

Anglophone School District North

Grade 4 Science Common Assessment

English Version



2016-2017

School: _____

Class: _____

Last Name: _____ First Name: _____

Question 1

A community in New Brunswick is thinking about allowing a shopping mall to be built on an area that is currently a local park. The mayor suggests that a scientific investigation be conducted to determine the best option for the community.

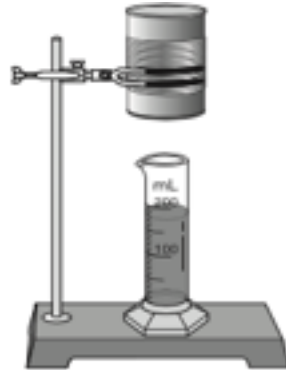


Which question would be appropriate for the community to use for their purpose?

- A. What will be the impact on Canadian Geese who live in the park?
- B. What adaptations do the animals use that live in the park?
- C. How much money can the community make if we build a shopping mall on the park?
- D. What effects will building a shopping mall have on all organisms in the park habitat?

Question 2

A student conducts an investigation using four identical cans, each with the same sized hole in the bottom of the can. The student fills each can with a different type of soil and then adds 200 ml of water to each can. The graduated cylinder in the diagram below shows the amount of water that drains through the soil and out the bottom of each can.

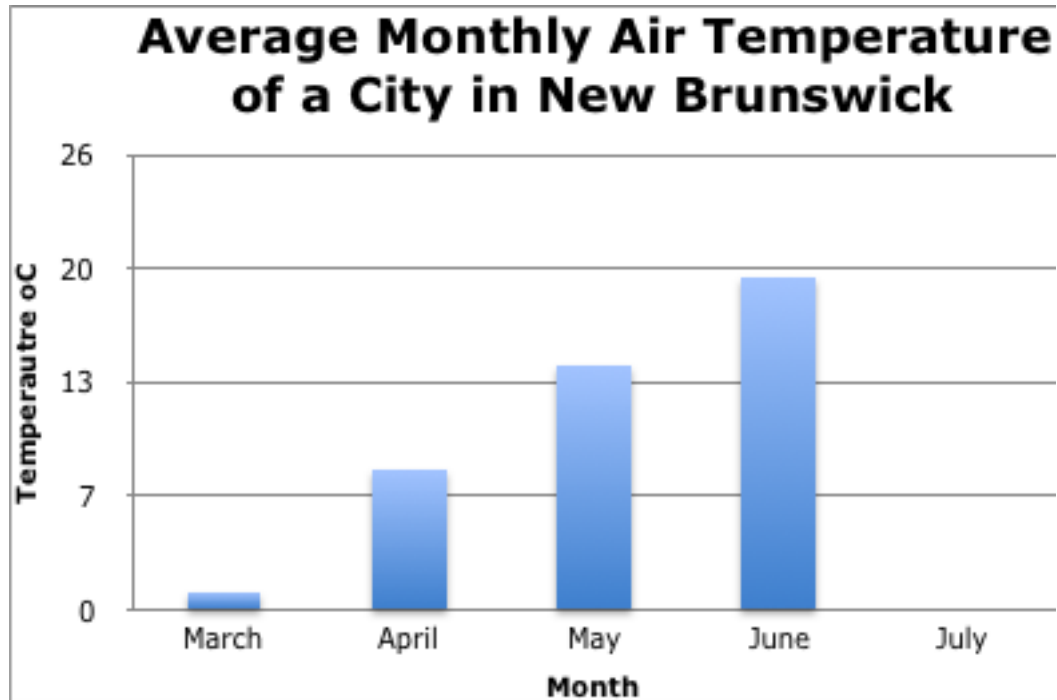


Identify the variable in this experiment that is not a controlled variable.

- A. Each can is filled with a different type of soil.
- B. Each can has 200 ml of water added to it.
- C. The student uses four identical cans.
- D. Same sized hole in the bottom of the can.

Question 3

The graph below shows some average monthly air temperatures for a city in New Brunswick.



Based on the data pattern, what would the average air temperature probably have been in July?

- A. 14°C
- B. 17°C
- C. 23°C
- D. 31°C

Question 4

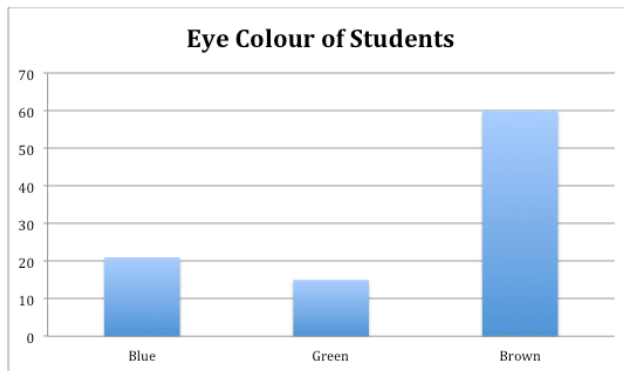
At an Elementary School students are asked to take a survey about eye colour. They are asked to identify if their eye colour is more *Blueish*, *Greenish*, or *Brownish*.

