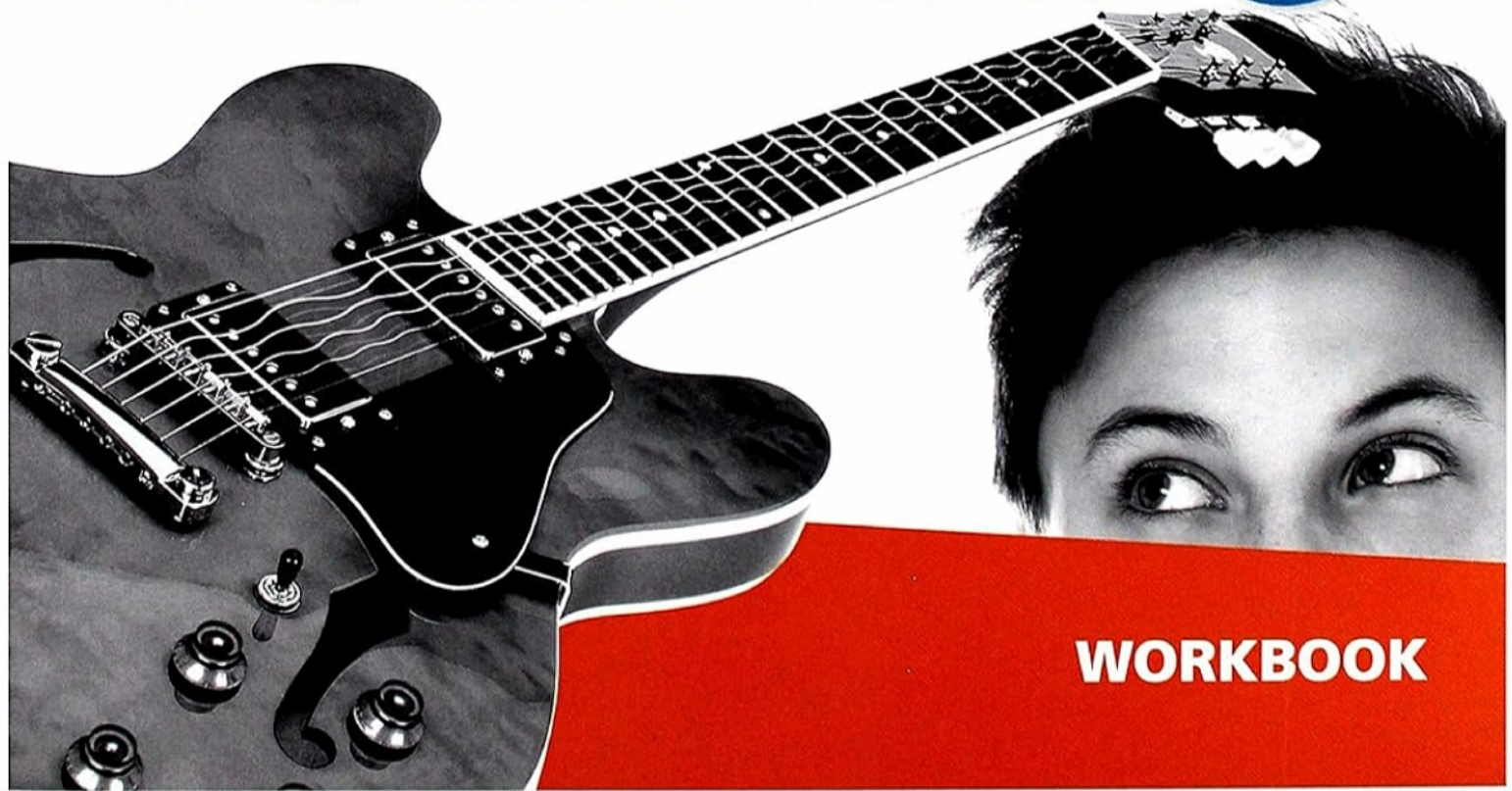


BIG

SCIENCE 5



WORKBOOK

ALWAYS LEARNING

PEARSON

Contents

 Unit 1	Plants and Animals	4
	What do living organisms need to survive?	
 Unit 2	Ecosystems	12
	How do living organisms interact with the environment?	
 Unit 3	Body and Nutrition	20
	How does my diet affect my health?	
	Review 1–3	28
 Unit 4	Earth’s Resources	30
	How do Earth’s resources change?	
 Unit 5	Earth and Space	38
	What are some patterns in space?	
 Unit 6	Matter	46
	How can matter be described and measured?	
	Review 4–6	54
 Unit 7	Energy and Heat	56
	How does energy change?	
 Unit 8	Electricity	64
	How is electricity used?	
 Unit 9	Motion	72
	How can motion be described and measured?	
	Review 7–9	80
	Skills	82

Unit 1

Plants and Animals



What do living organisms need to survive?

