

**McGraw-Hill Science © 2000, Texas Edition  
TAKS Practice Test**

**Grade 5, Chapter 11  
Ecosystems**

**Name** \_\_\_\_\_

**Date** \_\_\_\_\_

1 What role do nitrogen-fixing bacteria play in the nitrogen cycle?

- A They release nitrogen gas into the air.
- B They release ammonia into the air.
- C They turn nitrogen gas into nitrogen-containing substances that plants can use.
- D They change nitrogen into oxygen.

2 Predict which of these animals has lightweight, hollow bones.

A Mountain lion



B Blue jay



C Fish



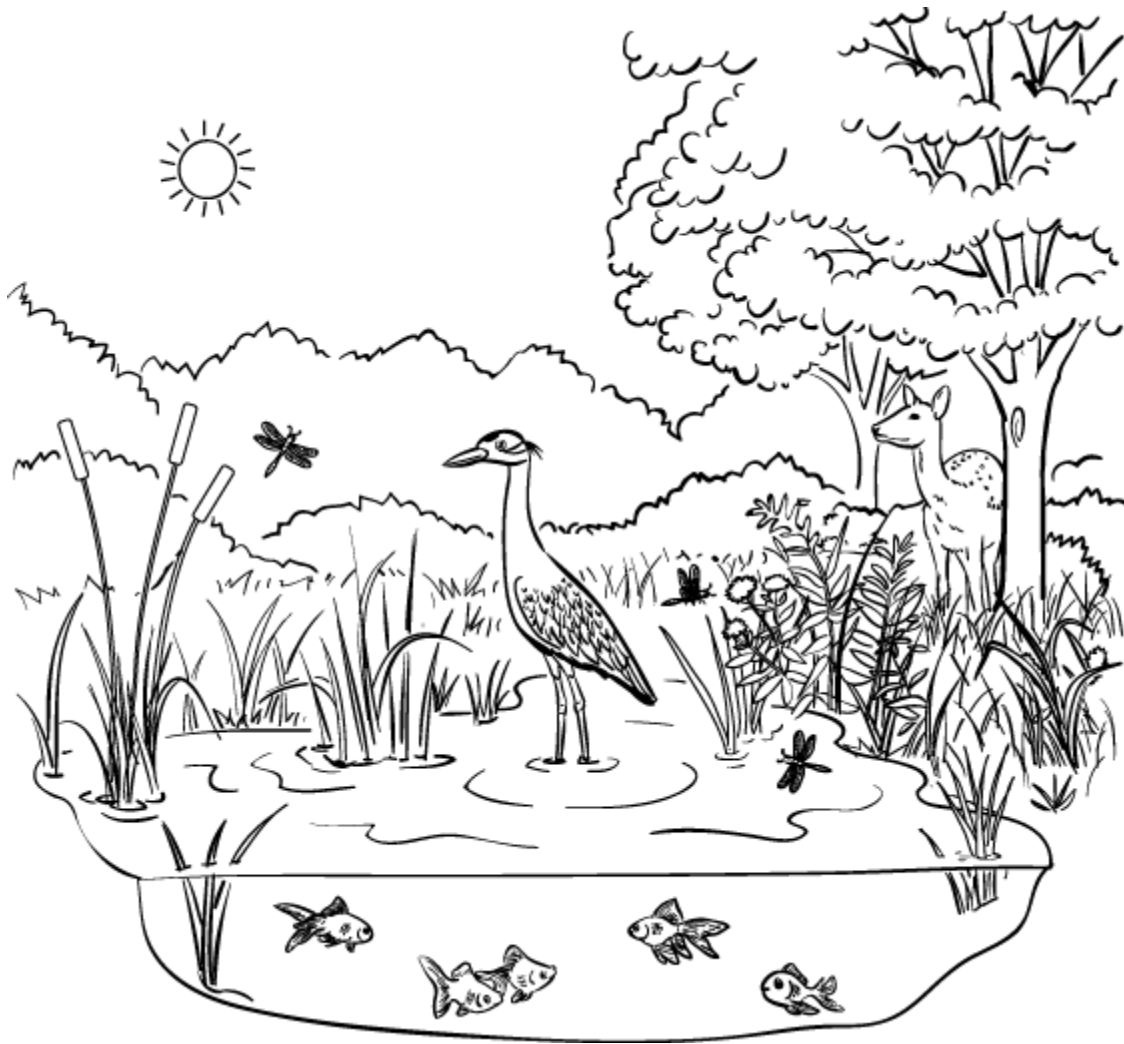
D Human



3 Which of these body parts would you expect to find in an herbivore?

- A Sharp claws or talons
- B Fins and gills
- C Thick, scaly skin
- D Teeth with flat edges

Use the illustration below and your knowledge of science to answer Questions 4 to 6.



