about 500 troops).
Combat Situations. Tactics is used in combat.
Close Order Drill (Rifle or Sword). The individual knows how to participate in military parades, marches, and ceremonies. He or she knows how to manipulate small arms in Close Order Drill, and how to give orders to others when in a position of leadership.

To properly march a unit of soldiers through a plaza
Difficult (3D) < Edu + Tactics

Naval Tactics
The individual knows how to operate starships and spacecraft in combat and maneuver situations.
Combat. Naval Tactics is used in space combat.
Naval Tactics concerns the operation of starships and spacecraft; Fleet Tactics concerns the operation of groups of starships or spacecraft)

Related Skills. Strategy, Tactics, and Fleet Tactics are related skills. Strategy addresses the reasons for a military or naval encounter and planning the deployment of resources to achieve an intended result. Tactics is the specific activities within a battle which help achieve victory. Fleet Tactics is the direction of multiple ships in space combat.

TEACHER
Teacher (Instruction, Instructor, Teaching) is skill in imparting knowledge to others in classroom or practical situations.
Characters with Teacher have the ability to impart knowledge to other characters who have C5 = Edu, and to a lesser extent, to characters who have C5= Tra.

To teach a skill to one student (1 year)
Difficult (3D) < Edu + Teacher

To teach a skill to one C5= Tra student (1 year)
Formidable (4D) < Edu + Teacher

Specify skill being taught (the teacher must have at least one level higher in the skill being taught). Student receives plus one level at year end. The student need not begin the course with any skill level in the skill being taught.

To teach a skill to a class of students (1 year)
Difficult (3D) < Edu + Teacher
Each student must roll Edu or less to receive the skill (thus, a student with C5= Tra uses Tra/2 for Edu).

Enhancements to Teacher. The chance of success of the instruction task may be improved by a variety of enhancements. For example, Linguistics can be used when teaching Language.
The skill received is in place of the experience skill increase for the year. The advantage is that the skill received may be a totally new one to the student.

Related Skills. Teacher and **Trainer** are related skills.
Teacher is the ability to impart knowledge to characters who have C5= Edu. **Trainer** is the ability to impart knowledge to characters who have C5= Tra.

TRADER
Trader is skill in identifying goods and estimating their value in the local market.
Characters with Trader have learned to identify a wide variety of objects and to evaluate them in terms of their relative scarcity (both locally, and throughout the universe). They can determine with some degree of accuracy the current local market price of objects.

To evaluate a trade good or cargo
Difficult (3D) < Int + Trader
Uncertain (1D)

Evaluation. Objects are (or can be) described in the QREBS system to indicate their level of Quality, Reliability, Ease of Use, Burden, and Safety. Trader (and Craftsman) can evaluate the specific components of QREBS.
Appraisal. Trader (but not Craftsman) can also estimate the value of an object.

EVALUATING QREBS

		Difficulty	Char	Skill
Q	Quality	3D	C5	Trader*
R	Reliability	4D	Ins	Trader*
E	Ease of Use	2D	C2	Trader*
B	Burden	2D	Str	Trader*
S	Safety	2D	Int	Trader*
	Value	3D	Int	Trader

* or substitute Craftsman.

To evaluate Quality
Difficult (3D) < C5 + Trader
Uncertain (1D)

To evaluate Reliability
Formidable (4D) < Ins + Trader
Uncertain (1D)

To evaluate Ease Of Use

Average(2D) < C2 + Trader
Uncertain (1D)

To evaluate Burden
Average (2D) < Str + Trader
Uncertain (1D)

To evaluate Safety
Average (2D) < Int + Trader
Uncertain (1D)

To estimate Value
Difficult (3D) < Int + Trader
Uncertain (1D)

Trade and Commerce
   Trader provides an understanding of market processes. Trader allows one die on the Actual Value Table to be rolled in advance; each level of Trader allows a throw one day in advance of the sale date.
   For example, a character with Trader-3 can roll one die on the 2D Actual Value Table (on the Trade Charts) three days before the transaction. Using simple logic, he can predict the minimum and maximum values on that table (reflecting his experience in such transactions). If the transaction will not produce sufficient profit, he can cancel it and move on.

   Related Skills. Broker and **Trader** are related skills. **Broker** is the ability to bring together a seller and a buyer based on interpersonal interactions and an understanding of relative values of goods. **Trader** is the ability to independently appraise and value goods.

VACC SUIT
   Vacc Suit (Space Suit, Vacuum Suit) is skill in functioning in Vacuum environments, and using vacuum suits and environmental protective equipment.
   Characters with Vacc Suit know how to examine a vacc suit, ascertain that it is functional, put it on, check its seals,

and maneuver while wearing it without causing a tear in the fabric.
   Vacc Suit is a Default Skill. Most people are able to wear a Vacc Suit, with suitable caution and attention, when necessary. All characters have Vacc Suit-0.

