

Finding Science in the Home

One important area of learning that we approach differently in the Casa is science. Children under six are focused on the tangible items in their life; it is the age of “what is this?” So, when we think of science for this age group, we consider what objects or processes the child can directly observe. In the classroom, this could mean something as simple as learning the names of different classifications of animals, or as complex as keeping an observation journal of caterpillars in metamorphosis. Science for this age is closely related to both sensorial learning, as the child begins to improve at differentiation, and language. Here are some areas of natural science that are either already present or can be easily approached in the home.

- **Biology**

- Go on a walk. Take note of every living thing you see together. Casual conversation is a great way to talk about the differences between living and non-living things; plants and what is unique about them; and the different animals that call our region home.
- Zoology can be learned casually through conversation in the home. When an animal comes up in conversation, you could ask questions like, is it a vertebrate or invertebrate? Is it a mammal?
- Children are fascinated by the human body!
 - Learn the names of body parts through songs. In our class, we use “Head, Shoulders, Knees, and Toes” to learn the names of different bones or muscle groups. You could also turn it into a gross motor game together (“Touch your phalanges to your tarsals!”)
 - List as many body parts as they can, orally or through writing. For an extra challenge, how many internal body parts can they name?
 - This is a great time to learn about germs. Demystifying what they can't see could help alleviate stress around it.
- Gardening with children is a great way to help them gain appreciation for the world around them through botany. Children can:
 - Weed, with supervision or after a lesson on distinguishing weeds from desirable plants
 - Water houseplants. Tip: have them use either a very small watering can or a small measuring cup or bottle to avoid over watering with younger children. They may also need a reminder how to tell if a plant needs water.
 - Learn the names of the plants around them. For children who can write, they could make lists or labels for them, or even create a guide of care instructions.
 - Plant. If you have seeds and are fortunate enough to have a yard, this is a perfect time to grow some new additions to your world. Children love to dig, and to see and document the growth of seedlings. Older children could create a journal documenting the growth of their new sprouts. If seeds and starts are unavailable to you, try sprouting potato eyes in a bucket, legumes on a damp cloth, or an avocado pit in a jar!
 - Clean the leaves of a plant. This improves the plant's ability to produce its energy. All that's needed is a little dish of water and a soft cloth or cotton ball. Older children may even want to know the purpose of this, and could begin to learn about (or research for themselves!) photosynthesis.
 - Major gardening tasks can also be undertaken at this time, and children are happy to help! Laying in compost for the new plants, or to boost perennials, can be a lesson in what plants require to grow. Mulching can also be a lesson in what happens when a plant (in this case, a weed) is deprived of what it requires.

- **Chemistry**
 - Cooking and baking are chemistry in its most digestible form.
 - Baking requires precision because of its chemical reactions. Practice measuring carefully! As you bake, talk about why each ingredient is part of the recipe, and what might happen if you forget to include it.
 - As you cook, discuss the different flavors and textures of your ingredients. Let your child taste with you as you cook to help their palates learn about the five main flavors, and how to tell what is missing from a dish.
 - Play a guessing game with tasting fruits or vegetables – no peeking! Learn the smells of some kitchen herbs, and play a bring me game where they have to find the right container by smell alone.
- **Physics**
 - Colors!
 - Let your child explore what happens when combining different colors of paint. They can even build a color wheel using water colors, markers, or food colored water and a paper coffee filter.
 - Find colors around the house. How many blue objects can they find? Can they put them in order from darkest to lightest? What are the names for different shade of each color?
 - Building is early engineering. Offer challenges for building something new with legos or blocks. How can we keep it from falling down? What makes a structure stable? How tall can we build it?
 - Explore gravity. A ball always goes up and then comes down. What do other things do when we drop them? How do they fall? Help them gather a collection of (non-fragile) objects and find out!
 - Explore buoyancy. Help them collect objects that are water-resistant or expendable, and a towel and bowl of water. What sinks and what floats?
 - Explore magnetism. If you have a magnet, they can make collections of what is and is not magnetic and note their similarities.
- **Earth Science**
 - Children love rocks. They could organize their collections of pebbles. Test their hardness with sandpaper. Note their textures and colors. What other qualities could they discover about their rocks?
 - Weather is the easiest way to start children with life sciences
 - Your child can record what the weather was each day. If you have a thermometer, they could track temperature as well – even multiple times a day!
 - Learn about different kinds of clouds together. What does each type mean?

There is so much science in the world around us. While some science may require special materials, so much of it is simply noticing what is already there, and illuminating it for the child to see, rather than to take for granted. We would love to hear where else you have found science in your home!