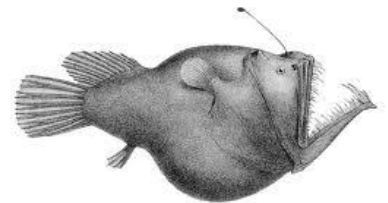


Name: _____ Period: _____ Date: _____

Blue Planet DVD – Deep Ocean

1. Why is a submersible needed to descend to the bottom parts of the ocean?
2. As the submersible approaches the twilight zone (300m deep), what changes in light and temperature occur?
3. How is the **deep sea squid** different than its relatives that stay near the surface?
4. **Hatchet fish** are able to make themselves virtually invisible in the dark zone. Describe two specific aspects of their body design that allows this kind of camouflage.
5. Why do so many of the animals in the dark zone have red pigment?
6. What do animals like the **hairy angler** depend on instead of sight to locate prey?
7. There are two huge challenges to living in the dark zone: finding food, and a mate. Describe how the **deep sea angler** accomplishes both.



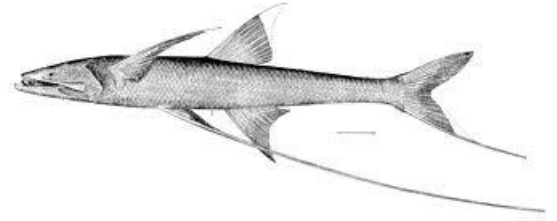
a. Attracting Prey:

b. Locating a Mate:

8. Most of the bioluminescence produced at this level of the ocean is blue. Some predators, however, are able to produce red light. Which is more of an advantage? Why?
9. Bioluminescence is also used by prey, such as the shrimp and copepods to escape predators like the **gigantocyprus**. Describe two examples shown.
10. Animals like the **firefly squid** will migrate up and down the different layers of the ocean depending on the time of day. Explain why.
11. Why are there no plants below 500 meters? What do animals at this depth depend on for food instead?
12. Why do the echinoderms that live at this depth, such as sea stars and sea urchins, travel in herds?
13. The mushroom coral polyps have the largest tentacles of any coral in the ocean. Why is it so important for coral at this depth to have large tentacles?
14. What unusual ability do sea cucumbers and polychaete worms have at this depth to help them find food?
15. Large predators are rare at this depth, but there are a few. Give an example.
16. Hag fish have a mostly cartilaginous skeleton. How do they get enough force to tear flesh from the grey whale carcass?

17. What is the depth of the Mariana trench?

18. **Tripod fish** have two types of specialized fins. Explain where they are, and what they do.



19. What unusual ability does the **dumbo octopus** have that helps it conserve energy?

20. Why are the polychaete worms living near the underwater volcanic vent called **Pompeii worms**?

21. The organisms that live around the underwater volcanic vents are completely independent of the sun. What forms the basis of their food web?

22. An underwater lake with a sort of tidal action is shown at the bottom of the Gulf of Mexico. How is this possible underwater?

23. What does the life in this underwater lake survive on?