   To put on and wear a vacc suit.
   Average (2D) < Dex + Vacc Suit
   Cooperative (1 Vacc Suit)

   Mishaps. There are opportunities for mishaps while wearing environmental protection equipment.

   To patch a vacc suit (minor problem)
   Average (2D) < Dex + Vacc Suit

   To patch a vacc suit (major problem)
   Difficult (3D) < Dex + Vacc Suit

   Other Equipment. Vacc suit skill is also usable with respirators, filter masks, high temperature environment suits, and low temperature suits.

ZERO-G
   Zero-G (Zero-Gravity) is skill in functioning in Zero-Gravity environments.
   Characters with Zero-G have developed the basic abilities to function in non-gravity environments, including using secondary limbs to stabilize themselves, understanding how to move from place to place, predicting the position of self and others based on the laws of motion, and internalizing basic safety procedures.

   To leap a Vlong Gap between ships in deep space
   Average (2D) < Dex + Zero-G

   To leap a Distant Gap between ships in deep space
   Difficult (3D) < Dex + Zero-G

Immediate Action
   Immediate Action is the trained automatic response to a problem, without regard to diagnosis or probable cause.
   Soldiers, mechanics, technicians, and clerks all respond to an equipment malfunction by performing Immediate Action.

   When a weapon, device or component fails or malfunctions, identify the appropriate skill and

   Check Skill (2D)

   Success makes the severity of the malfunction or damage Easy 1D and the device remains operable.
   A result of 12 is automatic failure.

THE TRADES
   A trade is a skilled practice of a practical occupation. An individual with skill in one of the Trades is a skilled worker (as opposed to an unskilled worked). There are ten Trades: Biologics, Craftsman, Electronics, Fluidics, Gravitics, Magnetics, Mechanics, Photonics, Polymers, and Programming.
   Each trade has a standard response to emergency or important situations. The expert skill holder gets an inspiration and says:

Biologics	Add more amino acid.
Craftman	Slap on another coat of varnish.
Electronics	Reverse the polarity.
Fluidics	Purge the primary (/secondary) feed.
Gravitics	Filter out the harmonics.
Magnetics	Adjust the pole tolerance.
Mechanics	Give it a whack!
Photonics	Increase (/decrease) the wavelength.
Polymers	Reverse the last ion pair.
Programming	Run the error suppression routine.

He then rolls Immediate Action.

The Knowledges

A **knowledge** is a body of information based on a field of science, training, or experience. For example, Chemistry reflects the body of knowledge of theoretical and practical chemistry. The maximum attainable level of a knowledge is 6.

Academia (Academics) is the general Knowledge associated with the profession of scholar.

ACV (Air Cushion Vehicle) is the Knowledge associated with the operation of vehicles using ACV technology.

Aeronautics is the Knowledge of Flyer maintenance and repair. It contrasts with the other Knowledges under Flyer in that it is deeply concerned with repair, modification, and maintenance rather than operation.

Aquanautics is the Knowledge of watercraft maintenance and repair. It contrasts with the other Knowledges under Watercraft in that it is deeply concerned with repair, modification, and maintenance rather than operation.

Archeology is the scientific study of civilizations, societies, and cultures

Artillery is the Knowledge associated with the targeting, operation, and maintenance of the artillery weapons systems.

Automotive is the Knowledge of ground vehicle maintenance and repair. It contrasts with the other Knowledges under Driver in that it is deeply concerned with repair, modification, and maintenance rather than operation.

BattleDress is skill in the use, care, and repair of personal combat armor, including Powered Armor. Battle Dress is also required to use weapons designated as Portable.

Bay Weapons is the Knowledge associated with large starship weapons installations (those mounted in Bays).

Beams is the Knowledge associated with the use, maintenance, and repair of personal energy weapons.

Biology is the scientific study of living organisms

Blades is the Knowledge associated with the use, maintenance, and repair of blade or edged weapons.

Boat is the Knowledge associated with the operation of small watercraft.

Capital is the general Knowledge associated with Capital, the center of the Imperium.

Career is the general Knowledge associated with a specific <Career>.

Chemistry is the scientific study of matter at the atomic, molecular, and macromolecular levels

Exotics is the Knowledge associated with the use, maintenance, and repair of strange, unorthodox, or unusual personal weapons.

Flapper (Ornithopter, Flapping Wing Aircraft) is the Knowledge associated with the operation of aircraft which use flapping wings.

G-Drive is the Knowledge associated with the operation of gravitic drives. G-Drives are a subset of M-Drives, and this obscure Knowledge is typically learned by citizens and functionaries.

Grav (Grav Vehicle) is the Knowledge associated with the operation of vehicles using gravitics technology.

Grav (Grav Watercraft) is the Knowledge associated with the operation of watercraft using gravitics technology.

Grav (Grav Flyer) is the Knowledge associated with the operation of flying craft using gravitics technology.

History is the scientific study of events over time

J-Drive is the Knowledge associated with the operation of jump drives.

Launcher is the Knowledge associated with the targeting, operation, and maintenance of the military launcher weapons systems.

