Name: _____ Date: _____

Chapter 1 Home Investigation: Helping the Ecosystem

1. Interview two people at home about what people in your neighborhood are doing to help plants and animals in your area stay healthy.
2. Write each person's name and then ask the two questions shown below.
3. Record each person's responses on the lines below each question.

Name of Person 1: _____

What is something that people in our neighborhood are doing to help plants and animals in our local ecosystem stay healthy?

_____

_____

What is something that people in our neighborhood could do to help plants and animals in our local ecosystem stay healthy?

_____

_____

Name of Person 2: _____

What is something that people in our neighborhood are doing to help plants and animals in our local ecosystem stay healthy?

_____

_____

What is something that people in our neighborhood could do to help plants and animals in our local ecosystem stay healthy?

_____

_____

Name: _____ Date: _____

Chapter 2 Home Investigation: The Story of My Food

1. With the help of a family member, try to identify the source of the food molecules from a food you have eaten today.
2. On the line below, write the name of the food.
3. Together with your family member, list the ingredients that were used to make that food. (You might need to look at a recipe or at the information on the side of the food package to figure this out.)
4. Try to identify the source of molecules for each ingredient. Did it come from a plant or an animal? Where did that plant or animal get its food molecules?

Name of food item: _____

Name of ingredient	**Source: plant or animal?**	**Where could that plant or animal have gotten its food molecules?**

Name: _____ Date: _____

Chapter 3 Home Investigation: Conduct a Soil Investigation

1. Together with someone at home, take a close look at the soil in a yard, flower pot, or other area where plants might grow. On the line on the next page, write where you got the soil sample.
2. With your fingers or a spoon, scoop a small amount of soil onto a piece of paper.
3. Spread the soil sample on the paper so you can observe the matter that makes up the soil.
4. In the box on the next page, draw what you observe.
5. Add labels to describe or identify the matter that makes up the soil in your sample. You may want to use the scientific language (below) for ideas.
6. Write a caption for your drawing that describes the soil you observed.

Scientific Language About Soil				
rich soil	decomposing	sow bug	dead organisms	
leaves	earthworm	plants	millipedes	
decomposers	fungus	water	moist	dry

Name: _____ Date: _____

Chapter 3 Home Investigation: Conduct a Soil Investigation (continued)

Soil sample from: _____

Caption:

_____

_____

Name: _____ Date: _____

Chapter 1 Home Investigation: Food Mixtures

1. Interview two people at home about mixtures they've made in the kitchen.
2. Record each person's name and then ask the questions below.
3. Record each person's responses on the lines below each question.

Person 1: _____

Describe a mixture you've made out of different ingredients.

_____

_____

_____

What were some of the properties of the ingredients before you mixed them? Did the mixture have the same or different properties?

_____

_____

_____

Person 2: _____

Describe a mixture you've made out of different ingredients.

_____

_____

_____

What were some of the properties of the ingredients before you mixed them? Did the mixture have the same or different properties?

