



MINISTRY OF EDUCATION,
YOUTH & INFORMATION

Primary Exit Profile

May/June 2018

PRACTICE QUESTIONS

Grade 6

Science

This paper consists of ten (10) items.

Science CBT Practice Items

Question 1

Unit: Materials – Properties and Uses

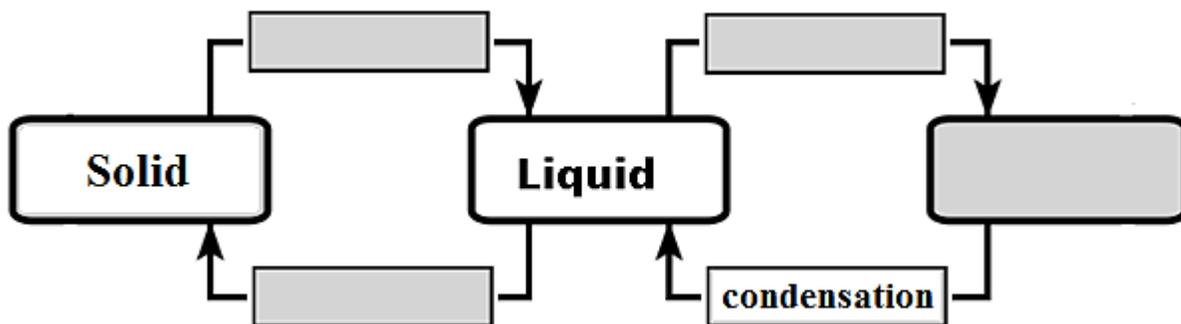
Objective(s): Infer that some materials can change from one state to another (solid, liquid and gas)

Identify the processes involved when materials change from one state to another (freezing, melting, evaporating, and condensing)

Item Type: Selected Response - Order Match

Select **four** of the words listed below to complete the diagram to make the relationships true.

Choices: freezing evaporation melting gas
 heating



(4 marks)

Question 2

Unit: The Environment

Objective(s): Observe, collect and record information regarding the interacting factors within an environment

Item Type: Selected Response - Table Grid

A student exposed each of 5 tomato seedlings to different temperatures for 5 weeks. At the end of the 5 weeks, the student recorded the height reached by each tomato plant.

The table shows the effects of different temperatures on tomato plant growth.

Tomato Plants	Temperature (°C)	Plant Height (cm)
Plant A	12	24
Plant B	19	121
Plant C	23	150
Plant D	28	124
Plant E	34	0

Indicate using a tick (✓) whether the following statements are **supported** or **not supported** by the results of the investigation.

Statements	Supported	Not Supported
Temperatures below 13°C will limit plant growth.		
Temperature does NOT affect plant growth.		
Plants will grow above 124 cm in temperatures higher than 36°C		

(3 marks)

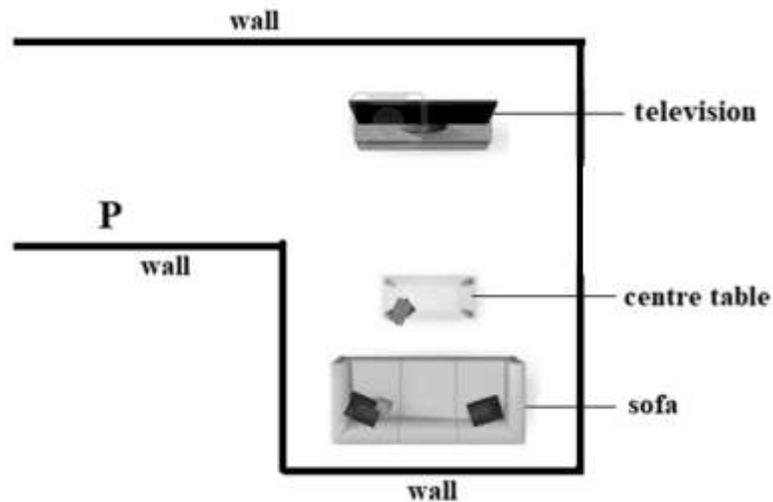
Question 3

Unit: Light and Sound

Objective(s): Investigate the properties of light

Item Type: Selected Response – Multiple Selected Response

The diagram shows an overhead view of a room. Use the information to answer the item below.



If a person was standing at position **P**, which **two** statements would **most likely** be **true** if the person was unable to see the sofa?

- A. Light only travels in a straight line.
- B. The light from the television was too bright.
- C. The sofa did not reflect light to the person's eye.
- D. There was not enough light in the room.
- E. The sofa was too far.