Legged is the Knowledge associated with the operation of vehicles supported by and propelled by legs. Legged is the controlling Knowledge for Units (a form of personal armor).

Life Support is the Knowledge associated with the operation of life support systems.

Linguistics is the scientific study of languages

LTA (Lighter Than Air Craft) is the Knowledge associated with the operation of lighter-than-air craft.

Maneuver Drive (M-Drive) is the Knowledge associated with the operation of maneuver drives. It includes G-Drives.

Mole is the Knowledge associated with the operation of vehicles which burrow underground.

Ordnance (Gun Repair) is the Knowledge associated with military weapon maintenance and repair.

Ortillery (Orbital Bombardment) is the Knowledge associated with the targeting, operation, and maintenance of the orbital bombardment systems.

Philosophy is the scientific study of the purpose or purposes of life

Physics is the scientific study of fundamental laws of the universe

Planetology is the scientific study of structure and characteristics of worlds

P-Plant is the Knowledge associated with the operation of fusion (and other) power generating plants.

Psionicology is the scientific study of psionics and paranormal activity.

Psychohistory is the scientific study of extremely large populations. Psychohistory is a predictive and manipulative science which envisions specific stimuli applied to a large population to achieve a specific result.

Psychology is the scientific study of mental processes and behavior.

Regina is the general Knowledge associated with the world of Regina.

Rider (Equestrian) is the Knowledge associated with the use of animals as personal transport.

Robotics is the scientific study of the design, construction or creation, and maintenance of artificial beings

Rotor (Helicopter, Rotary Wing Aircraft) is the Knowledge associated with the operation of aircraft which use rotary wings.

Scout Service (Scout) is the general Knowledge associated with the profession of scout.

Screens is the Knowledge associated with the operation of protective screens.

Ship is the Knowledge associated with the operation of large scale ocean-going surface watercraft.

Slug Throwers is the Knowledge associated with the use, maintenance, and repair of personal bullet-firing weapons.

Small Craft (Ship's Boat) is the Knowledge associated with the operation of spacecraft typically smaller than 100 tons.

Soldier (Army, Military) is the general Knowledge associated with the profession of soldier.

Sophontology (Xenology) is the scientific study of intelligent beings

Spacecraft ACS (Spaceship, Spacecraft) is the Knowledge associated with the piloting or direction of spacecraft in the ACS series (larger than Small Craft but smaller than 2500 tons).

Spacecraft BCS (Big Spaceship, Big Spacecraft, BCS Spacecraft) is the Knowledge associated with the piloting or direction of spacecraft in the BCS series (larger than 2400 tons).

Spacer (Navy, Naval) is the general Knowledge associated with the profession of spacer.

Spines is the Knowledge associated with the operation of spinal weaponry for starships and spacecraft.

Sprays is the Knowledge associated with the use, maintenance, and repair of personal spray weapons.

Sub (Submarine, Submersible) is the Knowledge associated with the operation of subsurface watercraft.

Teamster is the Knowledge associated with the use of animals as beasts of burden and the loading and unloading of transport vehicles (especially beast-drawn vehicles).

Tracked is the Knowledge associated with the operation of vehicles propelled by endless tracks.

Trainer (Training) is the Knowledge associated with changing behavior of animals (and of sophonts with C5 = Training).

Turret is the Knowledge associated with the operation of turret based weaponry.

Unarmed (Unarmed Combat, Melee, Brawling) is the Knowledge associated with unarmed combat techniques.

Wheeled (Wheeled Vehicle) is the Knowledge associated with the operation of vehicles which use wheels.

Wing (Fixed Wing Aircraft) is the Knowledge associated with the operation of fixed wing aircraft.

WMD (Weapons of Mass Destruction) is the Knowledge associated with the targeting, operation, and maintenance of the Weapons of Mass Destruction.

World is the general Knowledge associated with <World>.

Many other Knowledges are possible: one for every career; one for every world; one for every branch of science, and many specialized subsets of the Knowledges shown.

The Talents

A **talent** is a personal ability not generally possible for a human, but which may be possible for some specific non-humans. The maximum level for a specific talent is usually 15.

COMPUTE

Compute is the native ability to perform detailed or extensive information processing rapidly and without external aids or devices.

Compute essentially mimics the information processing capabilities of an electronic computer. The individual can scan text at high speed and make simple or complex notations. The ability includes both text processing and number processing.

For example, scan pages of text in search of specific words or groups of words, or scan pages of numbers and calculate sums, averages, or other relationships.

To scan a text searching for instances of <World Name>
Difficult (3D) < Int + Compute

To scan accounting documents to calculate values
Difficult (3D) < Int + Compute

Success and Failure. Success completes the task and provides the results. Failure halts the task half way through. The task can be restarted to complete the current text scanning.

Fatigue. Using Compute can be taxing. Check C3 after each task: failure advances C3 to its next stage (optimal becomes ordinary; ordinary becomes tired; tired becomes sleepy).