1 What do the pictures show? Write the missing letters.



1 m o t h



2 u t e



3 pri l pe r
ca t



4 se



5 p cup n

2 What can you see in the photos in 1? Unscramble the letters.

I can see a lot of _____ . (lviign oanismsrg)

3 How do the animals in 1 protect themselves? Match the pictures 1–5 with the sentences a–e.

- a I can fly very high when I'm in danger.
- b I protect myself with my sharp spines.
- c I don't move my wings when there's danger.
- d I have hairs with sharp edges to protect me.
- e I hide inside my shell to protect myself.

4

4 What kind of text is it? Why was it written? Read it quickly and answer the questions.

- 1 What kind of text is it?
a an email **b** a postcard **c** a diary entry
- 2 It was written by Mark. Why do you think he wrote it?

Reading Tip

The first time you read a text, try to understand the general meaning. Don't worry about understanding all the details.

Sunday, April 22nd

Yesterday was an awesome day! It was sunny and warm, so we ate lunch in the park. After lunch, I played baseball with my dad and my brother. I was running to catch the ball, and I tripped on a stone and fell. I thought it was a stone because it was round and hard. I looked closer, and I shouted: "It's a turtle!" Dad came to see, and he said "That's a kind of turtle. It's a tortoise." I didn't know the difference. My dad explained, "Some turtles that live on land are called tortoises."

We took the tortoise to the pet store, but I really wanted to keep him. Finally my parents said OK! I've made a house—a box with some grass—for him, and I give him some cabbage to eat every day. He loves cabbage!



5 True or false? Circle **T** (true) or **F** (false).

- 1 Mark didn't have a good time yesterday. T / F
- 2 At first, Mark thought the tortoise was a ball. T / F
- 3 Mark now knows that some turtles are called tortoises. T / F

6 Imagine that you found one of these animals on the playground. Explain what happened and how you looked after it.

frog kitten parrot porcupine rabbit squirrel

Lesson 1 • What plant and animal characteristics are inherited?

1 What animal is it? Read the student's project.

General Information

A chameleon is a type of lizard that lives in hot places in Africa, Asia, and southern Europe. There are more than 200 types of chameleon.



Heredity

The offspring of all types of chameleon inherit similar characteristics: a very long tongue and big eyes. Their eyes can move in different directions. This gives chameleons a big advantage because they can see insects flying and catch them with their super-fast tongues.

Competition

Some male chameleons can turn red, green, yellow, brown, purple—any color you can imagine! They use their skin color to compete with each other. For instance, when a male wants to scare another male and chase it away, it changes its skin color. Chameleons also change color when they want to attract a female, or to camouflage themselves. They can match the color of the things around them so that their predators can't see them.

2 What do these words mean? Match the words (1–7) to their definitions (a–g).

- | | |
|-------------------|---|
| 1 heredity | a occurs when two or more living things need the same resources in order to survive |
| 2 offspring | b a characteristic or behavior that can help an individual organism compete |
| 3 inherit | c the passing of traits or characteristics from parents to their offspring |
| 4 characteristics | d to receive characteristics, or traits, from parents |
| 5 advantage | e the traits or behaviors that allow some organisms to hide themselves by looking like the natural background |
| 6 competition | f the young of an animal or a plant |
| 7 camouflage | g the traits or qualities an organism has |



Grammar Tip

Helen **wrote** about chameleons.
 Helen **didn't write** about lions.
Did Helen **write** about zebras? No, she **didn't**.

3 What happened? Complete the sentences with the past simple form of the verbs in parentheses.

- 1 George Mendel's work became very important for science. (become)
- 2 The peacock _____ in the park and _____ its beautiful tail. (run, show)
- 3 We _____ on a safari, but we _____ zebras. (go, not see)
- 4 _____ you _____ your red hair from your mom or your dad? (inherit)
- 5 Why _____ the chameleon _____ color? (change)
- 6 The moth _____ around the light, but it _____ burnt. (fly, not get)
- 7 There _____ two porcupines in the park. We _____ them. (be, not touch)
- 8 How _____ this coconut _____ here? I think it _____ across the water. (get, travel)

4 Discussing a science project. Complete the conversation. Use the past simple form of the verbs in parentheses.

Mom: Hi, Helen! How (1) did it go (go)? (2) _____ your teacher _____ (like) your project?

Helen: Yes, she did.

Mom: What (3) _____ she _____ (say)?

Helen: Well, she (4) _____ (tell) me: "You (5) _____ (work) hard, and you (6) _____ (find) a lot of interesting information about chameleons." Everyone in my class (7) _____ (want) to learn more about chameleons. Some of my classmates (8) _____ (ask) questions, and I (9) _____ (give) them answers.

Mom: So, what questions (10) _____ they _____ (ask) you?

