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| Luke Pepin – MARN 1001E Assignment 9/26 |

Describe how and where it is believed life on Earth began.

Several theories address how and where life on Earth began one such theory is the Hydrothermal Vent Theory. Which states that life began on the bottom of the ocean floor near Hydrothermal vents which provide a source of minerals of energy, both being nesscary resources that could have supported early life forms.

Describe each of the 5 zones in the ocean.

1. Epipleagic Zone (Sunlight Zone) - From the surface to 200 meters deep this zone receives plenty of sunlight, supports photosynthesis and a diverse range of marine life.

2. Mesopelagiz Zone (Twlight Zone) - From 200 meters to 1000 meters deep this zone receives minimal sunlight. Marine life here is often biolumionescent meaning they generate their own light off of biological reactions.

3. Bathypelagic Zone (Midnight Zone) - From 1000 meters to 4000 meters this zone is completely dark, under incredible water pressure and an example of marine life here includes anglerfish.

4. Abyssopelagic Zone (Abyss) - From 4000 meters to 6000 meters this zone is pitch black, freezing temperatures and supports marine life such as deep-sea cucumbers.

5. Hadalpelagic Zone (Trenches) - From 6000 meters to the bottom of the ocean this zone is made up of deep ocean trenches, its marine life here are snail fish and amphipods.

Explain the concept of symbiosis and provide 3 real world examples.

Symbiosis is the interaction between two different organisms living in close physical association. It is compromised of 3 main types:

* Mutualism – both organisms benefit (Bees and Flowers)
* Commensalism – one organism benefits the other is unchanged (Barnacles and Whales)
* Parasitism – one organism benefits at the expense of the other (Ticks and Humans)

Discuss longevity in the sea. Where are the longest living creatures living and how long do they live?

Longest-living creatures:

Greenland Sharks – 400-500 years

Ocean Quahog (Clams) - over 500 years

Black Coral – over 4000 years

Use the book and the internet to search life in your favorite sea (which you picked in the last assignment).

Sea Choosen: The Mediterranean Sea

What are some of the most common creatures?

Loggerhead Turtles

Bottlenose Dolphins

Various Fish: Dusky Grouper, Striped Red Mullet

What are some amazing creatures?

Mediterranean monk seal

Great White Sharks

Giant Devil Rays

How many depth zones in your sea?

The deepest part of the Mediteranean sea is the Calypso Deep reaching around 5100 Meters this places it in the middle of the Abyssopelagic Zone, meaning there are 4 depth zones in this sea.