



KNOWLEDGE ORGANISER

SCIENCE: WHO AM I

YEAR FOUR

KEY KNOWLEDGE:

QUESTION 1: How are vertebrates grouped together?

ANSWER

- **Fish** - Fish are animals that live in the water. They have gills that allow them to breathe under water. Different species of fish may live in fresh water or salt water. Some examples of fish include the brook trout, the great white shark, lionfish, and the swordfish.
- **Birds** - Birds are animals that have feathers, wings, and lay eggs. Many, but not all, birds can fly. Some examples of bird species include the bald eagle, the cardinal, the flamingo, ostriches, and the red-tailed hawk.
- **Mammals** - Mammals are warm-blooded animals that nurse their young with milk and have fur or hair. Some examples of mammals include humans, dolphins, giraffes, horses, and spotted hyenas.
- **Amphibians** - Amphibians are cold-blooded animals. They start out their lives living in the water with gills just like fish. Later they develop lungs and can move to dry land. Amphibians include frogs, toads, newts, and salamanders.
- **Reptiles** - Reptiles are cold-blooded animals which lay eggs. Their skin is covered with hard and dry scales. Reptile species include alligators, crocodiles, snakes, lizards, and turtles.

QUESTION 2: How are invertebrates grouped together?

ANSWER

- **Marine Invertebrates** - There are a wide variety of interesting ocean animals that are invertebrates. These include sponges, corals, jellyfish, anemones, and starfish.
- **Mollusks** - Mollusks have a soft body that is covered by an outer layer called a mantle. Many mollusks live inside a shell, but not all of them. Some examples of mollusks include squid, snails, slugs, octopuses, and oysters.
- **Crustaceans** - Crustaceans are a type of arthropod, meaning that they have jointed legs. They also have an exoskeleton (their bones are on the outside like a shell). Some examples of crustaceans are crabs, lobster, shrimp, and barnacles.
- **Worms** - The term "worm" is not a scientific word, but is often used to refer to invertebrate animals that don't have legs. Worms may live in the soil, in the water, or even inside other animals as parasites. Some examples include the tapeworm, the leech, and the earthworm.
- **Insects** - Insects are part of the Earth's largest animal phylum, the arthropods. There are over 1 million species of insects including such animals as the grasshopper, dragonfly, yellow jacket, butterfly, and praying mantis.
- **Spiders, Centipedes and Scorpions** - These animals are all part of the arthropod phylum. Spiders and scorpions are arachnids because they have eight legs. Centipedes and millipedes are myriapods and have lots of legs.

QUESTION 3: What is a classification key?

ANSWER

Classification is the method used by scientists to order living organisms. All species have a unique **classification** that results in a binomial name. Vertebrates are an example of a **classification** group. **Keys** can be used to help to identify individual organisms.