

Student Sheet

Name \_\_\_\_\_

Period \_\_\_\_\_

### **Title: Ocean Webquest**

**Introduction:** The oceans are divided into 5 zones mostly by light. Life in the deep sea must adapt to unique conditions of low or no light, high pressure, low energy, and near-freezing temperatures- or- superheated temperatures by the hot vents. Amazingly, less than 10% of the deep-sea has been explored. Today you will be researching the 5 zones of the ocean and creating food webs to demonstrate the flow of energy through the ocean.

#### **Procedures:**

1. Using the website below and other search engines (Google, Ask, Yahoo), fill information under the data section.
2. Now you will need to go into the program of Inspirations on your computer and **make 2 different types** of ocean food webs.
3. One food web must include 10 species of plants or animals, the other must include at least 6. Examples of different food webs would be deep ocean, arctic ocean, tropical ocean, open ocean, or food webs in any of the five layers you just learned about. Try different searches in Yahoo, Google, or Ask, using these different terms or any others you wish to use.
4. Once you find a food web you like, you need to recreate it in Inspirations. You cannot just copy and paste it in. You can use the pictures on Inspirations for some of your pictures, but you will probably have to copy and paste (or "save picture as") pictures in from Google images or other websites. Please make sure you label each picture on your food web and use arrows to connect the correct pictures together (this can be done by clicking on "linking" up above). Be sure to save your work frequently under my documents so you do not lose it.
5. Answer your analysis questions and complete your conclusion.

#### **Data:**

- 1) Go to the following website: <http://www.mos.org/oceans/life/index.html>
- 2) Write 3 other facts you learned about sunlight zone.
- 3) At what depths is the twilight zone located?
- 4) There are large temperature changes in this zone. Why might that be?

- 5) What depths is the Midnight zone found between?
- 6) How does pressure change as you go deeper in the water?
- 7) What do you think this much pressure would do to humans?
- 8) Why doesn't it do that to animals that live there?
- 9) What is the deepest zone in the ocean called?
- 10) Does plant life exist at this depth? Why or why not?

**Analysis:**

1. What happens to the temperature of the ocean the deeper it gets?
2. Predict one way you think animals would adapt to temperature changes.
3. What happens to the amount of light in the ocean the deeper it gets?
4. What happens to the amount of pressure in the ocean the deeper it gets?
5. Predict one way you think animals would adapt to pressure changes?

**Conclusion:** Explain in a complete sentence one thing you learned from this.