
Pretest

Grade 4 • Science



Student Test Booklet

FOCUScurriculum

Publishing to New York's Core Curriculum

GRADE 4

4

ELEMENTARY-LEVEL SCIENCE PRETEST

WRITTEN PRETEST

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.

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33 Milford Drive, Suite 1

Hudson, OH 44236

(330) 656-9008

www.focuscurriculum.com

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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

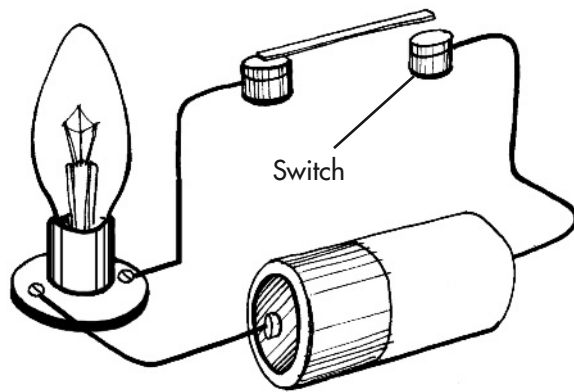
Part 1

- 1 Which characteristic helps a hawk find food?
 - A strong claws
 - B sharp eyesight
 - C long wingspan
 - D thick feathers
- 2 An animal that eats other animals is
 - A an herbivore
 - B a predator
 - C a decomposer
 - D a producer
- 3 When a hairdryer is turned on, energy changes from
 - A mechanical to sound
 - B sound to electric
 - C chemical to heat
 - D electric to heat
- 4 Rain beating down on a cliff over thousands of years can wear down the rock. This process is called
 - A erosion
 - B deposition
 - C evaporation
 - D condensation
- 5 Which statement is an example of humans changing the natural environment?
 - A Earthworms dig tunnels in the soil.
 - B A tornado destroys homes.
 - C Winds move seeds to new places.
 - D Factories release gases into the air.

Note that question 6 has only three choices.

- 6** Water has neither definite shape nor definite form in which state of matter?
- A gas
 - B solid
 - C liquid
- 7** Foxes and owls preying on the same food are in
- A evaporation
 - B competition
 - C reproduction
 - D hibernation
- 8** The energy that powers the water cycle comes from
- A animals
 - B wind
 - C the Sun
 - D plants
- 9** What is the function of decomposers in a food chain?
- A to feed predators
 - B to capture energy from the Sun
 - C to recycle nutrients
 - D to produce oxygen
- 10** The force of magnetism is strongest between two magnetic objects when the distance between them is
- A 1 inch
 - B 5 inches
 - C 10 inches
 - D 15 inches

11 The diagram below shows an electrical circuit.

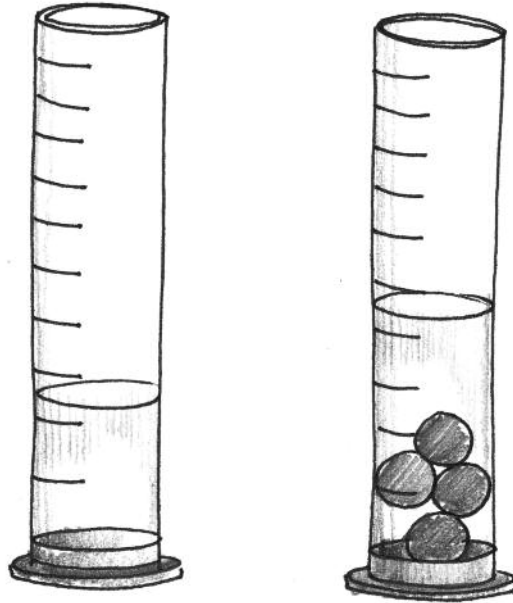


What must occur for the light bulb to light up?

- A The switch must be closed.
 - B There must be a second battery.
 - C The switch must be replaced with a wire.
 - D There must be a second circuit.
- 12 Which statement describes one negative impact of a volcano?
- A Winds knock down trees.
 - B Water floods the land.
 - C Lava buries plants.
 - D Nutrients are added to the soil.

- 13** A student adds an ice cube to a glass of warm water. A few minutes later, the ice cube has melted. A change in which factor caused the ice to melt?
- A temperature
 - B flexibility
 - C volume
 - D shape
- 14** Which material is the best conductor of electricity?
- A plastic
 - B copper
 - C rubber
 - D wood
- 15** Which of the following is a natural resource that humans depend on?
- A water
 - B houses
 - C roads
 - D hospitals

16 The diagrams below show a graduated cylinder filled with water.



A student adds several marbles to the cylinder. Each time she adds a marble, the water level rises. Which property causes the rise in water level?

