

DIVERSITY OF LIFE

What Is Life?

There are many characteristics that scientists use to determine if something is alive. The characteristics are very specific and are applicable to all of the different species that exist on our planet.

We are surrounded by life almost everywhere a human can go on our planet. Appreciating life is important and studying different species is vital to understanding our environment.

Characteristics of Living Organisms

There are certain characteristics of all living organisms on our planet. They:

- Reproduce
- Use energy
- Grow and develop
- Resp
- Have
- Have

Water and
have living



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, but



Cells are the basic building blocks of all living organisms.

Needs of Living Things

Living organisms must continually meet four basic needs to stay alive. They must have a **living space, water, energy, and stable internal conditions**.

Plants are autotrophic feeders and animals are heterotrophic feeders.



Why Cla

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Without the classification system that is in place there would be mass confusion in the scientific community. Classifying organisms allows there to be structure and organization to science and the information that scientists discover.

Lesson Checkpoint: *Why do scientists classify living organisms?*

What is Binomial Nomenclature?

Binomial nomenclature is a two-part naming system, with the first part being the **Genus** and the second part being the **Species**. The system clarifies an organism's scientific name and its relationship to other species.

A **taxonomic key** is a method used to classify organisms by dividing them into different categories at each step in a series of steps.

Levels of Classification

There are different levels of classification that narrow in on a particular species. The relationship between organisms gets closer and closer the lower the level of classification.

There are eight levels used in the classification system. The correct order from the highest level is:

Domain,
Kingdom,
Phylum,
Class,
Order,
Family,
Genus, and
Species

Six Kingdom

There are



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n system.



The names of the six different Kingdom's are as follows: Animals (Animalia), Plants (Plantae), Archaeobacteria, Eubacteria, Fungi, and Protists.