

# Grade 3

# Science review



## Vocabulary

Fill each blank with the best term from the list.

cells

mammal

photosynthesis

shelter

environment

nutrient

reproduce

vertebrate

invertebrate

organism

1. Animals often seek a safe place, or \_\_\_\_\_ shelter \_\_\_\_\_ to protect themselves.
2. Each living thing is an \_\_\_\_\_ organism \_\_\_\_\_.
3. An animal with a backbone is called a \_\_\_\_\_ vertebrate \_\_\_\_\_.
4. Living things \_\_\_\_\_ reproduce \_\_\_\_\_ to make more of their own kind.
5. A vertebrate that is born live is called a \_\_\_\_\_ mammal \_\_\_\_\_.
6. A substance that helps living things grow and stay healthy is a \_\_\_\_\_ nutrient \_\_\_\_\_.
7. Plants make their own food using the process of \_\_\_\_\_ photosynthesis \_\_\_\_\_.
8. Living things are made of one or more tiny \_\_\_\_\_ cells \_\_\_\_\_.
9. An animal without a backbone is called an \_\_\_\_\_ invertebrate \_\_\_\_\_.
10. All the living and nonliving things that surround an organism are part of an \_\_\_\_\_ environment \_\_\_\_\_.

## CHAPTER 2 Review

### Skills and Concepts

Answer each of the following in complete sentences.

- 11. Main Idea and Details** What makes living things different from nonliving things?

Living things use energy to grow, respond, while nonliving things do not.

- 12. Descriptive Writing** Describe the structures that different animals use to breathe.

Fish breathe using gills, while other animals have lungs. Some animals can take in oxygen through their skin.

- 13. Classify** Group the following animals as vertebrates or invertebrates: butterfly, cow, snail, goldfish, owl, spider.

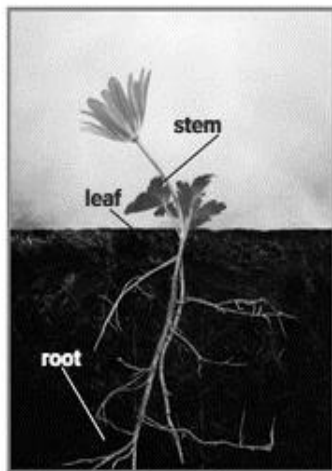
Vertebrates	Invertebrates
Cow, goldfish, owl	Butterfly, snail, spider

- 14. Critical Thinking** What might happen to a plant if someone picked most of its leaves?

A plant that lost most of its leaves would not be able to make much food through photosynthesis. It will grow new leaves quickly or it will die.

15. Explain how each labeled part helps a plant survive.

- 
- Stem hold up the plant and takes nutrients through the plant.
  - Leaves change sunlight into food for the plant.
  - Roots bring water and nutrients from the soil to the plant, helps support the plant.
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16. How do living things get what they need to live and grow?

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Circle the best answer for each question.

1. What is one question you could ask to find out whether something is living?  
 A Does it take in nutrients?  
 B Was it made by humans?  
 C Does it come from nature?  
 D Is it made of more than one cell?
2. Some plants in tropical rain forests have very large leaves. The large leaves help the plants  
 A save their energy.  
 B lose extra rainwater.  
 C absorb more sunlight.  
 D support their tall trunks.
3. The large ears of a desert jackrabbit help it  
 A run fast.  
 B blend in.  
 C find food.  
 D stay cool.
4. How do animals use camouflage to survive?  
 A by standing out from their environment  
 B by absorbing more sunlight  
 C by blending in with their environment  
 D by giving warning calls
5. Where would you most likely find animals with thick fur and a lot of blubber?  
 A the desert  
 B cold, arctic waters  
 C a rain forest  
 D warm ocean waters
6. All of the following are needed for a plant to live except  
 A nutrients only.  
 B water, air, soil and light.  
 C light and water only.  
 D soil and air only.

7. Caribou live in the arctic tundra. They spend most of the summer eating small plants.

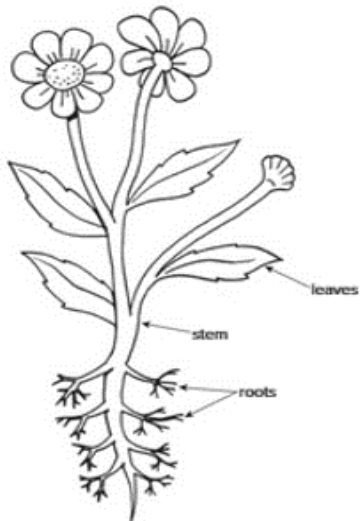


What do they do in winter when plants are hard to find?