(2 marks)

Question 4

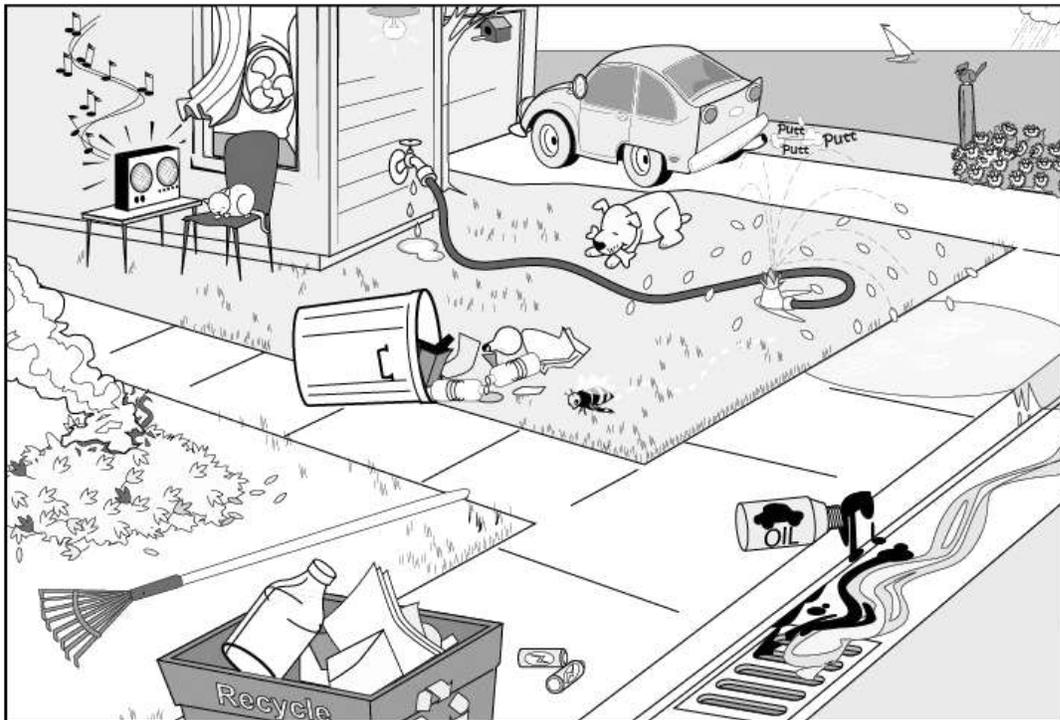
Unit: The Environment

Objective(s): Formulate a definition of environment

Outline the effects of human activities on the environment

Item Type: Constructed Response - Short Constructed Response

The picture below shows Mr. Brown's front yard.



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Use the picture of Mr. Brown's yard to help you in answering the questions which follow. Write your answers on the lines provided.

Identify **two** environmental issues, and briefly describe how each issue could affect Mr. Brown's community.

Environmental issue 1

Negative effect

Environmental issue 2

Negative effect

Provide **one** recommendation that Mr. Brown could follow to help reduce any of the environmental issues identified above.

(8 marks)

Question 5

Unit: The Environment

Objective(s): Investigate features/soils of different environments

Observe, collect and record information regarding the interacting factors within an environment

Item Type: Selected Response – Order Match

Use the passage and the results of the investigation to complete the activity.

Passage: Needs of a Cactus Plant

A cactus is a plant that can survive in dry, desert-like conditions. Most cacti store moisture in their stems and unlike many other plants they are less dependent on the soil to provide them with moisture.

Desert cactus must have a very well-drained soil for their survival.

Results of Investigation

The table shows the results of an investigation to determine how water drains through three types of soil

Soil Sample	Time taken for water to drain through soil (min.)	Volume of water added to soil (cm³)	Volume of water drained through soil (cm³)
Soil A	10	120	80
Soil B	4	120	100
Soil C	7	120	100

Order the three soil types, Soil A, Soil B, and Soil C from **most suitable** to **least suitable** for growing a cactus plant.

Most Suitable Least Suitable
(2 marks)

Question 6

Unit: Materials – Properties and Uses

Objective(s): Evaluate how the disposal of selected materials affect the environment

Item Type: Constructed Response - Short Constructed Response



In the cartoon above, “Shorty” and his taller friend “Longman” are having a discussion. The discussion is about the method of disposal chosen by Shorty and the type of materials he is throwing away.

Do you agree with Shorty’s method of garbage disposal? Yes or no

Explain why you agree **or** disagree with Shorty’s method of garbage disposal.

Later in the discussion, “Longman” suggests that plastic materials should be collected in large piles and burnt all at once. Longman believes this method saves time and is much cheaper.

Write **two** points that you would use to convince Longman that burning plastics is a bad idea.

Point 1

Point 2

(5 marks)

Question 7

Unit: Light and Sound

Objective(s): Distinguish between luminous and non-luminous objects/organisms

Item Type: Selected Response – Table Grid

The following are all statements about luminous objects. Indicate using a tick (✓) if you agree or disagree with each statement.

Statements	Agree	Disagree
Luminous objects produce their own light.		
The moon is a luminous object		
Non-luminous objects cannot be seen		

(3 marks)

Question 8

Unit: Mixtures

Objective(s): Classify mixtures as solutions, suspensions, and colloids.

