



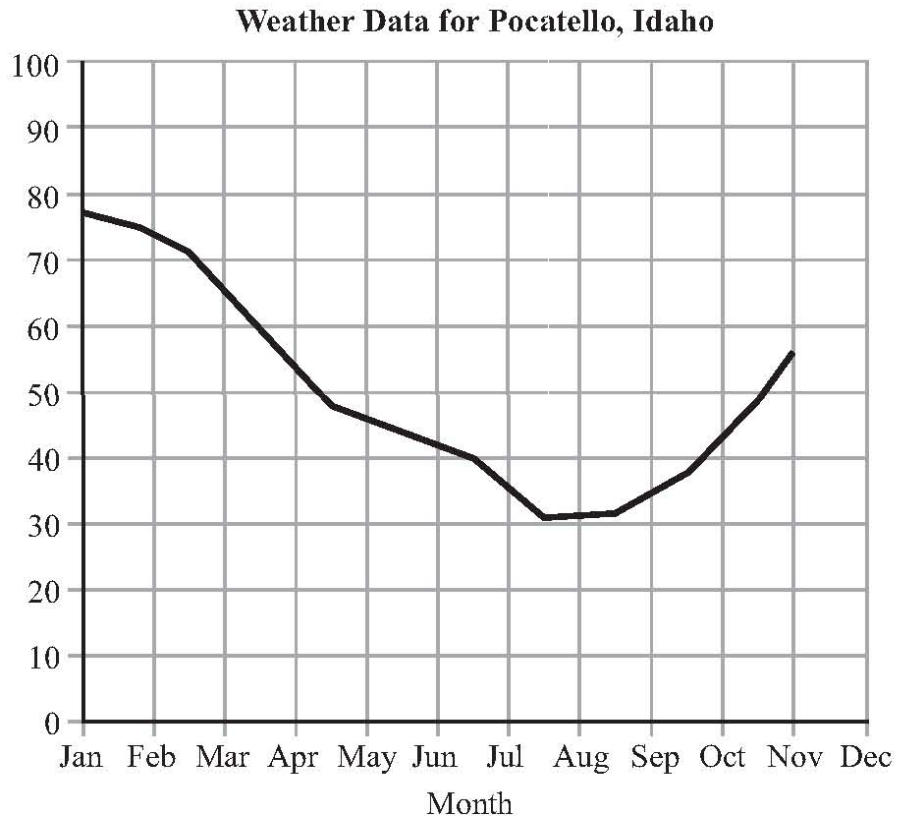
STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

ISAT Sample Questions: Grade 5 Science

1. Use the graph below to answer the question.



The graph shows the relative humidity for Pocatello, Idaho for one year. Which value **best** predicts the relative humidity for December?

- A. 47%
- B. 57%
- C. 67%
- D. 77%



STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

2. Use the table below to answer the question.

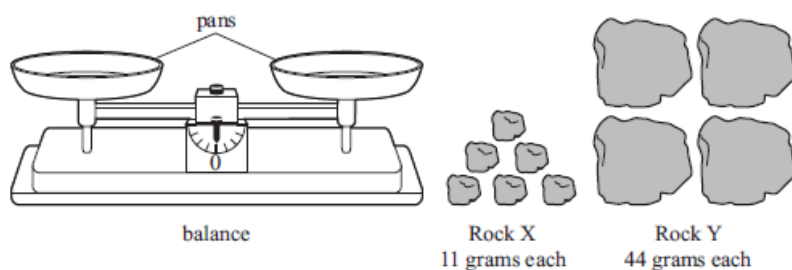
Students' Observations and Inferences

Student	Observation	Inference
1	Maple tree leaves and aspen tree leaves look different when they move in the wind.	The shape of a leaf and its stem affects how it moves in the wind.
2	The shape of a leaf and its stem affects how it moves in the wind.	The movement of tree leaves is caused by the tree rather than by the wind.
3	Trees that are taller have leaves that move more in the wind.	Maple tree leaves and aspen tree leaves look different when they move in the wind.
4	The movement of tree leaves is caused by the tree rather than by the wind.	Trees that are taller have leaves that move more in the wind.

Four students made an observation and an inference about maple trees and aspen trees. Which student correctly made an inference based on an observation?

- A. Student 1
- B. Student 2
- C. Student 3
- D. Student 4

3. Use the drawings below to answer the question.



The mass of each Rock X is 11 grams, and the mass of each Rock Y is 44 grams. A student is asked to make the pans balance by placing one type of rock in each pan. Which groups of the two sizes of rocks will make the pans balance?



