



# AT-HOME



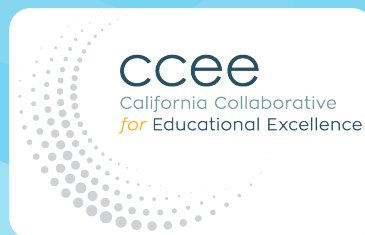
# SCIENCE LEARNING



## WHERE DID THE WATER GO?

### ***PARENTS***

*At-Home Science Learning is all about you and your children exploring science in a fun, hands-on way using simple supplies found around your home. Use the “Parent Guide” to help support your children through the activities plus see a list of required materials needed. Print out the “At-Home Science Journal” for your child to follow along with each activity. The activities are designed to take 15 – 30 minutes. Get your whole family exploring science together!*




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## FOR THE PARENT:

# #7 WHERE DID THE WATER GO?

**Overview:** Observing what happens to an ice cube on a sunny day is a great way to explore the water cycle. Through multiple explorations, your child will discover that water evaporates as the sun heats it up. They will use this knowledge to make a shelter to slow down the melting of their ice cubes.

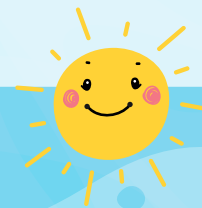
### Materials/Supplies:

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- Electronic device connected to the internet to watch and make videos, use as a timer and play games.
  - Piece of chalk or long string, ice, small clear cup, plastic wrap, rubber band, paintbrush or sponge brush, bowl, variety of supplies from around the home to make a “shelter.”
  - Copy of the “Student Science Journal” and a pencil.
  - Optional supplies: colored pencils or crayons.

**Each of the activities is designed to take 15–30 Minutes.**

### Activity 1: Story

1. Ask your child if they have ever played in a puddle. What did they like about playing in the puddle?
2. Use your electronic device to watch the read-aloud of the book “Puddles!” by clicking on this link: [tinyurl.com/story-puddles](http://tinyurl.com/story-puddles).
3. After listening to the story, have your child go to their Science Journal – Activity 1 section and recall the story by writing or drawing what happened.
  - a. Encourage your child to recall the story to you first before writing or drawing each part. It is often easier for a child to write something once they are able to say it or describe it correctly.
4. Ask your child if they have ever wondered where a puddle goes after it rains. Why don't puddles stay around for days? Have your child choose one of these statements that they think is true and explain why. Your child can record their thinking in their science journal.
  - a. The water disappears.
  - b. The water stays the same.
  - c. Animals drink the water.
  - d. The water moves to the air around us.



## Activity 2: Ice Cube in the Sun

1. In order to answer the question “Where does a puddle go after it rains?” from Activity 1, it’s time for an experiment. You will need an ice cube and a sunny spot on a sidewalk or other cement area. A piece of chalk or a long piece of string is helpful along with a device for timing, like a cell phone or watch. This activity will also require your child to have patience as they make observations.
2. Find a safe, sunny spot on a sidewalk where your child can sit and observe. Have your child place the ice cube directly on the sunny sidewalk and observe what happens. If you have a timing device, start the timer when the ice is placed on the sidewalk. Continue timing until the ice cube is completely melted. Have your child record how long it took for the ice cube to melt in their Science Journal – Activity 2 section.
3. Have your child draw a chalk line around the “puddle” created by the melted ice cube. You could also use a string to outline the puddle.
4. Now that the ice cube has melted, have your child continue to watch the puddle to see what happens next. This might take a few minutes to see any changes in the puddle. Encourage your child to have patience and to continue to observe. Help your child record what they noticed and what they wonder in their science journal.  
Encourage your child to tell you what they notice using complete sentences before they write it. You can help them begin their sentences with a sentence starter like
  - a. I noticed that my puddle...”
  - b. “I wonder...”
5. Your child should have noticed that the puddle created by the melted ice cube started to shrink. They can tell the puddle is getting smaller because the wet spot should be getting smaller compared to the chalk or string outline of the original puddle.
6. A fun option is to use your electronic device to take a time-lapse video of what happens to the ice cube when it is placed on the sunny sidewalk or what happens to the puddle after the ice cube melts.

