

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



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:	

Kingdom: EUBACTERIA

Number of cells:	one
Have nucleus?	no Kalana (Canada)
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**



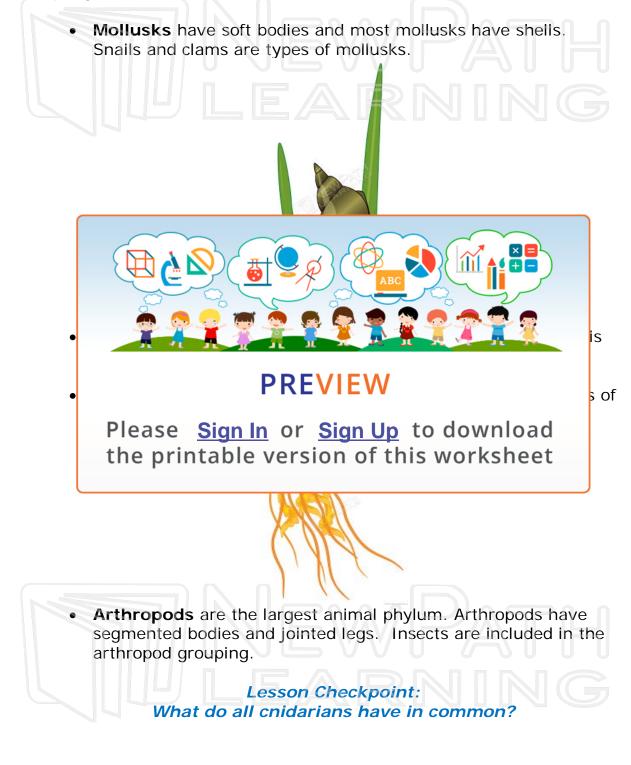
Mammals are warm-blooded organisms that have body hair and produce milk for their young. They also breathe air with their lungs. An example of a mammal is a dog.



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.





Classification of Plants

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





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.