ACCURACY VERSUS SPEED

Difficulty	Speed	Errors	Search Size
1D Easy	1 sec	1 in 10	3 pages
2D Average	1 min	1 in 100	9 pages
3D Difficult	2 min	1 in 1,000	27 pages
4D Formidable	3 min	1 in 10,000	81 pages
5D Staggering	5 min	1 in 100,000	243 pages

Speed = per page.
Errors = missed references or ignored values.

EMPATH

Empath (Empathy) is the native ability to sense and understand the emotions of others.

Empathy is either a variant of, or related to, the sense of Perception. An Empath is able to sense the emotional state of other beings and sophonts.

TYPICAL EMOTIONAL STATES

Flux	Emotion	Degree	Comment
-5	Distress	Utmost	
-4	Hate	Extreme	
-3	Fear	Major	
-2	Surprise	Significant	
-1	Unease	Minor	
0	Blank	Trivial (or masked)	
1	Calm	Minor	
2	Surprise	Significant	
3	Courage	Major	
4	Love	Extreme	
5	Delight	Utmost	

To Scan for Emotional Content
Average (2D) < C4 + Empath
Points out specific individuals and their emotional state

To Sense a General Emotional State
Average (2D) < C4 + Empath

To Sense the Emotional State of a Specific Person
Difficult (3D) < C4 + Empath

HIBERNATE

Hibernate is the native ability to enter a short-term or long-term state of reduced consciousness and physical activity.

Hibernation is a survival mechanism based on an evolutionary need to avoid extremes of weather or environment, or to undergo prolonged healing.

Going Into Hibernation.

Hibernation may be voluntary or involuntary.

Voluntary. Hibernation is a voluntary act. The individual makes a conscious decision to hibernate. He finds a safe place (his bunk; a remote corner somewhere) and falls asleep with some plan for total sleep time (in weeks).

Involuntary. Any wounding which would otherwise kill the character converts to involuntary hibernation. The individual enters hibernation automatically. Hibernation lasts weeks equal to C3. Upon emergence, characteristics are returned to normal.

In Hibernation

A character in hibernation requires no food or water; reasonable breathing gases are required. He is unconscious and unaware of external circumstances.

Waking Up

A character awakens after some passage of time (measured in days). The character is extremely hungry and thirsty.

To Wake From Voluntary Hibernation
Average (2D) < C3 + Hibernation

Success= Awaken at the planned time.
Failure= Awaken at planned time + Good Flux Days.

Involuntary Hibernation ends after C3 weeks.

HYPNO

Hypno is the native ability to create altered mental states in which the subject's critical thinking faculties are bypassed or overridden.

Hypno interacts with non-player characters find answers to questions and to force compliance or action. Hypno uses a variety of senses to work its effect, but appears to the observer to be extra-sensory.

To Create the Hypnotic State
Difficult (3D) < C4 + Hypno

If the hypnotic state is not created, then no further hypno is possible. If the state is created,

To Ask Questions
Check Query + 2x Hypno

To Persuade to Do <something>
Check Persuade + 3x Hypno

To Command to Do <something>
Check Command + 4x Hypno

Failure in each case results in feeble or ineffective attempts by the subject (rather than outright refusal).
Post Hypnotic Suggestions. Hypno may be used to implant reasonable post hypnotic suggestions which remain in effect on the subject for (subject's) C3 days.

Mass Hypnosis
A user of Hypno may affect multiple subjects simultaneously.

INTUITION

Intuition is the native ability to generate or obtain information without any apparent operation of the senses.
Akin to Insight. The character can see (or puzzle out) correct action, which usually expresses itself as a question: "Why don't we try (blank)?"
Treat Intuition as a Characteristic and Check Intuition.
Helpful In Choices. In tasks which present choices, Intuition is an acceptable substitute for the suggested skill.

Intuition Failure
When a task using Intuition fails, the Talent becomes unreliable for a time. On the next use of Intuition, use it at Level-1, and increase the level +1 every use until it regains its original value.

MATH

Math is the native ability to perform detailed or extensive mathematical calculations rapidly and without external aids or devices. The individual is able to do math "in his head."
Provided the individual understands the specific mathematics (as evidenced by C5), the individual can (for example):

- Add or subtract columns of numbers,
- Multiply or divide multi-digit numbers,
- Find roots
- Identify prime numbers.
- Solve equations for unknowns.

To Solve Basic Math (1 digit)
Easy (1D) < (Int or C5) + Math

To Solve Basic Math (2 digit)
Average (2D) < (Int or C5) + Math

To Solve Basic Math (3 digit)
Difficult (3D) < (Int or C5) + Math

To Solve Basic Math (4 digit)
Formidable (4D) < (Int or C5) + Math

To Solve Basic Math (5 digit)
Staggering (5D) < (Int or C5) + Math

Astrogation. Math is a Mod for Astrogator tasks.
Math Speeds Up Calculations. When Math is used as a Mod in calculation tasks, it radically cuts the time required (by 90%).

