



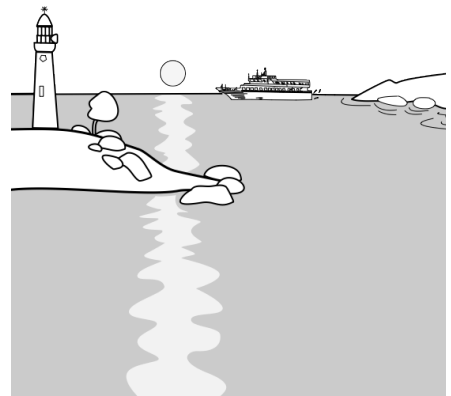
# WEATHER

## BIG IDEA

Children are eager to explore and describe the world around them, including changes in the weather and seasons. Children predict and describe weather types, select appropriate clothing, and explore weather-related safety issues.

### Content objective(s):

The child will observe and describe water in its solid and liquid forms and explore how the weather can influence this change.



### Materials needed:

- ♦ Unit book: *Weather*, by Caroline Harris
- ♦ Sequencing cards of water glasses (Handout 1)—copy and cut out
- ♦ Examples of bodies of water (Handout 2)—copy and cut out
- ♦ Cup, water, ice

### Lesson vocabulary:

- ♦ solid—solidó
- ♦ liquid—liquido
- ♦ experiment—experimento
- ♦ ocean—océano
- ♦ lake—lago
- ♦ mountain—montaña
- ♦ melt—derretir
- ♦ freeze—congelar
- ♦ change—cambiar

### Texas Prekindergarten Guidelines (Revised) domains addressed:

#### Language and Communication:

II.A.1. Child shows understanding by responding appropriately.

#### Mathematics:

V.A.7. Child uses the verbal ordinal terms.

#### Science:

VI.A.1. Child describes, observes, and investigates properties and characteristics of common objects.

## Activities:

### 1. The home educator models and demonstrates for the parent.



*We've been learning about weather. (Show the child a cup of ice.) Do you know what this is? **(Pause)** Do you know how to make ice? **(Pause)** (If the child doesn't know, encourage him/her to ask the parent.) Right, when water gets very cold, it turns into ice. It becomes solid, and it is very hard. Have you ever been in weather that was so cold the water would freeze? **(Pause)** Have you seen ice on the street or sidewalk? **(Pause)** When the weather is very cold, rain sometimes turns to ice.*

Invite the child to feel the ice. Then show the child another cup with water and say,

*Now, feel the water in the cup. Is it hard? **(Pause)** No, it isn't hard. It is not solid; it is liquid. Do you like to play in the water?*

*Have you been in a swimming pool? (Show the picture of a swimming pool from Handout 2.)*

*Have you ever been swimming in a lake? (Show the picture of a lake.)*

*Have you been to the ocean? (Show the picture of the ocean.)*

If the child has not seen the ocean explain that the ocean is a much bigger body of water than a lake or a pool. Say,

*Did you know that there is a part of the ocean that is very, very, cold? **(Pause)** What do you think the water is like where the ocean is very, very cold? **(Pause)** Right! Just like when you put water in the freezer, it turns into ice; the water in the ocean where it is very, very, cold, turns into huge pieces of ice, as big as a mountain! (Show the child the pictures in the unit book, *Weather*, by Caroline Harris, pages 30–31.) Now we know what happens to water when we put it in a very cold place.*

*What do you think would happen if we put the ice in a very warm place? **(Pause)** Let's do an experiment to see what happens when the ice warms up. Let's put this ice in a dish and put it in a warm place. Can you think of a warm place where we could put it?*

Place a large chunk or pile of ice in a shallow dish or saucer with some water in it and put it in a warm place (in the sun, under a lamp, near the stove). Be sure that the ice is large enough to overflow the dish when it is melted, and place a towel under the dish to absorb the water. Invite the child to check on the dish occasionally to see what is happening to the ice. Ask him/her to explain what happens. Ask,

*What happens to the ice? **(Pause)** That's right, the ice that was solid melted and it turned into liquid water. What do you think will happen to the ocean water if the sun melts the big mountains of ice? **(Pause)** Will there be more water in the ocean or less?*

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## 2. The parent works with the child.



