

The Daily Parent

A NEWSLETTER FOR WORKING PARENTS

WHAT MAKES IT RAIN?:

Science Teaches Children About the World Around Them

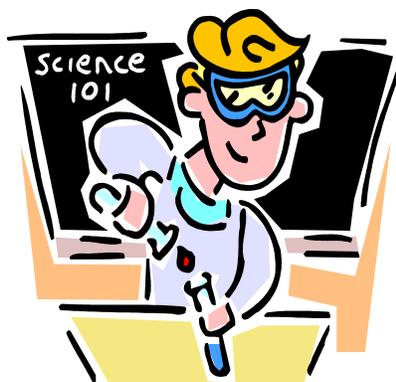
The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them.

—William Lawrence Bragg

When you think of science, what comes to mind?

Is it looking under a microscope? Mixing different liquids and finding out what happens? Perhaps it was the class where you actually got to “do” something? There are many different types of science. That’s because in its simplest meaning, science is the way you study or learn (or think) about something. Science is all about studying, finding out, and making sense of the “hows”, “whats”, and “whys” of the world that we live in.

For young children, science mixes well with their natural sense of curiosity. Young children learn through their senses -

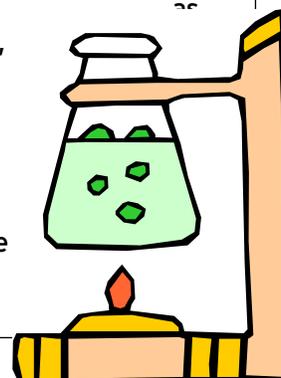


smelling, tasting, touching, hearing and seeing.

Science uses all of these senses and it is also fun. Science can help children learn how the light from the sun helps flowers grow, how water becomes ice, and about other things in their environments.

More Than Discovering

Science has an even more important role for children than just showing them what and how things happen. Science teaches children **how** to learn. It uses thinking (cognitive) skills, and promotes creativity. By using the imagination, creativity, testing, experimenting, and observing, children get ideas that help them learn basic facts and rules about the world around them. Science is about experimenting—learning by trial and error, not giving up, following steps, and coming up with results. Science uses many math skills well—guessing, measuring, comparing, organizing, observing. Science helps children come up with their own answers (and ideas) rather than being given them. It’s what true learning is all about.



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Science Teaches Children About the World Around Them

Science is Everywhere

Science is all around us. There is probably no one room at home or in a center or outdoors that cannot be a place of exploration for children. For young children, science does not have to be "formal" or take a lot of time, or take money. It just has to be an activity where children "do" something and "see" the results. Although the following activities

are grouped by age—all activities are okay for any age group. For older children, ask them questions about the activities to build their thinking skills. Make sure children are actually doing the activities. Of course, adults have to get materials together and help the younger ones with cutting or other skills. However, let the children actually do the mixing, planting or whatever the activities ask. Allow them to explore and discover.

Continued on page 5

Fun Science Activities for Young Children*

*These activities are referenced in **For More Information Section.**

	Activity/Materials You'll Need	What You and Child(ren) Do	Skills/Topics/What is Being Learned
	Growing Sponge Grass		
Toddlers	<ul style="list-style-type: none"> ▶ Sponges (small ones/buy small ones or take 1 large sponge and cut it) ▶ Scissors ▶ Container – foam tray, small dish ▶ Water ▶ Grass seed ▶ Small spray or squirt plastic bottles ▶ Sunny area- window or place that gets sunlight 	<ul style="list-style-type: none"> ▶ Take small sponge or a pieces of sponge ▶ Soak it in water ▶ Place the sponge in the container ▶ Sprinkle the grass seeds on the sponge ▶ Place it in a sunny space ▶ Water it a little every day ▶ Watch as the grass begins to grow! 	<ul style="list-style-type: none"> ▶ The sun helps plants grow ▶ Water helps plants to grow ▶ How to observe changes every day ▶ How to grow things ▶ Words used: sun, water, sprinkle, grow, wait and observe



Science Teaches Children About the World Around Them



Fun Science Activities for Young Children*

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	Activity/Materials You'll Need	What You and Child(ren) Do	Skills/Topics/What is Being Learned
	Making Lemonade		
Toddlers	<ul style="list-style-type: none"> ▶ Lemons (at least one for each child) ▶ Knife to cut (for adult use only) ▶ Spoons ▶ Cups ▶ Sugar ▶ Measuring spoons ▶ Drinking water - pitcher or from faucet or wherever you get water 	<ul style="list-style-type: none"> ▶ Help cut the lemons into quarters or smaller pieces ▶ Squeeze some lemon into cups ▶ Add sugar – using measuring spoons ▶ Add water ▶ Stir and taste ▶ Add a little more sugar and taste again ▶ After adding more sugar, ask how does it taste? 	<ul style="list-style-type: none"> ▶ Using the taste sense ▶ How sugar sweetens and changes taste ▶ Measuring ▶ Words used: squeeze, measure, stir, sweet(er), sour, delicious, yucky, perfect

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Fun Science Activities for Young Children*