## Activity 3: Ice Cube in a Cup

1. In the last activity, your child observed that the water from the puddle “disappeared” but may not know exactly where the water went. This exploration will help visualize what is happening. You will need a small clear cup, a few ice cubes, a piece of plastic wrap, a rubber band, and a sunny sidewalk. Help your child place the ice cubes in the plastic cup and then use the rubber band to secure the plastic wrap over the top of the cup. Then place the cup in the sun for an hour or more.
2. After an hour or two, have your child observe what has happened in the cup and record their observations in their Science Journal – Activity 3 section.
  - a. Again, encourage your child to tell you what they observed before they write it. Help them say it in a way that makes sense before they write it. If they need help getting started, they can say, “When my cup was in the sun I noticed...”
3. Your child should notice that the ice cubes are melted (or mostly melted) and that there is water on the inside of the plastic wrap covering the cup. Ask your child where they think the water on the plastic wrap came from. Help your child understand that the water must have come from the melting ice cubes, that the water was trapped from going into the air.
  - a. Encourage your child to share their observations with you using complete sentences. “I think the water on the plastic wrap came from...” is one way they can begin
4. You could use your electronic device to take a time-lapse video of what happens to the ice cubes covered in the cup. Watch back the video to see what happened.



## Activity 4: What Happens to the Water?

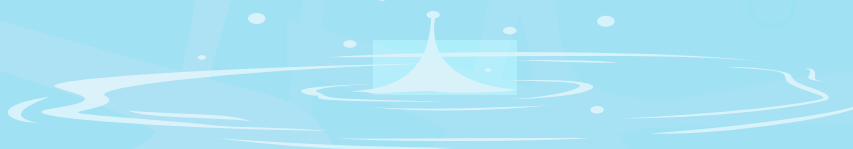
1. In order to see what happens to water puddles on a sunny day, use your electronic device to watch this video link: [tingurl.com/video-waterinjars](http://tingurl.com/video-waterinjars).
2. Help your child draw what happened in the two different jars in the video experiment in their Science Journal – Activity 4. Optional: If your child wants to try this experiment, help them set this up. You will need two jars (one with a lid), water, a marker, and a sunny spot to put both jars.
3. Have your child explain what happens to the water molecules in the jar with the lid and the jar without the lid. Help your students use the new vocabulary word: evaporation.
4. Now have your child refer back to the statements from Activity 1. (These statements are also found in the Activity 4 section of their Science Journal.) Have your child pick which statement they now know to be true and what evidence have they collected from Activity 2, 3, and 4.
  - a. The correct statement is: The water goes to the air around us. (evaporation)

## Activity 5: Water Cycle Game

1. Use your electronic device to access the “Natural Water Cycle Game” by clicking on this link: [tingurl.com/game-watercycle](http://tingurl.com/game-watercycle).
2. Scroll down the website and click on the blue box that says “Play the Natural Water Cycle Game.” When the game loads, click on the purple “Play Game” button.
3. Help your child identify the keys on the keyboard they will use to move their water drop. Give your child plenty of time to play the game. Then direct them to their Science Journal – Activity 5 section to answer the questions.
4. To solidify your child’s understanding of the water cycle, have them watch the video “Where Does Water Come From?” by clicking on this link: [tingurl.com/video-watercycle](http://tingurl.com/video-watercycle). Help your child summarize their learning in their science journal.

## Activity 6: Paint with Water

1. A fun outdoor activity is to paint with water on a sunny day! Give your child a bowl or bucket with water and tools for painting such as a paintbrush, sponge brush, small broom, or rags. Have your child make a prediction – How long will it take for your painting to evaporate? Have your child record their prediction in their Science Journal – Activity 6 section.
  - a. Continue encouraging them to share using complete sentences. One example is, “I predict it will take \_\_\_\_\_ minutes for my painting to evaporate.”
2. Help your child find a sunny spot on the cement and create a picture using water. Use a timing device to record how long it takes for their painting to evaporate. Have your child record this information in their science journal. Optional: take a time-lapse video of the painting to see it evaporate in fast motion!
3. Another variation of this activity is to have your child paint a picture with water in a shady spot and a sunny spot and compare how long it takes for each painting to evaporate.