_____

_____

_____

Name: _____ Date: _____

Chapter 2 Home Investigation: Investigating More Mixtures

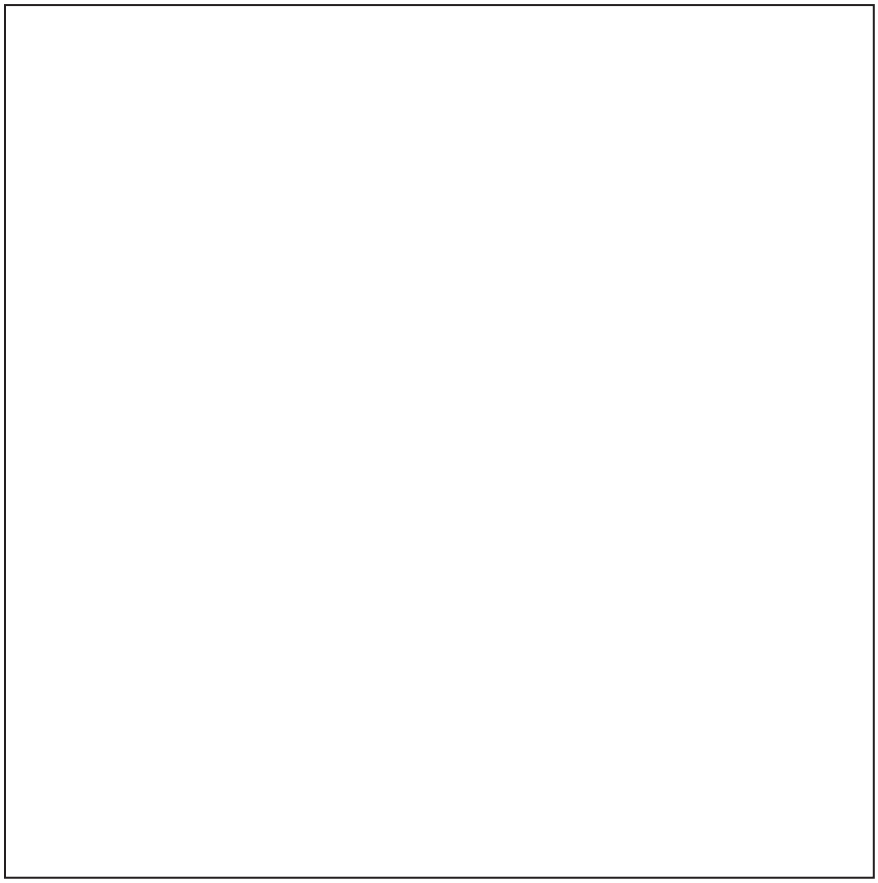
1. With someone at home, choose two flavor ingredients to see whether or not they will dissolve in water. Choose ingredients that you did not investigate in class.
2. On the next page, record the name of your first flavor ingredient on the line provided.
3. Add a small amount of your first flavor ingredient into a half cup of water and stir with a spoon until it has dissolved or until you are sure that it will not dissolve.
4. In the Key on the next page, record the name of flavor ingredient 1. Then draw a shape to represent a molecule of flavor ingredient 1 and a shape to represent a water molecule.
5. Draw a model of your first mixture.
6. Repeat Steps 2–5, this time using your second flavor ingredient. Draw your model on page 3.
7. Use your models to explain to the person who's investigating with you what is happening with the molecules of the substances as they mix or don't mix.

Name: _____ Date: _____

Chapter 2 Home Investigation: Investigating More Mixtures (continued)