- A size
- B color
- C shape
- D volume

17 Water is poured from a cup to a bowl. Which property of the water changes?

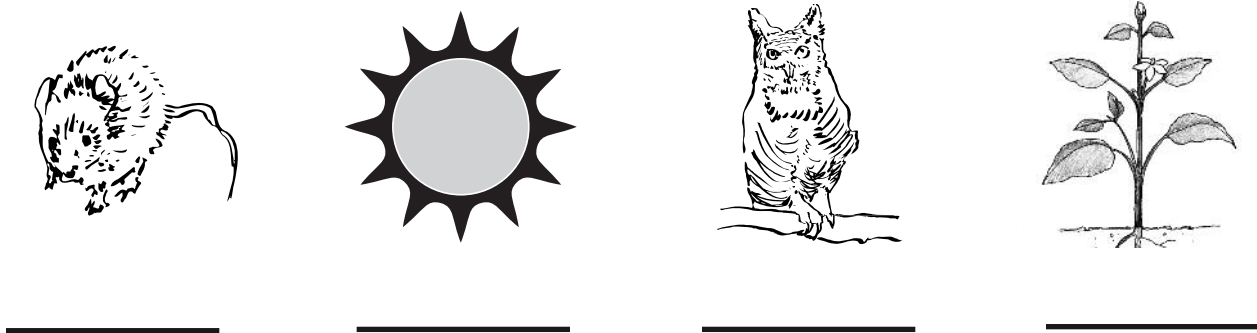
- A color
- B taste
- C odor
- D shape

- 18** Water that flows on Earth's surface is called
- A precipitation
 - B evaporation
 - C runoff
 - D groundwater
- 19** To produce food, plants need
- A water, air, and sunlight
 - B soil, shelter, and water
 - C shelter, air, and sunlight
 - D soil, water, and air
- 20** If a forest fire destroys plants, the animals that ate them will most likely
- A eat different food
 - B move to a new location
 - C become predators
 - D wait until the plants grow back

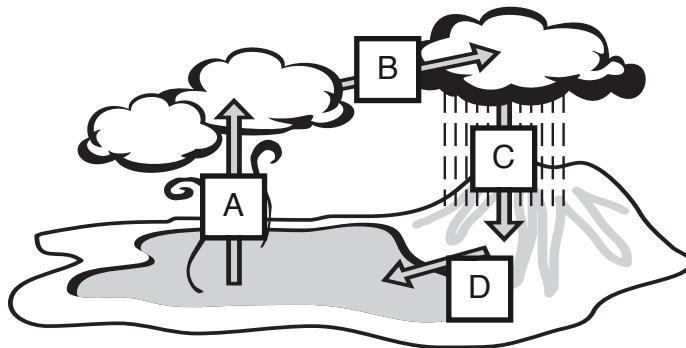
Part II

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

- 21** The diagram below shows a food chain. Write a number under each picture to show how energy flows through the food chain. [1]



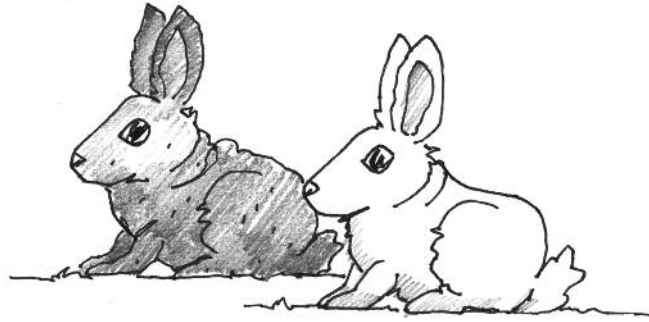
- 22** The diagram below shows the water cycle. Four stages of the water cycle are labeled A, B, C, and D.



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

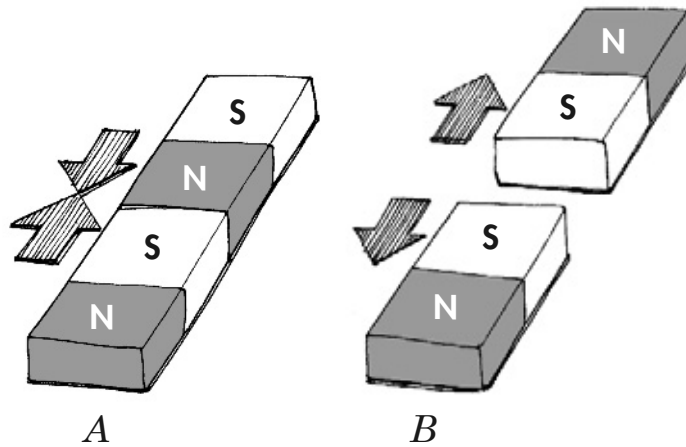
Process	Letter
Evaporation	
Precipitation	
Runoff	
Condensation	

- 23 The diagrams below show two rabbits that live in the same cold, snowy habitat.



Explain why the rabbit on the right has an advantage in surviving. [1]

- 24 The diagrams below show the same magnets in different positions.



Explain why the magnets attract each other in diagram A, while the same magnets repel each other in diagram B. [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
mass	gram
volume of a liquid	
temperature	
length	

Answer Sheet

S-1 A B 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 Pretest
Core Curriculum Correlation and Answers**

Item	Standard	Answer
1	4/LE5.2c	B
2	4/LE6.1b	B
3	4/PS4.1a, PS4.1d	D
4	4/PS2.1d	A
5	4/LE7.1b, LE7.1c	D
6	4/PS3.2a	A
7	4/LE6.1e	B
8	4/LE6.2c	C
9	4/LE6.1d	C
10	4/PS5.2a, PS5.2b	A
11	4/PS4.1e	A
12	4/PS2.1e	C
13	4/PS3.2b, PS3.2c	A
14	4/PS4.1c	B
15	4/LE7.1a	A
16	4/PS3.1a, PS3.1e	D
17	4/PS3.1b, PS3.1c	D
18	4/PS2.1c	C
19	4/LE6.2a	A
20	4/LE5.2g, LE6.1f	B
21	4/LE6.2b	3; 1; 4; 2
22	4/PS2.1c	A; C; D; B
23	4/LE3.2a, LE3.2b	The white rabbit can better hide from predators.
24	4/PS5.1e	Like poles repel; opposite poles attract.
25	4/PS3.1d	liter; degree Celsius; meter