MEMAWARE

MemAware (Eidetic Awareness Memory) is the native ability to recall in great detail previous experiences through the sense of Awareness.
Recall. The individual can recall (in Awareness descriptive terms) specific facts or elements of his experience when prompted by need or by query.
Descriptive Terms. The individual can describe the facts (details of description, intensity, field strengths, aspect, and benchmarks) as they were sensed, and as if they were being sensed at the present moment.
Accuracy. For the ability to use words to describe the facts, Check Int for each major fact.

MEMORIZE

Memorize is the native ability to recall in great detail previously acquired information.
Memorization. The individual can consciously scan pages of information and repeat it (verbally) as needed. The acquisition of information is automatic and without effort.

To Repeat Memorized Information from the Last Day

Past Day	Easy (1D)	< (Int or Ins) + Memorize
Past Week	Average (2D)	< (Int or Ins) + Memorize
Past Month	Difficult (3D)	< (Int or Ins) + Memorize
Half Year	Formidable (4D)	< (Int or Ins) + Memorize
Year	Staggering (5D)	< (Int or Ins) + Memorize
Term	Hopeless (6D)	< (Int or Ins) + Memorize
Life Stage	Impossible (7D)	< (Int or Ins) + Memorize
Lifetime	Beyond (8D)	< (Int or Ins) + Memorize

Memory Purge. Memorized materials disappear from memory over time (as reflected by the increased difficulty of the tasks).
Memory Retention. An individual can consciously retain memorized information by consciously recalling specific information (and alerting the Referee).
Memory Capacity. The individual's capacity for Memorization is roughly 10^M (M= Memorization) pages.
Memory Failure. A failed Memory Task can be re-attempted under Immediate Action. If Immediate Action fails, the information is lost.

MEMPERCEPT

MemPercep (Eidetic Perception Memory) is the native ability to recall in great detail previous experiences through the sense of Perception.
Recall. The individual can recall (in Perception descriptive terms) specific facts or elements of his experience when prompted by need or by query.
Descriptive Terms. The individual can describe the facts (details of description, intensity, field strengths, aspect, and degree of emotion) as they were sensed, and as if they were being sensed at the present moment.
Accuracy. For the ability to use words to describe the facts, Check Int for each major fact.

MEMSCENT

MemScent (Eidetic Scent Memory) is the native ability to recall in great detail previous experiences through the sense of Smell.

Recall. The individual can recall (in Smell descriptive terms) specific facts or elements of his experience when prompted by need or by query.

Descriptive Terms. The individual can describe the facts (details of description, intensity, odor identity, and benchmarks) as they were sensed, and as if they were being sensed at the present moment.

Accuracy. For the ability to use words to describe the facts, Check Int for each major fact.

MEMSIGHT

MemSight (Eidetic Visual Memory; Photographic Memory) is the native ability to recall in great detail previous experiences through the sense of Vision.

Recall. The individual can recall (in Visual descriptive terms) specific facts or elements of his experience when prompted by need or by query.

Descriptive Terms. The individual can describe the facts (details of description, intensity, color, and benchmarks) as they were sensed, and as if they were being sensed at the present moment.

Accuracy. For the ability to use words to describe the facts, Check Int for each major fact.

MEMSOUND

MemSound (Eidetic Aural Memory; Phonographic Memory) is the native ability to recall in great detail previous experiences through the sense of Hearing.

Recall. The individual can recall (in Awareness descriptive terms) specific facts or elements of his experience when prompted by need or by query.

Descriptive Terms. The individual can describe the facts (details of description, intensity, pitch, melody, benchmarks) as they were sensed, and as if they were being sensed at the present moment.

Accuracy. For the ability to use words to describe the facts, Check Int for each major fact.

MORPH

Morph is the native ability to change the shape, contours, appearance, and coloration of one's body.

Within limits, the individual can change the shape and appearance of his body.

Appearances

Morph can change skin color and texture to imitate almost any example encountered.

Morph can extrude additional limbs, or enhance existing limbs to mimic examples.

Morph can reproduce faithfully mimic existing faces.

Limits

The total mass of the body cannot change.

Volume cannot change more than plus or minus 10%.

Structures can be formed, but they are non-functional (additional eyes don't actually see, for example).

Fanciful Morph activity is always possible. Morph activity which is faithful to a pattern or model requires access to images, pictures, or examples.

To Morph to an Existing Pattern Faithful at Range= 2
Average (2D) < Dex + Morph + Art + Craftsman

To Morph to an Existing Pattern Faithful at Range = 1
Difficult (3D) < Dex + Morph + Art + Craftsman

To Morph to an Existing Pattern Faithful at Range = 0
Formidable (4D) < Dex + Morph + Art + Craftsman

Morph in the Natural State. The natural use of Morph is fanciful: it has cultural or biological imperatives which do not require faithfulness to patterns or originals. It is only as Morph has moved into a wider society that its other uses have become known.

