

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## **Chapter 1 Home Investigation: Investigating a Sample Study Site**

Directions:

1. Get a piece of string or rope (such as a jump rope) that is 3 meters long. If you cannot find one, collect two rocks or sticks.
2. Find an outdoor space where one or more plants are growing. This can be a field, park, or even a crack in the sidewalk.
3. Mark the spot with the string or rope to create your sample study site. You can also mark the edges of your site using rocks or sticks.
4. Observe and draw the plants and animals you see in the sample study site.
5. Use words and pictures to describe what you see.

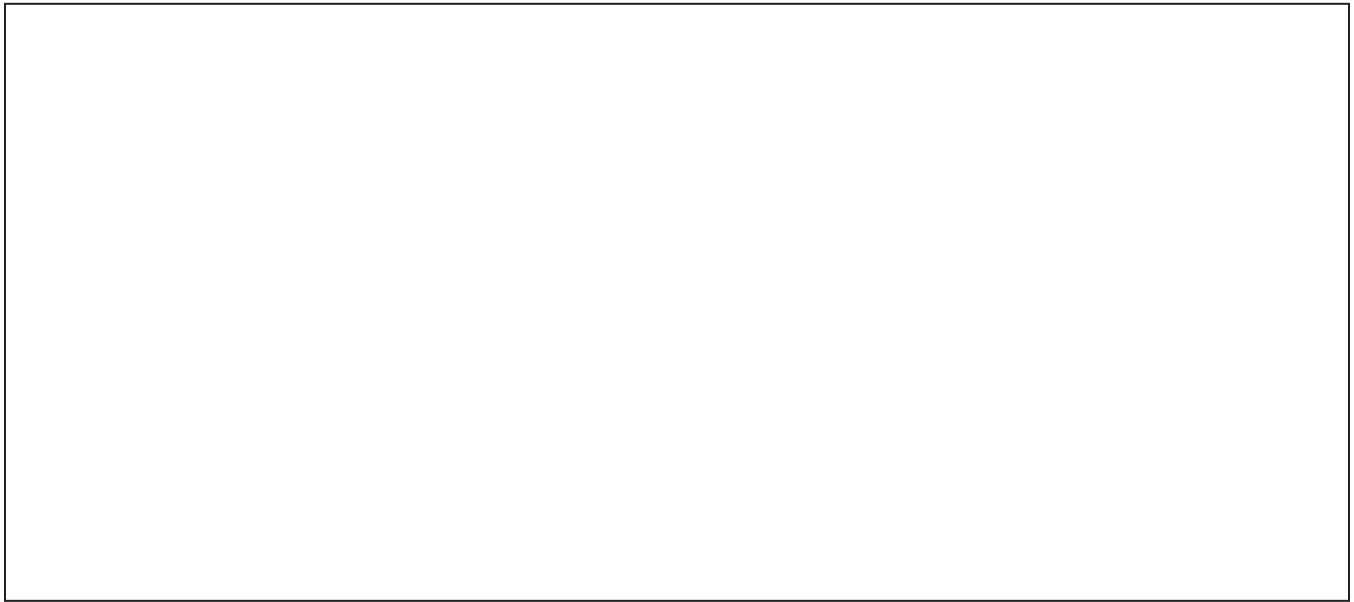


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## **Chapter 2 Home Investigation: Exploring Roots and Leaves**

Directions:

1. Go on a walk with an adult to explore plants that live near your home.
2. Observe the roots and leaves of the plants you find.
3. In the box, draw a picture of one of the plants you observe. Label your drawing.
4. Answer the question below.



Why do you think the plant can grow in the place where you found it?

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## Chapter 3 Home Investigation: Dispersing Seeds

Directions:

1. Go on a walk with an adult in an outdoor area near your home.
2. Look for a seed or a plant that is away from other plants.
3. Answer the questions below.

How do you think the seed got to the place where you found it? Why do you think so?

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## Chapter 1 Home Investigation: Observing Your Favorite Drink

Directions:

1. Choose a favorite drink to observe.
2. For each sense, record one or two observations about the drink.
3. Describe the drink. Use the words on the next page to help you.

Your senses	Describing words
 It tastes . . .	
 It looks . . .	
 It sounds . . .	
 It feels . . .	
 It smells . . .	

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## Chapter 1 Home Investigation: Observing Your Favorite Drink (continued)

Use these words to help you describe your drink.

### **Tastes**

sweet  
sour  
fruity  
bitter  
spicy  
salty

### **Feels**

cold  
hot  
thick  
watery  
pulpy  
smooth

### **Looks**

bubbly  
white  
brown  
blue  
clear  
orange  
red  
yellow

### **Sounds**

quiet  
loud  
fizzy

### **Smells**

sweet  
sour  
fruity  
creamy  
chocolatey

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## Chapter 1 Home Investigation: More Sticky Tests

Directions:

### Part 1: Observing Ingredients

1. Ask an adult to help you select two or three safe ingredients.
2. Record the name of each ingredient in the first column of the table.
3. Put one spoonful of each ingredient in a cup. If the ingredient is dry, add water and stir.
4. Record your observations of the wet ingredient in the second column of the table.

