



Supporting Science Learning at Home

Parents are the first and most important early educators of their children. As children grow, they acquire much of their understanding and attitudes about the natural and technological world from their parents. Science is all around us. It can be in your home, outside or elsewhere. Children are naturally curious about the world they live in and hands-on, relevant activities with an emphasis on learning about the science in everyday life will help them form a deeper understanding of how the world works. The goal is for children to develop an awareness of their surroundings.

Teachable moments are learning opportunities that occur spontaneously every day. Parents are in the ideal position to seize these opportunities. You can't plan a teachable moment, but by planning ahead, you can ensure you are ready to take advantage of one when it occurs. Your child may show particular interest in something or you may see an opportunity to point out something that is unique or worth sharing. Talk about how playing in the shade will be cooler on a hot, sunny day. Ask your child questions or follow up on their questions. Conduct an experiment on the spot. Encourage them to ask questions and seek out their own answers. Investigate the concepts by doing further research together with your child.

How to Design an Experiment

Experiments don't have to be elaborate, but they do need to be safe. Simple experiments may include the POE method – Predict, Observe and Explain.

- Have the child predict what they think may happen. Will it be hotter in the shade or the sun? Do the experiment and observe what happens. Fill two glasses with water and put one in the shade and one in the sun.
- Ask your child whether their prediction was correct and try to explain what may have happened and why. Why was the glass of water in the sun warmer than the one in the shade? How did it get that way?
- Try to do the experiment in a different way and observe what happens. A correct

explanation is not necessary right away. You can tell your child that you do not know the answer and then you can try to find out the answer together. Put the glass of water from the shade into the sun and see how long it takes to get as warm as the one already in the sun or mix the hot and cooler glasses of water together and feel the temperature of the resulting water.

Science is everywhere. You can turn almost any discussion into a science discovery. Just ask your child some simple questions:

- What do you think will happen?
- Let's try to measure how long, how big, how fast it is, etc.
- If we do it this way instead, let's watch what happens.
- What does it feel like?



Try to relate it to previous experiences so your child makes links and builds knowledge. Most importantly, have fun, be safe and share the experience!

Use the following chart as suggestions for activities that you can do with your child.

JANUARY	FEBRUARY	MARCH	APRIL
Make a snowball on a snowy day and talk about snow being frozen water. Bring the snowball inside to watch it melt. Make different sized snowballs, guess which will produce more water when melted and measure.	Make footprints in the snow or mud. Try to identify other footprints found. Measure the distance between objects using footprints – who uses more footprints, child or adult?	Discuss the importance of brushing your teeth. Count the number of teeth – who has more, child or adult?	When riding in the car on a rainy day observe how the windshield wipers help you see. Count the number of times the wipers move in a period of time.
MAY	JUNE	JULY	AUGUST
Watch a bird build a nest and talk about the materials it uses. What other kinds of homes do animals make?	Plant a vegetable garden with your children and help them take care of the garden. Count the number of days before different plants sprout. Which plant grows fastest?	Talk about why you put sunblock lotion on your child when they go outside on a sunny day.	Bounce different types of balls and see which one bounces higher. Make predictions first and then measure height.
SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Play with bubbles and experiment with different materials used as bubble wands.	Visit a pumpkin patch to see how pumpkins grow on vines. Compare the sizes of different pumpkins.	Take a trip to the grocery store and find both fresh vegetables and canned vegetables. Talk about the farm where the food may have been grown.	Bake a cake with your child and talk about how it changes from a liquid to a solid in the hot oven.