RAGE

Rage is the native ability to enter a heightened emotional state characterized by increased physical characteristics, and insensitivity to pain and wounds,

Increased Physical Characteristics. At the beginning of any Fighting situation, the point value of Rage may be distributed among any of the three physical characteristics C1 C2 C3.

Combat Effects. Injuries and wounds in combat reduce Rage points first.

Stopping Rage. Rage naturally exhausts itself after C3 Rounds (Minutes), at which point the individual is Tired.

Rage can be stopped with an Intelligence Check or a Sanity Check. If successful, the individual returns to a normal state (and if the duration of the rage has been less than half of C3, there is no other effect; otherwise he is Tired).

Situations For Rage

Rage can be called into use in situations with an identifiable adversary. Typically, this adversary is an enemy in combat, but it may also be physical barriers, elements of the environment (a violent storm).

SOUNDMIMIC

SoundMimic is the native ability to recreate or imitate sounds which the individual has previously heard.

Expression. The individual has the ability to mimic complex sounds and express them as required.

To Mimic A Sound
Difficult (3D) < Dexterity + SoundMimic

Master Mods Tables

- -Modifications (Mods) indicate a deviation from the norm or standard. Mods can be determined with Flux from the tables, or they can be selected as appropriate by the referee.

Master Mods Index

Table

1	Environ	Touch	Sound	Smell	Light	Pain	Truth
2	Max Visibility	Respect*	Attitude	Conformity	Imagination	Beauty	
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4	Height*	Width*	Stability*	Idea	CommEnviron	Logic	Weather
5	Gravity	Typical BR	Typical DH	Xeno-Medicine*	Wounds*	Severity*	Diagnosis
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8	TL Low	TL High	TL Vhigh	TL Extreme	- -	Multiples	Noise - -
9	Careers	- -	- -	- -	Good/Evil	Order/Chaos	Sounds - -
10	Gravity	Acceleration	Environ	Zero-G			

1 TYPICAL MODS-1

Flux	Environ	Touch	Sound	Smell	Light	Pain	Truth	Flux
-5	Frigid	Frigid	- -	- -	- -	- -	GAEWK *	-5
-4	Vcold	VCold	- -	- -		Numb	Unsettling	-4
-3	Cold	Cold	Faint	- -	Dim	- -	Obviously False	-3
-2	Chilly	Chilly	Whisper	Subliminal	Obscured	Normal	False	-2
-1	Cool	Cool	Soft	Subtle	Hazy	Normal	Not Quite	-1
0	Nice	Normal	Talking	Ordinary	Visible	Normal	Ordinary	0
+1	Warm	Warm	Loud	Fragrant	Bright	Discomfort	Good Enough	+1
+2	VWarm	VWarm	Shout	Pungent	VBright	Stinging	True	+2
+3	Hot	Hot	Cacaphony	- -	UBright	Painful	Obviously True	+3
+4	Vhot	VHot	- -	Overwhelm	Blinding	VPainful	Epiphany	+4
+5	Scalding	Scalding	- -	- -	Burning	Unbearable	Absolute Truth	+5

*GAEWK (pronounced Gawk!) Goes Against Everything We Know.

2 TYPICAL MODS-2

Flux- -	Max Visibility	Respect*	- -	Attitude	Conformity	Imagination	Beauty	Flux
-5	Contact	Non-acknowledgement		Unenthusiastic	Total Conformist	Idiotic	Repulsive	-5
-4	Reading	Utter Contempt	- -	- -	- -	Foolish	Ugly	-4
-3	Talking	- -	- -	Unsupportive	- -	VDull	VUnattractive	-3
-2	Vshort	Distaste	- -	- -	Collectivist	Dull	Unattractive	-2
-1	Short	- -	- -	Indifferent	- -	Pedestrian	VPlain	-1
0	Visible	Peer	- -	- -	Balanced	Ordinary	Plain	0
+1	Medium	- -	- -	Interested	- -	Sharp	Cute	+1
+2	Long	Acknowledgement		- -	Individualist	Clever	Pretty	+2
+3	Vlong	Admiration	- -	Supportive	- -	VClever	VPretty	+3
+4	Distant	Absolute Respect		- -	Egotist	Creative	Beautiful	+4
+5	Vdistant	Idolization	- -	Enthusiastic	Narcissist	Genius	Stunning	+5

*Typically Social1 minus Social2.

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3 TYPICAL MODS-3

Flux- -	Walking	Driving	Highway	Injuries	Vilani	NewSpeak	Anglic	Flux
-5	- -	Stuck	Stuck	Very Heavy	- -	Worst*	Worst	-5
-4	- -	- -	- -	Heavy	- -	DoublePlusUnGood	Atrocious	-4
-3	- -	Stop & Go	- -	Common	- -	PlusUnGood	Very Bad	-3
-2	Crawl	VSlow	Creeping	Light	- -	Ungood	Worse	-2
-1	Stroll	Slow	Lagging	Slight	- -	HalfUnGood	Bad	-1
0	Walk	Drive	Cruise	Scratch	- -		Average	0
+1	Trot	Fast	Fast Lane	- -	- -	HalfGood	Good	+1
+2	Run	VFast	Vfast Lane	- -	- -	Good	Better	+2
+3	Sprint	Racing	Grid Control	- -	- -	PlusGood	Very Good	+3
+4	- -	- -	Speeding	- -	- -	DoublePlusGood	Excellent	+4
+5	- -	- -	- -	- -	- -	Best*	Best	+5

*Technically Ungrammatical.

