Water Play Is Science

By Alissa Lange

"I like to play in it." This was my five-year-old's response to the question, "What do you think about water outside?" I was expecting something along the lines of rivers, critters swimming in the water, or rain. But her answer was play.

I love that. I hope that we can all find joy in the outdoors with the water that is all around us. Instead of being at odds with each other, play, joy, and curiosity can *support* our efforts to meet standards and address learning objectives in educational settings. One of the ways this can happen is through open observations and intentional interaction with the water in our world. And having access to a forest is not required—we can find water beading up on plastic slides or in the cracks of city sidewalks. Water can behave in surprising ways and can raise some big questions. Why does that glob of dew stick to the spider web? Why is that rock in the stream so smooth? Why is it still wet under the slide but not next to it?

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Starting with careful observation and a related question, we can find links to learning objectives and standards in so many ways that it can make your head spin. Examples include Earth science standards about the materials that are found on our planet or weather (the water cycle), physical science ideas related to states of matter (Rain! Icicles!), or learning objectives related to life science and how water is essential for almost all living things to survive and thrive (including us!).

The challenge for many of us is to identify our learning objectives in a given situation (e.g., that the water that falls from the sky in the form of precipitation makes its way to rivers and streams) versus our theme or topic (e.g., weather). Sometimes, our goal might be to engage in science practices like careful observation with our senses, as opposed to learning a new vocabulary word. We might also wish to find out what children already know, like about what makes fresh water different from the water in our oceans, while also trying to engage interest. We might encourage children

to play, observe, and experience water outside on the playground on their own terms first, even if the eventual goal is to learn more about the process of erosion. In the activity that follows, I describe a series of connected learning experiences that could be done over time and that start with play.

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Where's the Water?

This outdoor water scavenger hunt includes a set of linked learning experiences in which children will practice careful observation and documentation to identify places they can find water outside.

LEARNING OBJECTIVES

- Children will be able to identify water found in more than one location outside
- Children will be able to describe their observations of water outside using spoken words, writing, and/or pictures
- Children will compare and contrast predictions with documented observation

Let children play around with water inside and out, carefully noting what they are saying and doing. Later, ask children what they know about water. What does it look like? What does it feel like? Consider documenting these observations and thoughts.

Ask children where they think they can find water outside. Document children's ideas to return to later, such as on chart paper. Connect to children's prior outdoor experiences with water (e.g., remember when your shoes got soaked when we walked in those puddles on the sidewalk?).

Tell children that we have a challenge. We think that water may be in all sorts of sneaky places outside. We are going to go outside and we will take notes in our science journals (or take pictures) about where we find water. Adult scientists do this too! They document their observations so they can analyze, compare, and remember them later.

While outside on the scavenger hunt, be ready with some scaffolds, if needed. Some possible places where we might find water in different forms are as follows:

- morning dew on leaves
- frost on the swings
- dampness under the slide

MATERIALS

- Science journals, paper with clipboards, or notebooks
- Writing, drawing utensils
- Tablets to take pictures (optional)
- Bucket or bag to collect wet treasures for further classroom observation (optional)

- trickling, bubbling in a stream
- tiny streams hiding in the cracks in the sidewalk
- water dripping down windows or windshields (home connection?)
- pooling water in a puddle at a low point on the playground
- water flowing to a drain
- droplets on different surfaces…plastic, wood, grass, cement, soil
- everywhere after it rains!

Support children to note observations in whichever ways they can, such as drawings, words, or recordings.

Upon returning to the classroom, ask children to share where they found water and document the locations for the whole class.

Compare observations with predictions

Extension possibilities. Connections may arise from these activities to curriculum or local standards, such as the following: physical science investigations around states of matter; properties of matter, like how water behaves differently on the different surfaces they found (e.g., leaf versus soil); life science concepts related to how water is "sinking" down into the soil near the trees' roots; Earth science ideas related to where water is pooling and what that might tell us about movement of water on Earth's surface; or engineering a dam. Document children's thoughts and interests during the main activities because extension ideas may arise directly from children's questions, actions, chatter, and play!

SUPPLEMENTAL RESOURCES

Read reflections on water outside from an outdoor school co-director at *https://bit.ly/3BQomDQ*.