

# WATER WORKS

## GAME



**MAKE BODIES OF WATER BY FORMING GROUPS WITH OTHER PLAYERS.**

### TIME

15–20 minutes

### MATERIALS

- ✓ Body of Water Examples
- ✓ Water, Flow, Salt, and Double Water Cards
- ✓ Challenge Cards (optional)
- ✓ Bodies of Water Chart

### PREPARE AHEAD OF TIME

- ✓ Print out the Bodies of Water Chart.
- ✓ Print and cut out the Water, Flow, Salt, and Double Water cards. For round 1, set the Salt and Double Water cards aside. Shuffle the remaining cards so they are in random order.
- ✓ Print and cut out three copies of each Body of Water Example.
- ✓ Print and cut out the Challenge Cards (optional).



Each card represents a different feature of a body of water.

## EXPLORING SCIENCE THROUGH GAMES

Children identify and describe features of bodies of water. They **find out more information** about lakes, rivers, oceans, waterfalls—and even puddles!—and **share** what they find out. They **compare** bodies of water and reason about similarities and differences.

## SCIENCE BIG IDEAS

Water exists in ponds, lakes, rivers, and oceans. We can observe and describe how bodies of water are alike and different.

## SCIENCE QUESTIONS

What kinds of bodies of water are there? How are these bodies of water alike? How are they different?

## INTRO (whole group, pairs)

1. Introduce the Science Questions.
2. (Optional) If there is a body of water near your location—and if time and weather permit—you may wish to play this game outdoors, near your local body of water.
  - If you are outdoors near a body of water, tell children to observe the body of water carefully. Have children talk with a partner about what they notice.
3. If you are not outdoors near a body of water, set out the Body of Water Examples. Give one Body of Water Example to each pair of children, and have pairs discuss the body of water together.
  - Ask one pair to show their body of water and tell a few things about it.
  - Ask, *Who has a different body of water?* Have a pair that has a different body of water show and tell about it. Ask the pairs to tell how the two bodies of water are alike and how they are different.



4. Hold up a Water card and a Flow card, and show children the Bodies of Water Chart. Read and point to each body of water.
  - Have children tell what they think the Water card means. Ask why the chart shows different amounts of water for different bodies of water, and have children discuss with a partner.
  - Have children tell what they think the Flow card means. Explain that this card means that the water is going somewhere. For example, rivers flow into other bodies of water. Water flows down in a waterfall. Water moves in oceans and lakes too, but the water in an ocean or a lake doesn't always have a specific place it's moving to.
5. Have each pair look at the chart and identify how many Water cards they need for their body of water. Hand pairs the cards they need. Have each pair identify how many Flow cards they need, if any. Hand pairs the cards they need.
6. Collect all the cards. Set aside the Body of Water Examples. Shuffle the Water and Flow cards before starting the game.

**PLAY THE GAME** (whole group)

While children play the game, check in and listen for Science Big Ideas and Science Talk.

7. Children play the game. See Game Directions, below.

**REFLECT** (whole group)

8. Ask children how the different bodies of water were the same and different. Ask them to name some bodies of water that were not in the game (such as ponds, geysers, streams, or swamps). Ask them what cards they think they would use to represent those bodies of water, or if they would want to make any new cards for them.

**WRAP UP**

9. Say, *We observed and compared bodies of water, just like scientists. We found out ways that bodies of water are alike and different.*

**SCIENCE TALK**

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

SUPERPOWERS OF SCIENCE	CHILD-FRIENDLY LANGUAGE
compare	compare • what's the same and what's different
explain	explain • figure out what happened • use evidence to explain
learn more information	learn something new • check with someone who knows • check it out • read about . . .
observe	notice • observe
share what you know	share your ideas • share information • talk about what you found out

SCIENCE WORDS
deep • flow • freshwater • lake • land • ocean • puddle • river • salt water • shallow • waterfall

## **GAME DIRECTIONS:** Water Works

**GAME GOAL:** In this game, each player has a card representing a feature of a body of water (Water, Flow, Salt, or Double Water). During the game, players form groups to become a body of water.

