

AL NOOR INTERNATIONAL SCHOOL
Riyadh, Saudi Arabia



interactive SCIENCE



Workbook

Name: _____

Grade 2 - _____

Academic Year: _____



Skills Handbook Part 1

Lesson 1 What questions do scientists ask?

Words to Know

Write the word next to the description it matches.

inquiry	nutrients
---------	-----------

1. _____ asking questions and looking for answers
2. _____ materials plants need from soil



Explain

Tell if each statement is true or false.
Explain your choice. Give an example.

3. Scientists only ask questions about space.

This statement is _____ because _____

4. Scientists discovered that all plants need soil to grow.

This statement is _____ because _____



Apply Concepts

5. Suppose you were asked to be the first child astronaut.
What question would you want to investigate in space?
How would you find the answer to your question?



my planet DiARY DISCOVERY



*Lunch is served!
This astronaut put
water back into
her food. She is
ready to eat!*

Astronauts take food with them when they take off from the Kennedy Space Center in Florida. Scientists found a way to take food into space.

Many foods, like soup and macaroni and cheese, contain water. Scientists take water out of food so the food lasts longer. Astronauts put water back into the food before they eat it.

Tell what else scientists might need in space.

Analyze Scientists asked questions and learned how astronauts might take food into space. What other question might scientists ask before sending astronauts into space for months?



Skills Handbook Part 1

Lesson 2 What kinds of skills do scientists use?

Words to Know

Write the word next to the description it matches.

observe	predict
---------	---------

1. _____ to tell what you think will happen next
2. _____ to use your senses to find out about something



Explain

Answer the questions on the lines below.

3. Name one sense you can use to observe an orange.

4. What do scientists do when they compare and contrast?



Apply Concepts

5. Suppose that you are a scientist who studies flowers.

Name five different ways that you could classify flowers.



Science Process Skills

Cut and glue to fill in the missing words.

1: Scientists ask

.

2: Scientists look for

to their questions.

3: A scientist can

with their eyes.

4: A scientist can

with their hands

5: A scientist can

with a ruler

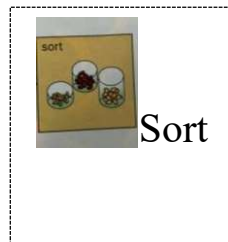
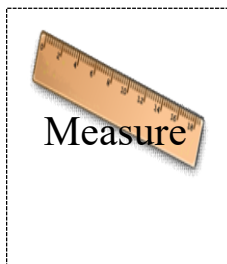
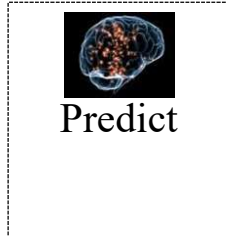
6: A scientist can

with their brain.

7: A scientist can

with their work.

Name _____ Date _____





Skills Handbook Part 1

Lesson 3 How do scientists use tools and stay safe?

Words to Know

Write a sentence using the word in the box below.

tool

1. _____



Explain

Tell if each statement is true or false. Explain your choice.

2. You should wear safety goggles at all times.

This statement is _____ because _____

3. Scientists take each measurement more than one time.

This statement is _____ because _____



Apply Concepts

4. Look at the rocks.
How could you use tools to observe and learn more about these rocks?

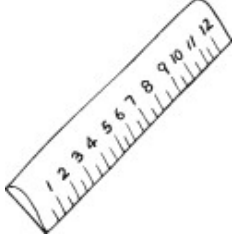
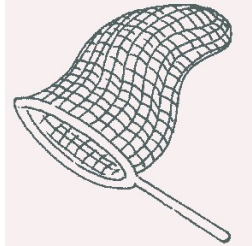

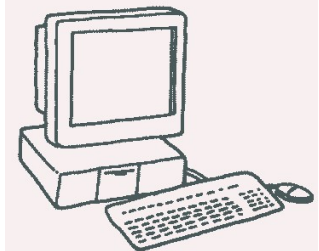


Name _____ Date _____



How do scientists use tools and stay safe?

Finish the sentence for each tool.

Tool	I can use this tool to . . .
	
	
	
	

Name _____ Date _____



Skills Handbook Part 1

Lesson 4 How do scientists find answers?

