SCIENCE GRADE 4 LESSON 1

HSEA HomeSchool Education Academy

Compare Plants and Animal Adaptations

How to use: Print first for the main practice. Then use the device to repeat activities and save progress.

LEARNING OBJECTIVES

1. Define adaptation and explain why organisms develop them
2. Compare plant and animal adaptations to their environments
3. Give examples of adaptations that help organisms survive

MINI LESSON

An adaptation is a physical feature or behavior that helps a living thing survive in its environment. Adaptations develop over many generations through a process called natural selection — organisms with useful traits are more likely to survive and pass those traits on.

Plant Adaptations

- Thick waxy leaves — desert cacti reduce water loss through a waxy coating.
- Deep roots — grassland plants reach underground water supplies.
- Broad leaves — rainforest floor plants capture limited sunlight filtering through the canopy.
- Thorns — sharp spines deter herbivores from eating the plant.

Animal Adaptations

- Camouflage — a chameleon blends into its surroundings to hide from predators.
- Thick fur — an Arctic fox stays warm in freezing temperatures.
- Sharp claws — an eagle grips and catches prey effectively.
- Long neck — a giraffe reaches leaves high up in tall trees.

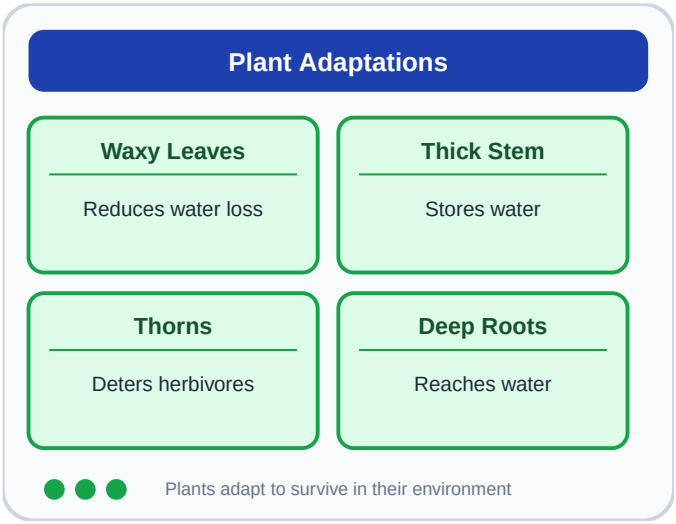
How Adaptations Develop

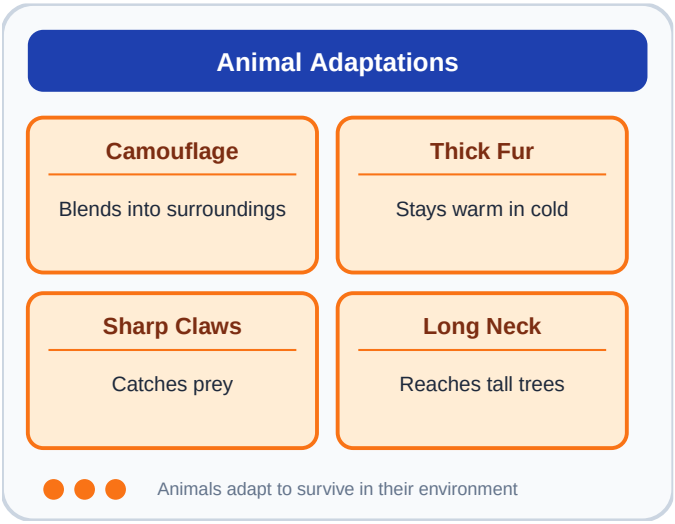
- Adaptations develop over many generations, not in a single lifetime.
- Natural selection: organisms with helpful traits survive longer and reproduce more.
- Over time, the useful trait becomes common in the population.

! Tip: think about the environment first, then ask — what feature would help an organism survive there? That feature is an adaptation.

VOCABULARY

adaptation	A physical feature or behavior that helps a living thing survive in its environment.
natural selection	The process by which organisms with useful traits survive and reproduce more successfully.
camouflage	An adaptation where an animal blends into its surroundings to avoid predators.
herbivore	An animal that feeds only on plants.





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TRACING PRACTICE

Trace and label each adaptation, then copy it twice on the lines provided.

