We have reached the Mysterious Alien Planet and it is overtaken by so many individual outcrops. It reminds me of the spooky version of Earth’s Callanish Standing Stones. In my outcrop I see the characteristics of sedimentary structures, minerals from Bowen’s reaction series, and foliation.

I see three types of rocks present. The lowest layer is igneous rock, the next level up is metamorphic rock and the third layer is sedimentary rock in my peculiar outcrop.

I am able to identify specific rocks in each layer! The bottom-most layer is igneous rock from magma. It is specifically Olivine based on the materials in it and I know this from the Bowen’s reaction series (Physical Science Department). Next, the second layer is metamorphic rock; it is specifically Pyroxene by its mineral composition (Earle, 2015). Pyroxene which has undergone foliation by high pressure and temperature to be created form the Olivine (Pyroxene). The third layer is sedimentary rock; specifically, it is I sandstone and I can identify it as Quartz (Earle, 2015).

My outcrop is very colorful. Beginning with the olivine beautiful green color (Olivine). This rock layer is what predominantly led me to name this planet the Mysterious Alien Planet! Another characteristic off the pyroxene layer is its crystal structure (Pyroxene). Again, there are many outcrops of the sea colored layers on this planet – similar to a planet filled with Standing Stones. The outcrop is firm in texture.

My environment formed beginning in the Mantle with the Olivine and pyroxene then shifted when development hit what now the crust. Magma of approximately 1400 degrees Celsius creates Olivine around an oceanic hot spot on this planet (Olivine). Reaction with residual magna makes Pyroxene. The environment suffered drastic temperature change over time. The crust is where the quartz is found – similar to Earth (Earle, 2015). The shape of the Quartz forms by drastic weathering.

A volcanic eruption occurred to prompt the formation of olivine in 1400-degree Celsius temperature. Then great pressure was applied to my outcrop to take the next step in the Bowen’s Reaction Chain and crafted Pyroxene. Extreme pressure and heat are attributed to the foliation and transformation of the igneous rock into metamorphic. Then a massive temperature change occurred, and the weather underwent a massive frozen period that leads to the development of quartz in lower temperatures from 1400 Celsius where we began. The principle of superposition allows me to easily relatively date these layers.

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