Words to Know

Write the word next to the description it matches.

investigate	conclusion	hypothesis
-------------	------------	------------

1. _____ a possible answer to a question
2. _____ to look for answers
3. _____ what you decide after you think about all you know



Explain

Answer the questions on the lines below.

4. In the scientific method, what should you do after you collect and record your data?

5. Why do scientists repeat their investigations?



Apply Concepts

6. A scientist wants to investigate how much water a plant needs each day. What should the scientist do to find out?

Name _____ Date _____



How do scientists find answers?

Take notes on the steps in a scientific investigation.

STEP	EXPLANATION
Ask a question.	
Make your hypothesis.	
Plan a fair test.	
Do your test.	
Collect and record your data.	
State your conclusion.	



Skills Handbook Part 1

Lesson 5 How do scientists collect and share data?

Words to Know

Write the word next to the description it matches.

data	chart	bar graph
------	-------	-----------

1. _____ a way to organize data
2. _____ what you observe
3. _____ a way to compare data



Explain

Answer the questions on the lines below.

4. You measure the lengths of three leaves. Name two ways to record your data.

5. How does a bar graph help a scientist make comparisons?



Apply Concepts

6. Suppose that you have an apple in your hand.
What data could you collect about that apple?

Name _____ Date _____

How do scientists collect and share data?



Study the data in the chart.

Kind of car	Observations
Small	Car can hold two people.
Medium	Car can hold four people.
Large	Car can hold eight people.

Show the data in a new way.

Draw.

Name _____ Date _____



Chapter 1

Lesson 1 What are some properties of matter?

Words to Know

Write the letter of each word next to its definition.

A. matter ___ **B.** property **C.** thermometer

1. _____ a tool that measures temperature
2. _____ something about an object you can observe with your senses
3. _____ anything that takes up space and has mass



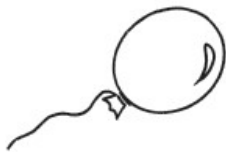
Explain

4. What can you observe about an object?



Apply Concepts

5. Look at the object. List three of its properties.



Name _____ Date _____

What are some properties of matter?

Draw or write about an object that is good example of each property of matter.



Property	Example
Color	
Texture	
Size	
Shape	
Flexibility	
Temperature	

Name _____ Date _____



Chapter 1

Lesson 2 What are solids, liquids, and gases?

Words to Know

Draw a line from each word to the definition it matches.

- | | |
|------------------|--|
| 1. solid | A. matter that does not have its own size or shape and fills its container |
| 2. liquid | B. matter that has its own size and shape |
| 3. gas | C. matter that does not have its own shape and takes the shape of its container |



Explain

4. Give one example of a solid, a liquid, and a gas.



Apply Concepts

5. Tell what will happen when you put each object in a container.

plastic ball _____

apple juice _____

air _____



What are solids, liquids, and gases?

Work with your team to find objects. Write their names in the first column. Then mark if they are a solid, liquid, or gas. A sample has been done for you.

	Solid	Liquid	Gas
Chair	X		

Name _____ Date _____



Chapter 1

Lesson 3 What are some ways matter can change?

Words to Know

1. What is a physical change?



Explain

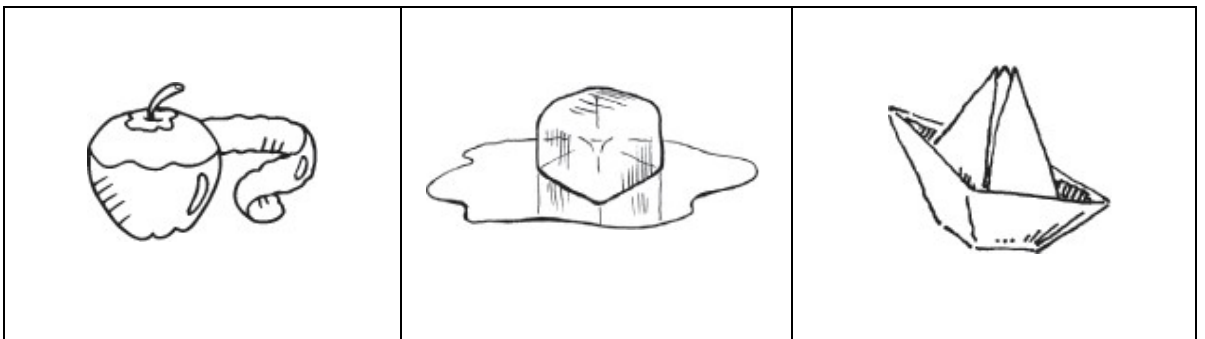
2. Tell three ways you could change a cardboard box.