- A** eat meat instead of plants  
**B** hibernate  
**C** change color  
**D** migrate
8. How do a plant's roots help it get what it needs?
- A** They take in sunlight.  
**B** They take in carbon dioxide.  
**C** They take in water.  
**D** They take in food.

Answer the following question.

9. Describe how the labeled parts of the plant help it survive.



Roots take in water.

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Stem takes water to other parts.

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Leaves help to make food.

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## Visual Summary

Complete the lesson summary in your own words.



### Growth Changes \_\_\_\_\_

Plants go through a series of changes as they grow.

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### Flowering Plants and Conifers \_\_\_\_\_

Grow from seeds and have similar life cycles.

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### Ferns \_\_\_\_\_

Ferns make spores. Other plants grow in different ways.

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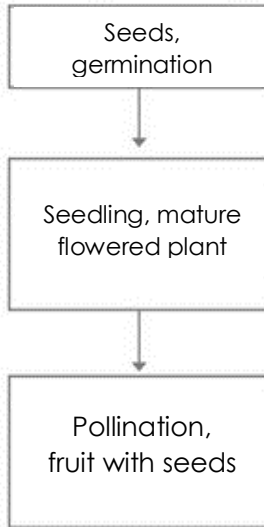


## Think, Talk, and Write

① **Vocabulary** What is fruit?

A plant structure that grows around the seeds of flowering plants.

② **Sequence** What is the life cycle of a flowering plant?



③ **Critical Thinking** How do animals help flowering plants?

By carrying pollen between plants and by spreading seeds.

④ **Test Prep** How does a conifer reproduce?

- A with bulbs    **C with cones**  
B with flowers    D with spores

**Essential Question** How do plants grow and reproduce?

— Plants reproduce by sending spores through the air or —  
— by being carried by other insects like bees. —

## Visual Summary

Complete the lesson summary in your own words.



**Animal metamorphosis.** \_\_\_\_\_

Has its own life cycle. Amphibians and most insects go through metamorphosis.



**Reptiles, Birds, and Fish** \_\_\_\_\_

Hatch from eggs. Reptiles and fish do not usually care for their young.



**Most mammals** \_\_\_\_\_

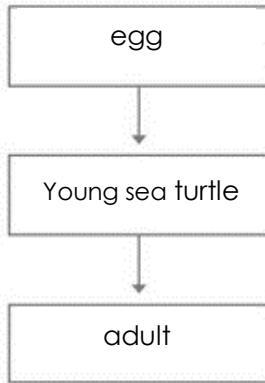
Are born alive. They depend on their parents until they can get their own food..

## Think, Talk, and Write

① **Vocabulary** What is metamorphosis?

A series of changes and animal goes through in a life cycle.

② **Sequence** Name three stages in a sea turtle's life cycle. Put them in order.



③ **Critical Thinking** Do you go through metamorphosis? How do you know?

No, when humans are born they have many adult features.

④ **Test Prep** An iguana's life cycle would be most like a

- A** turtle's.   **C** fly's.  
**B** cheetah's.   **D** bear's.

**Essential Question** How are all living things alike?

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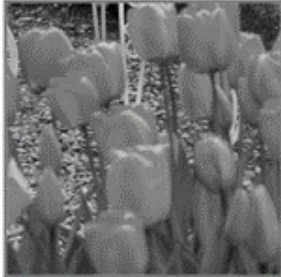
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## Visual Summary

Complete the lesson summary in your own words.



### Inherited Traits

\_\_\_\_\_

- Are passed from parents to offspring.
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\_\_\_\_\_

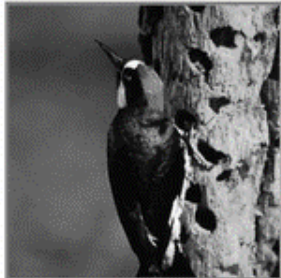


### Learned Traits

\_\_\_\_\_

- Are new skills an organism gains during its life.
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\_\_\_\_\_