**NUMBER OF PLAYERS:** 5+

### **HOW TO PLAY**

At the start of each round, each player gets a card representing a feature of a body of water. Players keep their cards secret and spread out around the room. When the adult says go, players have to form groups that have all the features of a body of water:

- Ocean (salt and a large amount of water)
- Lake (water)
- River (water and direction of flow)
- Waterfall (water and direction of flow)
- Puddle (small amount of water)

### **SET UP**

- Make sure you have at least the same number of cards as there are players.
- For round 1, only hand out the Water cards and the Flow cards.
- Post the Bodies of Water Chart where players can check it during play.

### **PLAY**

#### **Round 1**

1. In round 1, only use Water cards and Flow cards.
2. Each player draws a card. Tell players to keep the card they got a secret.
3. Explain the game:
  - When you say go, players will get a group together and use their cards to make a body of water. For example, two players with Water cards plus one child with a Flow card make a river.
  - When a group has made a body of water, they sit down together. They may talk about their body of water.
4. Play round 1. While players are making their bodies of water, circulate and ask them what their body of water has. Encourage players to discuss different ways to make each body of water or to talk about how the bodies of water are alike or different.
  - If a player needs help, or is alone with a card that is not a Water card, ask which group thinks they can make a new body of water by adding this player. For example, a group may be able to add more Water or Flow to form a waterfall or a river.
  - When all players are part of a body of water, have each group tell what kind of body of water they are. Ask them to explain how each card is important to this body of water. Give each group the Body of Water Example that shows the body of water they have made.
  - Have players compare how the various bodies of water are alike or different.
5. When the round is over, collect the cards. Young children or those who need more practice may play additional rounds with just the Water and Flow cards.

#### **Round 2**

6. For round 2, add the Salt cards and the Double Water cards.
  - Ask players what they know about salty water. Guide them to explain that oceans are salty. Point out that oceans need a lot of water and a Salt card.
  - Now players can make oceans, lakes, waterfalls, and puddles.

7. As players gain experience, they may ask questions such as these:
  - The ocean moves, so why doesn't it get a Flow card?
  - Don't some lakes have salt in them too?

Use players' questions to prompt conversation. For example, comparing bodies of water, explaining the difference between flowing to a certain place versus movement such as waves and tides. Encourage players to use real-world examples. If players are interested, you can update your Body of Water Chart to include these new variations for your next round.

### Challenge Rounds (Optional)

8. Challenge rounds are a fun way for players to explore different features of bodies of water. They have opportunities to explain their reasoning and think about examples they may not have considered before.
9. Before the challenge round, set up six challenge stations around the room. Place a different Challenge Card at each station.
10. To begin challenge play, display the Challenge Card pairs and discuss briefly:
  - For the Has Fish and Doesn't Have Fish cards, explain that fish can live anywhere that has enough water for them. Have players discuss with a partner which bodies of water they think may or may not have fish.
  - For the Deep and Not Deep cards, explain that deep water goes "over their heads" and can even be deeper than some buildings. Have players discuss with a partner which bodies of water they think could be deep and which they think could be not deep.
  - For the Can See Land and Can't See Land cards, have players observe the Body of Water Examples. Ask, *If you look across the ocean, can you see land on the other side? If you look across a river, can you see land? What about a puddle? A lake?* Have players discuss with a partner.
11. Players go to the challenge station of their choice and make a body of water that could use that Challenge Card.
  - For example, players could go to the Deep station to make an ocean, a lake, a river, or a waterfall, but not a puddle.

## RULES

1. Each player has only one card at a time.
2. Players must walk, not run, when making groups.

## GAME VARIATIONS

1. Call out a specific body of water for the players to make. Play like musical chairs: players have to quickly group up to make the body of water.
  - Congratulate the group that was first to make the body of water.
  - (Optional) Any leftover players who couldn't make a group are out for the next round.
2. Have players try making as few bodies of water as possible with the cards they have.