3. Draw how you could change an orange.



Apply Concepts

4. Circle the pictures that show a physical change.

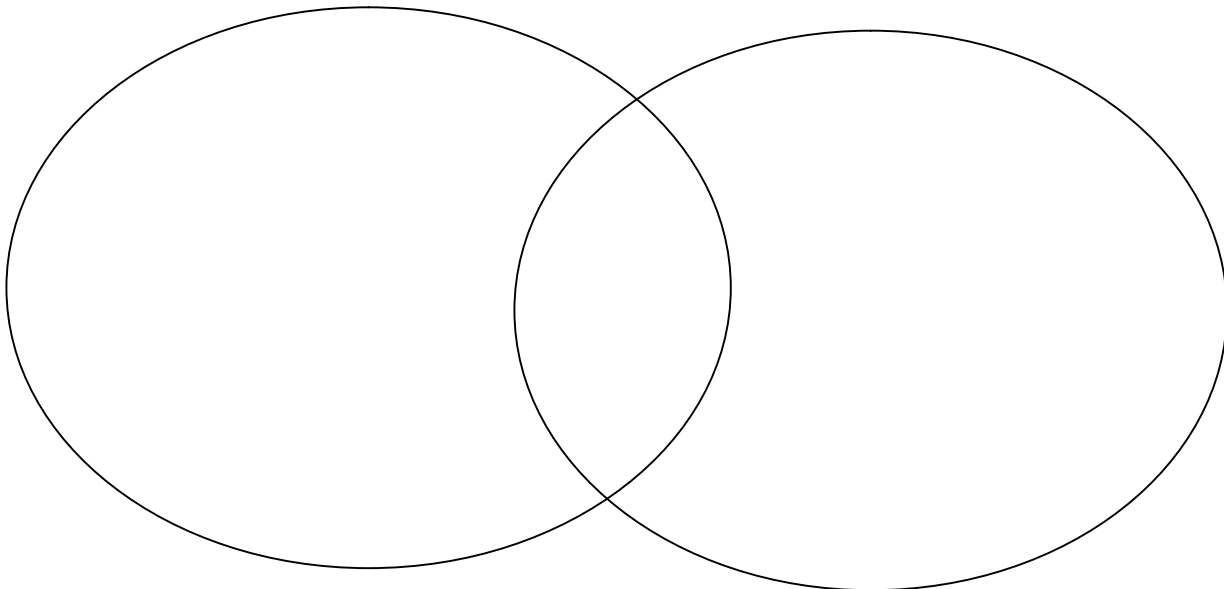


Name _____ Date _____



What are some ways matter can change?

Compare and contrast the ways you can change two different objects. Label the circles with your objects and write the ways you can change them.





Chapter 1

Lesson 4 How can water change?

Words to Know

1. Write a sentence that uses the word *volume*.



Explain

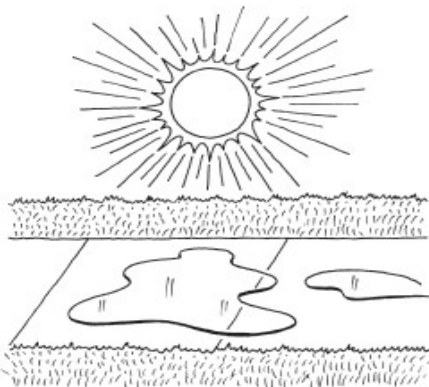
2. How can heat change a solid? Give an example.

3. How can cold change a liquid? Give an example.



Apply Concepts

4. What will happen to the puddle? Tell why.



What happened?

