Is it a Fish or a Marine Mammal?

**Summary:** Marine mammals and fishes have very similar morphology that help them thrive in aquatic environments, but they are actually very different animals that survive in their aquatic habitats in unique ways. This activity will help students compare and contrast these two animal groups by playing a matching game.

**Goals & Objective:** Person will understand (1) how various species are related by either categorizing them as a fish or a marine mammal, (2) how fishes’ bodily functions differ from marine mammals, and (3) what fishes and marine mammals have in common.

**Grades:** K-2nd

**Duration:** 15 minutes

**Vocabulary:**
- **Aquatic:** growing or living in or near the water.
- **Ectothermic:** body temperature is the same as the ambient temperature; “cold-blooded.”
- **Endothermic:** body temperature is constant and created internally; “warm-blooded.”
- **Gills:** the respiratory organ of fishes and some amphibians, by which oxygen is extracted from water.
- **Lungs:** the respiratory organ of birds, reptiles, and mammals by which oxygen is extract from air.
- **Marine:** relating to the ocean.
- **Streamlined/Hydrodynamic:** a design that presents very little resistance to a flow of water, increasing speed and ease of movement.
- **Vertebrate:** a grouping of animals that is distinguished by the possession of a backbone or spinal column, including mammals, birds, reptiles, amphianians, and fishes.

**Materials (if you choose to print)**
- Scissors
- Coloring utensils
- Computer to research animals

**Background & Activity:**
When walking around the aquarium, you may notice all of the animals are aquatic. The animals all swim in the water, have a similar body shaped called streamlined so they can be hydrodynamic as they swim, and hunt for their food in the water. However, not all of the animals depend on their aquatic environments exactly the same. For example, some animals breathe differently; some animals use their gills, some animals use lungs. This is because animals can be distantly related and fall into different animal families, while all adapting to the same environment to survive; for in the aquarium’s case, the ocean. For our last example, fishes use gills to breath, and mammals use lungs to breathe. To learn more about animals they are studying, scientists try to organize animals into their animal families. For our activity, we are specifically going to focus on marine mammals and fishes.

Fishes are a group of animals that are completely aquatic vertebrates that have gills, scales, swim bladders to float, most produce eggs, and are ectothermic. Sharks, stingrays, skates, eels, puffers, seahorses, clownfish are all examples of fishes. Marine mammals are a group of animals that can either partially or completely aquatic vertebrates that have lungs, have hair (at least at one point in their life), produce milk for live birth, and are endothermic. Whales, dolphins, sea otters, sea lions, seals, walruses, manatees, and polar bears are all examples of marine mammals.

*(Some animals are rule-breakers though... go to the bottom for some bonus trivia & research!)*
Draw a line and match the characteristics on the right-hand column with the animal group on the left! (HINT: some are both!)

**FISH**

- Ectotherm (cold-blooded)
- Endotherm (warm-blooded)
- Nurses young with milk
- Scales
- Fur or hair
- Breathes oxygen through gills
- Breathes oxygen with lungs
- Live birth
- Lays eggs
- Uses fins to steer and propel
- Vertebrate
- Ocean ecosystems

**MARINE MAMMAL**
1st Option: Put a blue circle around the animals that are marine mammals. Put a red circle around the animals that are fish!

2nd Option: Print off this worksheet and cut out the animals and separate them into their animal group.
BONUS LEARNING:
Some species of fishes and mammals actually give birth differently than their fish or mammal cousins... We are going to explore the different methods to give birth in the animal kingdom.

Research the difference between these vocab words:

Oviparity (most fish): __________________________

_______________________________

Ovoviviparity:______________________

______________________________

Viviparity (most mammals):____________

________________________________

Give an example of a fish that is ovoviparious:

Give an example of a mammal that is oviparious: