
Posttest

Grade 4 • Science



Student Test Booklet

FOCUScurriculum

Publishing to New York's Core Curriculum

GRADE 4

4

ELEMENTARY-LEVEL SCIENCE POSTTEST

WRITTEN POSTTEST

Student Name _____

School Name _____

Print your name and the name of your school on the lines above.
The test has two parts. Parts I and II are in this test booklet.

Part I contains 20 multiple-choice questions. Record your answers to these questions on the separate answer sheet. Use only a No. 2 pencil on your answer sheet.

Part II consists of 5 open-ended questions. Write your answers to Part II in this test booklet.

You will have as much time as you need to answer the questions.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

Published by FOCUScurriculum

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Order Number: NYSC-Post4

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DIRECTIONS

There are 20 questions on Part I of this test. Each question is followed by three or four answer choices, labeled A-D. Read each question carefully. Decide which choice is the best answer. On the separate answer sheet, mark your answer in the row of circles for each question by filling in the circle that has the same letter as the answer you have chosen. Use a No. 2 pencil to mark the answer sheet.

Read Sample Question S-1 below.

S-1 Frozen water is called

- A fog
- B ice
- C steam
- D vapor

The correct answer is **ice**, which is next to letter **B**. On your answer sheet, look at the box showing the row of answer circles for Sample Question **S-1**. See how the circle for letter **B** has been filled in.

Answer all 20 questions of Part I of this test. Fill in only one circle for each question. Be sure to erase completely any answer you want to change. You may not know the answers to some of the questions, but do the best you can on each one.

When you have finished Part I, go on to Part II. Answer all of the questions in Part II in the space for each question.

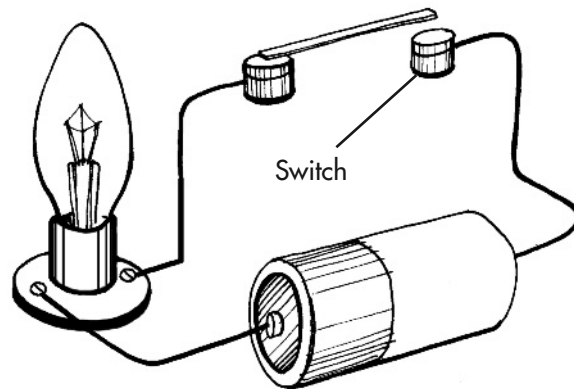
Part 1

- 1 Which characteristic helps a dog locate its food?
 - A thick fur
 - B long tail
 - C sharp teeth
 - D strong sense of smell
- 2 All animals depend on
 - A plants
 - B soil
 - C predators
 - D prey
- 3 When a flashlight is turned on, energy changes from
 - A chemical to heat
 - B electric to light
 - C mechanical to sound
 - D sound to electric
- 4 Sand dunes are created when the wind moves bits of sand to a new place. This process is called
 - A erosion
 - B evaporation
 - C deposition
 - D friction
- 5 Which statement is an example of a human-caused change to the natural environment?
 - A Developers fill in wetlands to build houses.
 - B Lightning starts a forest fire.
 - C Beavers cut down trees to build dams.
 - D A hurricane washes away homes and land.

Note that question 6 has only three choices.

- 6** In which state of matter does water have a definite shape and volume?
- A solid
 - B gas
 - C liquid
- 7** Beavers and porcupines seeking the same food are
- A germinating
 - B hibernating
 - C migrating
 - D competing
- 8** The water cycle is powered by energy from
- A oceans
 - B the Sun
 - C wind
 - D clouds
- 9** Decomposers serve an important role in the food chain by
- A producing oxygen
 - B transferring energy
 - C absorbing heat from the Sun
 - D recycling nutrients
- 10** The force of magnetism between a magnet and a paperclip is strongest when they are how far apart?
- A 1 inch
 - B 2 inches
 - C 10 inches
 - D 20 inches

