**Ocean Exploration Mini Project-**

**This packet is a lab grade. The final product is a project grade.**

**Helpful websites:** <http://www.waterencyclopedia.com/La-Mi/Life-in-Water.html>

<http://www.marinebio.net/marinescience/01intro/woclass.htm>

*You have decided to become an ocean explorer. You recently invested in a scuba suit and a submersible and have decided to see the oceans of the world. As you go on your travels, you are documenting what you see, hear, and feel as you reach different zones of the ocean. NOAA (National Oceanic and Atmospheric Association) has assigned you with discovering and cataloging any new species you have discovered. Your focus will be on four major marine life zones: the intertidal zone, the benthic zone, the photic zone, and the abyssal zone.*

*Your task is to discover a new species in each of four major life zones and document its characteristics and those of the environment it lives in. Lastly, you will document the journey of your travels from each life zone noting how conditions of the ocean changed.*

**Part 1**

1. Investigate each marine life zone (intertidal, benthic, photic, and abyssal). Determine the temperature, sunlight, pressure, of each zone. **You may find that that there is a range of numbers or that there is only a description of the characteristic.** Write down any information you find about the specific characteristic of the zone.

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| **Marine**  **life zone** | **Temperature** | **Sunlight** | **Pressure** |
| Intertidal |  |  |  |
| Benthic |  |  |  |
| Photic |  |  |  |
| Abyssal |  |  |  |

1. Investigate three organisms that live in each zone and describe **any unique features** they have which allow them to live in their environment.

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| **Marine**  **life zone** | **Organism 1** | **Organism 2** | **Organism 3** | **Features that Allow Adaptability in the environment** |
| Intertidal |  |  |  |  |
| Benthic |  |  |  |  |
| Photic |  |  |  |  |
| Abyssal |  |  |  |  |

***Part 2:*** *Based upon your findings,* ***create a new species*** *that lives in each marine life zone. For each organism, you must draw and color what they look like. You must write a description of any exterior features (spikes, scales, etc.). You must also describe what* ***they eat (prey), who eats them (predator), how they move,******their lifestyle (plankton, nekton, or benthos) and any special adaptations*** *they may have to survive in their environment for example they may be very small due to the high pressure in their marine life zone. Also make note of any species they may be related to in the ocean.*

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| **Intertidal Zone** | **Characteristics** | |
| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Drawing: | Features: |  |
| Prey: |  |
| Predators: |  |
| Lifestyle: |  |
| Adaptations: |  |
| Organism Related to: |  |
| **Benthic Zone** | **Characteristics** | |
| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Drawing: | Features: |  |
| Prey: |  |
| Predators: |  |
| Lifestyle: |  |
| Adaptations: |  |
| Organism Related to: |  |

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| --- | --- | --- |
| **Photic Zone** | **Characteristics** | |
| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Drawing: | Features: |  |
| Prey: |  |
| Predators: |  |
| Lifestyle: |  |
| Adaptations: |  |
| Organism Related to: |  |
| **Abyssal Zone** | **Characteristics** | |
| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Drawing: | Features: |  |
| Prey: |  |
| Predators: |  |
| Lifestyle: |  |
| Adaptations: |  |
| Organism Related to: |  |

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| **PART 3**: **Final Product (PROJECT GRADE)- Due by Tuesday 2/16/16:**  Create a visual representation of the profile of the ocean that includes **sketch and the label** of the words below **WITH THE CHARACTERS YOU HAVE CREATED**. You may create this visual presentation as a poster (hand drawn), or on the computer (using paint/photoshop or any web 2.0 tools- MUST EMAIL TO TEACHER as an attachment if done on the computer):   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Continental margin | Continental shelf | Continental slope | Continental rise | Abyssal plain | Trenches | Sea mount | New sea floor | | Abyssal zone | Photic zone | Benthic zone | Intertidal zone | All 4 of your creatures w/labels | Convergent boundary (w/arrows) | Divergent boundary (w/arrows) | Mid-ocean ridge | |