Flavor ingredient 1: _____

Model of the Mixture



Key

☐ _____ molecule

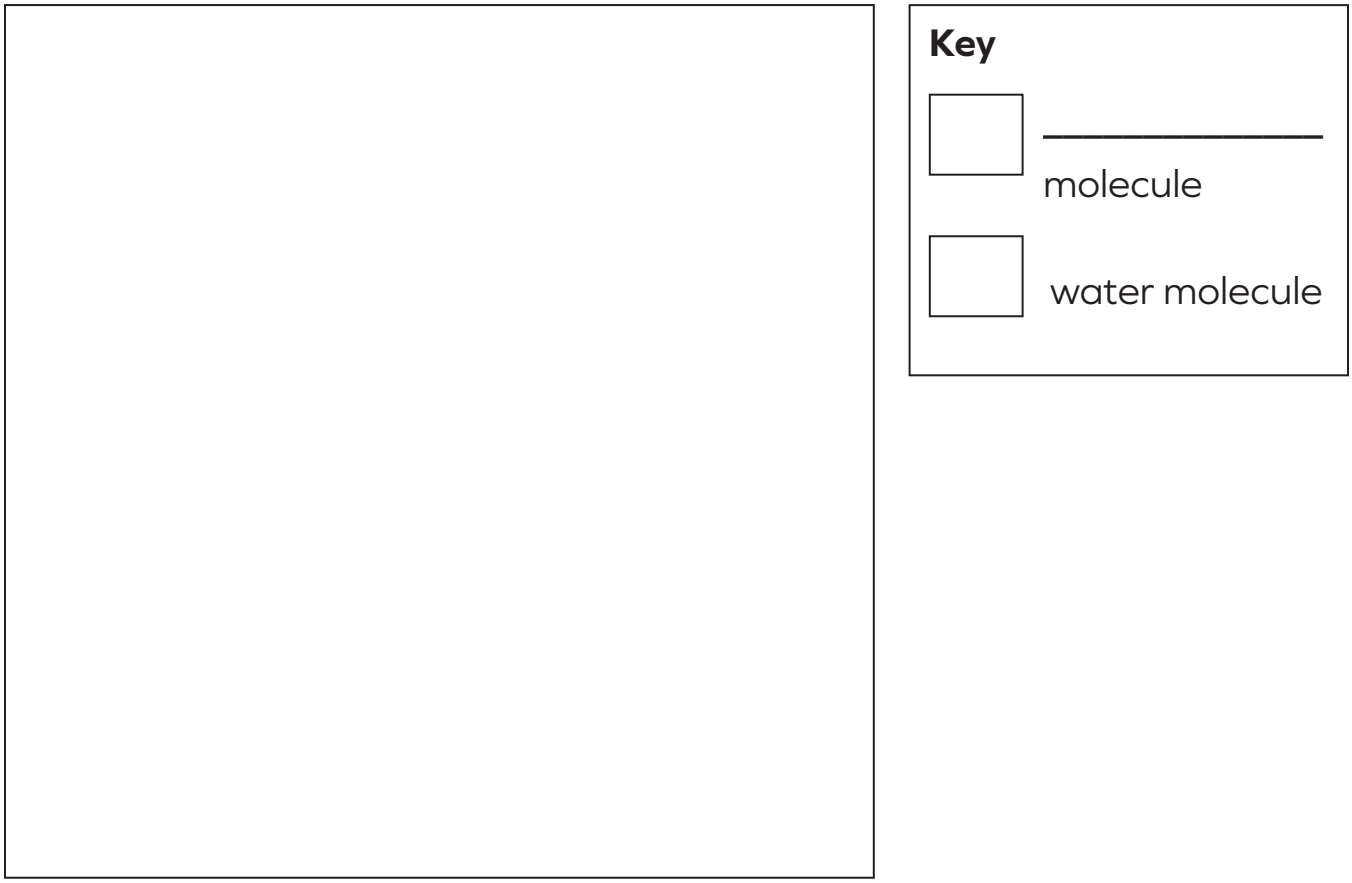
☐ water molecule

Name: _____ Date: _____

Chapter 2 Home Investigation: Investigating More Mixtures (continued)

Flavor ingredient 2: _____

Model of the Mixture



Name: _____ Date: _____

Chapter 3 Home Investigation: Molecules in Salad Dressing Quiz

1. Create a quiz about the molecules you've used in class to make salad dressing.
2. Write five statements about what happens to the molecules in dissolving, mixing, or separating substances. Some statements should be true, and some statements should be false.
3. Give the quiz to someone in your family group. Have that person read each statement and circle whether they think each one is true or false.
4. Talk about the answers with the person who took the quiz. You might teach them something!

1.	true	false
2.	true	false
3.	true	false
4.	true	false
5.	true	false

Name: _____ Date: _____

Chapter 1 Home Investigation: Observing the Stars

A. Interview someone at home about their experiences observing the stars or other objects in space. Record the person's name.

B. List three of your own interview questions on the lines below. **Ideas:** Which stars or other objects in space has the person has seen? Do they have a special memory connected with seeing the stars? Does the person have a favorite star?

C. Interview the person and record their responses.

Name of person interviewed: _____

1. _____

_____

Response: _____

_____

2. _____

_____

Response: _____

_____

3. _____

_____

Response: _____

_____

4. What do you still wonder about the stars?

Response: _____

_____

Name: _____ Date: _____

Chapter 2 Home Investigation: Earth and Stars Quiz

A. Using what you have learned so far about Earth and the stars, create a quiz by recording five statements. Some statements should be **true**, and some statements should be **false**. The first statement is done for you.

B. Give the quiz to someone at home. Have that person read each statement and indicate whether they think it is true or false.