### Some Traits

\_\_\_\_\_

- Are affected by the organism's environment.
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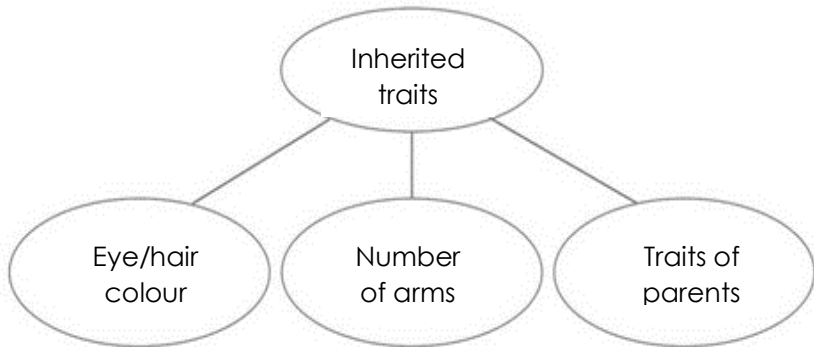
\_\_\_\_\_

## Think, Talk, and Write

**1 Vocabulary** What is heredity?

The passing on of a trait from parent to child.

**2 Main Idea and Details** What is an inherited trait? Give examples.



**3 Critical Thinking** Why do you look the way you do?

I look the way I do because I inherited traits from my parents. Other traits are from my environment.

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**4 Test Prep** A plant loses branches during a storm. This is an example of

**A** an inherited trait.

**C** a learned trait.

**B** a trait affected by the environment.

**D** heredity.

### Essential Question

How do organisms get their features?

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Organisms get features from their parents and the environment

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# CHAPTER 3 Review

## Visual Summary

Summarize each lesson in your own words.



### Lesson 1 \_\_\_\_\_

- A life cycle describes how an \_\_\_\_\_
- organism grows and reproduces. \_\_\_\_\_
- Most plants grow from seeds. \_\_\_\_\_



### Lesson 2 \_\_\_\_\_

- Animals have different life cycles. \_\_\_\_\_
- Some are born looking like their \_\_\_\_\_
- parents while others change \_\_\_\_\_
- significantly. \_\_\_\_\_



### Lesson 3 \_\_\_\_\_

- Organisms have traits that they inherit \_\_\_\_\_
- their parents. Some have learned \_\_\_\_\_
- traits or from their environment. \_\_\_\_\_

## Vocabulary

Fill each blank with the best term from the list.

cone

life cycle

egg

metamorphosis

heredity

pollination

inherited traits

seed

larva

trait

1. An amphibian begins its life as an      egg     .
2. A conifer's seeds are made inside a      cone     .
3. An organism goes through stages that make up its      life cycle
4. Some organisms, such as caterpillars, go through a      metamorphosis      in which their body changes shape.
5. The passing of traits from parents to young is known as      heredity     .
6. A structure that can grow into a new plant is called a      seed
7. A feature of a living thing is called a      trait     .
8. Animals and wind help plants reproduce through      pollination
9. Traits that an organism gets from its parents are called      Inherited traits
10. When an insect hatches from an egg, it is called a      larva

## CHAPTER 3 Review

### المهارات والمفاهيم

Answer each of the following in complete sentences.

- 11. Sequence** List the stages of a flowering plant's life cycle in the correct order.

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- 12. Personal Narrative** Describe how you use learned traits during the course of a typical school day.

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- 13. Predict** A ripe apple falls to the ground. How can this help an apple tree reproduce?

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- 14. Critical Thinking** How could the environment affect a bird's life cycle?

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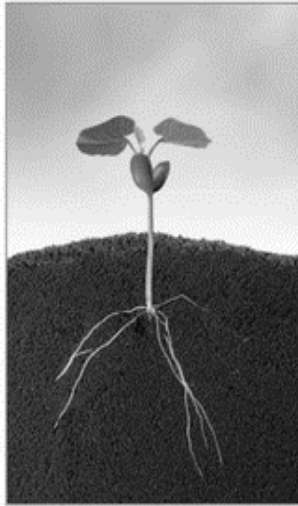
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15. What is happening in this picture? Which part of a life cycle does this picture show?

- At this stage of the life cycle the seeds have  
- developed and are traveling to the soil so new plants  
- can grow.



16. How do living things change?

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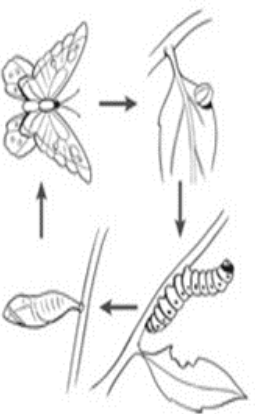
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Circle the best answer for each question.