4 TYPICAL MODS-4

Comms

Flux- -	Height*	Width*	Stability*	Idea	Environ	Logic	Weather	Flux
-5	Formidable	Formidable	Formidable	Derivative	Jammed	Indeterminate	Extremely Bad	-5
-4	Challenging	Challenging	Challenging	Boring	Equip Fault	Fuzzy	Very Bad	-4
-3	Very High	Very Wide	Very Unstable	Dull	Equip Glitch	Meaningless	Worse	-3
-2	High	Wide	Unstable	Uninspired	Interference	False	Bad	-2
-1	Barrier	Barrier	Shaky	Unoriginal	Static	Probably False	Inconvenient	-1
0	Ordinary	Ordinary	Stable	Ordinary	Good	Logical	Neutral	0
1	Low	- -	- -	Novel	Very Good	Probably True	Fortuitous	+1
2	- -	- -	- -	Ingenious	Excellent	True	Good	+2
3	Flat	- -	- -	Innovative	Clear	Self-Referential	Better	+3
4	- -	- -	- -	Imaginative	Very Clear	Unsolvable	Very Good	+4
5	- -	- -	- -	Truly Inspired	Crystal Clear	Paradoxical	Extremely Good	+5

* For barriers, use Bad Flux.

5 TYPICAL MODS-5

Flux- -	Gravity	Typical BR	Typical DH	Xeno-Medicine*	Wounds*	Severity*		Diagnosis		Flux
-5	World=0	General	- -	Illogical	Vheavy	Intense	5D	Extremely Obscure	5D	-5
-4	World=1	SuSAG	K'Kree	Obscure	Heavy	Critical	4D	Obscure	4D	-4
-3	World=2-3	Tukera	Solomani	Very Strange	Common	Serious	3D	Very Difficult	3D	-3
-2	World=4-5	Sharurshid	Zhodani	Strange	Light	Fair	2D	Difficult	2D	-2
-1	World=6	- -	- -	Uncommon	Slight	Good	1D	Hard	1D	-1
0	Normal	Naasirka	Imperium	Ordinary	Scratch	Scratch	- -	Ordinary	- -	0
1	World=8	- -	Aslan	- -	- -	- -	- -	Easy	- -	+1
2	World=9	Makhidkarun	- -	- -	- -	- -	- -	Clear	- -	+2
3	World=A	Sternmetal	Ziru Sirka	- -	- -	- -	- -	Very Clear	- -	+3
4	World=B	LSP	Hiver	- -	- -	- -	- -	Obvious	- -	+4
5	World=C	- -	- -	- -	- -	- -	- -	Very Obvious	- -	+5

	Bureaucratic	Diplomatic			from BTSD		
* Bad Flux	Regs	Handbook					

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MODS

6 TYPICAL MODS-6

Flux- - Rewards*		Speed	Speed	Encounter Range	Time In Jump	Commercial Breakout	Naval Breakout	Flux
-6		5 kph	Creep					
-5	- -	10 kph	Crawl	Contact		- 10 hours	- 5 hours	-5
-4	- -	20 kph	Xslow	VShort		- 8 hours	- 4 hours	-4
-3	- -	30 kph	Vslow	Short		- 6 hours	- 3 hours	-3
-2	- -	50 kph	Slow	Medium		- 4 hours	- 2 hours	-2
-1	- -	100 kph	Standard	Long		- 2 hours	- 1 hour	-1
0	Token	300 kph	Cruise	Vlong	168 hours	no variation	no variation	0
+1	- -	500 kph	Fast	Distant		+ 2 hours	+ 1 hour	+1
+2	- -	700 kph	Vfast	VDistant		+ 4 hours	+ 2 hours	+2
+3	- -	1000 kph	Sonic	Orbit		+ 6 hours	+ 3 hours	+3
+4	- -	2000 kph	Ssonic	- -		+ 8 hours	+ 4 hours	+4
+5	Incredible	3000 kph	Hsonic	- -		+10 hours	+ 5 hours	+5
+6		5000 kph	Xhsonic					