## Activity 7: Engineering Challenge

1. Ask your child if they had two ice cubes and put one in the shade and one in the sun, which one they think will melt the fastest. Have your child record this information in their Science Journal – Activity 7 section. Now have your child test it out by placing one ice cube on the ground in a shady spot and one ice cube on the ground in the sun. Time how long it takes for each ice cube to melt and record in their science journal.
2. Ask your child why they think the ice cube melted slower in the shade compared to the sun.
  - a. One idea to begin is “I think the ice cube melted slower in the shade because...”
3. Engineering Challenge: using materials found around your home, have your child create a “shelter” that will slow down the melting of their ice cube. Materials can be just about anything but here are a few ideas: empty cereal or cracker box, foil, paper plate, construction paper, tape or glue, etc. It is a fun option to have each person in your family create a shelter and compare what happens!
4. Once your child has created a shelter for their ice cube, have your child draw their shelter in their Science Journal – Activity 7. Now have your child test out their shelter by placing the ice cube under the shelter in a sunny spot outside. Use a timing device to time how long it takes the ice cube to melt. Have your child compare the “sheltered ice cube” time with the original ice cube melting at the beginning of this activity. Which ice cube melted slower and why?
  - a. Continue encouraging them to speak using complete sentences and give them ideas to begin if they need help. For example, “I observed the \_\_\_\_ ice cube melted slower. I think this is because...”
5. Optional: Have your child redesign their ice cube shelter to see if they can slow the ice from melting even more! Test the redesigned shelter by timing the melting of another ice cube and recording the results in their science journal.



# AT-HOME SCIENCE LEARNING

## #7 WHERE DID THE WATER GO?

NAME: \_\_\_\_\_



### Activity 1: Story

After listening to the story, draw  or write  what happened.

FIRST

THEN

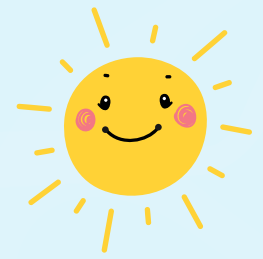
FINALLY


Circle the sentence you think is the best answer to this question:

Where does the puddle go after it rains?

- a. The water disappears.
- b. The water stays the same.
- c. The animals drink the water.
- d. The water moves to the air around us.

## Activity 2: Ice Cube in the Sun



Draw  or write :



When I placed my ice cube in the sun, I observed...

This is how long it took for my ice cube to melt: \_\_\_\_\_

Draw  or write :

After my ice cube melted, the puddle

## Activity 3: Ice Cube in a Cup

Draw  or write  what you observe in the cup *before* you set it in the sun and then again after it has been in the sun for at least one hour.

BEFORE:



AFTER:



When my cup was in the sun, I observed...





## Activity 4: What Happens to the Water?

After watching the video (or doing this experiment over many days),

draw  what happened to the water level in each of the jars over time.



Here is what happens to the water molecules in the jar without the lid...



Where does the puddle go after it rains?



- a. The water disappears.
- b. The water stays the same.
- c. The animals drink the water.
- d. The water moves to the air around us.

When water molecules are warmed up, the molecules move to the \_\_\_\_\_.

This is called \_\_\_\_\_



## Activity 5: Water Cycle Game

After playing the “Natural Water Cycle” game, draw  or write  your answers.

1. How did you make the water from the ocean evaporate?



I made the water from the ocean evaporate by...

2. What happened as you continued to warm up the ocean water?

As I continued to warm up the water, I noticed...


3. When does the melted snow in the mountains eventually end up?

The melted snow in the mountains eventually ends up...

Draw  and label  what you learned about the WATER CYCLE.




## Activity 6: Paint with Water

When I draw  a picture with water on the sidewalk,

I predict it will take \_\_\_\_\_ minutes for my picture to evaporate.

It actually took \_\_\_\_\_ minutes for my picture to evaporate.

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Draw  a picture in the sun and in the shade. Time how long it takes each one to evaporate.

PICTURE IN THE SUN: \_\_\_\_\_ minutes

PICTURE IN THE SHADE: \_\_\_\_\_ minutes

It took my picture in the \_\_\_\_\_ longer to evaporate.

I think this happened because...




## Activity 7: Engineering Challenge

If you place an ice cube in the sun and an ice cube in the shade, which one do you predict will melt the quickest?

I predict that the ice cube in the \_\_\_\_\_ will melt the quickest.

Here is how long it took each ice cube to melt:

Ice cube in the SUN: \_\_\_\_\_ Ice cube in the SHADE: \_\_\_\_\_

 Here is the shelter I built to slow down the melting of my ice cube:

The ice cube under my shelter took \_\_\_\_\_ minutes to melt!