



Water Wheels



Discovery

Standards:
S.ES.PS.2

Materials:

- 2-3 toy water wheels
- scoops, spoons, and/or ladles
- cups
- empty yogurt containers
- empty spray bottles
- smocks
- shallow trays or bins
- plastic gloves
- images of waterwheels (see Resources)
- paper

Vocabulary:

- water wheel
- faster: move quicker
- slower: not fast
- pour
- spin: turn around and around
- turn
- scoop
- fill

Preparation: Set up materials. For children with sensory issues, provide plastic gloves. Set up a smaller amount of water in an individual shallow tray or bin. Provide a spoon or ladle to pour water.

Intro to Centers:

“Today at the Discovery Table, you can explore moving water with a **water wheel**.”

“What do you think will happen if I **pour** water on the **water wheel**?”

“What did you notice?”

“How could I make the water wheel spin **faster**? **Slower**?”

Show water wheel.

*Children respond.
Model.*

Children respond.

*Children respond.
Model.*

“Today at Discovery, there are materials for **scooping** and **pouring** water onto the **water wheels** to make them **spin**.”

Show materials.

During Centers:

Encourage children to experiment with making the water wheels spin faster or slower. Show images of waterwheels and explain their uses, i.e. generating electricity, part of a larger machine, etc.

Encourage children to use water wheels to move objects in the water, i.e., a counting bear in a cup.

Guiding Questions during Centers:

- How can you pour the water to make the water wheel spin faster/ slower?
- What happens when you pour more/ less water on the water wheel?
- What do you hear when you pour the water, i.e. plop, splash, gurgle, etc.?
- What does the water feel like if you pour it on your fingers or your hand?
If you use the squirt bottle, does the wheel go faster than if you use the cup? Why?

Thinking & Feedback: Invite children to share their processes. Encourage children to describe the challenges they might have encountered.

Documentation: Collect samples of the children’s work as well as photographs and/or video of their process; use the documentation to launch a discussion during Thinking and Feedback.

Provocation:

Encourage children could paint waterwheels using watercolors at the Art Studio.

Challenge children to consider work that a water wheel could do in the classroom or at home?

Read *Pancakes, Pancakes* (Eric Carle) and *The Little Red Hen* (Paul Galdone) and notice illustrations of waterwheels.