C. Talk about the answers with the person who took the quiz. You might teach them something!

1. The sun is the closest star to Earth.	❒ true	❒ false
2.	❒ true	❒ false
3.	❒ true	❒ false
4.	❒ true	❒ false
5.	❒ true	❒ false

Name: _____ Date: _____

Chapter 3 Home Investigation: Planning and Conducting a Systematic Investigation

1. With an adult, make a plan to systematically observe which stars are visible in an area of the sky over a period of two weeks.
2. Fill in the dates and times when you will observe the sky (first column).
3. Go outside and choose an area of the sky that you would like to investigate. Choose an area that is near a reference point (a telephone pole, a building, or a tree), so you can be sure you are looking at the same area every time. Draw the stars you see and the reference point for this and every observation that follows (second column).
4. Follow your plan. You may wish to look at a star map or a digital device so you can learn more about the stars you are investigating.

Date and Time	Observation: Stars and Reference Point
_____ date	
_____ time	
_____ date	
_____ time	

Name: _____ Date: _____

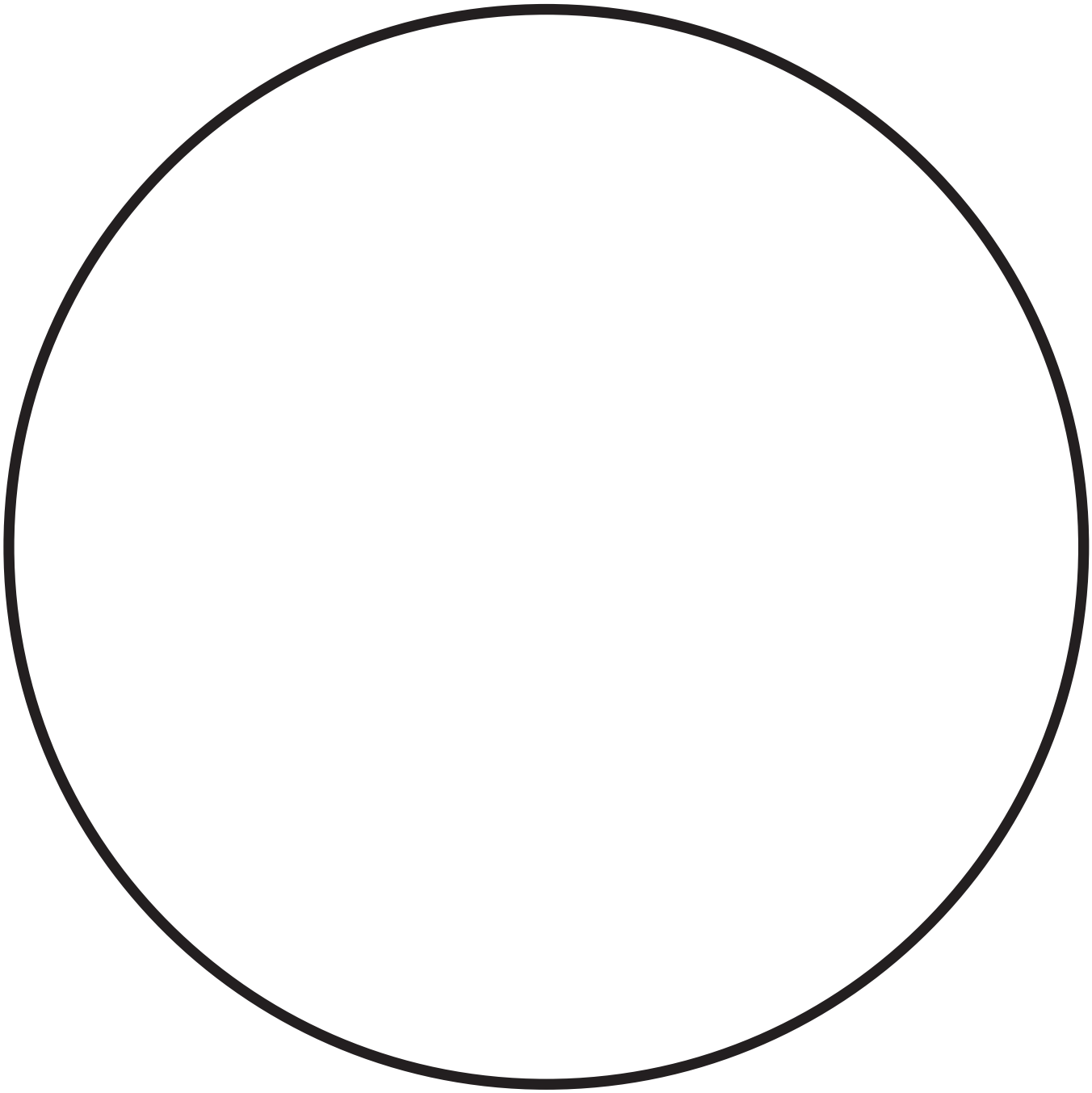
Chapter 3 Home Investigation: Planning and Conducting a Systematic Investigation (continued)

