Name: Date: Score: / 8

Adapting Over Time: Learn and Practice

Tracking trait changes across generations

Read each question. Circle the best answer.

💡 Adaptation Over Generations

- An adaptation is an inherited trait that helps an organism survive and reproduce.
- When the environment changes, the share of individuals with helpful traits can grow.
- Scientists track these changes with data and graphs.
- year 1: 20 of 100 resistant, year 10: 80 of 100: trait increased

1 🐻‍❄️ Which is a structural adaptation of a polar bear?

A. Hunting on sea ice

B. Swimming long distances

C. Thick fur and a layer of fat D. Sleeping in dens

2 🦊 Arctic foxes have small ears. How does this help them?

A. They swim faster B. They look scary

C. They hear better D. Less body heat is lost

3 🪲 In a population of 100 beetles, 30 are green. Ten generations later, 70 are green. What happened?

A. Nothing changed B. All beetles disappeared

C. Green beetles became more common

D. Green beetles became rarer

4 Which is a behavioral adaptation?

A. A cactus with spines B. A fish with gills

C. A duck with webbed feet

D. Birds flying south for winter

5 What is an adaptation?

A. A type of rock B. A random injury

C. A habit you learn today

D. An inherited trait that helps survival

6 How long do adaptations in a population usually take to develop?

A. Many generations B. One day

C. One afternoon D. A single lifetime

7 A graph shows the share of mosquitoes resistant to a spray rising every year. What does this show?

A. The data must be wrong

B. The spray is getting stronger

C. Mosquitoes are learning

D. The population is adapting

8 🌵 Which trait helps a cactus survive in the desert?

A. Shallow roots that avoid water

B. Large, soft leaves

C. A thick stem that stores water

D. Flowers that never open

ANSWER KEY

Adapting Over Time: Learn and Practice (answers)

Tracking trait changes across generations

Read each question. Circle the best answer.

1 🐻‍❄️ Which is a structural adaptation of a polar bear?

A. Hunting on sea ice

B. Swimming long distances

C. Thick fur and a layer of fat

D. Sleeping in dens

Structural adaptations are body parts. Thick fur and fat keep a polar bear warm in the Arctic.

2 🦊 Arctic foxes have small ears. How does this help them?

A. They swim faster B. They look scary

C. They hear better **D. Less body heat is lost**

Small ears have less surface for heat to escape, which helps in freezing weather.

3 🪲 In a population of 100 beetles, 30 are green. Ten generations later, 70 are green. What happened?

A. Nothing changed B. All beetles disappeared

C. Green beetles became more common

D. Green beetles became rarer

The number of green beetles rose from 30 to 70 out of 100, so the green trait spread.

4 Which is a behavioral adaptation?

A. A cactus with spines B. A fish with gills

C. A duck with webbed feet

D. Birds flying south for winter

Migration is something birds do, not a body part, so it is a behavioral adaptation.

5 What is an adaptation?

A. A type of rock B. A random injury

C. A habit you learn today

D. An inherited trait that helps survival

An adaptation is a trait passed down through genes that helps an organism survive in its home.

6 How long do adaptations in a population usually take to develop?

A. Many generations B. One day

C. One afternoon D. A single lifetime

Adaptations spread slowly as individuals with helpful traits reproduce, generation after generation.

7 A graph shows the share of mosquitoes resistant to a spray rising every year. What does this show?

A. The data must be wrong

B. The spray is getting stronger

C. Mosquitoes are learning

D. The population is adapting

A rising share of resistant mosquitoes means natural selection is favouring that trait.

8 🌵 Which trait helps a cactus survive in the desert?

A. Shallow roots that avoid water

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C. A thick stem that stores water

D. Flowers that never open

A thick, waxy stem stores water for long dry spells. Big leaves would lose too much water.