*Good Flux.   Typical Jump takes 168 hours plus or minus some value

7 TYPICAL MODS-7

Flux- - Emotional	Degree	Potential	Brand Names	Anglic Brand Names	Vilani Brand Names	-MegaCorps- -	Flux
-5 Distress	Utmost	Terrible	Loamer	Glump	Naa	General	- 5
-4 Hate	Extreme	Extremely Bad	Sloeph	NNA	Kakna	GsbAg	- 4
-3 Fear	Major	Very Bad	Cerlan	Peerless	Seleni	Delgado	-3
-2 Surprise	Significant	Bad	Boron	Consolidated	Lanuur	Hortalez	-2
-1 Unease	Minor	Poor	Neol Bros	Dorado	Khush	SuSAg	-1
0 Blank	Trivial	Ordinary	Engolia	Acme	Ushum	Makhid	0
1 Calm	Minor	Possible	Kosinar	Ponii	Ganun	Zirunkarish	+1
2 Surprise	Significant	Good	JPG	Golden	Shakashdir	Sharurshid	+2
3 Courage	Major	Very Good	Vereos	Official TAS	Sebiilem	Naasirka	+3
4 Love	Extreme	Extremely Good-	Tyxagon Corp	Iridium	Agbar Urdim	LSP	+4
5 Delight	Utmost	Wonderful	Starling	715 Corp	Karak	Instellarms	+5

8 TYPICAL MODS-8

Flux- -TL Low	TL High	TL Vhigh	TL Extreme	- -	Multiples	Noise	- -	Flux
-5 TL 0	TL 5	TL A	TL N	- -	- -	Crowd Noise	- -	-5
-4 TL 1	TL 6	TL B	TL P	- -	- -	- -	- -	-4
-3 TL 2	TL 7	TL C	TL Q	- -	- -	Background Noise	- -	-3
-2 TL 3	TL 8	TL D	TL R	- -	- -	- -	- -	-2
-1 TL 4	TL 9	TL E	TL S	- -	- -	Distractions	- -	-1
0 TL 5	TL A	TL F	TL T	- -	Individuals	Normal	- -	0
1 TL 6	TL B	TL G	TL U	- -	Groups	- -	- -	+1
2 TL 7	TL C	TL H	TL V	- -	Hundreds	Quiet	- -	+2
3 TL 8	TL D	TL J	TL W	- -	Thousands	- -	- -	+3
4 TL 9	TL E	TL K	TL X	- -	10,000	Concentrating	- -	+4
5 TL A	TL F	TL M	TL Y	- -	100,000	- -	- -	+5

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Mods

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MODS

9 TYPICAL MODS-9

Flux	Careers				Good/Evil	Order/Chaos	Sounds		Flux
-6	Citizen								
-5	Scholar	- -	- -	- -	Chaotic	Evil	- -	- -	-5
-4	Entertainer	- -	- -	- -	Chaotic	Evil- - -	- -	- -	-4
-3	Craftsman	- -	- -	- -	Chaotic	Evil - -	- -	- -	-3
-2	Scout	- -	- -	- -	Chaotic	Evil- - - -	Earpiece	- -	-2
-1	Merchant	- -	- -	- -	Neutral	Neutral - - -	Whisper	- -	-1
0	Spacer		- -	- -	Neutral	Neutral -	Talking	- -	0
1	Soldier	- -	- -	- -	Neutral	Neutral- -	Lecture	- -	+1
2	Agent	- -	- -	- -	Orderly	Good- - - -	Shout	- -	+2
3	Rogue	- -	- -	- -	Orderly	Good- - - -	Distress	- -	+3
4	Noble	- -	- -	- -	Orderly	Good - - -	Many In Distress	- -	+4
5	Marines	- -	- -	- -	Orderly	Good -	Gunshot	- -	+5
+6	Functionary						Thunder		+6

10 TYPICAL MODS-10

Flux	Gravity*	Acceleration*	Hostile Environ*	Zero-G*	BTSD Wound*	Damage*	Protection Mods**	Action Mods**	Flux
-6					Disastrous (6D)	Near Total (6D)			
-5	Crushing	Crushing	Chaotic	Chaotic	Very Heavy (5D)	Very Heavy (5D)	- -	- -	-5
-4	Extreme	Extreme	Disorienting	Disorienting	Heavy (4D)	Heavy (4D)	- -	- -	-4
-3	Crippling	Crippling	Disrupting	Disrupting	Common (3D)	Common (3D)	- -	- -	-3
-2	VStrong	VStrong	Swirling	Fluxing	Light (2D)	Light (2D)	- -	- -	-2
-1	Strong	Strong	Bothersome	Abnormal	Slight (1D)	Surface (1D)	- -	- -	-1
0	Normal	Normal	Normal	Normal	Scratch (1 pt)	Scratch (1 pt)	Typical	Typical	0
1		- -	- -	- -	- -	- -	Lt Armor	Evade	+1
2		- -	- -	- -	- -	- -	Armored		+2
3		- -	- -	- -	- -	- -	Hvy Armor		+3
4		- -	- -	- -	- -	- -	- -	- -	+4
5		- -	- -	- -	- -	- -	- -	- -	+5
+6									+6
	* Bad Flux	* Bad Flux	*Bad Flux	*Bad Flux	*Bad Flux	*Bad Flux	**Good Flux	**Good Flux	

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