The parent and child can work together to put the pictures from Handout 1 in sequential order. The parent should ask questions to guide the child's understanding and use vocabulary words where appropriate. Use the terms "first," "then," and "last."

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## 3. The child works with the parent's help.

The child can retell the events in the experiment using the pictures for support.

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## 4. The child works independently as the parent and home educator watch for learning.

The child should be able to identify water in its solid and liquid forms. He/she should also be able to explain what happens to water when it is placed in a cold location and what happens to ice when it is placed in a warm location. The child should be able to relate the events of the experiment to the ice and water in nature (weather).

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## 5. The home educator summarizes the lesson.

Finish by reviewing the content objective and talking about what the family learned today.

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## Follow-up questions to deepen the child's thinking:



1. *What would happen if you put another liquid (e.g., juice, milk, etc.) in a cold place like the freezer?*
2. *How does the sun melt the mountains of ice?*
3. *What would happen to the ocean if it was very, very cold everywhere?*

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## Ways to extend the lesson concepts:



1. If possible, freeze some water with food coloring added, so that when the ice melts, the child can more clearly see that the melted ice becomes part of the water.
2. Make popsicles using fruit juice or Kool Aid and paper cups.
3. Have the child draw a picture of a time and place where he/she went swimming or played in the water (in a pool, lake, river, or ocean).



4. Visit the public library and check out the book, *Little Polar Bear*, by Hans de Beer. Read the book aloud to the child.

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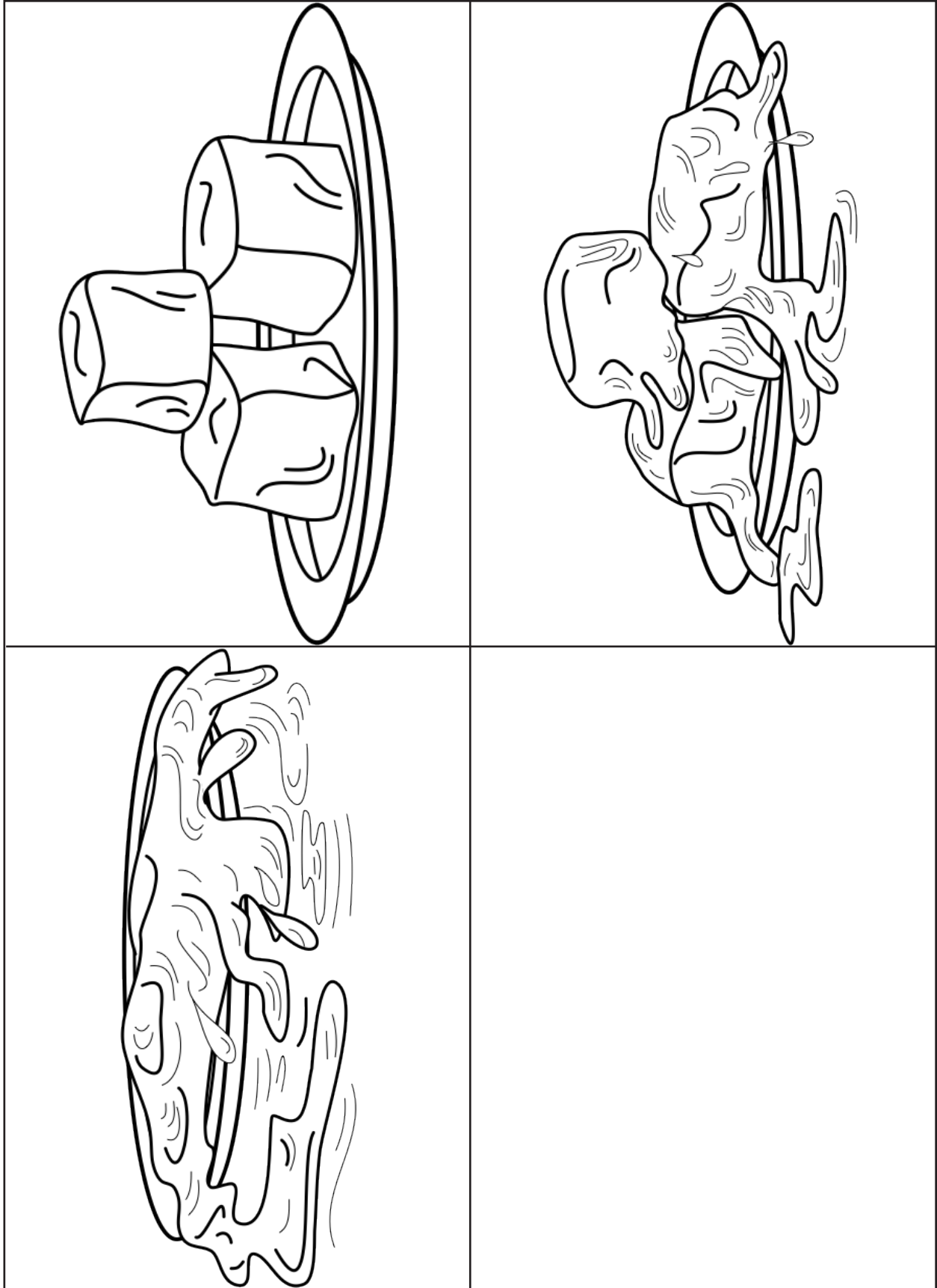
## Modifications:

