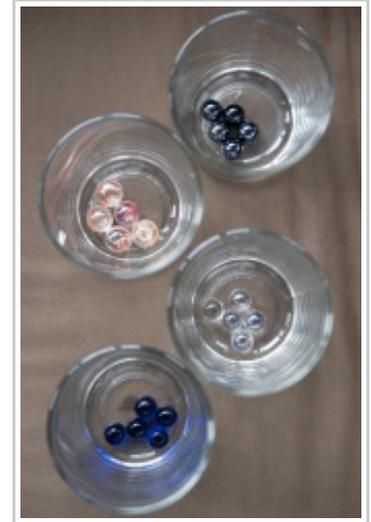


Practice Classification in Action

Scientists love to classify. When scientific items are properly organized, not only are they powerful tools for scientists, they can also predict yet undiscovered items.

Dmitri Mendeleev, considered the father of the modern periodic table, arranged the known elements of the 1800's, in rows and columns by similar chemical and physical properties. What he discovered were "gaps" in the table and correctly predicted that yet undiscovered elements would fill those gaps.

Try this simple activity with your child to help him develop an understanding of why scientific classification systems exist and how they are developed.



What You Need:

- A collection of related but different items (Legos work well).

What You Do:

1. People are natural classifiers. Have your child look around the house and see what items we classify on a daily basis. Consider looking at food, clothes, toys, games, and books.
2. Ask your child to name some scientific classification systems and if possible, explain by which properties they are classified. Some examples include: Classification of living things (kingdom, phylum, class...) Periodic table (atomic mass, ionization energy, atomic radius...) Mineral classification systems (silicates, oxides, carbonates...) Star classification (O, B, A...).
3. Explain to your child that you are going to create a classification system for Legos (or whatever objects you picked). You will arrange the items by your classification system and your child will need to determine the factor which organizes the items by observation only.
4. Start with an easy classification system. Separate the Legos into piles based on color only. Allow your child to guess how they are organized. Switch places with your child and allow him to classify the Legos and you guess how they are organized. Encourage him to develop his own classification system, some possibilities include: shape, size, and number of raised circles on top of blocks. Alternate taking turns classifying the blocks by one property and guessing until you both run out of ideas.
5. Many classification systems involve more than one trait by which the items are classified. Take the challenge to the next level and classify the Legos by two characteristics. Don't be afraid to connect the Legos! For example, make columns and rows of Legos, that organize them by their color as well as the number of Legos connected (first row has 1 red brick, second has 2 stacked red bricks, third row has 3 stacked bricks, the row underneath does the same for blue bricks and so on). Switch places with your child and have him create a two-trait classification system for you to figure out.
6. How many traits can you each use to create your classification systems; two, three, four? Give it a try!
7. Variation: Instead of simply guessing the organization of the classification system, have your child (and you!) continue the classification system by properly adding more Legos to the system the other one created.