Date and Time	Observation: Stars and Reference Point
_____ date	
_____ time	
_____ date	
_____ time	
_____ date	
_____ time	
_____ date	
_____ time	

Name: _____ Date: _____

Chapter 4 Home Investigation: Design an Artifact

1. With an adult, design an artifact that shows your ideas about the stars we can see from Earth. Work together to come up with an artifact that is unique.
2. Choose the stars or constellations you would like to include by referring to reference books or reliable sites on the Internet.
3. Draw your ideas.



Name: _____ Date: _____

Chapter 1 Home Investigation: Saving Water

1. Interview two people at home about whether they think it is important to save water and what ideas they have about how to save water.
2. Write each person's name and then ask the questions shown below.
3. Record each person's responses on the lines below each question.

Name of Person 1: _____

Do you think it is important to save water? Why or why not?

_____

_____

What can we do to save water?

_____

_____

Name of Person 2: _____

Do you think it is important to save water? Why or why not?

_____

_____

What can we do to save water?

_____

_____

Name: _____ Date: _____

Chapter 2 Home Investigation: Evaporation and Condensation

1. With the help of someone at home, look for examples of evaporation and condensation happening in or around your home.
2. Record each example in the table below.

Examples of evaporation	**Examples of condensation**

Name: _____ Date: _____

Chapter 3 Home Investigation: Rain Quiz

1. Write four statements about rain and how raindrops form. Some statements should be true and some should be false.
2. Give the quiz to someone at home. Have that person read each statement. They should circle "Agree" by the statements they agree with and "Disagree" by the statements they disagree with.
3. Talk about the answers with the person who took the quiz. You might teach them something!

Statement 1: Agree / Disagree

_____

_____

Statement 2: Agree / Disagree

_____

_____

Statement 3: Agree / Disagree

_____

_____

Statement 4: Agree / Disagree

_____

_____

Name: _____ Date: _____

Chapter 4 Home Investigation: Earth System Interactions

1. Describe the different parts of the Earth system (hydrosphere, biosphere, atmosphere, and geosphere) to someone at home.
2. With their help, try to identify examples of parts of the Earth system interacting in and around your home.
3. In the table below, record what you observed in the first column. In the second column, write which parts of the Earth system you think are involved. In the third column, describe the interactions.

Observation	**Parts of the Earth System**	**Interactions**
A puddle in the yard is smaller today than it was yesterday.	hydrosphere atmosphere	The water in the puddle (part of the hydrosphere) is evaporating to become water vapor in the atmosphere.

Name: _____ Date: _____

Chapter 5 Home Investigation: Chemical Reactions at Home

1. Find two different chemical reactions that you can observe in or around your home. Answer the questions below for each chemical reaction.
2. Explain to someone at home how you know these are chemical reactions.
3. Ask the person at home if he or she has any questions about how to know if a chemical reactions has happened. Record these questions, then see if you can answer them.

Chemical Reaction 1: _____

What evidence can you observe that shows this is a chemical reaction?

_____

_____

Chemical Reaction 2: _____

What evidence can you observe that shows this is a chemical reaction?

_____

_____

What questions did the person you talked to have about chemical reactions? Were you able to answer them?

_____

_____

_____

_____

_____

_____