Look at the pictures. Think about the states of water and the actions that happened in the middle. Then, choose the words from the box and write. You can repeat the words.



Name _____ Date _____



States of water

Liquid

Solid

Gas

Actions

Cool

freeze

heat and boil

melt



Chapter 1

Lesson 5 How can you combine materials?

Words to Know

Write the word next to the description it matches.

combine	material
---------	----------

1. _____ to put two or more things together
2. _____ any type of matter used to create or build something



Explain

3. Why are structures built with a variety of materials?



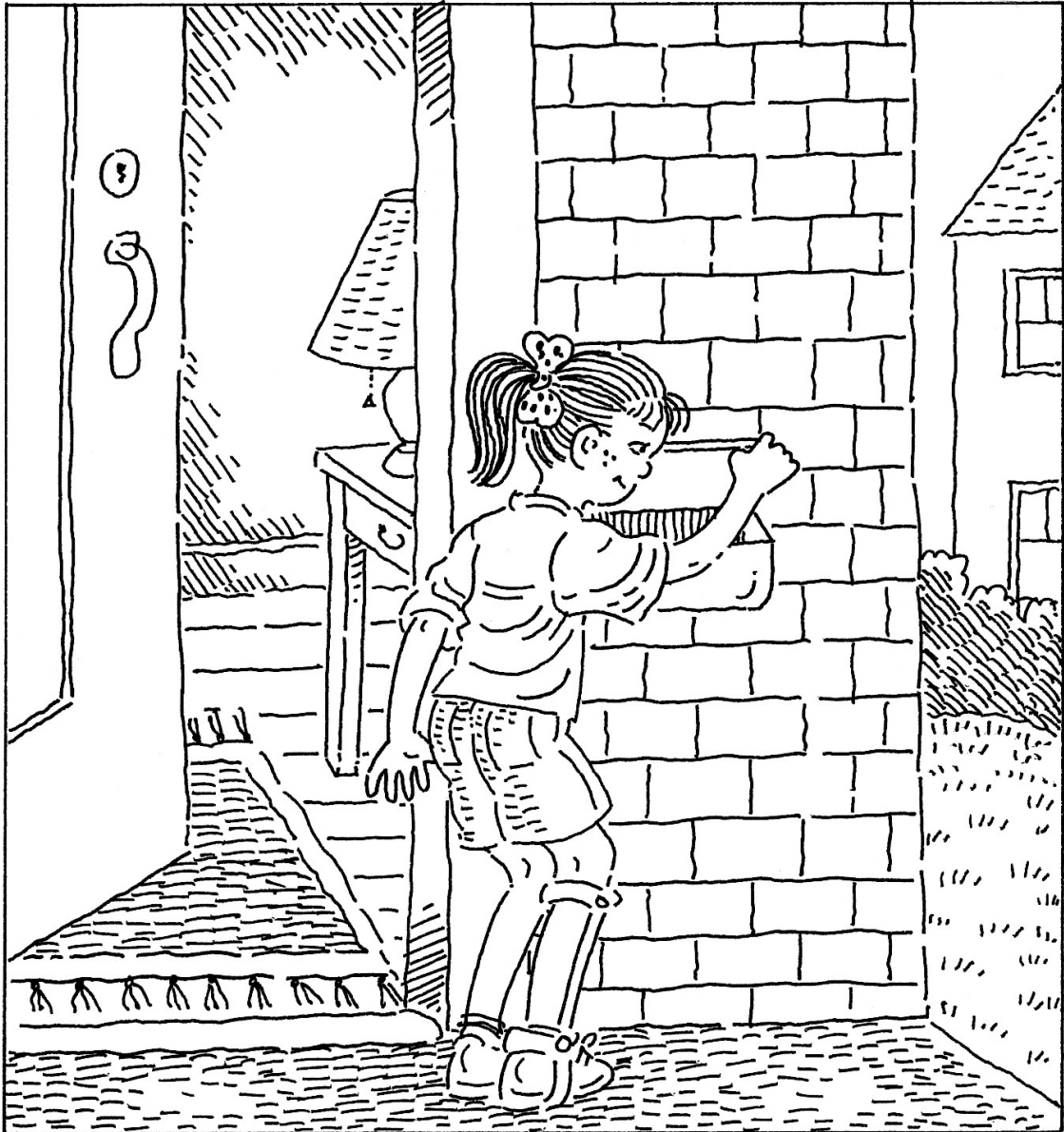
Apply Concepts

4. Name two materials that are made of other combined materials. Give three examples of how each material is used.

Name _____ Date _____

How can you combine materials?

