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Research and Justification

Whether or not people believe in the possibility of extraterrestrial life, Hollywood has inundated, society with humanoid image after image. The notion that alien life can mimic Earth life can be rooted in science. After all, the only concrete evidence of life and how it has evolved is on Earth. However, this mindset becomes limiting in our search for life in the Universe that is at least 14 billion years old and mind-boggling in its immensity. Personally, I became intrigued by the question, “What can life look like in different environments? How can our geo-centric view of life help us predict the simplest form of life possible in early evolution? What is the most imaginative evolutionary adaptation that could evolve in such an environment? In order to do so, I restricted the factors to carbon and silicon-based life. I also restricted liquid solvents to water and methane/ethane.

One source I used during research was CLIO. It is Columbia University’s library and article database that is freely available to students. Doing so allowed me to feel confident that the publications found there would likely be scientific and peer approved. One book was The Hunt for Alien Life by Peter Linde. The specific chapter that helped me was “What do the aliens look like?”. Another book was Astrobiology and Evolutionary Approach. The specific chapter was called “Extraterrestrial Life: what are we looking for?” by Irwin and Fairen.

Another source I used was NASA’s website which holds information on myriads of topics. One page was specifically on Europa while another was specifically on Titan. These were helpful considering these moons contained many of the factors of habitable worlds that I was constraining my research to.

Another trusted resource I used was Google’s scholarly articles link. I was able to access a work printed in the Journal of Cosmology entitled, “The Search for Life on Other Planets: Sulfur-Based, Silicon-Based, Ammonia-Based Life” by Rampelotto in 2010. I actually also read a non-scholarly article in which Carl Sagan was credited on talking about life on Venus. What I did to make sure it was credible was to find the original source. Thus, I used the scientific work by Carl Sagan in which he talked about Venus.

The only resources on which I cannot vouch complete credibility on are from space.com and the Smithsonian Magazine’s website. The latter seemed credible at the time due to its name. Next time, I will be sure to see if these sources are credible or not considering they are not targeted at scientists but science-minded individuals.

Works Cited

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