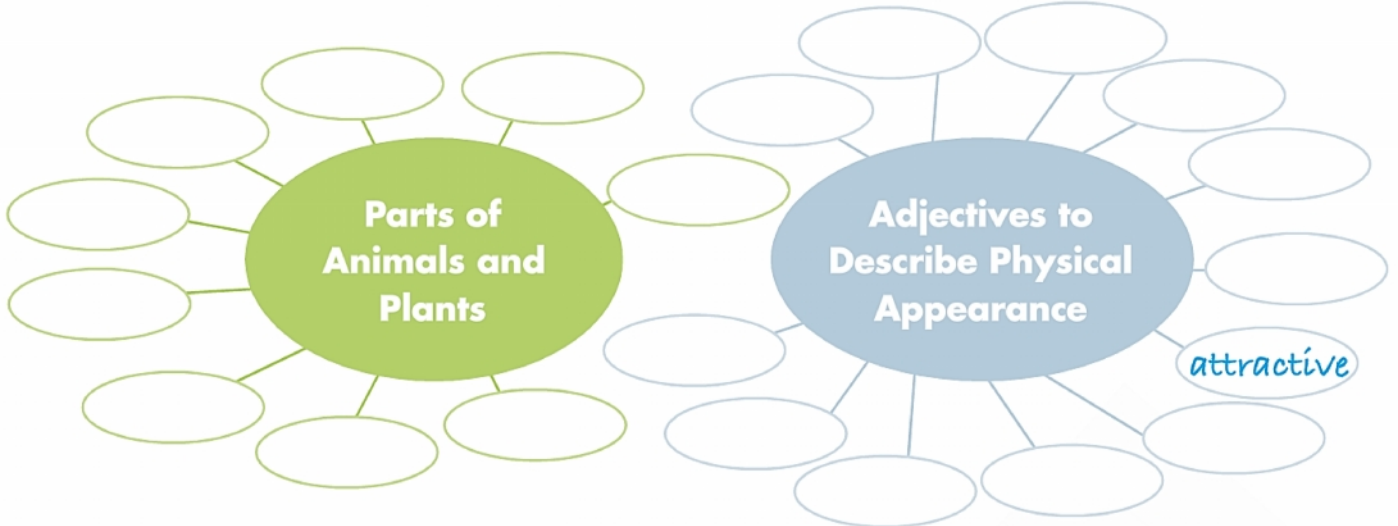
Helen: Well, Jim (11) _____ (ask) me if all chameleons change color and I (12) _____ (explain) that it's only the male chameleons.

Mom: That's interesting. I'm sure everyone (13) _____ (enjoy) your talk.

Helen: Thanks, Mom.

5 Describing animals and plants. Complete the diagrams. Use the words from the box and your own ideas.

~~attractive~~ big dark dry eyes flowers hair
 leaves light long mane neck pods prickly
 sharp short smooth spine stem tall wrinkled



6 A description of a rose. Circle the correct words.

This plant is called a rose, and its **flowers** / leaves are red. There are lots of different types of roses, and their **pod**s / **flowers** can be red, white, yellow, pink, or orange. The rose's leaves are **smooth** / tall and dark green. The **stem** / neck of the rose is quite long and **wrinkled** / prickly, and it has lots of sharp spines called thorns. They help protect the rose. I really like roses because they smell nice.



Grammar Tip
 This plant is called a rose, **and** its ...

7 A description of a daisy. Look at the picture and write.

This plant is called a _____ and its _____
 are _____



Lesson 2 • How do animals respond to the environment?

- 1 What differences are there between a porcupine and a hedgehog? Look at the photos and write. _____

Porcupines vs. Hedgehogs

Some people think porcupines and hedgehogs are the same. In fact, there are more differences between them than similarities. First of all, a porcupine is bigger, and it has long, sharp hairs called quills, which it uses to protect itself. A hedgehog has short, thick hairs called spines, and its **behavior** is sometimes quite funny. When there's a dangerous **stimulus**, it rolls into a ball for **protection**. A porcupine doesn't react in the same way, but each animal has a strong survival **instinct**. The biggest similarity between them is that neither the porcupine nor the hedgehog **migrate**. They have different ways of surviving the winter. A hedgehog will go to sleep for up to six months, but a porcupine won't **hibernate** at all.



- 2 Read the text in 1. Are the sentences true for a porcupine, a hedgehog, or both? Mark (✓) the correct boxes.

	Porcupine	Hedgehog	Both
1 It looks like a ball when it feels threatened.			
2 It protects itself with long, sharp hairs.			
3 It doesn't go to sleep during winter.			

- 3 What do the words mean? Write the words in blue from the article in 1 next to the correct definitions.

- instinct: an inherited behavior, e.g., a hedgehog rolling into a ball
- _____: something that causes an animal's reaction
- _____: things that living things do in a situation
- _____: conserve energy by slowing down their body functions
- _____: staying safe
- _____: movement from one habitat to another