Label the picture with the names of materials used to make the house.





Name _____ Date _____

Skills Handbook Part 2

Lesson 1 What is technology?

Words to Know

Write the word next to the description it matches.

technology	invent
------------	--------

1. _____ to make something for the first time
2. _____ the use of science to solve problems



Explain

Answer the questions on the lines below.

3. Is a spoon technology? How do you know?

4. You follow directions to make a paper airplane. Did you invent the paper airplane? Explain why or why not.



Apply Concepts

5. Give an example of a technology you use each day. Tell what problem this technology solves.



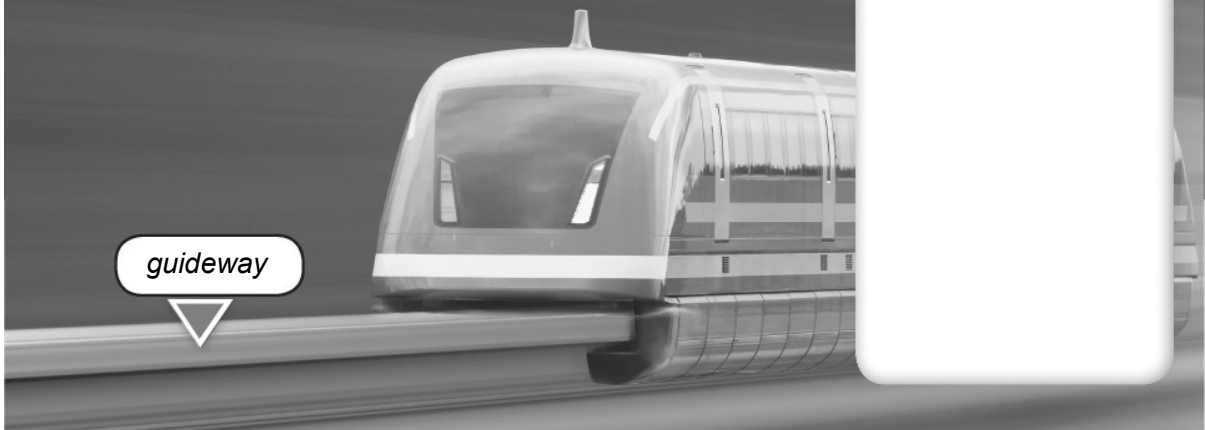
my planet DiARY

INVENTION!



Engineers have designed a train that uses magnets instead of engines. These trains are called Maglev trains. They are faster and quieter than trains that use engines. Maglev trains float about one to ten centimeters above a guideway. The magnets on the bottoms of the trains and the magnets on the guideway help move the train along. Maglev trains can travel faster than 300 miles per hour!

Use a ruler.
Draw a line that is ten centimeters tall to show how high Maglev trains can float.



Identify What are two advantages of Maglev trains?



Name _____ Date _____

Skills Handbook Part 2

Lesson 2 How do people design new things?

Words to Know

Match each word with its definition.

goal	solution	material
------	----------	----------

- _____ what something is made of
- _____ the answer to a problem
- _____ something you want to do



Explain

4. Read the steps of the design process. Number them 1 through 5 to put them in the correct order.

- _____ **Plan and Draw**
- _____ **Record and Share**
- _____ **Find a Problem**
- _____ **Make and Test**
- _____ **Choose Materials**



Apply Concepts

5. An engineer designed this lamp and tested it. The lamp fell over every time the cord was pulled. How could the engineer solve this problem?





Look at the pictures. How do people design new things?

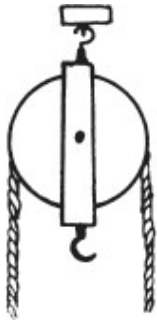



Make a solution.	Set a goal to find a solution.	Test the solution. Does it work?	Plan and choose the materials.	Think about a problem.

