

Outdoor Activities: Taking Science Outside

By Ellen Booth Church

Taking science outdoors is natural! Any and all of the indoor science experiments you have enjoyed this year are worth repeating outside this summer. Children gain deeper understanding of science skills when they try an activity again in a new setting. It's the application of these concepts and skills to a broader field of experience that strengthens them.

Through outdoor science activities, children build analytical as well as creative-thinking skills. They make predictions, test out hypotheses, and experiment with materials and ideas in a variety of ways. With the activities in this section, you will be helping children focus their natural curiosity and better understand the science processes they are actually using!

Getting Started

Outdoor science is the art of seeing. It is the ability to look from different perspectives and to perceive through the senses. A great starting place for outdoor science is to invite children to play with their perceptions of the outdoors. What happens when you look at something (a tree) one way (straightforward) and then look again from a different angle or perspective (while lying on your back)? Observation invites children to focus their attention on just one sense, sight. As they experiment and explore further, they employ their other senses to expand their experience and their understanding. Observing and perceiving activities are about taking time-to be still, to breathe, to imagine, and, eventually, to create. Start here from this quiet place. Then dive into the beauty and fun of the science activities in this section.

When presenting these science activities, remember to keep a mathematical "eye" out for opportunities to ask children to count, combine, match, and compare. You might ask, How many different ways can you sort and organize these materials? Which group has the most items? Do any groups of materials have the same or equal number of items? These math skills create the foundation of understanding that children use to create their scientific predictions, hypotheses, and experiments.

Using the Activities

Here are some ways you can build observation skills, as well as explore math and art, with these outdoor science activities.

Before introducing activities, practice observing with a simple game. Ask children to focus their full attention on an object outside. Invite them to keep looking at it from different angles, looking for something they never noticed before! Have them discuss with friends what they saw.

Explore the art of science by asking children to use art materials to represent what they see when they observe objects. How can you draw or paint what you saw in your bubble, shadow, and rock experiments? Can you use collage or recycled materials too?

Invite children to keep a summer field journal. Another way art and science intersect is in making science journals. Provide bound journals of plain paper for children to draw one thing they observe each day. Children can add their own writing or dictate their ideas too.

Highlight the math in science by inviting children to sort and classify materials before you use them in an experiment. This will not only invite children to think in math/science terms, but help them be more observant - an essential skill in any curriculum area. What do you notice about these materials? How are they the same or different?

Conversations and Questions

Usually children are quick to discuss their science discoveries because their "ah-ha" experiences are so exciting. But you can even take them further with just a few more questions. For example:

- What do you know about insects, rocks, or shadows? What would you like to find out?
- What would happen if it never rained?
- Where do bubbles go when they float up into the air?