11 The diagram below shows an electrical circuit.

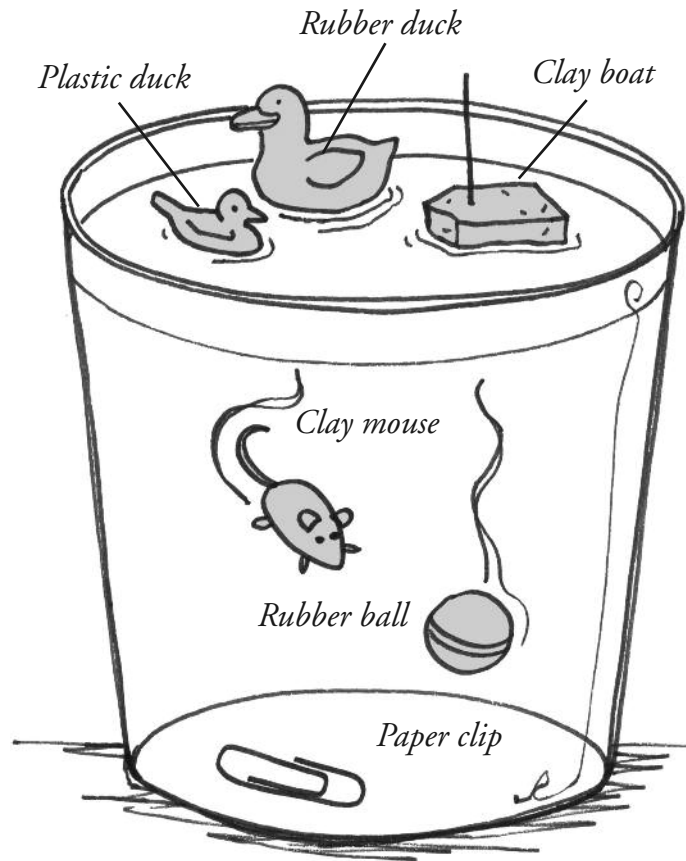


The open switch

- A recharges the battery
 - B turns the light bulb on
 - C conducts electricity
 - D stops the flow of electricity
- 12 A forest fire has a positive impact on plants by
- A releasing gases
 - B killing off predators
 - C making room for new growth
 - D adding nutrients to the air

- 13** A student fills a jar with water and leaves it outside overnight. The next morning, the water has turned to ice. What caused this change in state?
- A decreased volume
 - B decreased temperature
 - C increased conductivity
 - D increased flexibility
- 14** Rubber is used to cover a copper wire because it
- A stops the flow of electricity
 - B conducts electricity
 - C stores electricity
 - D measures the flow of electricity
- 15** Which of the following is a resource that humans have constructed?
- A water
 - B air
 - C roads
 - D plants

The diagram below shows a bucket filled with water.



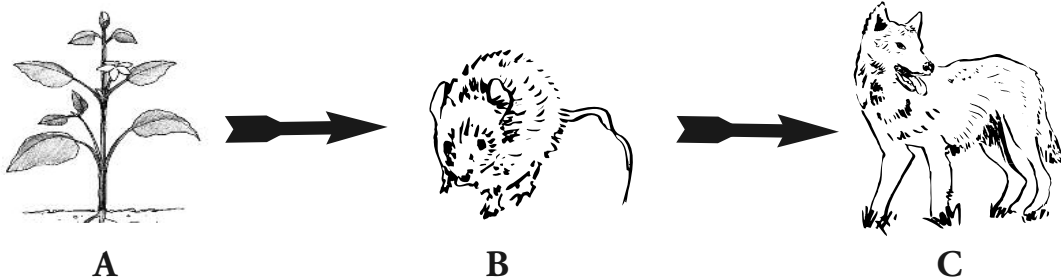
- 16 A student places objects in a bucket of water. The rubber duck and rubber ball have the same mass. Which property causes them to behave differently?
- A weight
 - B texture
 - C size
 - D shape
- 17 If half the water is poured out of a bucket, which property changes?
- A color
 - B odor
 - C volume
 - D texture

- 18** Water that has changed from gas to liquid is called
- A precipitation
 - B condensation
 - C evaporation
 - D groundwater
- 19** Sunlight, air, and water are necessary for plants to
- A reproduce
 - B make food
 - C germinate
 - D attract animals
- 20** Moving to a new location is an example of animal behavior that occurs when
- A there is a lack of food available
 - B the habitat is protected
 - C the number of predators decreases
 - D the ecosystem is balanced

Part II

Directions (21-25): Record your answers in the space provided below each question.

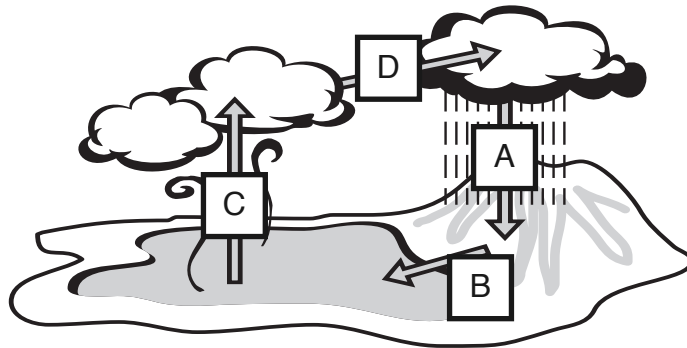
21 The diagram below shows a food chain.