### Part 2: Setting Up Sticky Tests

1. Ask an adult to help you get beans or some other material (such as rice).
2. Place a small circle of each wet ingredient on a labeled index card.
3. Add the same number of beans or other material to each ingredient.
4. Leave to dry overnight.

### Part 3: Sticky Tests

1. Shake each card the same number of times to get a fair test.
2. Record your results in the third column of the table.

Ingredient	Observations	Sticky test results

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## Chapter 2 Home Investigation: Heating and Cooling

Directions:

1. Choose a raw or uncooked food to observe.
2. Ask an adult to help you heat the food.
3. Observe the food three times—before you heat it, after you heat it, and after it returns to its starting temperature.
4. After each observation, record your answers to the questions.

**Before you heat the food:** What are the properties of the food?

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**After you heat the food:** How did the food change? Describe any new properties of the food.

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**After the food returns to its starting temperature:** Are the properties of the food the same as before you heated it? Or did they change?

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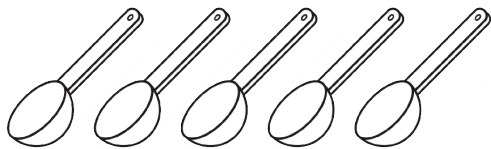

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## Chapter 3 Home Investigation: Designing a Lemonade Recipe

Directions:

1. Use what you have learned about the properties of ingredients to design a great tasting lemonade!
2. Ask an adult to help you gather enough ingredients for one glass.
3. Discuss the properties you want your mixture to have.
4. As you add each ingredient, stir the mixture and taste it.
5. Circle cups and spoons as you add them. Then record how much of each ingredient you added on the line.
6. If you would like, add a mystery ingredient. (Hint: fruit or mint might taste great.) Draw the ingredient and show how much you added.
7. Stop when the lemonade tastes right to you. Add ice and enjoy!

Total number	Ingredient	Circle how many you add
_____ cups	warm water	
_____ tablespoons	lemon juice	
_____ teaspoons	sugar	



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## Chapter 4 Home Investigation: Mystery Drinks

Directions:

1. Think of two Mystery Drinks. Record the properties of each drink in the second column of the table.
2. Ask a friend or family member to name the ingredients of each drink based on the drink's properties.
3. Write what the person says in the third column.
4. Then, ask that person to figure out the Mystery Drink.
5. Write the person's answer in the fourth column.

### Words You Can Use

watery	fizzy	blue	salty
thick	green	white	sweet
grainy	light brown	red	sour
chunky	dark brown	orange	creamy

<b>Mystery Drink</b>	<b>Properties</b>	<b>Ask: "What are the ingredients?"</b>	<b>Ask: "What is the Mystery Drink?"</b>
Example	bubbly orange watery sweet	fizzy water orange juice corn syrup	orange soda
Drink 1			
Drink 2			

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## **Chapter 1 Home Investigation: Making Observations About a Rock**

Directions:

1. Find a rock near your home or in your neighborhood.
2. Record your observations about the rock. Make sure to include observations about the rock's size, shape, and color. Describe how you think the rock got to be the way it is.
3. In the box at the bottom of this page, make a drawing of the rock.

Record your observations.

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Describe how the rock got to be the way it is.

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Draw the rock.



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## Chapter 2 Home Investigation: What's Stronger?

Directions:

1. In the book *What's Stronger?*, you learned that water can cause erosion. Invite someone at home to look at the list below and circle the thing in each pair that they think is stronger.
2. After they finish deciding what is stronger from the list below, talk to the person about their answers. Use ideas you remember from the book to explain which one is stronger and why. You can use the scientific language at the bottom of this page to explain your ideas.

What's stronger?

raindrops	or	a hill
a boulder	or	a stream
a river	or	a mountain
waves	or	a beach
rock	or	ice
a valley	or	a glacier

Scientific language to use in your discussion:

\_\_\_\_\_ is stronger than \_\_\_\_\_ because \_\_\_\_\_.

\_\_\_\_\_ can erode \_\_\_\_\_ because \_\_\_\_\_.

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## **Chapter 3 Home Investigation: Making a Flipbook**

Make a flipbook that shows how small changes to a landform can add up to a big change over time.