MODEL — READ IT

adaptation

COPY 1

COPY 2

MODEL — READ IT

camouflage

COPY 1

COPY 2

MODEL — READ IT

waxy leaves

COPY 1

COPY 2

MODEL — READ IT

thick fur

COPY 1

COPY 2

MODEL — READ IT

deep roots

COPY 1

COPY 2

MODEL — READ IT

natural selection

COPY 1

COPY 2

Tip: Say each word aloud as you write it.

TYPE OR WRITE

Write 3 different words from the list above.

1. .....

2. .....

3. .....

EXERCISES — SORT & MATCH

Sort each adaptation as plant or animal.

SENTENCES TO SORT

1. Waxy leaves to reduce water loss
2. Thick trunk to store water
3. Thorns to deter herbivores
4. Broad leaves to capture sunlight
5. Deep roots to reach water
6. Camouflage to blend into surroundings
7. Thick fur to stay warm
8. Sharp claws to catch prey
9. Long neck to reach tall trees
10. Webbed feet to swim efficiently

Write the number of each sentence in the correct bucket below.

Plant Adaptation	Animal Adaptation

"Flip the page upside down to see the answer key "

Plant Adaptation: Waxy leaves to reduce water loss, Thick trunk to store water, Thorns to deter herbivores, Broad leaves to capture sunlight, Deep roots to reach water | Animal Adaptation: Camouflage to blend into surroundings, Thick fur to stay warm, Sharp claws to catch prey, Long neck to reach tall trees, Webbed feet to swim efficiently

EXERCISES — MATCH THE PAIRS

Match each adaptation to the environment it suits.

1. Thick waxy skin	A. Dense forest or jungle
2. Thick fur and blubber	B. Dry grassland or savanna

3. Webbed feet	**C.** Shaded rainforest floor
4. Camouflage (leaf-like body)	**D.** Hot, dry desert
5. Long roots	**E.** Cold Arctic environment
6. Broad flat leaves	**F.** Aquatic or wetland environment

Write the matching letter next to each number (e.g. 1-B, 2-A, 3-C...).

1 — ____ 2 — ____ 3 — ____ 4 — ____ 5 — ____ 6 — ____

"Flip the page upside down to see the answer key "

1-D 2-E 3-F 4-A 5-B 6-C

PRACTICE — DICTATION / TYPING

Without looking, name 2 plant adaptations and 2 animal adaptations and explain what each one does.

Can you name 2 plant adaptations and 2 animal adaptations and explain what each one does?
Think about what environments these organisms live in — desert, Arctic, rainforest, savanna.

"Flip the page upside down to see the answer key "

waxy / roots / fur / claws / neck / camouflage

EXERCISES — MULTIPLE CHOICE

Circle the best answer.

1. What is an adaptation?
- ◯ A change an animal makes in one day
- ◯ A feature that helps survival over generations
- ◯ A skill learned from parents

2. Which is a plant adaptation?
- ◯ Sharp claws
- ◯ Thick waxy leaves
- ◯ Camouflage

3. Why do cacti have thick stems?
- ◯ To attract insects
- ◯ To store water
- ◯ To grow taller

4. Camouflage is an example of...
- ◯ A plant adaptation
- ◯ A learned behavior
- ◯ An animal adaptation

5. An Arctic fox has white fur. This helps it...

- ◯ Stay cool in summer
- ◯ Blend into snowy surroundings
- ◯ Attract prey

6. Which adaptation helps a giraffe survive?

- ◯ Webbed feet
- ◯ Long neck
- ◯ Thorns

7. Adaptations develop over...

- ◯ A few days
- ◯ One lifetime
- ◯ Many generations

8. Which environment would suit a plant with very deep roots?

- ◯ Rainforest
- ◯ Arctic tundra
- ◯ Dry grassland

"Flip the page upside down to see the answer key "

1.b 2.b 3.b 4.c 5.b 6.b 7.c 8.c

ASSESSMENT

PARENT / TEACHER CHECKLIST

- ☐ Can define adaptation in their own words
- ☐ Can give at least 2 examples of plant adaptations
- ☐ Can give at least 2 examples of animal adaptations
- ☐ Can match adaptations to the environments they suit
- ☐ Can explain how adaptations help organisms survive