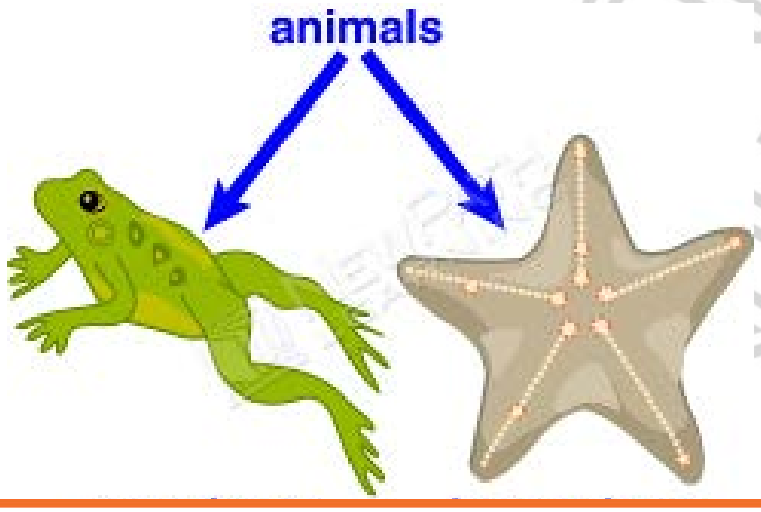
CLASSIFYING ORGANISMS

Scientific classification is the process of **grouping living organisms** into certain categories based on their characteristics, traits, and appearance.



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What is one reason scientists classify animals?

Several characteristics are considered when scientists classify animals into different groups. When classifying organisms, scientists consider:

- The number of cells an organism has—that is whether they are unicellular (have only one cell) or are multicellular (they have many cells)
- The type of cells organisms have, meaning whether their cells have a nucleus or not, and
- Whether the animal makes or finds its own food.

Lesson Checkpoint:
What is one characteristic that scientists consider in an organism when classifying that organism?

The **order of scientific classification** is kingdom, phylum, class, order, family, genus, and species.

Some people take the first letters of each classification *K, P, C, O, F, G, S * and make up a sentence to help them remember the correct order of classification. A sentence like **K**ing **P**atrick **C**ame **O**ver **F**or **G**reen **S**lime.

Each time we move to a **different classification** category, the groups get smaller and more specific. So, for example, there are many, many animals in a kingdom, but not as many in a genus or a species, because those are smaller groups within the kingdom.

When classifying animals, **KINGDOM** is the **largest** category. A kingdom includes a great number of different kinds of organisms. Each organism within the same kingdom has similar cell structures and body functions.

Scientists recognize **six kingdoms** to date:
1. Animals
2. Plants
3. Fungi
4. Protista
5. Eubacteria
6. Archaebacteria

Lesson Checkpoint:
What are the six kingdoms scientists have found so far?

Animal Kingdom Facts
Out of the six kingdoms, the animal kingdom is the **largest**.
# of cells: multicellular
type of cells: have nucleus
food: have to find own food, can't make their own

Plant Kingdom Facts
# of cells: multicellular
type of cells: have nucleus
food: make their own food

Fungi Kingdom Facts
The Fungi Kingdom includes organisms like mushrooms.
# of cells: most multicellular
type of cells: have nucleus
food: need to obtain food from other sources

Protista Kin
# of cells: mo
type of cells:
food: some m

er sources

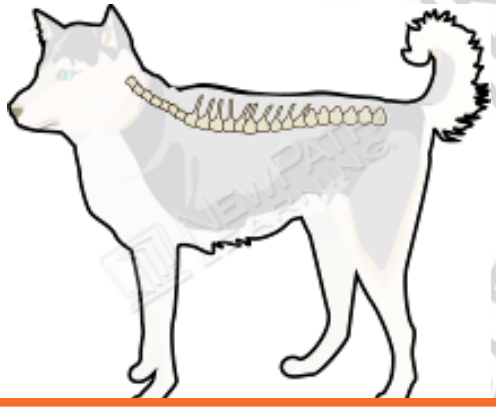
Eubacteria K
This is the ba
# of cells: unicellular
type of cells: no nucleus
food: some make their own/some need to obtain food from other sources

Archaebacteria Kingdom Facts
Is also known as ancient bacteria, found in harsh environments such as salty or extremely hot.
# of cells: unicellular
type of cells: no nucleus
food: make their own food

Lesson Checkpoint:
What is archaebacteria?

After sorting organisms into kingdoms, scientists **continue** to organize the organisms into smaller groups. As scientists continue to divide animals into smaller groups, the **groups** get more and more specific each time.

Phylum is the next category **after kingdom**. A well-known phylum is **Chordata**, which contains all animals such as fish, birds, mammals, reptiles, amphibians. These animals are all vertebrates, meaning they have backbones.



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Phylum → Chordata

Class → Mammalia

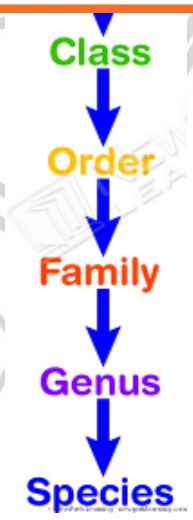
The **next category** after Class is **Order**. Orders can then be broken down again into a **Family**.

The next category is **Genus**, which is a group of closely related living things.

Finally, the genus is broken down into the **Species**. Species are the smallest groups. They are a group of organisms that look very similar and have the ability to reproduce among themselves.

Scientists give every living organism a scientific name. An organism's **scientific name** contains the genus name and the species name. Humans belong to the homo genus and the sapiens species. Our **scientific name** is Homo sapiens.

Scientific cla... extremely ge...



Lesson Checkpoint:
Scientific classification goes from extremely general (kingdom) to what??