1. What contains the seeds in flowering plants?  
**A** cone  
**B** bulb  
**C** fruit  
**D** tuber
2. Which animal goes through a stage of its life cycle in which it can breathe with gills?  
**A** ladybug  
**B** cheetah  
**C** turtle  
**D** frog
3. Wind, insects, and animals help plants reproduce by bringing together eggs and  
**A** pollen.  
**B** oxygen.  
**C** organisms.  
**D** water.
4. Which of the following nonliving parts of an environment do all living things need to survive?  
**A** rocks and water  
**B** water and air  
**C** water and fire  
**D** fire and food
5. What provides a seed with energy for germination?  
**A** stored food  
**B** soil  
**C** air  
**D** fruit
6. What is the correct order for a growing plant?  
**A** spore, seed, seedling  
**B** seed, spore, seedling  
**C** seed, seedling, adult plant  
**D** seedling, adult plant, seed

Answer the following questions.  
Refer to the diagram to answer  
questions 7–9.



7. What is shown in the diagram above?  
Life cycle

8. The pupa stage is between what two stages?  
Larva and adult

9. In which stage does a female butterfly produce eggs?  
adult

10. Fill in the chart below. Write yes if the trait is inherited. Write no if the trait is not inherited.

Trait	Inherited
A. scars	no
B. eye color	yes
C. riding a bicycle	no
D. hair color	yes
E. language	no

11. List two traits that are inherited. Include one animal trait and one plant trait.

Fur colour, eye colour, flower colour, size

12. Organisms almost never look exactly like either parent. What explains this?

They inherit traits from mom and dad.

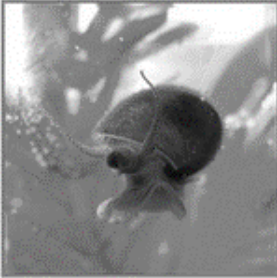
## Visual Summary

Complete the lesson summary in your own words.



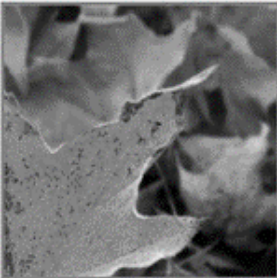
**Ecosystems** \_\_\_\_\_

- Have living and nonliving things that
- depend on each other to survive.



**Food Chains and Food Webs** \_\_\_\_\_

- Show how energy flows through an
- ecosystem.



**Decomposers** \_\_\_\_\_

- Plays an important role in an
- ecosystem. They eat dead material
- and release nutrients.

**Think, Talk, and Write**

- 1 **Vocabulary** What is a consumer?

An organism that eats another organism.

- 2 **Infer** How does it help an animal to be part of more than one food chain?

Clues	What I Know	What I Infer
Animals compete for food.	There might not be enough of one kind of food.	More food is available in other food chains.

- 3 **Critical Thinking** How do both plants and animals depend on decomposers?

Decomposers recycle nutrients that help plants grow. Animals might depend on these plants for food.

- 4 **Test Prep** Most producers get their energy from  
A sunlight. C predators.  
B consumers. D rocks.

**Essential Question** How do living things interact?

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### Visual Summary

Complete the lesson summary in your own words.



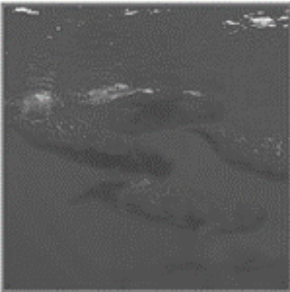
**Adaptations are** \_\_\_\_\_

- Structures or behaviours that help an
- organism to survive in its
- environment.



**Plant Adaptations Include** \_\_\_\_\_

- Fuzzy leaves, pointed leaves and
- shallow roots.



**Plant Adaptations Include** \_\_\_\_\_

- Camouflage, mimicry, migrating,
- hibernating

## Think, Talk, and Write

- 1 **Vocabulary** What does the word *nocturnal* mean?

Camouflage, mimicry, migrating, hibernating

- 2 **Predict** What might happen to an arctic willow plant if you moved it to a tropical rain forest?

What I Predict	What Happens
Plants do not survive	Dies, not adapted

- 3 **Critical Thinking** Compare two or more organisms from this lesson. Explain how the organisms are alike and different.

