WHAT IS IT?
ACTIVITY

EXPLORE PROPERTIES OF SOLIDS AND LIQUIDS.

TIME
20 minutes

MATERIALS
- ✓ 2 clear cups or glasses, one with a rock in it and one with water in it
- ✓ Sorting mats, 1 set per group

PREPARE AHEAD OF TIME
- ✓ Various solid and liquid materials for each small group, placed in individual containers with lids:
  - liquid dish soap
  - wooden stick (craft stick)
  - cotton ball or pom-pom
  - water
  - molasses
  - metal washer
  - glue
  - foil
  - sponge
  - feather
  - rock
- ✓ An additional set of the solid items in a paper bag

DOING SCIENCE
Children **collect information** by **observing** solid and liquid materials from everyday life. The children describe the materials to **make sense** of whether the items are solid or liquid.

SCIENCE BIG IDEA
Solid materials and liquid materials take up space in different ways.

SCIENCE QUESTIONS
How are solid and liquid materials alike? How are solid and liquid materials different?

5 MIN: INTRO (whole group)
1. Say, *We will use the same Superpowers of Science that scientists use. The questions we will investigate are, How are solid and liquid materials alike? and How are solid and liquid materials different?*
2. Show children one item from the paper bag. Have pairs share their observations about the item.

10 MIN: EXPLORE (pairs, whole group, small groups: 3–4 children)
Check in with children while they explore. Listen for Science Big Ideas and Science Talk.

3. Have pairs choose one item from the bag. Pairs examine the item and describe it to each other.
4. Display the cups with the rock and the water. Pairs describe the rock and the water.
5. Discuss the items as a whole group, focusing on ideas about “flowing” water and the shape and size of the rock.
6. Put children into small groups. Give each group a set of materials in containers. Tell them to leave the materials in the containers.
7. In the groups, have children take turns to describe an item and tell how the material is like the water or like the rock. Groups use the sorting mats to separate solids (items that are like the rock) and liquids (items that are like the water).

© 2020 Twin Cities Public Media Workshop, LLC. All rights reserved.
Permission to copy this document for educational use only.

5 MIN: REFLECT (whole group)

8. Discuss the key features of the materials in the rock group (solid). Ask, *What did you notice about the materials in the rock group? How are they alike?*
9. Discuss the key features of the materials in the water group (liquid). Ask, *What did you notice about the materials in the water group? How are they alike?*

WRAP UP

10. *Say, We observed and made sense, just like scientists. We noticed how solids and liquids are alike. And we noticed how solids and liquids are different.*

SCIENCE TALK

Use these words when talking with children. Listen for children to use these ideas.

SUPERPOWERS OF SCIENCE	CHILD-FRIENDLY LANGUAGE
collect information	collect information • find evidence • get data
make sense of information	make sense of data • make sense of information • what does that tell you
observe	notice • observe

SCIENCE WORDS
cold • compare • container • cool • flow • hot • ice • liquid • material • same • shape • solid • temperature • warm • water

©2020 Twin Cities Public Media Workshop, LLC. All rights reserved. Hero Elementary characters and underlying materials (including artwork) are trademarks and copyrights of Twin Cities Public Television. The PBS KIDS wordmark and the PBS KIDS Logo are registered trademarks of Public Broadcasting Service. Used with permission.

The contents of this program were developed under a grant from the U.S. Department of Education (PR U295A150012). However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

Funding for Hero Elementary is provided by a Ready To Learn grant from the U. S. Department of Education. Additional funding made possible by ABC Mouse.

Sorting Mat

WATER



Sorting Mat

ROCK