### If the lesson activity is too hard—

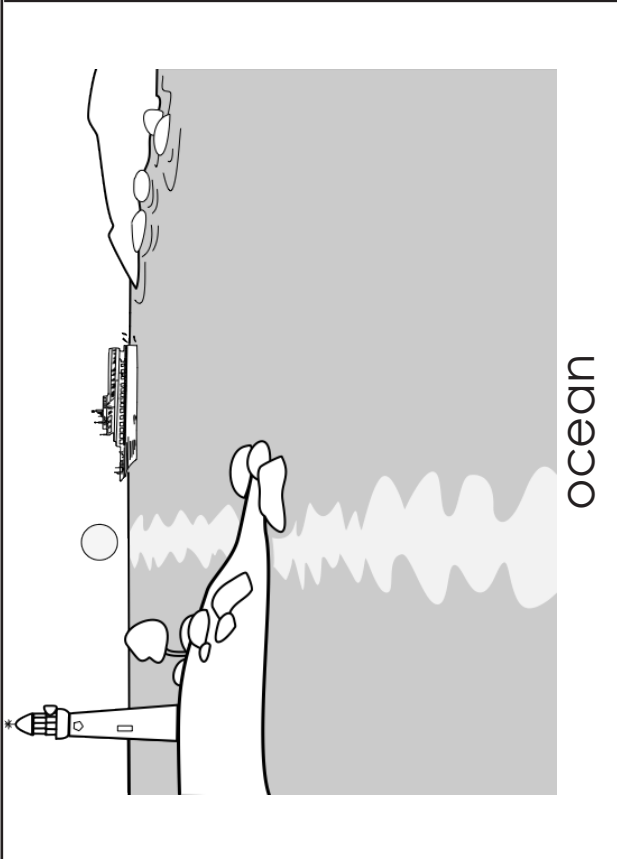
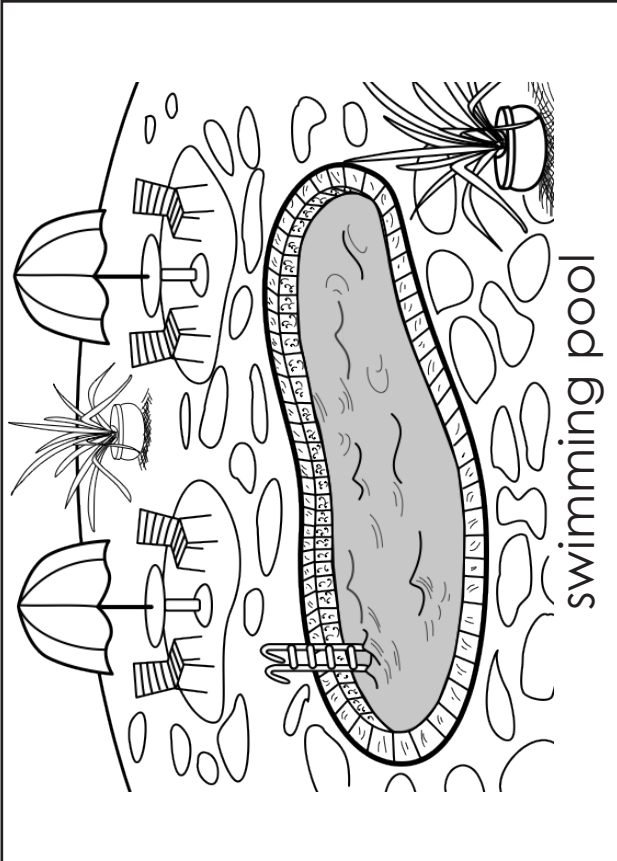
1. To clarify the transition from solid to liquid, melt a piece of ice in a separate container, then pour the melted water into a cup of water, so the concept is more concrete.
2. Spend more time examining the different bodies of water in Handout 2.
3. Provide extra time for the child to manipulate and explore the ice and water.