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- 4 **Test Prep** Why do some animals migrate?

A to escape prey

B to avoid cold weather

C to find their families

D to make a change

**Essential Question** How do an organism's traits help it survive?

An organism's traits help it get food and water, avoid danger, and reproduce.

## CHAPTER 4 Review

### Visual Summary

Summarize each lesson in your own words.



#### Lesson 1

Food chains and food webs show how organisms in an ecosystem depend on one another.



#### Lesson 3

Plants and animals have adaptations that help them survive.



## Vocabulary

Fill each blank with the best term from the list.

adaptation

decomposer

food chain

nocturnal

camouflage

desert

forest

producer

hibernation

1. An ecosystem that has many trees is called a forest ecosystem.
2. In an ecosystem a food chain diagram shows how energy passes from one organism to another.
3. An animal that is active at night is nocturnal animal.
4. A structure or behavior that helps an organism survive in an environment is an adaptation example.
5. An organism that makes its own food is called a producer organism.
6. An adaptation called camouflage helps an animal blend in with its environment.
7. Living and nonliving things interacting in their environment make up an ecosystem community.
8. An organism that breaks down dead plants and animals is called a decomposer organism.
9. Going in deep sleep in winter to survive winter is called hibernation behavior.

## CHAPTER 4 Review

### Skills and Concepts

Answer each of the following.

- 10. Infer** Is it possible to have more than one producer in a food chain? Could there be more than one consumer?

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- 11. Compare and write:** How are pond ecosystems and wetland ecosystems alike? How are they different? Write as much as you can about a bout the comparison.

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- 12. Critical Thinking** Imagine that you are taking care of plants and animals in a desert ecosystem. What kind of environment you would cerate for them to live in?

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- 13. Critical Thinking** How can an organism's color protect it?

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- 14. Predict** What do you think would happen if a fish that lived in freshwater was placed in an ocean? Explain.

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- 15.** What are the traits that would help the animal shown in the picture to survive cold environment?

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- 16.** How do living things survive in their environments?

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Circle the best answer for each question.

1. Which adaptation most likely helps this cactus survive in a desert ecosystem?



- A large leaves
- B small flowers
- C a waxy stem**
- D a waxy flower

2. The porcupine below has sharp quills.



How do the porcupine's quills help it survive?

- A The quills keep the porcupine warm.
- B The quills help the porcupine catch food.
- C The quills protect the porcupine from predators.
- D The quills allow the porcupine to get oxygen.**

3. Which best describes a green plant's role in an ecosystem?

- A making oxygen and food**
- B breaking down dead animals
- C eating other organisms
- D recycling soil

4. How do animals use camouflage to survive?

- A by standing out from their environments
- B by imitating other animals
- C by blending in with their environments**
- D by giving warning calls

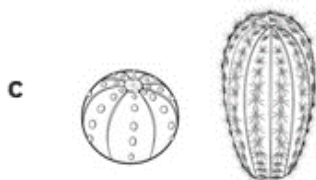
5. The table below shows the number of birds in a wetland ecosystem.

Season	Number of Birds
summer	700
winter	60

What most likely explains the difference between seasons?

- A Many birds drown when the ice melts in the fall.
- B Many birds are killed by predators in the spring.
- C Many birds die when the winter becomes cold.**
- D Many birds migrate south for the winter.

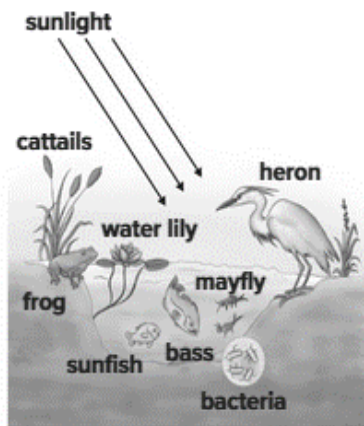
6. Carlos made a poster showing an example of mimicry. Which poster below is his?



7. Name a producer in an ocean ecosystem.

Algae is a producer.

Use the illustration below to answer question 8.



8. Frogs and bass eat mayflies in this pond ecosystem. In spring, temperatures were cold. Few mayflies survived.

How will the pond food web be affected in summer?

In summer frogs will have fewer mayflies to eat.

Some frogs will die.

The bird will not have a lot to eat because it eats the bird.

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