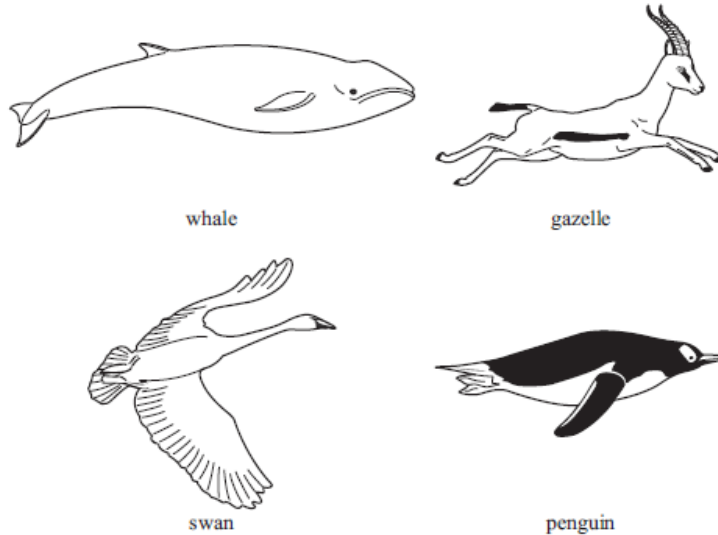
STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

- A. One of Rock X and two of Rock Y
- B. One of Rock X and four of Rock Y
- C. Four of Rock X and one of Rock Y
- D. Four of Rock X and two of Rock Y

4. Use the drawings below to answer the question.



Which statement **best** explains a form and function relationship between two animals?

- A. The penguin and the gazelle both have fur to keep them warm.
- B. The swan and the whale both have the same body parts used to swim.
- C. The whale and the penguin both have shapes to move quickly under water.
- D. The gazelle and the swan both have long necks needed for survival in a rainforest.

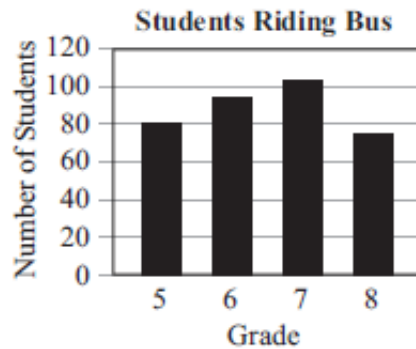


STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

5. Use the graph below to answer the question.



The graph shows the number of students that ride a bus to school each day. Which set of information was **most likely** used to create the graph?

A. **Students Riding Bus**

Grade	Number of Students
5	80
6	100
7	110
8	80

B. **Students Riding Bus**

Grade	Number of Buses
80	5
95	6
102	7
75	8

C. **Students Riding Bus**

Grade	Number of Buses
5	80
6	90
7	100
8	80

D. **Students Riding Bus**

Grade	Number of Students
5	80
6	95
7	102
8	75



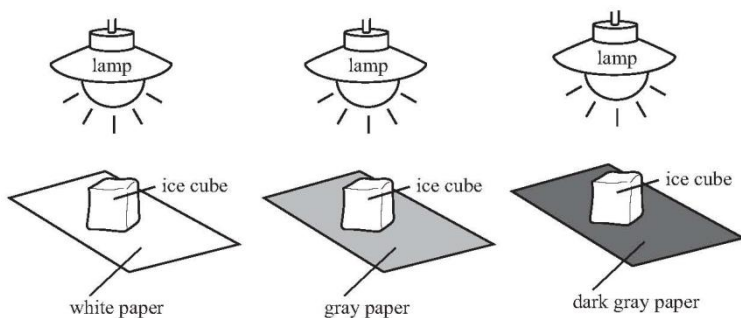
STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

6. Use the investigation setup and the chart below to answer the question.

Investigation Setup



Student Ice Cube Data

Color of Paper	Ice Cube Starting Mass (g)	Distance from Lamp (cm)	Time to Melt (sec)
white	5	25	?
gray	5	25	?
dark gray	5	25	?

During an investigation a student used the setup shown. Which hypothesis was the student **most likely** testing?

- A. An ice cube will melt faster on the darkest color of paper.
 - B. An ice cube will melt slowest when it is closest to the lamp.
 - C. Ice cubes with the same mass will melt in the same amount of time.
 - D. Ice cubes that have a different shape will melt in a different amount of time.
7. Which statement **best** describes a difference between a compound and a mixture?
- A. A mixture can be separated by filtering, but a compound cannot.
 - B. A mixture is represented by chemical symbols, but a compound is not.
 - C. A compound is made of elements, but a mixture is only made of compounds.
 - D. A compound can be made of a mixture, but a mixture cannot be made of a compound.



STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

8. Use the chart below to answer the question.

Heating an Ice Cube

Time (minutes)	State of Matter
0	solid
10	solid and liquid
20	liquid
30	liquid and gas
40	gas

An ice cube was placed on an electric burner. The state of matter for the water was recorded every ten minutes. At what time did the water molecules have the **most** motion?

- A. 0 minutes
- B. 20 minutes
- C. 30 minutes
- D. 40 minutes

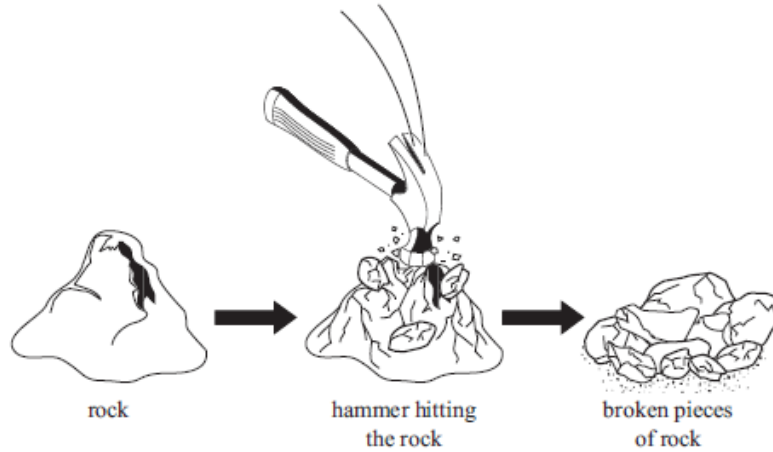


STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

9. Use the drawings below to answer the question.



Which statement **best** explains why the changes shown in the drawings are considered physical changes?

- A. The size and shape of the rock changed.
- B. The color and volume of the rock changed.
- C. The size and state of matter of the rock changed.
- D. The color and state of matter of the rock changed.



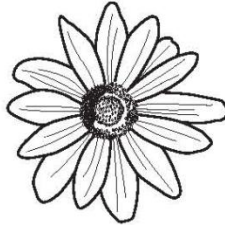
STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

10. In which plant part does **most** photosynthesis take place?

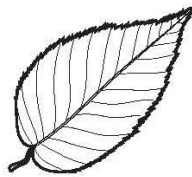
A. flower



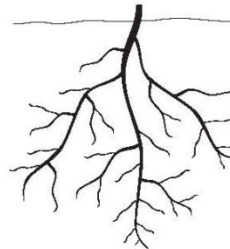
B. stem



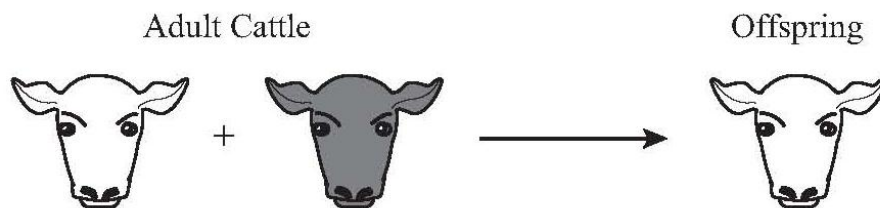
C. leaf



D. roots



11. Use the drawings below to answer the question.



Two adult cattle, one with white hair on its face and the other with brown hair on its face, produced an offspring with white hair on its face. What is the **best** explanation for the white hair trait being present in the offspring and in one of the adult cattle?

- A. The offspring inherited the trait from one of the adult cattle.
- B. The adult and the offspring both developed the trait by chance.
- C. The adult with the white hair caused the white hair trait to develop in the offspring after it was born.
- D. The offspring and one of the adult cattle live in the same environment, which made the hair on their faces white.

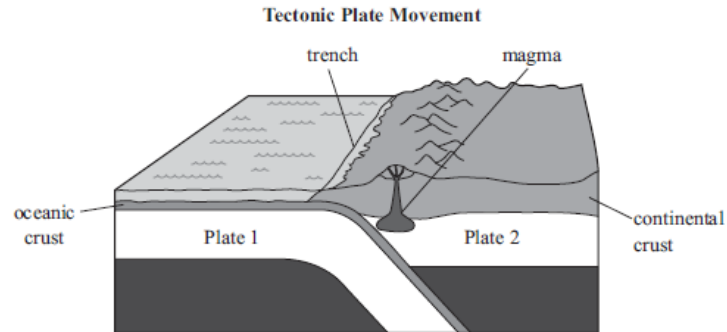


STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

12. Use the diagram below to answer



Which statement **best** describes the movement of these tectonic plates?

