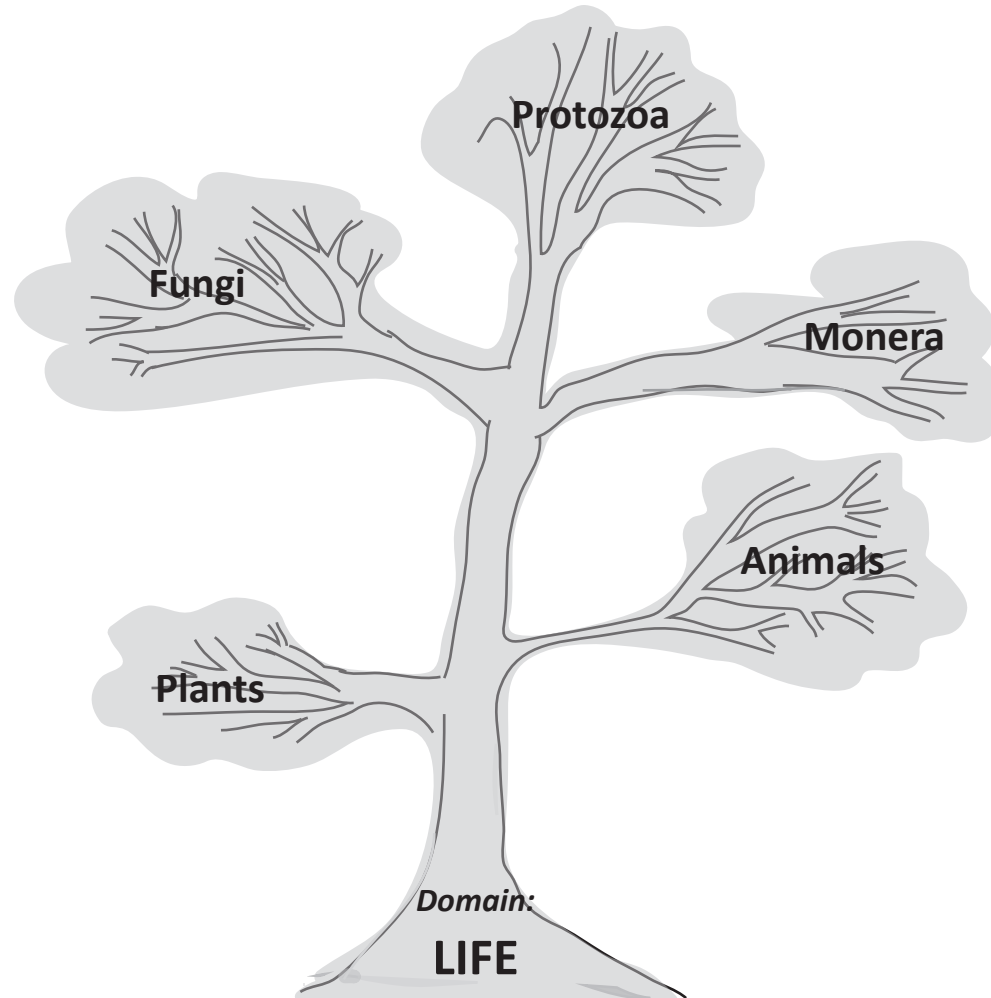


Describe the role of domain and kingdom in the biology tree of life.

Eukaryotic Cells = Complex cells with nucleus

Prokaryotic Cells = Primitive cells with no nucleus



Because of the complexity of living organisms, different scientists and texts will list different numbers of kingdoms and organize groups differently.

Describe the role of domain and kingdom in the biology tree of life.

Guessing Game: Using MatchCard 8 and the classification system, ask students to guess what DOMAIN plants and animals belong under. After "Life" is guessed, ask what other domain(s) might exist.

Give time to brainstorm what other living things are on the tree of life besides plants and animals. Then show the student page without answers. How does a fungus differ from a plant? Give ten minutes for a scavenger hunt to find information (print or internet) or specimens of fungi.

Introduce protozoa and monera as animal-like unicellular organisms. Monera - which include bacteria - have prokaryotic cells that are simple and have no nucleus (like the brain of the cell.) Give another ten minute scavenger hunt to find information on protozoa, bacteria, or archaea.

