# Scientific Sorting

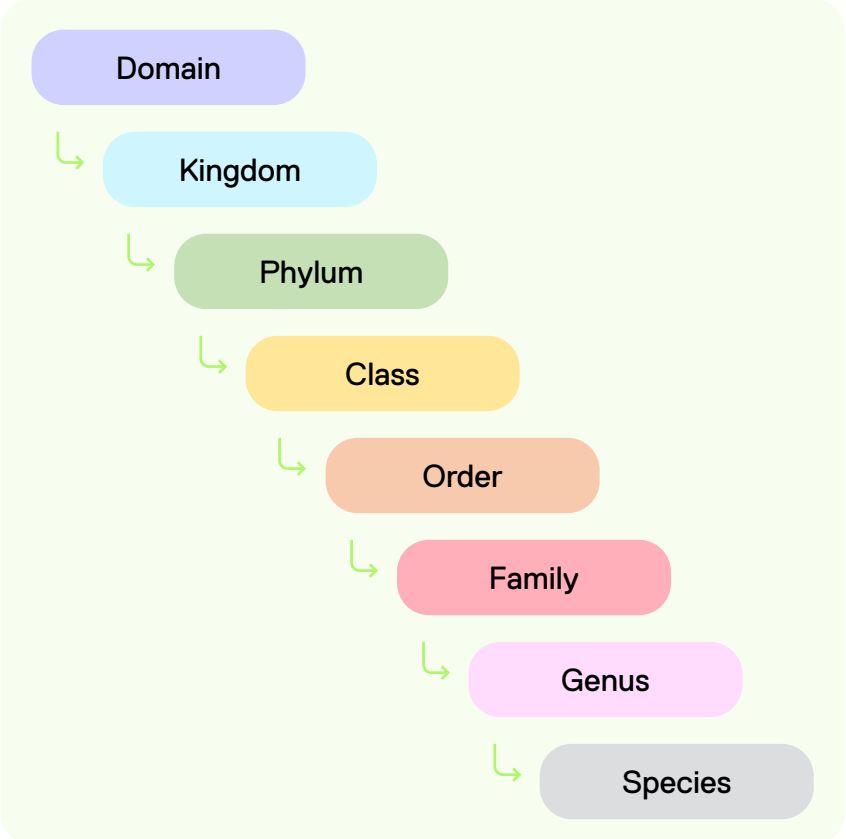
## MAIN IDEA

Collect your favorite natural objects from your own backyard and sort them by their physical characteristics to learn about the important scientific process of taxonomy while practicing fine motor skills. This is a great activity for children five and under.

## SCIENCE BACKGROUND

Taxonomy is the branch of science that classifies living organisms and nonliving things by their similarities. Scientists use this process to help identify and unlock key connections in the natural world. In biology, taxonomy allows scientists to identify, group and properly name organisms using the same system.

Organisms are grouped into taxa (taxonomic categories) and these groups are given a taxonomic rank which then form a taxonomic hierarchy. The main ranks in modern use include: Domain, Kingdom, Phylum, Class, Order, Family, Genus and Species. Domain is the broadest classification of a living organisms, while species is the most specific. All organisms have a scientific and common name. An organism's scientific name is the combination of its genus name and species name. For example, the common name is "American black bear" and its corresponding scientific name is Ursus americanus.




## MATERIALS

Multiple bins or a sorting tray
*(optional: use multipurpose tape to set different sections on one tray or tabletop for sorting)*

Natural objects
(leaves, rocks, seashells, sticks, etc.)

*Optional:* Paper and markers

*Optional:* Tongs or large tweezers

## ACTIVITY PROCEDURE

**Step 1:** Collect a large amount and variety of natural objects from outside in your backyard or a nearby outdoor area. These can be leaves, rocks, seashells, sticks, or more depending on what you can find.
*Hint: Similar types of objects make for extra fun sorting, such as different types or colors of leaves.*

**Step 2:** Place all collected objects into a central bin or location.

**Step 3:** Using a sorting tray or bins, start sorting the objects based on their physical characteristics. This could include color, pattern, shape, size and texture. Each bin or tray section should have at least one physical characteristic in common, such as color or size.
*Optional: use tongs or large tweezers to pick up objects to build fine motor skills!*

- How did you sort your objects? Did you focus on color, shape, size or something different?
- What makes the objects in each bin similar?
- Could you sort each bin into even smaller groups?

**Step 4:** Recombine all the objects and sort them again based on different physical characteristics.

- How many ways can you sort your objects?

## EDUCATIONAL STANDARDS

### Kindergarten

Big Idea 8: Properties of Matter

SC.K.P.8.1 - Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture.

### Grade 1

Big Idea 8: Properties of Matter

SC.1.P.8.1 - Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float.

## ADDITIONAL RESOURCES

**Dinosaur Train: Organizing into Groups or Classification**
https://pbskids.org/video/dinosaur-train/2232965177

**Britannica Kids Biological Classification**
https://kids.britannica.com/kids/article/biological-classification/599565

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