The principal compiled the results of the survey:

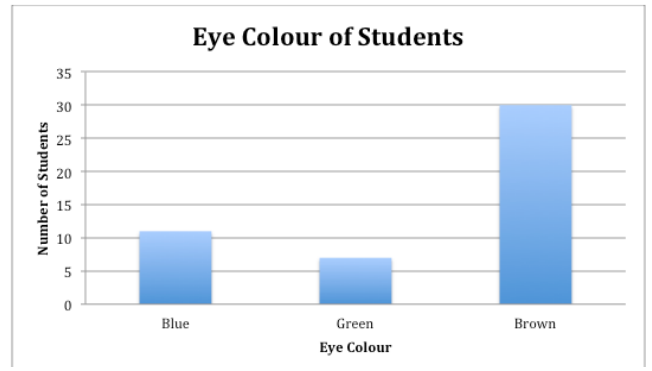
Eye Colour	Number of Students
<i>Blueish</i>	21
<i>Greenish</i>	15
<i>Brownish</i>	60

Based on the data table, which of the following graphs best represents the data?

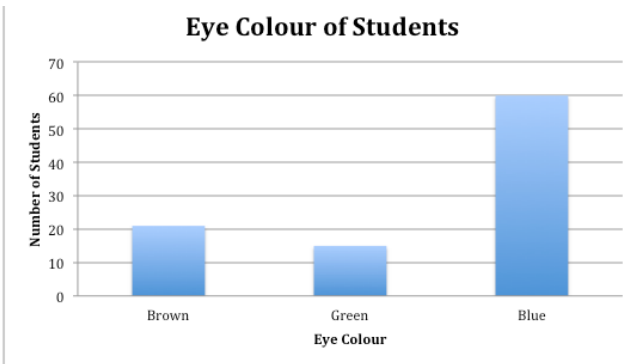
A.



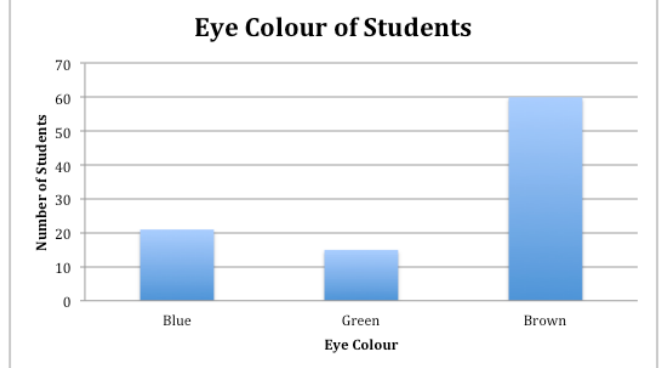
B.



C.



D.



Question 5

Students recorded the high and low air temperatures every day for five days.

Air Temperature Measurements Taken at an Elementary School		
Day	Low Temperature °C	High Temperature °C
Monday	19	27
Tuesday	20	26
Wednesday	20	27
Thursday	18	25
Friday	19	28

Based on the data, which of the following is the best conclusion?

- A. The total temperature change for the 5 days was 35°C.
- B. The total temperature change for the last 2 days was 15°C.
- C. Tuesday, was the day with the least amount of temperature change.
- D. Wednesday, was the day with the largest amount of temperature change.

Question 6

Students are doing an experiment to test the right amount of water to grow a healthy plant. They had been growing Potatoes (container A) and Yellow Beans (container B & C).