- 4 What if arrows were drawn in the illustration to show a food web? An arrow pointing to the pond plants would come from the \_\_\_\_\_.
- A fish
  - B trees
  - C heron
  - D Sun
- 5 Predict which of these events would most change the populations of living things shown in the drawing.
- A A new kind of fish is introduced to the pond.
  - B The deer dies.
  - C The pond dries up completely during a long drought.
  - D The fish eat half the leaves of the pond plants.
- 6 The heron's long legs allow it to wade into the pond and catch fish. The heron's niche in the pond habitat is as a \_\_\_\_\_.
- A producer
  - B primary consumer (herbivore)
  - C secondary consumer (carnivore)
  - D decomposer
- 7 In which of these ways do automobiles change the environment?
- A Adding oxygen to the air
  - B Adding carbon dioxide to the air
  - C Adding nitrogen to the air
  - D Removing nitrogen from the air

Use the illustration and your knowledge of science to answer Questions 8 and 9.



**A Terrarium**

- 8 What is the role of the plastic wrap that covers the terrarium?
- A The plastic wrap makes the terrarium larger.
  - B The plastic wrap allows air and water to move in and out of the terrarium.
  - C The plastic wrap prevents anything from entering or leaving the terrarium.
  - D The plastic wrap keeps the animals in the terrarium safe from one another.
- 9 Which of these tools would be most useful in studying the terrarium without opening it?
- A Hand lens
  - B Microscope
  - C Telescope
  - D Magnet

Use the following information, the illustration, and your knowledge of science to answer Questions 10, 11, and 12.

A student places a cup of dry soil, a bowl of water, and a dry paper towel in a plastic container. She places the container under a hot lamp. Every ten minutes, she records her observations.



<u>Time</u>	<u>Observation</u>
10 min.	A small circle of water drops has formed on the inside of the container top.
20 min.	The circle has grown larger. Larger drops have formed.
30 min.	The inside of the top is very wet. A few drops are running down the sides.

- 10** The student concludes that the bowl of water is the source of the water drops she observed. Which of these additional observations would support this conclusion?
- A** The soil became wetter.
  - B** The bowl's water level dropped.
  - C** The bowl's water level increased.
  - D** The bowl's water level did not change.
- 11** What is a valid conclusion for this experiment?
- A** Water can travel through air.
  - B** Water can travel through soil.
  - C** Earth's soil contains little water.
  - D** Water drops form only on a clear surface, such as plastic.
- 12** The experiment was designed to model the water cycle on Earth. How might the model be changed to better model Earth's water cycle?
- A** Remove the top of the plastic container.
  - B** Remove the cup of soil.
  - C** Add a toy dog, to represent Earth's animals.
  - D** Every day, turn the lamp off in the evening and turn it on in the morning.

Use the chart below and your knowledge of science to answer Questions 13 and 14.

**Populations of Rabbits and Eagles on the U.S. Grasslands (1960 – 2000)**

Year	Grasslands	Rabbits	Eagles
1960	26,418 km <sup>2</sup>	101,000	1,050
1970	23,569 km <sup>2</sup>	89,000	864
1980	21,238 km <sup>2</sup>	78,000	782
1990	13,727 km <sup>2</sup>	42,000	386
2000	13,313 km <sup>2</sup>	41,900	378

- 13** What information about rabbits and eagles on the U.S. grasslands can be inferred from the chart?
- A** The populations of rabbits and eagles always decrease from one year to the next.
  - B** Eagles live much longer than rabbits.
  - C** Rabbits and eagles live only on the grasslands.
  - D** From 1960 to 2000, the eagle population was about 1% of the rabbit population.

14 Calculate the drop in the eagle population from 1960 to 2000.

- Ⓐ
- Ⓑ
- Ⓒ
- Ⓓ
- Ⓔ
- Ⓕ
- Ⓖ
- Ⓗ
- Ⓘ
- Ⓚ

**ANSWER KEY and CORRELATIONS:**

<b>Question</b>	<b>Answer</b>	<b>TAKS</b>	<b>McGraw-Hill Science Grade 5 textbook</b>
1	C	5.5A	p. 518
2	B	5.9C	p. 502
3	D	5.9B	p. 500
4	D	2.9B	p. 500
5	C	3.8C	pp. 500, 501
6	C	5.9B	p. 500
7	B	5.5B	pp. 516, 517
8	C	5.2A	p. 483
9	A	5.4A	p. R6
10	B	5.2C	p. 511
11	A	5.2D	p. 511
12	D	5.3C	p. 511
13	D	5.3C	p. 524
14	672	5.2E	p. 524