

SHOOTS & SPROUTS

Life Cycle Experiments

Dr. Montessori always started teaching with observations of real things and then used models and pictures. These activities will allow your children to explore life cycles first hand, and the simple growing experiments will allow them to practice the steps of the scientific method.

Observation Of A Plant - Start with the real thing: show your child a plant that you've dug up and identify the parts with them: root, stem, leaves, seeds.

Plant Life Cycles - Have a discussion with your child. Ask: Where do plants come from? Using the model, introduce life cycles of plants, showing that they start as seeds, sprout, grow, and then produce seeds to start the cycle over again.

Seed Identification - Have your child help you identify different kinds of seeds that you might have around your home: Corn, beans, peas, nuts, etc. Talk about what seeds are edible and what aren't.

Life Cycle Model Sequencing - Set the models out in random order. Ask which comes first, then have your child put them in order. Older children can be introduced to the plant vocabulary [listed on the resources page].

Simple Bean Growing Observation - 2 methods:

1. Use the absorbent sheet, a little water and a single bean in a plastic bag. Tape to the window so it gets lots of sunlight. It should sprout within a few days.
2. Hydrate expanding water beads in water overnight. Fill the plastic bag with the beads, add a bean and tape to the window. It should sprout within a few days.

Match To Model - You can start beans on different days over a period of time so that you can show the different stages at once and match them to the life cycle model.

Growing Experiments - Using the printable on our resources page, you can help your child understand what is necessary for a plant to grow. Experiment with no air, water, or light and help them see what happens [see videos for a full explanation].

Life Cycle Experiments, continued

Growing Zinnias - Place a growing soil wafer into a pot and add water, watching it expand. Plant 1 or 2 seeds in the pot and then watch your plant grow! See resources page for tips on how to care for your Zinnias.

Tree Puzzle

This is no ordinary puzzle, so don't let its simplicity fool you! Montessori Puzzles are beautifully crafted and made of wood. In the right hands they can be a rich educational experience, because of their many uses and the variety of activities they provide.

Observation Of A Tree - Begin by observing a real tree, identifying the roots, trunk, leaves, branches, etc.

Puzzle Exploration - Introduce the puzzle as a representation of the tree. Have your child take the puzzle apart and put it back together, allowing them to explore.

Parts Of The Tree - Help your child identify and name the parts of the tree puzzle. Ask them to remove one part at a time, all of the leaves, the branches, the trunk, and the roots. [See video instructions for more details]

Plants As Food - Discuss plants that you have at home and foods that are the different parts of the plant. For example: carrots and potatoes are roots, lettuce and spinach are leaves, corn and beans are seeds, etc.

Advanced Puzzle Activities - [See video instructions]

1. Tracing and coloring in individual parts of the puzzle to make a "parts booklet"
2. Tracing the whole puzzle on a sheet of paper
3. Assembling the puzzle without the frame
4. Identifying and labeling the parts of the puzzle

Observation of Nature Items

Everyone love a good mystery, especially kids! The Mystery Bag is an important part of a Montessori classroom. It allows children to explore using their senses, develops an awareness of shapes and textures, and the vocabulary necessary to describe their experiences.

Exploration - Allow your child to explore the different items. Discuss attributes: some are soft, hard, rigid, spongy, etc. Use the magnifying glass to really see the details.

Identify Nature Items - Use the list that came in your Mystery Bag to identify and name the different items. For older children, you can look the items up and see what they look like on the plant or tree that they came from.

Nature Scavenger Hunt - Create a list of nature items that you know your child will be able to find. Grass, leaves, acorns, etc. Have them collect the items and check them off of your scavenger hunt list. Then, you can use those items to explore in more detail.

Label Nature Items - For older children, have them use a slip of paper to write down the name of the item and place it next to it. You could also have the names already written out and simply have your child label it.

Mystery Bag - What Is It? - Have your child reach into the bag, select an item, and try to guess what it is based on how it feels. After they guess, they can bring the item out and confirm what it actually is.

Mystery Bag - What's Missing? - Add several items to the Mystery Bag. Give your child a few minutes to feel what is in there, then secretly remove one item from the bag. Have your child try to guess what is missing based on what is left in the bag.

Parents should make sure that their children are not allergic to any natural items that we provide or that you may find at a park or around your home.