**Attributes**

**Mental**:

Intelligence (insanity, high willpower increases critical madness failure on a crafting check)

Willpower (sanity, high willpower reduces critical madness failure on a crafting check)

**Physical**:

Strength

Finesse

Endurance

**Mental Skills**

**Intellect (Memory, Insanity)**

**Scientific Disciplines\***

* Biology
* Biomechanics
* Chemistry
* Electricity
* Engineering
* Genetics
* Geology
* Material Science
* Mathematics
* Physics

**Social Science**

* Anthropology
* Bureaucracy
* Cartography
* Economics
* Geography
* History
* Law
* Linguistics
* Political Science
* Psychology
* Sociology

**Will (Willpower, Sanity)**

**Art**

* Acting
* Culinary
* Dance
* Music
* Painting
* Poetry
* Writing
* Textiles
* Miming

Perception

Philosophy

Religion

**Social**

* Barter
* Charm
* Convince
* Deceive
* Enthrall
* Etiquette
* Insight
* Intimidate
* Seduction
* Teamwork

**Physical Skills:**

**Endurance (Health)**

**Armor Use**

* Biological, Light
* Biological, Heavy
* Manufactured, Heavy
* Manufactured, Light

Labor

**Professions,**

* Farming
* Fishing
* Forestry
* Machining
* Manufacturing
* Mining
* Tailoring

**Resistance**

* Acid
* Aetheric (electricity?)
* Cold
* Heat
* Radiation
* Toxins

**Finesse (Speed)**

Evasion

Forgery

Lockpick

**Pilot**

* Air
* Land
* Sea
* Subterranean

Sleight of Hand

Stealth

**Weapon**

* Axes, Light
* Blades, Light
* Bludgeons, Light
* Bows
* Thrown, Light - grenades
* Natural Weapon, Light
* Pistols
* Polearms, Light,
* Rifles
* Flexible weapons

**Strength (Damage)**

Climb

Swim

**Weapon**

* Artillery ← maybe change to intelligence (more calculus based?)
* Axes, Heavy
* Blades, Heavy
* Bludgeons, Heavy
* Guns, Heavy
* Natural Weapon, Heavy
* Polearms, Heavy
* Thrown, Heavy - boulders, pieces of buildings, mannequins

**Crafting**

Overview

Welcome to the world of crafting.

Modular Construction, Building an automata would require automata (body), mechanical power (heart) and artificial intelligence, (brain)

Roll

The die roll is a simple percentile, 1-100%. Roll

Failing

Sacrifice attributes

Going above and beyond

Add attributes

**Skill and Associated Skills**

Modifiers

**Circumstantial**

Being shot at! Being wounded or dead! Noisy neighbors! Coffee!

**Cooperative Crafting**

Firstly, separate crafters may work on separate modules of one final part, reducing time and allowing for a crafter to specialize on one aspect of a larger project.

A primary crafter is a character with the required skill. A secondary crafter is a character with any related skill or discipline that can aid, but cannot make the base roll. If working on the same module, all primary crafters roll and take the best roll (critical failure exempted). For challenge modifiers (CM’s), choose the best base skill and connected skill percentiles from all parties and combine their relevant bonus.

**Research Supplements**

Knowing that libraries are available, university professors can be consulted and whispers from beyond occasionally enter a scientist’s dreams, a percent modifier is added to a scientist’s efforts from research materials. These often depend from book to book, or professor to professor and have hard caps on what they can do. Treat a book, professor or hint as having a skill level in XX skill (optics) for example, and can supplement or aid crafting up to a point. Recipes or rote instructions can be followed so far as the umbrella discipline skill can (50 optics book but only 20 in physics, 20 max)

**Time**

Each

**Tools and Laboratory Space**

Purely hypothetical scientific inquiries typically do not require tools or a laboratory, however repairs, upgrades and fabrication do. Depending on the task, nothing, tools or a laboratory (tools are assumed to be included in a lab) are required. Some builds absolutely require a lab, and this will be noted. Often these are builds such as growing constructs, melting down and rolling

supplement, positively or even more deleteriously. Tools add Tool Level x 50 to

**Specialties**

**Disciplines**

**Biology**

Animalia, Augmentation, Biological Armor, Biological Power, Biological Senses, Biological Weapons, Constructs, Medicine, Monera, Neuroscience, Plantae & Fungi, Prosthetics, Psychology, Surgery, Symbiotics, Virology

**Biomechanics**

Automata, Biological Armor and Weapons, Construct, Prosthetics

**Chemistry**

Chemical Receptors, Chemical Weaponry, Explosives, Fuel, Herbology, Medicine, Pharmaceuticals.

**Electricity**

Artificial Intelligence, Electrical Power, Electrical Weaponry.

**Engineering**

Aeronautical Engineering, Automata, Clockwork, Engines, Firearms and Artillery, Mechanical Armor, Naval Engineering, Prosthetics, Structural Engineering, Vehicular Engineering.

