Life

You’ve often heard that Earth is unique, but how unique is it *really*? Working in small groups, come up with ways we are like other objects in our solar system and ways we are unique. Consider the following areas: weather/atmosphere, physics, chemistry, biology, physical properties, etc.

A. The ties that bind: how we are similar to other solar system objects? List as many similarities that we share with other solar system objects as possible, and name the object(s) that share our traits. The first two are done for you.

B. Singing a solo: how we are unique when compared to other solar system objects? List as many singular traits that we possess

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|  | Part A | Part B  |
|  | Similarity | Objects that Share the Similarity | Uniqueness |
| 1. | We go around the sun.  | Planets, Comets, Asteroids, etc. (but not satellites)  |  |
| 2. | We are round.  | All objects large enough to be gravitationally squeezed into spheroidal shapes.  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |
| 6. |  |  |  |
| 7. |  |  |  |
| 8. |  |  |  |
| 9. |  |  |  |
| 10. |  |  |  |

Earth is unique among the planets we know because it contains life – and a wide variety of life at that. So what allows life to thrive on Earth? Using the table you completed about Earth’s individuality, and after doing some research, think about how life manages not only to survive, but to flourish on Earth. Then choose one of the following activities to complete.

1. Compare and contrast Earth’s deep sea life with life on the surface of Earth. Include information about what life looks like and how it functions. How does pounds per square inch (psi) affect life?

2. Is there life on Titan, Saturn’s largest moon? The question is currently undergoing much debate in the scientific community. Describe Titan as it would need to be in order for there to be life on the planet. Make sure you use as much detail as is known about Titan, while adding any qualities it would need in order to support life.

3. Design your own exoplanet (a planet that orbits a star outside of our solar system) which contains life. Describe its place in its solar system. Tell about its characteristics – and make sure they are realistic. Give a vivid portrayal (in words and/or pictures) of the animals/plants on the planet.