Skills Handbook Part 2

Lesson 3 How do we use tools and machines?

Words to Know

Circle the objects that are **simple machines**.

1. 	
	



Explain

2. What is an inclined plane? How does it help you do work?





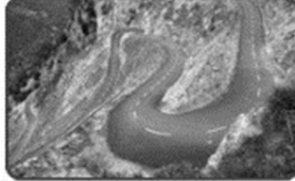



Apply Concepts

3. A mover needs to move a couch from the first floor to the second floor. It does not fit through the stairwell. Which simple machine might help the mover? Why?

Name _____ Date _____



Label each simple machine.

		
<input type="text"/>	<input type="text"/>	<input type="text"/>
		
<input type="text"/>	<input type="text"/>	<input type="text"/>

Pulley

Wheel & axle

Screw

Lever

Wedge

Inclined plane



Chapter 2

Lesson 1 What are parts of plants?

Words to Know

Write the word next to the description it matches.

nutrient	roots	stem
-----------------	--------------	-------------

1. _____ parts of the plant that hold the plant in place and take in water and nutrients
2. _____ part of the plant that carries water and nutrients to the leaves
3. _____ a food material that living things need to live and grow



Explain

Answer the questions on the lines below.

4. What do plants need to grow?

5. In what two places on plants do seeds grow?



Apply Concepts

6. Think about a flower growing in your garden. You notice that all of its leaves have fallen off. Why is this a problem for the plant?

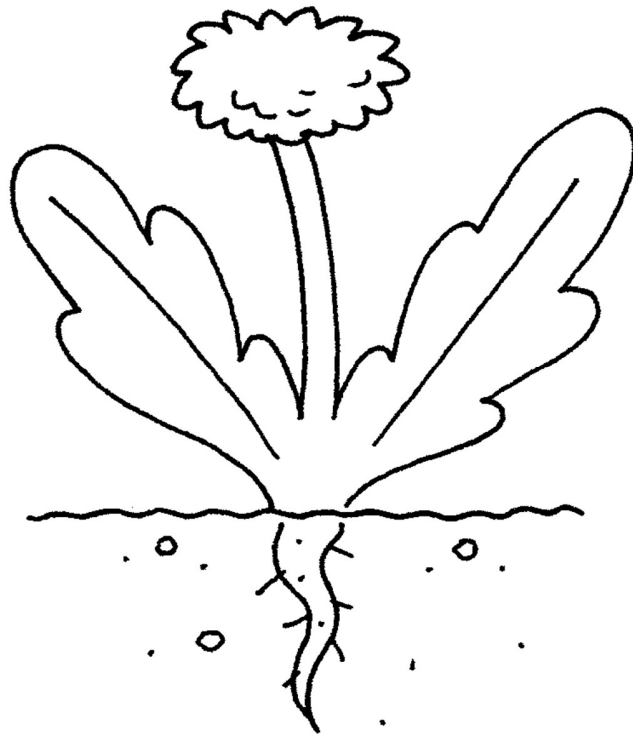
Name _____ Date _____



What are the parts of plants?

Draw a line from the word in the box to the correct part of the plant. Then choose one part and explain how it helps the plant to grow.

stem leaves roots flower





Chapter 2

Lesson 2 What are some kinds of animals?

Words to Know

Write a sentence that uses each word.

