THE SIX KINGDOMS OF LIFE

Classifying Plants and Animals

Scientists classify plants and animals according to the structures and characteristics of each organism. They compare and contrast organisms, and those with similar structures and characteristics are grouped together.

The **characteristics** that scientists consider when classifying plants and animals are:

- how many cells in the organism
- if the cell(s) contains a nucleus
- how the organism obtains food
- how it moves.

Lesson Checkpoint:
Why do scientists classify organisms?

Order of Classifications

The order within the six Kingdom classification system is Kingdom, Phylum, Class, Order, Family, Genus, and Species. The Kingdom is the largest group of organisms, and Species is the smallest group of organisms.

Lesson Checkpoint:
Think of a fun way to memorize the correct order of classification: Kingdom, Phylum, Class, Order, Family, Genus, and Species.

Kingdom: ANIMAL

Number of cells:	multicellular
Have nucleus?	yes
How obtains food:	have to find own food
Movement:	can move on own
Example:	bear

Kingdom: PLANT

Number of cells:	multicellular
Have nucleus?	yes
How obtains food:	can make own food
Example:	rose

Kingdom: FUNGI

Number of cells:	most are multicellular
Have nucleus?	yes
How obtains food:	have to find own food
Example:	

Algae

Mushroom

Kingdom: PROTISTS

Number of cells:	most are one cell
Have nucleus?	yes
How obtains food:	some make their own, some have to get their own food
Example:	algae

Kingdom: EUBACTERIA

Number of cells:	one
Have nucleus?	no
How obtains food:	some make their own/some have to get their own food
Environment:	everywhere: all around us

Kingdom: ARCHAEBACTERIA

Number of cells:	one
Have nucleus?	no
How obtains food:	make their own food
Environment:	harsh: salty, hot even with no sunshine or oxygen

Lesson Checkpoint:
How do plants obtain food?

So many animals…

After being placed in the animal kingdom, animals are then placed into a phylum group. The **chordata** is a phylum that includes animals with **backbones**.

A group of chordata is then divided into five classes depending on their features and characteristics. Those five classes are fish, amphibians, reptiles, bi

Amphibia They go through dr reathe with gills a mphibian is a frog.

Reptiles a ng their bodies. Most reptiles lay eggs. Reptiles use their lungs to breathe. An example of a reptile is a snake.

Mammals are warm-blooded organisms that have body hair and produce milk for their young. They also breathe air with their lungs. An example of a mammal is a dog.

Lesson Checkpoint:
How do reptiles breathe?

Invertebrates are classified into phyla based on their structure and characteristics, such as mollusks, annelids, cnidarians, arthropods, sponges, and echinoderms.

- **Mollusks** have soft bodies and most mollusks have shells. Snails and clams are types of mollusks.

- **Ann** nelid is an e

- **Cnid** amples of cnida

- **Arthropods** are the largest animal phylum. Arthropods have segmented bodies and jointed legs. Insects are included in the arthropod grouping.

Lesson Checkpoint:
What do all cnidarians have in common?

Classification of Plants

Now we can't forget about **plants.** Four well-known plant phyla include flowering plants, mosses, ferns, and conifers.

Flowering plants are vascular, produce seeds, and produce flowers (obviously by their name).

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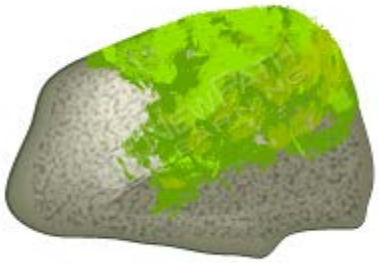
throu

Ferns are stead to
reproduce)

Mosses do not flower, they do not produce seeds, and they are not vascular.



Conifers do not flower, they reproduce using cones and seeds, and they are vascular. Conifers have needles instead of leaves, such as pine trees.

Lesson Checkpoint:
What does vascular mean?