### If the lesson activity is too easy—

1. Talk about how the solid ice felt, and look for other things around the house that are solid. Clarify that ice melts back into water because it was water before it became ice.
2. Repeat the experiment but place the ice and water in a cooler place (e.g., in the refrigerator) or hotter place (e.g., on the stove). Compare and talk about what happens.
3. Introduce more complex vocabulary (e.g., glacier, iceberg, etc.).



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# WEATHER (LESSON 6)

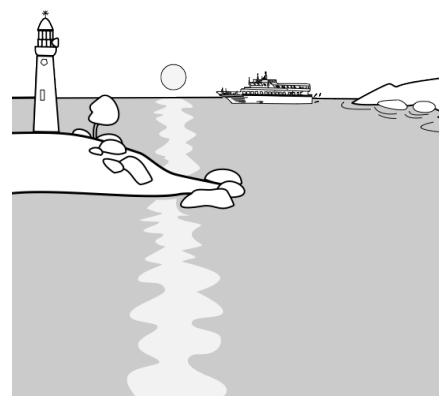
## PARENT PAGE

### What we are learning:

Your child will observe and describe water in its solid and liquid forms and explore how the weather can influence this change.

#### Words to know:

- |                              |                    |
|------------------------------|--------------------|
| ♦ solid—solidó               | ♦ lake—lago        |
| ♦ liquid—liquido             | ♦ mountain—montaña |
| ♦ experiment—<br>experimento | ♦ melt—derretir    |
| ♦ ocean—océano               | ♦ freeze—congelar  |
|                              | ♦ change—cambiar   |



### What to ask:

1. *What would happen if you put another liquid (e.g., juice, milk, etc.) in a cold place like the freezer?*
2. *How does the sun melt the mountains of ice?*
3. *What would happen to the ocean if it was very, very cold everywhere?*

### What else to do:

1. If possible, freeze some water with food coloring added, so that when the ice melts, your child can more clearly see that the melted ice becomes part of the water.
2. Make popsicles using fruit juice or Kool Aid and paper cups.
3. Have your child draw a picture of a time and place where he/she went swimming or played in the water (in a pool, lake, river, or ocean).
4. Visit the public library and check out the book, *Little Polar Bear*, by Hans de Beer. Read the book aloud to your child.

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