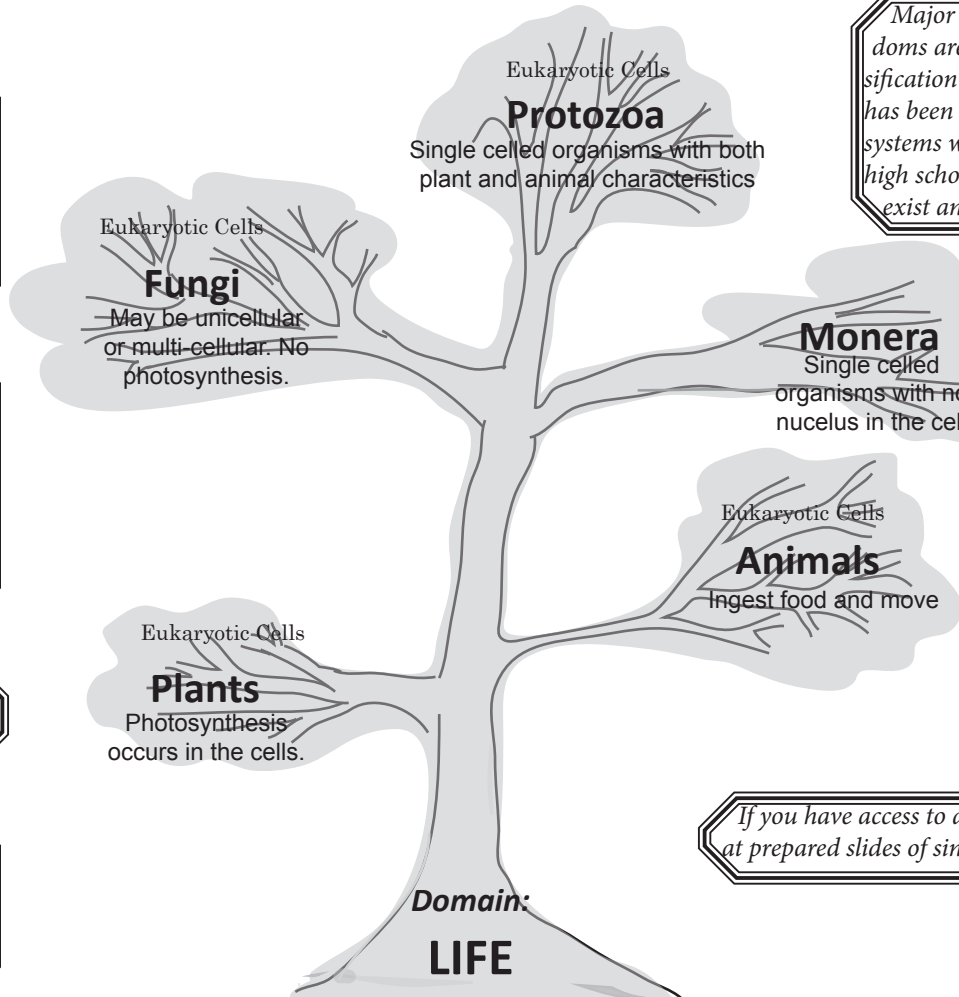
A virus is not a cell but causes disease by invading cells. The common cold is a viral infection.

With time, new kingdoms are added to the tree of life by scientists. Can you imagine a type of creature that would not fit into these five kingdoms? Describe it and name the kingdom.

Eukaryotic Cells = Complex cells with nucleus

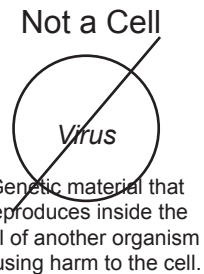
Prokaryotic Cells = Primitive cells with no nucleus

Major Teaching Concepts: Plant and Animal kingdoms are insufficient for all living things and the classification system has become more complex. DOMAIN has been added to the system. Different classification systems will list different numbers of kingdoms. Prior to high school, students should know single-celled organisms exist and that viruses are not cells.



Prokaryotic Cells

Archaea	Bacteria
More recently discovered and exist in some extreme environments	Found throughout the environment and may be harmful or helpful to humans



If you have access to a microscope, look at prepared slides of single celled organisms.

Because of the complexity of living organisms, different scientists and texts will list different numbers of kingdoms and organize groups differently.

Zoology 9 Information Pieces

Photosynthesis occurs in the cells. Z-9
May be unicellular or multi-cellular - No photosynthesis Z-9
Single celled organisms with no nucleus in the cell Z-9
Single celled organisms with both plant and animal characteristics Z-9
Ingest food and move Z-9

Eukaryotic Cells Z-9
Eukaryotic Cells Z-9
Eukaryotic Cells Z-9
Eukaryotic Cells Z-9
Prokaryotic Cells Z-9

<i>Archaea</i> Z-9
More recently discovered and exist in some extreme environments Z-9
<i>Bacteria</i> Z-9
Found throughout the environment and may be harmful or helpful to humans Z-9
<i>Virus</i> Z-9
Genetic material that reproduces inside the cell of another organism causing harm to the cell. Z-9

To Make Your **MatchCard** more durable:

1. Put the student MatchCard and instructor MatchCard back to back in a clear plastic page protector.
2. Laminate the information pieces. Or you can make them sturdier by covering the paper with transparent tape prior to cutting the pieces out.
3. For more ideas on how to use the MatchCards, and for keeping a notebook for review, see the Instructor's Guide.