1. amphibian

2. reptile



Explain

3. Tell how fish and birds are different. Then tell how they are alike.

Fish	Fish and Birds	Birds



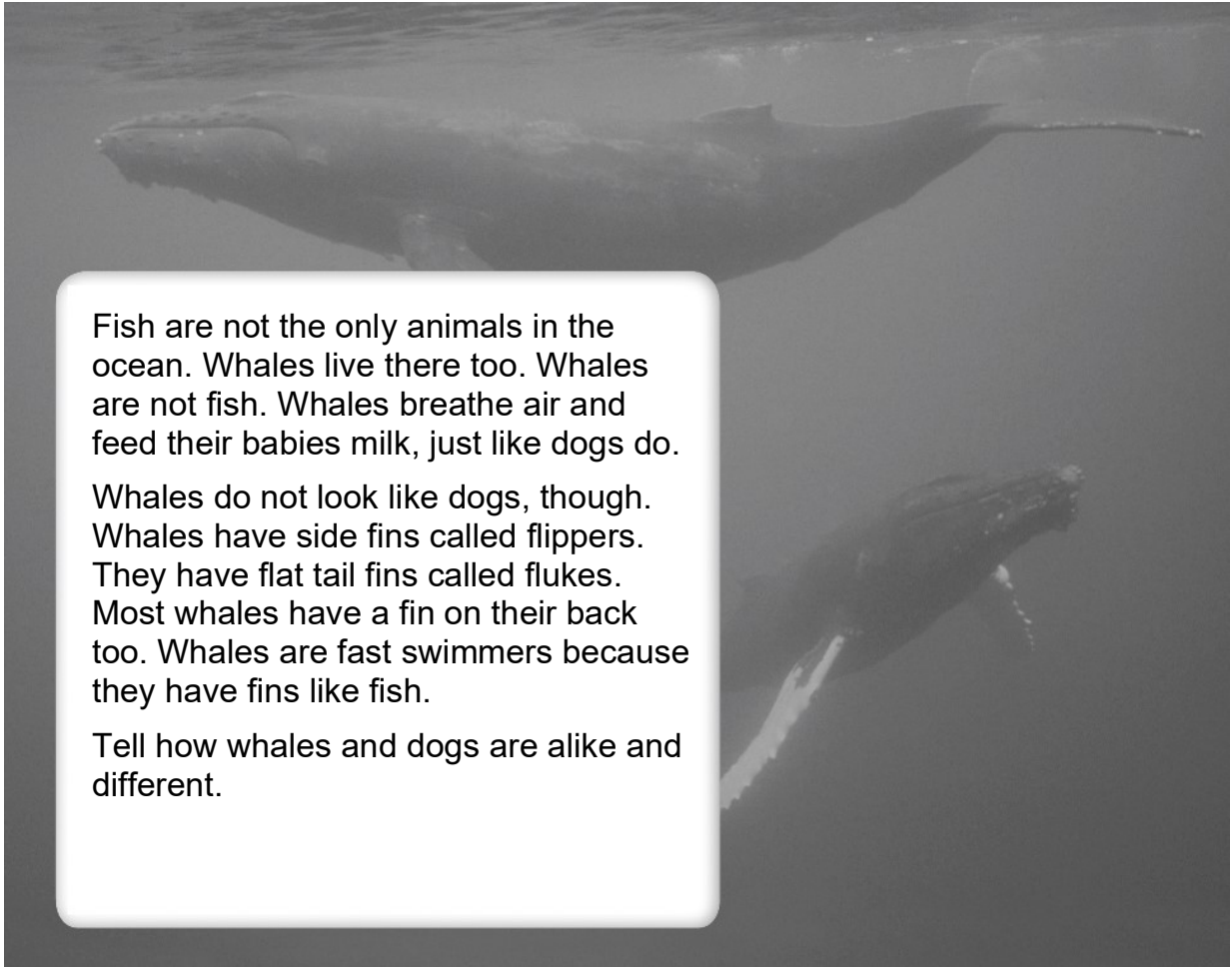
Apply Concepts

4. Look at the picture. Is this animal a spider or an insect? Write how you know.





my planet DiARY Did You Know?



Fish are not the only animals in the ocean. Whales live there too. Whales are not fish. Whales breathe air and feed their babies milk, just like dogs do.

Whales do not look like dogs, though. Whales have side fins called flippers. They have flat tail fins called flukes. Most whales have a fin on their back too. Whales are fast swimmers because they have fins like fish.

Tell how whales and dogs are alike and different.

How are the legs of a dog like the flippers of a whale?



Chapter 2

Lesson 3 What are some parts of animals?

Words to Know

Write a sentence using the word in the box below.

camouflage

1. _____



Explain

Answer the questions on the lines below.

2. How does a bird's beak help it get what it needs? Give an example.

3. Name three ways animals may protect themselves from other animals.



Apply Concepts



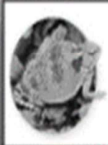



4. A tiger's stripes blend in with the tallgrasses where it lives. Why are stripes an important part of a tiger?

Name _____ Date _____



Match the pictures of the animals into the correct boxes.