Identify the role of the organisms labeled A and C. [1]

A: _____ C: _____

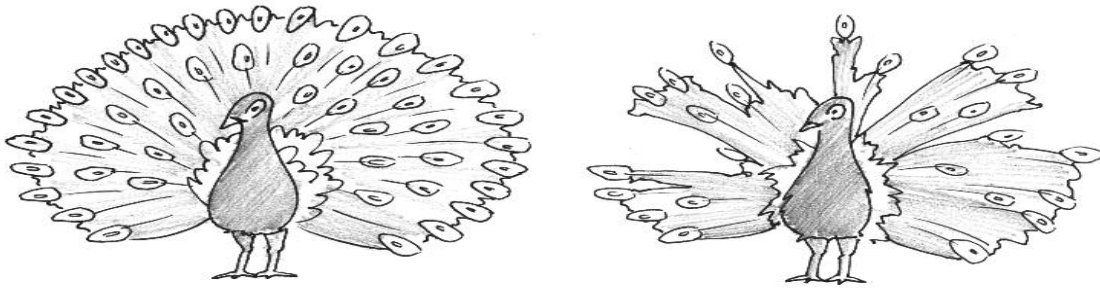
22 The diagram below shows the water cycle. Four stages of the water cycle are labeled A, B, C, and D.



In the chart below, write the letter that matches the stage shown in the diagram. [2]

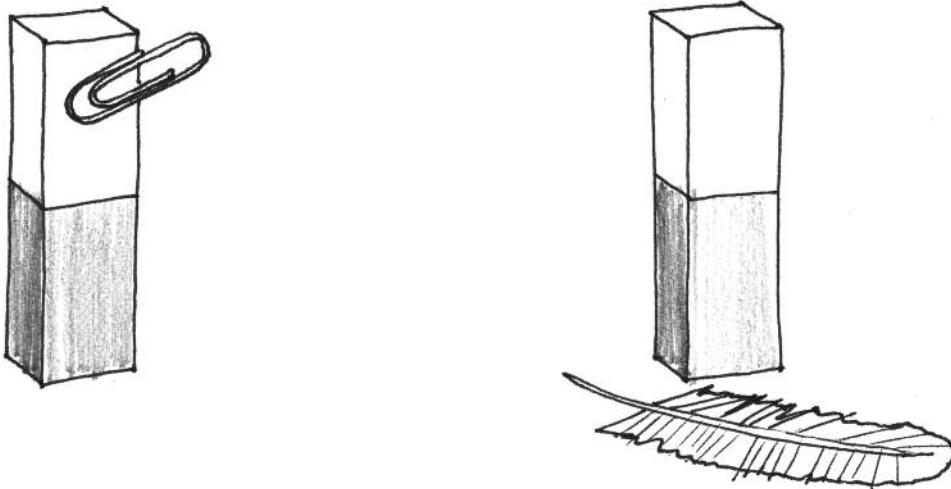
Process	Letter
Precipitation	
Evaporation	
Runoff	
Condensation	

23 The diagram below shows two peacocks.



Identify which peacock would have an advantage in reproducing and explain why. [1]

24 The diagrams below show the same magnet with two different objects.



Explain why the same magnet does not have the same effect on a paper clip and on a feather. [1]

25 Complete the chart below by identifying a unit that can be used to measure each property. The unit in the first row is shown. [2]

Property	Unit
volume of a liquid	liter
mass	
length	
temperature	

Answer Sheet

S-1 (A) ● (C) (D)

1. (A) (B) (C) (D)

2. (A) (B) (C) (D)

3. (A) (B) (C) (D)

4. (A) (B) (C) (D)

5. (A) (B) (C) (D)

6. (A) (B) (C) (D)

7. (A) (B) (C) (D)

8. (A) (B) (C) (D)

9. (A) (B) (C) (D)

10. (A) (B) (C) (D)

11. (A) (B) (C) (D)

12. (A) (B) (C) (D)

13. (A) (B) (C) (D)

14. (A) (B) (C) (D)

15. (A) (B) (C) (D)

16. (A) (B) (C) (D)

17. (A) (B) (C) (D)

18. (A) (B) (C) (D)

19. (A) (B) (C) (D)

20. (A) (B) (C) (D)

**Grade 4 Elementary-Level Science Posttest
Core Curriculum Correlation and Answers**

Item	Standard	Answer
1	4/LE5.2c	D
2	4/LE6.1b	A
3	4/PS4.1a, PS4.1d	B
4	4/PS2.1d	C
5	4/LE7.1b, LE7.1c	A
6	4/PS3.2a	A
7	4/LE6.1e	D
8	4/LE6.2c	B
9	4/LE6.1d	D
10	4/PS5.2a, PS5.2b	A
11	4/PS4.1e	D
12	4/PS2.1e	C
13	4/PS3.2b, PS3.2c	B
14	4/PS4.1c	A
15	4/LE7.1a	C
16	4/PS3.1a, PS3.1e	D
17	4/PS3.1b, PS3.1c	C
18	4/PS2.1c	B
19	4/LE6.2a	B
20	4/LE5.2g, LE6.1f	A
21	4/LE6.2b	A: producer; C: predator
22	4/PS2.1c	A; C; B; D
23	4/LE3.2a, LE3.2b	The full-plumed peacock will attract more mates.
24	4/PS5.1e	Magnets only attract metals
25	4/PS3.1d	Gram; meter; degree Celsius