- A. As the tectonic plates move in opposite directions, a deep trench is formed.
- B. As the tectonic plates collide, one plate slides beneath the other plate to form a trench.
- C. As the tectonic plates pull apart, magma flows upward through weak areas in the crust.
- D. As the tectonic plates slide past each other, a deep hole allows magma to rise through the crust.

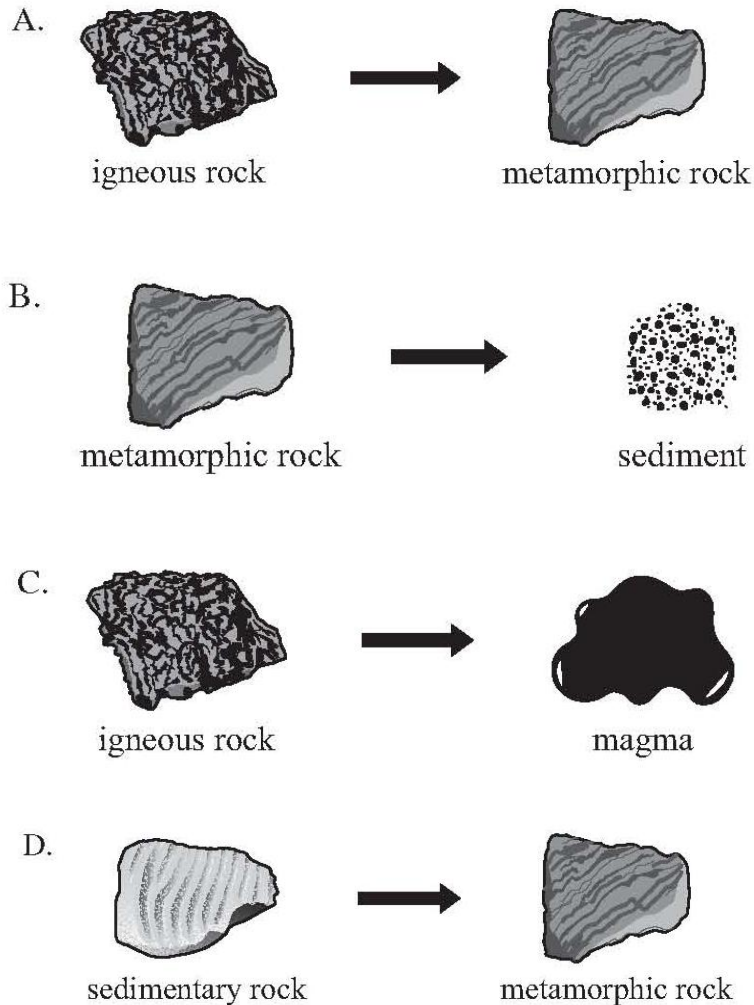


STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

13. Which diagram shows a result of weathering and erosion?



14. Which student action can help reduce the amount of land needed for disposal of garbage?

- A. walking in small groups to and from school
- B. recycling containers used for food at lunch time
- C. using paper towels instead of air dryers to dry hands after washing
- D. drinking water from small plastic bottles instead of water fountains



STATE DEPARTMENT OF EDUCATION

P.O. BOX 83720
BOISE, IDAHO 83720-0027

TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION

15. Which statement **best** describes renewable resources?

- A. They are materials that cannot be recycled.
- B. They are materials that are collected underground.
- C. They are human-made materials that take many years to replace.
- D. They are naturally-made materials that can be replaced over time.



STATE DEPARTMENT OF EDUCATION

**P.O. BOX 83720
BOISE, IDAHO 83720-0027**

**TOM LUNA
STATE SUPERINTENDENT
PUBLIC INSTRUCTION**

ISAT Sample Questions: Grade 5 Science

Question #	Correct Answer	Standard/Goal/Objective
1	C	1.2.1
2	A	1.2.2
3	C	1.3.2
4	C	1.5.1
5	D	1.6.3
6	A	1.6.5
7	A	2.1.1
8	D	2.1.2
9	A	2.1.3
10	C	3.2.1
11	A	3.3.2
12	B	4.1.1
13	B	4.2.1
14	B	5.1.1
15	D	5.3.1