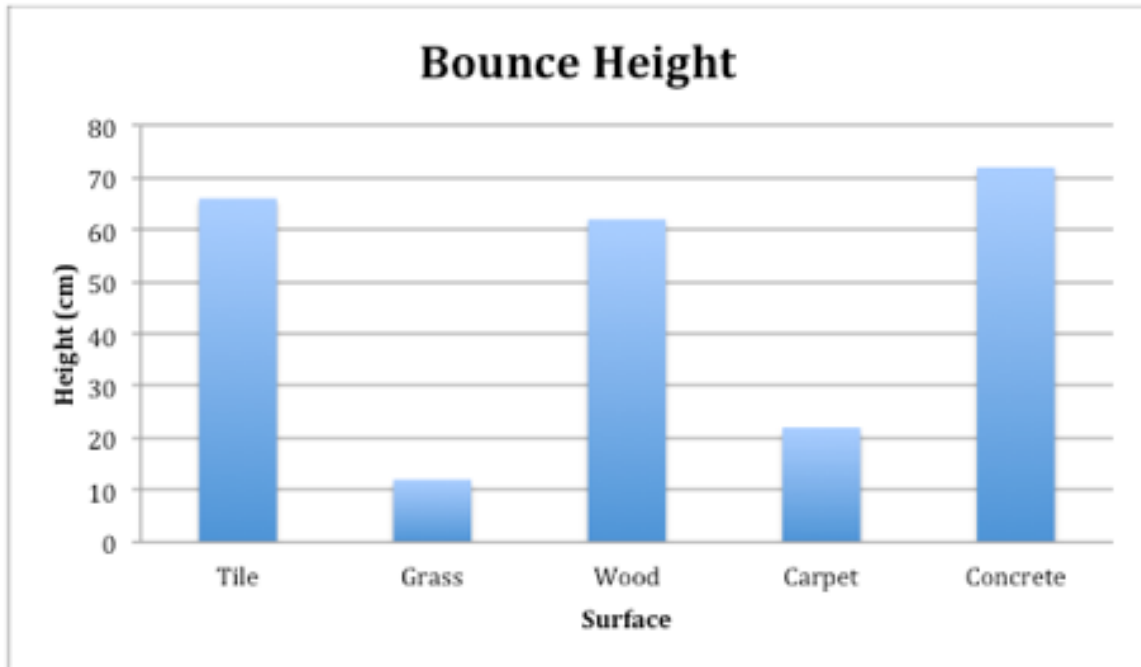
The teacher told them the experiment was not fair. The teacher said they would have to start their experiment over and to *have controls to make it fair*.

What variable needs to be controlled (kept the same) to make this experiment a fair test of the right amount of water to grow a healthy plant?

- A. The students would have to use the same amount of water in each container
- B. The students would have to use the same type of seeds in each container
- C. The students would have to use a different type of soil in each container
- D. The students would have to use a different type of seed in each container

Question 7

A rubber ball was dropped from the same height onto five different surfaces. The height of the first bounce was measured and recorded. The graph shows the data.



Based on the data, which of the following is the best conclusion?

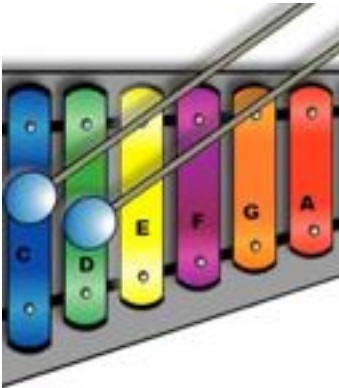
- A. Rubber balls bounce the same on all surfaces.
- B. Rubber balls bounce higher on harder surfaces.
- C. All rubber balls bounce higher indoors than they do outdoors.
- D. Large rubber balls do not bounce as high as small rubber balls.

Question 8

Students are learning about the pitch of sound in science class. Pitch determines the strength of a sound.

Judy hits notes on the xylophone in the picture. She hits the “C” note and then the “D” note. She notices that the pitch of the “D” note is higher. Next, she hits the “E” note and notices that it is even higher than the “D” note.

The teacher asks the students in the class to make a prediction about which note will have the highest pitch.



Which prediction fits this pattern?

- A. The “A” note will have the highest pitch because it will be the last note to be struck
- B. The “E” note will have the highest pitch because it’s the highest pitch struck so far
- C. The “F” note will have the highest pitch because it will be the next note to be struck
- D. The “G” note will have the highest pitch because it’s the furthest along in the alphabet

Question 9

A town in New Brunswick was doing a study on the number of mosquitos in their community. They set out mosquito traps and counted the number of mosquitos during each month. Here are the results:

Number of Mosquitos				
Location of Trap	May	June	July	August
River Bank	53	74	123	102
Pond	72	89	143	121
Grass Field	23	38	81	62
Wooded Area	42	59	101	92

Based on this data, where might you tell a tourist to go to have a picnic so they could avoid the most mosquitos?

- A. "Go to a park, so you can play with others."
- B. "Go to an area that does not have water."
- C. "Go to a place with water to enjoy the view."
- D. "Go to the area with the most trees to provide shelter"

Question 10

Students are working on absorbing and reflecting light energy. Absorbing light means to take it in, while reflecting means to push it away. Their teacher posed the following question.

Question: What effect does the colour of the lid have on the air temperature inside a glass jar when a lamp shines directly on it?

Resulting Data from the Experiment:

Lid Colour	Air Temperature (inside glass jar after 10 min)		
	Trial 1	Trial 2	Trial 3
Black	54°C	52°C	54°C
White	42°C	43°C	41°C

What variable was changed to test this question?

- A. Lid Colour
- B. Size of Jar
- C. Air temperature in the room
- D. Distance between lamp and lid