STANDARD PLANETARY CLASSES

For reference, Vulcan scientists established a number of broad categories of planetary types. Some very different planets can fit into a single category, and some planets at the limits of one category may be similar to planets in an entirely different category. The categories are:

Class A: This is a “hot” gas giant such as Jupiter which generates internal heat. There is no “surface” per se, just an increasingly dense atmosphere. See Class S.

Class B: This is a “cold” gas giant (does not generate internal heat), smaller and farther from the star, such as Uranus. It also has no surface. See Class S.

Class C: This is a “hothouse” planet such as Venus, with a corrosive and/or toxic atmosphere.

Class D: This is an airless rock such as Luna. Classes D, I, and J are three different points on the same spectrum of airless rocks floating in space.

Class E: This is a “super-terrestrial” world, basically a larger-than-Earth planet with an atmosphere and biosphere and at least marginally habitable.

Class F: This planet has a sulphurous atmosphere. It is not a “hothouse” (Class C).

Class G: A dry desert planet with no oceans, such as Mars. It may be cold or hot. Its atmosphere may be thin or without oxygen. There is rarely a biosphere. See Class K.

Class H: This is an “early Earth” planet with a developing biosphere (mostly bacteria, some low-grade plants). The atmosphere will be unbreathable to humans.

Class I: A rocky planet hot enough to melt lead, such as Mercury. The atmosphere (if any) will probably be thin and there will be no recognizable biosphere. See Class D and Class J.

Class J: This is a cold rocky planet with a thin atmosphere (or none at all). Temperatures are below freezing, any water (and there may be none or very little) will be frozen, and there will be no recognizable biosphere. See Class D and Class I.

Class K: This is a desert world with a breathable atmosphere and a working biosphere, such as Vulcan. There will be some small oceans, lakes, or seas, but these will be limited and some will be brackish.

Class L: A world similar to Earth, but with far less water. Oceans cover less than a third of the surface; there will be a breathable atmosphere and a working biosphere.

Class M: This planet is Earth-like. Classes L-M-N represent only one percent of surveyed planets, but these are the most highly-prized as colonists can move in at far less expense with far less artificial support.

Class N: Like Earth, but oceans cover 90% of the surface and humidity is high. Such planets often have no real continents, but volcanic island chains.

Class O: Like Earth, but much colder, with extensive glaciers trapping most of the water. Harder to colonize than Classes L-M-N, these are habitable if the colony has a sufficient power source to melt ice and warm the atmosphere. This usually means a domed colony, but one that can be operated at far less expense.

Class P: Most of the atmosphere is frozen into glaciers of carbon-dioxide or other gases.

Class Q: A frozen iceball, such as Pluto, that is more of a huge comet than a small planet. The orbit will often be erratic, and this is usually the outermost planet. Many Ort Cloud and Kuyper Belt Objects are of this type.

Class R: A nitrogen-ammonia atmosphere on an otherwise Class-J cold rocky planet, such as Q’Nabb (in the ISC sector). Very few are known, but at least one of them produced a spacefaring species.

Class S: A small gas giant with frozen methane oceans with floating continents, such as Hydrax. Many of these develop life, but only one is known to have developed an intelligent civilization, that being Hydrax itself.

Class T: A semi-molten planet, such as Tholia in the M81 Galaxy, with high temperatures (above 212°F) and with inorganic life.