### **Materials:**

- several small pieces of paper
- a pencil
- markers or crayons
- a stapler

### **Directions:**

1. Choose a landform.
2. Ask someone at home to help you create your flipbook. Explain to the person how water can erode your landform over time.
3. On the first piece of paper, draw what your landform looked like a long time ago.
4. On the next piece of paper, draw the landform again with a very small change.
5. Continue to draw the landform on the pieces of paper, with each drawing showing a new small change.
6. Your last drawing should show that a big change has happened to the landform over time.
7. If you'd like to, you can use markers or crayons to add color to your drawings.
8. Have someone at home help you staple the pages of your flipbook together in order.
9. Turn the pages of your flipbook quickly to see the drawings of the landform move.

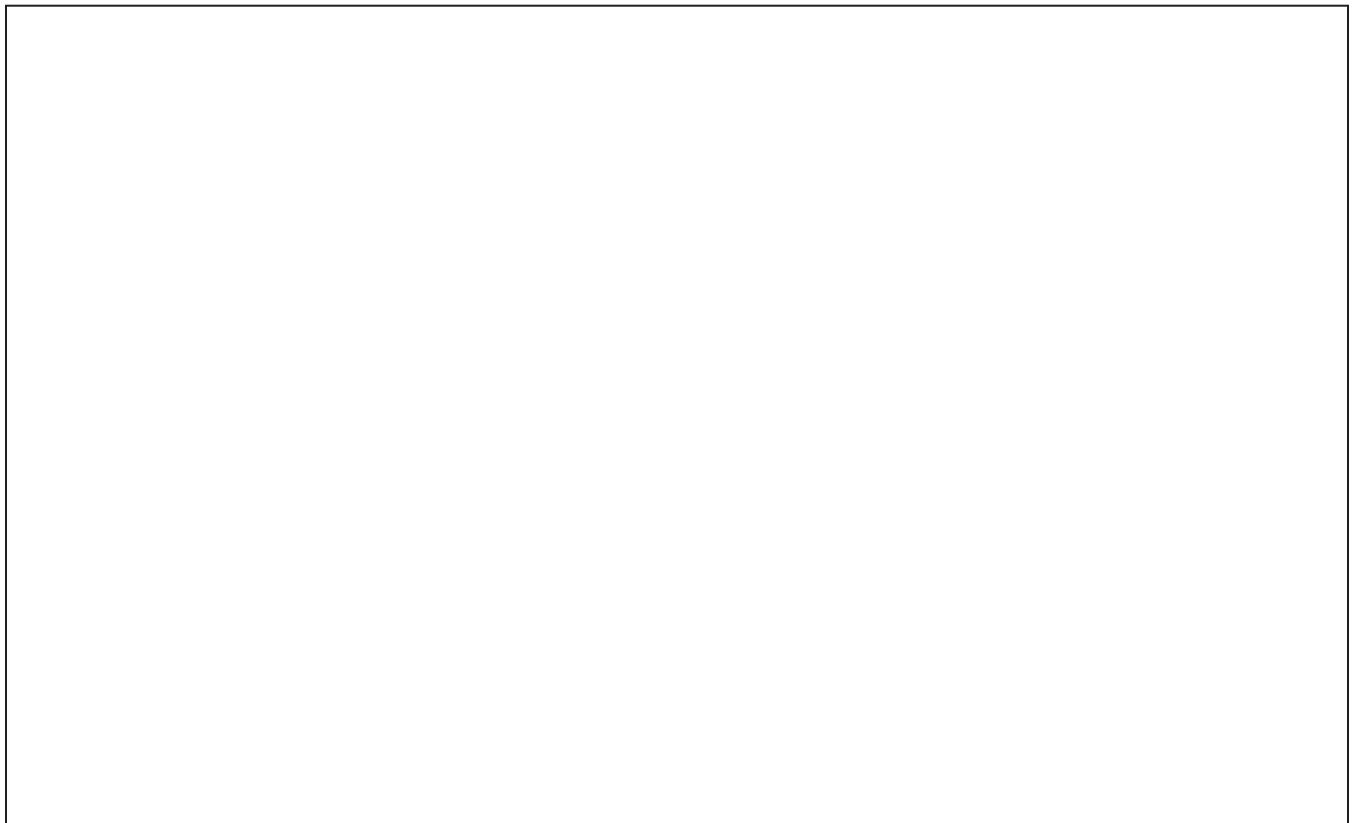
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## **Chapter 4 Home Investigation: Making a Stream Model**

Directions:

1. Use materials you find at home to make a stream model. You could use a plastic tub, sand or soil, rocks, sticks, a pitcher for pouring water, or anything else an adult at home says is okay to use. Be sure to check with an adult before choosing your materials!
2. In the box below, draw your stream model.
3. On the next page, answer the questions about your model.

### **My Stream Model**



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## **Chapter 4 Home Investigation: Making a Stream Model** (continued)

How is your stream model similar to a real stream?

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How is your stream model different from a real stream?

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What did you learn about streams from your stream model?

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