Bodies of Water Chart



OCEAN



LAKE



RIVER

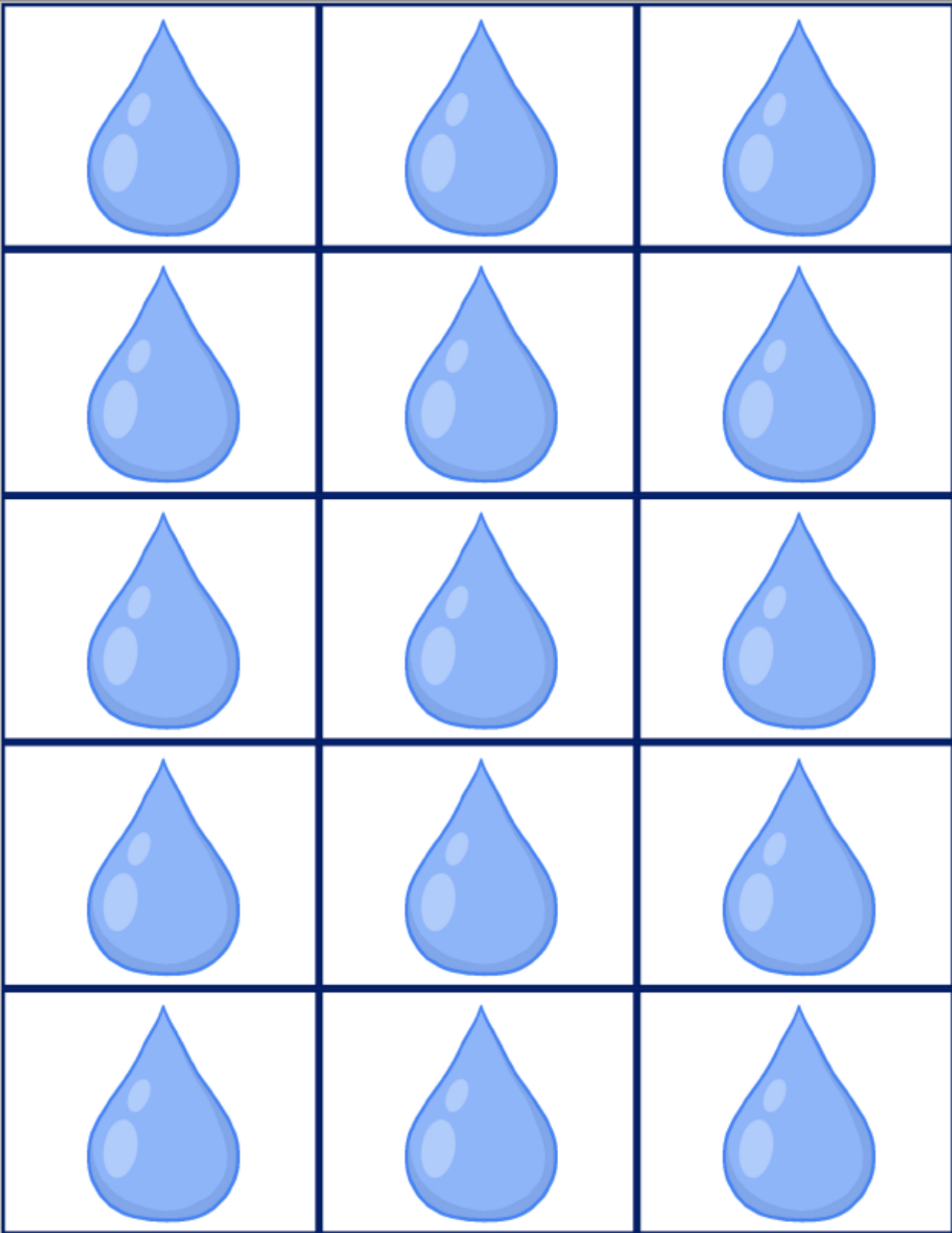

















WATERFALL



PUDDLE

Water, Flow, and Salt Cards



Challenge Cards

**DEEP**

**NOT  
DEEP**

**CAN  
SEE  
LAND**

**CAN'T  
SEE  
LAND**

**HAS  
FISH**

**DOESN'T  
HAVE  
FISH**



**OCEAN**



**LAKE**



**RIVER**



**WATERFALL**



**PUDDLE**