Recognize that all mixtures can be separated.

Demonstrate the separation of selected types of mixtures using various techniques

Item Type: Constructed Response - Short Constructed Response

After exploring the forest for some time, a group of scientists discovered a river. Several of the scientists were thirsty and decided to drink from the river. After watching the river flow for some time, they observed that the water had sand and tiny sea shells. Additionally, small leaves and other small particles were seen floating.

The scientist guessed that the water would be safe to drink once all the materials floating were removed. The scientists decided to use the tools and other resources they had, to separate the water from the materials floating.

Below is a list of resources the scientist had:

- a piece of cloth
- knife
- a small pot and its cover
- sponge
- empty plastic soda bottle
- cotton

Using any number of the materials and tools in the list above, describe how you would separate the river water from the materials floating within it.

(4 marks)

Question 9

Unit: Light and Sound

Objective(s): Investigate some properties of sound

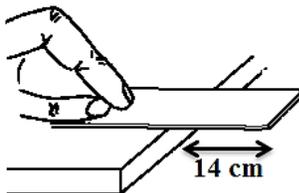
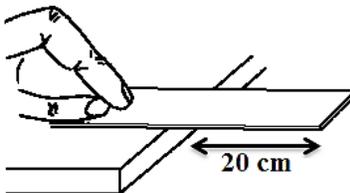
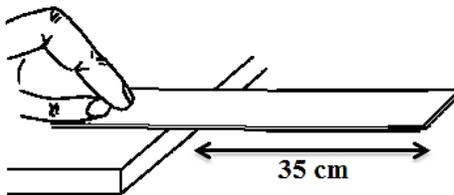
Formulate hypotheses when conducting investigations into the properties of sound

Item Type: Selected Response – Single Selected Response

The diagrams below show an investigation conducted by a student. The student fixed one end of a ruler to a table, and then plucked the other end of the ruler. The pitch of the sound made by the vibrating ruler was noted.

NOTE: Each time the ruler was plucked with the same force

This is what the student did:



From the option below select the most likely prediction for the investigation above.

- A. When an object is plucked it will make a sound.
- B. The speed of a vibrating object affects the pitch of the sound made
- C. The length of a ruler affects the pitch of the sound made.
- D. When an object is plucked it will vibrate

(1 mark)

Question 10

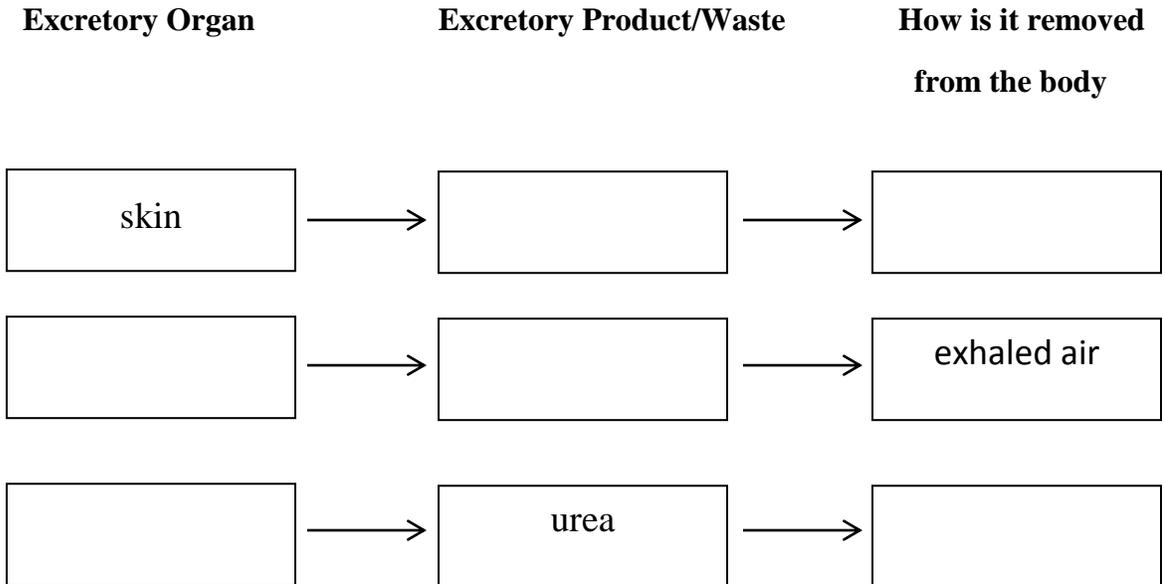
Unit: Human Body Systems

Objective(s): Identify the excretory organs of humans (kidney, lungs and skin) and state their role in excretion.

Item Type: Selected Response – Order Match

Complete the diagram below by placing **seven** of the following word/phrases in the correct boxes. **Each word/phrase must be used only once.**

Choices: sweat lungs kidney carbon dioxide urine
 excess water stomach mouth exhaled air



(6 marks)