**Genetics**

Animalia, Biological Armor, Power and Weapons, Constructs, Medicine, Monera, Pharmaceuticals, Plantae & Fungi

**Material Science**

Aeronautical Engineering, Chemical Weaponry, Engines, Explosives, Fuel, Mechanical Armor, Naval Engineering, Structural Engineering, Vehicular Engineering

**Mathematics**

All Sciences

**Physics**

All Sciences

**Science Skills**

Acoustics, **Acoustics, Physics**

Aeronautical Engineering, **Architecture, Engineering**

Animalia, **Animalia, Biology**

Artificial Intelligence, **Electricity, Intelligence**

Astronomy & Astrophysics, **Physics**

Augmentation, **Biology, Medicine, Surgery**

Automata, **Clockwork, Engineering, Intelligence**

Biological Armor, **Armor** **Animalia\*, Biology, Monera\***, **Plantae & Fungi\***

Biological Power, **Animalia\*, Biology, Monera\***, **Plantae & Fungi\*, Power**

Biological Senses, **Acoustics\*, Animalia\*, Biology, Chemical Receptors\*, Optics\*, Plantae & Fungi\***

Biological Weapons, **Animalia\*, Biology, Monera\***, **Plantae & Fungi\*, Weaponry**

Chemical Receptors, **Biological Senses\*, Chemistry**

Chemical Weaponry, **Chemistry, Weaponry**

Clockwork, **Clockwork, Engineering**

Constructs, **Animalia, Surgery\*, Biology, Medicine, Intelligence**

Deconstruction

Electrical Power, **Electricity, Power**

Electrical Weaponry, **Electricity, Weaponry**

Engines, **Engineering, Power**

Explosives, **Chemistry, Weaponry**

Firearms and Artillery, **Clockwork, Engineering, Weaponry**

Fuel, **Chemistry, Power**

Geology, **Physics**

Herbology, **Chemistry, Medicine**

Mechanical Armor, **Armor,** **Engineering**

Medicine, **Biology, Chemistry, Medicine**

Monera, **Biology, Monera**

Naval Engineering, **Architecture, Engineering**

Neuroscience, **Biology, Intelligence**

Optics, **Optics, Physics**

Pharmaceuticals, **Chemistry, Medicine**

Plantae & Fungi, **Biology, Plantae & Fungi**

Prosthetics, **Animalia, Biology, Clockwork**

Prosthetics, **Animalia, Clockwork, Engineering**

Psychology, **Biology, Intelligence**

Structural Engineering, **Architecture, Engineering**

Surgery, **Biology, Medicine, Surgery**

Symbiotics, **Animalia, Biology, Monera**, **Plantae & Fungi**

Vehicular Engineering, **Architecture, Engineering**

Virology, **Biology, Medicine, Monera, Weaponry\***

**Combat**

**Attack vs. Defense**

Attack = Finesse + Weapon Skill + d100

Defense = Finesse + Evasion + Armor’s Evasion

Critical Defense = Evasion + Armor’s Critical Evasion

If the Critical Defense is beat, then the Critical Resistance Armor

**Damage vs. Resistance**

Damage = Strength + Weapon Damage + d100

Resistance = Endurance + Relevant Resistance + Armor’s Relevant Resistance

Critical Resistance = Endurance + Relevant Resistance + Armor’s Critical Relevant Resistance

Over

**Health**

Endurance

Special:

AoE attacks

**In the Works:**

**POTENTIAL WEAPON PLANS (added by Kelton, 6/23/17)**

Tier system 1-10? 1-5?

Ranged Weapons (mech. Small arms) Potential Characteristics: Range, Damage, Magazine, Reload Time, Misfire,

Ranged Weapons (bio small arms) Potential Characteristics: Range, Damage, Magazine, Reload, Misfire,

Ranged Weapons (mech. artillery) Potential Characteristics: Range, Damage, Splash, Crew, Reload, Magazine, Accuracy

Ranged Weapons (bio. artillery) Potential Characteristics: Range, Damage, Splash, Crew, Reload, Magazine, Accuracy

Metal Densities, hardness on Brinell Scale

Tin- D= 7.287 grams per cubic centimeter H= 5

Palladium- D= 12.0 grams per cubic centimeter H= 40

Copper- D= 8.933 grams per cubic centimeter H= 82

Manganese Bronze- D= 8359 kg/m3 H= 95

Platinum- D= 21.46 grams per cubic centimeter H= 100

Aluminum- D=2.70 grams per cubic centimeter H= 100

Platinum Tungsten Alloy- D= H= 175

Aluminum Bronze- D= 8200 kg/m3 H= 178

Nickel- D= 8.912 grams per cubic centimeter H= 194

Medium Iron- D= 7.874 grams per cubic centimeter H= 196

Nickel Brass (Copper/Zinc alloy)- D= 8500 kg/m3 H= 197

Manganese Steel- D= H= 200

Molybdenum Steel- D= H= 220

Phosphor Bronze- D= 8850 kg/m3 H= 241

Tungsten (Wolfram) - D= 19.3 grams per cubic centimeter H= 262

Hard Iron- D= 7.874 grams per cubic centimeter H= 297

Titanium (grade 5)- D= 4.5 grams per cubic centimeter H= 334

Platinum Iridium alloy- D= H= 400

Spring Steel- D= H= 400

Stainless Steel- D= H= 490

Carbon Steel Alloy- D= 7.85 grams per cubic centimeter H= 600

Wood density, hardness

Ceramics

Encyclopedia of parts and materials

<http://books.google.com/books?id=6fdmMuj0rNEC&pg=PA539&lpg=PA539&dq=brinell+hardness+platinum&source=bl&ots=KL-bd1dSVH&sig=CmJ8dOzd5N5uMtfMBXyCLMzL3fk&hl=en&sa=X&ei=xcC5UoqJKoHCywG7kIHwCw&ved=0CEgQ6AEwAg#v=onepage&q=brinell%20hardness%20platinum&f=false>

Hardness for all elements

<http://periodictable.com/Properties/A/BrinellHardness.v.html>

Hardness for common metals

<http://www.drill-hq.com/2011/11/hardness-scale-for-various-materials/>