**Scrambled Food Chain: Answer KEY**

**Directions**: Read the information about each of the organisms below, and then create a food chain for the organisms in this marine ecosystem. Label your food chain with arrows to show energy flow and the trophic levels: producer, primary consumer, secondary consumer, and tertiary consumer.

**Zooplankton**: Zooplankton are a group of animals that drift through the ocean and feed mostly on tiny plants and sometimes other zooplankton. The plants provide them with energy, some of which they use and some of which they pass on when they are eaten. Examples of zooplankton are jellyfish and krill.

**Dolphins:** Dolphins are large sea mammals. They are fast and very skilled at catching prey. Dolphins have very few predators.

**Phytoplankton**: Phytoplankton are organisms that can live near the surface of the ocean. These tiny plants capture the Sun’s energy and convert it into glucose, a compound that all ocean organisms need to survive.

**Herring:** Herring are small fish that feed upon smaller animals at the ocean’s surface. They swim with their mouths open, filtering their prey from the water as it passes over their gills. They feed on the surface usually at night, when there is less chance of predation by larger animals.

**Place your food chain here:**

*Phytoplankton → Zooplankton → Herring → Dolphins*

*Producer → Primary Consumer → Secondary Consumer → Tertiary Consumer*

**Questions**

**1.** Which of the organisms in this food chain are carnivores?

*Herring and dolphins*

**2.** Where would you place decomposers on the food chain? Explain your answer.

*Decomposers can be placed at any level on the food chain. Decomposers get their energy from waste and dead organisms at all trophic levels.*

**3.** Which of the organisms on this food chain are the herring’s prey?

*The herring’s prey are the zooplankton.*

**4.** What happens to the energy that the herring take in when they consume their prey?

*The herring use some of the energy for life processes such as growth and movement, some of it is used as heat energy, and some of it is passed on to the herring’s predators.*

**5.** Why are there usually more producers than primary consumers in a food chain?

*There are usually more producers because only a small part of the food energy from the producers is available to the primary consumers.*