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	Activity/Materials You'll Need	What You and Child(ren) Do	Skills/Topics/What is Being Learned
Preschoolers	Making Fossil Prints		
	 <ul style="list-style-type: none"> ▶ 1 box of baking soda ▶ 1 cup of cornstarch ▶ Water ▶ Stove ▶ Small cooking pan ▶ Paper towel or cloth ▶ Plate ▶ Spoon ▶ Container with lid (or cover it tightly) ▶ Seashells – different sizes <p>Prepare the mixture a few hours (or day) before doing the activity</p>	<p>To prepare clay mixture -</p> <ul style="list-style-type: none"> ▶ Mix the box of baking soda, cornstarch and 1 and 1/4 cup of water together in a small pot ▶ Heat the mixture on stove until the mixture thickens ▶ Remove and put on plate to cool ▶ Place wet paper towel or cloth over the plate as it cools ▶ When cool, knead the mixture dough and then store in container with lid on it <p>For activity -</p> <ul style="list-style-type: none"> ▶ Get a lump of the clay to make a fossil ▶ Press the shell into the clay to leave a print ▶ Carefully remove the shell ▶ Try doing this with several shells of different sizes ▶ Let the fossil dry completely - overnight ▶ Compare the fossils to the shells the next day and match the shells to its imprint 	<ul style="list-style-type: none"> ▶ Learning about fossils ▶ Comparing and matching ▶ Words used: fossils, imprint, shell
	Magical Frost		
	<ul style="list-style-type: none"> ▶ A tin can or metal can (empty coffee can) ▶ Teaspoon ▶ Salt ▶ Ice cubes 	<ul style="list-style-type: none"> ▶ Put ice cubes into the tin can ▶ Add a teaspoon of salt and stir quickly ▶ Watch frost form on the outside of the can ▶ Touch it, smell it - examine it 	<ul style="list-style-type: none"> ▶ What happens to objects when the air around it gets very cold ▶ Words used: watch, frost, temperature

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Fun Science Activities for Young Children* *These activities are referenced in For More Information Section.			
	Activity/Materials You'll Need	What You and Child(ren) Do	Skills/Topics/What is Being Learned
School Age	<p>Sink or Float?</p> <ul style="list-style-type: none"> ▶ A tub or container that holds an amount of water (that's deep enough to cover objects placed within it) ▶ A variety of objects to place in water. Choose large objects and small objects – e.g., plastic bottle, spoon, rock, block, wash cloth, toothbrush, ball 	<ul style="list-style-type: none"> ▶ Fill the tub or container with water - enough to cover objects placed in the water (supervise children with water carefully) ▶ Before placing objects in the water - one by one, have the children guess if the object will sink to the bottom or float on the top of the water ▶ Write down the children's guesses ▶ Do this each with each object you have and record the guesses and what the results were 	<ul style="list-style-type: none"> ▶ What determines if an object will float or sink: the size, weight, material ▶ Words used: float, sink, heavy, light, size, material <p>Questions to ask the children:</p> <ul style="list-style-type: none"> ▶ Why do you think some of the objects floated? ▶ Why do you think some objects sank? <p>Have the children:</p> <ul style="list-style-type: none"> ▶ Make a chart of the things that floated and the things that sank
	<p>Making Volcanoes</p> <ul style="list-style-type: none"> ▶ Baking soda ▶ Vinegar ▶ Paper Towels ▶ Spoon ▶ A small pitcher or container to pour from ▶ Tub container or sink ▶ Small plastic bottle <p>(You can also do this if you have a sand table or outside in a sandbox-put the plastic bottle in the sand to give it a real volcano look)</p>	<ul style="list-style-type: none"> ▶ Place the plastic bottle in the tub or sink. Make sure it can stand on its own. ▶ Pour two spoonfuls of baking soda into the bottle ▶ Pour some vinegar into the small pitcher or container ▶ Pour a little vinegar into the bottle with the baking soda ▶ This will cause a chemical reaction and the vinegar will start the baking soda to bubble over like a volcano ▶ Repeat this process a few times: add a few more spoonfuls of baking soda, then a few pours of vinegar – watch what happens 	<ul style="list-style-type: none"> ▶ What can happen when two ingredients are combined ▶ Trial and error ▶ Words used: pour, mix, repeat <p>Questions to ask the children:</p> <p>Before activity: What do you think will happen when you pour the vinegar?</p> <p>After activity - Why do you think there are foam and bubbles?</p>



Science Teaches Children About the World Around Them

Science is probably one of the easiest and most fun ways to engage children. Children use all of the senses, use their small (and large) motor skills, and think about how things work and why things happen. This is the way young children learn best - by doing. See how many ways you can blend science activities into your child's daily life and help her to understand that learning can be fun.

For More Information

- ▶ **Science Activities.** Activities are reprinted (and adapted) with permission from, *The Giant Encyclopedia of Preschool Activities for Three-Year-Olds*, *The Giant Encyclopedia of Preschool Activities for Four-Year-Olds*, and *The Giant Encyclopedia of Kindergarten Activities*. © 2004 by Gryphon House, Inc. Price \$34.95/\$6.00 shipping each. Available from Gryphon House, Box 207, Beltsville, MD 20704-0207, 1-800-638-0928, www.ghbooks.com.

- ▶ **Sesame Street Workshop for Parents.** www.sesamestreet.org/parents/activity. Gives activity ideas by activity type, theme or learning area.
- ▶ **Apples4theTeacher.Com,** www.apples4theteacher.com/science.html. Online interactive science games
- ▶ **PreschoolRock.com,** <http://science.preschoolrock.com>. The Preschool Science and Nature site provides ideas for introducing science concepts and discovering the world with your preschooler through experiments, field trips, and activities designed especially for kids with big ideas and little hands

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