Camouflage	Hard Body Parts	Poison

					
---	---	---	---	---	--

Chapter 2

Lesson 4 Where do plants and animals live?

Words to Know

Write the word that completes each sentence.

wetland	desert	habitat
---------	--------	---------

1. A _____ is a hot, dry place where few plants can live.
2. An animal's _____ is the place where it lives and meets its needs.
3. Many plants and animals in a _____ live in water.



Explain

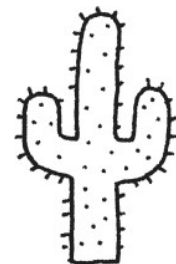
4. Tell two things about each kind of habitat.

Forest	Ocean	Rainforest
1.	1.	1.
2.	2.	2.



Apply Concepts

5. What is this plant? Where does it live?
How does it get what it needs?



Name _____ Date _____



Chapter 2

Lesson 5 How do living things get food?

Words to Know

Write the word next to the description it matches.

food chain	predator	prey
------------	----------	------

- _____ a model that shows how energy passes from one living thing to another
- _____ an animal that is caught and eaten
- _____ an animal that catches and eats another animal



Explain

Tell if each statement is true or false. Explain your choice. Give an example.

- Plants and animals can make their own food.

This statement is _____ because _____

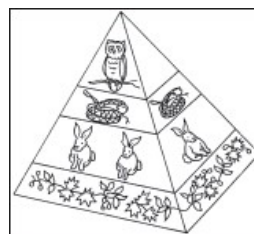
- A snake is a predator.

This statement is _____ because _____



Apply Concepts

- Look at this picture. Tell how energy passes from one living thing to another in this food chain.



Name _____ Date _____



How do living things get food?

Choose a habitat. Draw a food chain in that habitat.

A large empty rectangular box for drawing a food chain in a chosen habitat.

Chapter 3

Lesson 1 What are some kinds of land and water?

Words to Know

Write a sentence that uses each word.

1. landform

2. glacier



Explain

3. What does a plain look like?



Apply Concepts

4. What landforms are in this picture?
What body of water is in this picture?
Tell how you know.





my planet DiARY



A chain of mountains is called a mountain range. The Rocky Mountains form the longest mountain range in North America. Only the Andes Mountains in South America form a longer mountain range.

These are not the longest mountain ranges on Earth, though. The longest mountain range is under the ocean! It is four times longer than the Rockies, Andes, and Himalayas put together.

Tell what you think the land under the ocean looks like.



Rocky Mountains

List the three mountain ranges in order from longest to shortest.



Name _____ Date _____

Chapter 3

Lesson 2 What changes land?

Words to Know

Write the word that completes each sentence.

weathering	erosion
------------	---------

- When wind or water moves rock it is called _____.
- _____ is when water or ice breaks down rocks.



Explain

- Put an X on a way that Earth can change fast.

A.  ___ B.  C. 

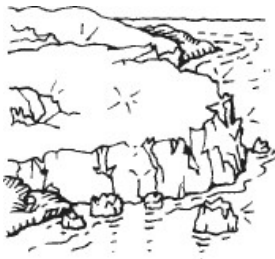
- Circle two ways water can change rock.

- A. sand and soil
- B. earthquakes and volcanoes
- C. weathering and erosion



Apply Concepts

- Look at the picture. Is this a fast change or a slow change? Write how you know.



Name _____ Date _____



Give one example of how the land changes quickly.
Give one example of how the land changes slowly.

A large sheet of lined paper with horizontal lines and a vertical margin line on the left side. There are three binder holes punched along the left edge.



Name _____ Date _____

Chapter 3

Lesson 3 What is a fossil?

Words to Know

Write the word that matches each definition.

extinct	fossil
---------	--------

1. a print or part of a plant or animal that lived long ago _____
2. a plant or animal that no longer lives on Earth _____



Explain

3. Why do scientists study fossils?



Apply Concepts

4. A fern plant dies. Tell what might happen to it over time.



What can people learn from fossils? Write your responses in the concept map.

