

YEAR 8 SCIENCE
EXAMINATION - SEMESTER 2, 2015



**KINROSS
COLLEGE**

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WRITTEN QUESTION AND ANSWER BOOKLET 2

STUDENT'S NAME:
TEACHER'S NAME:
DATE:

Topic	Section	Marks
Earth Science	Multiple Choice	/15
	Short Answer	/20
Physical Science	Multiple Choice	/15
	Short Answer	/20
Investigating		/15
Total		/85

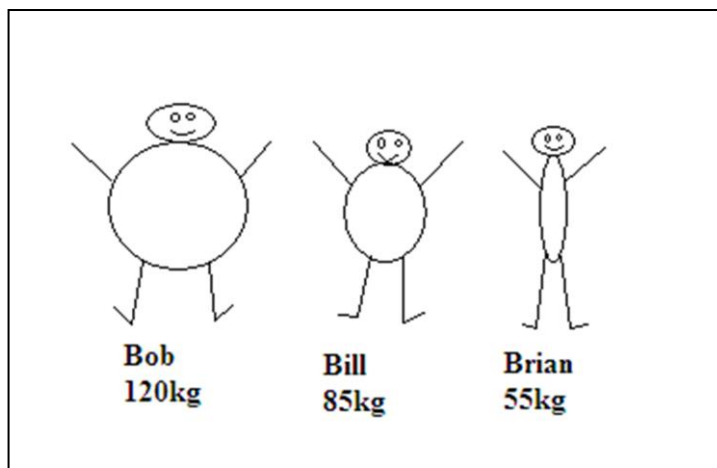
INSTRUCTION TO CANDIDATES:

1. **Read** through both papers to familiarise yourself with all the questions.
2. Use a **blue or black** ballpoint / ink pen for written answers. Use pencil for drawing graphs or labeling diagrams.
3. **Write** your answers in the booklets.
4. Should you require more space than you have been given please use **the spare sheet** (at the back of this booklet) and ensure that you include your name and the question / statement to which you are responding.

Note: Do not turn the page until you are asked to do so.

SHORT ANSWERS (40 marks):

PHYSICS (20 MARKS)



1. Bob, Bill and Brian are three friends. They all have mass. Bob has a mass of 120kg, Bill has a mass of 85kg and Brian has a mass of 55kg. There is a very weak force of attraction between them.

a. What is the name of this attractive force between them?

..... (1 mark)

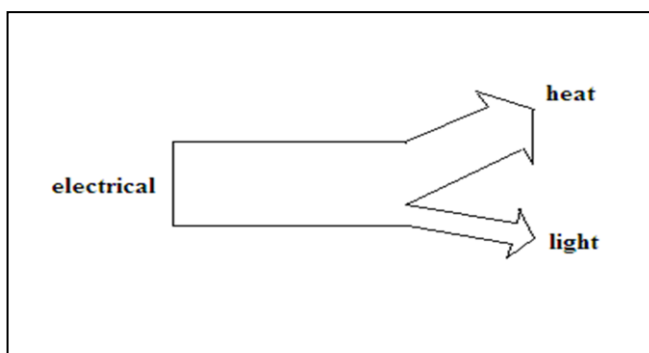
b. Which one of them has the weakest attractive force?

..... (1 mark)

c. Give a reason for your answer to part b.

..... (1 mark)

2. Below is an energy transfer arrow for a light bulb:



It shows that a light bulb converts electrical energy into a lot of heat energy and a little bit of light energy.

Create energy transfer diagrams for the following: (next page)

a) Electrical heater (2 marks)

b) Playing music on your phone (2 marks)

c) Watching a YouTube clip on a tablet (4 marks)

3. Petrol is burnt in a car engine to get the car moving; however, a lot of energy is wasted.

a) Name two forms of wasted energy produced in a car. (2 marks)

b) What happens to this wasted energy? (1 mark)

4. There are 3 main types of stored energy:

a) _____ eg. a stretched rubber band, windup toy. (1 mark)

b) _____ eg. candle (wax) is burning to give out light and heat (1 mark)

c) Gravitational Potential energy eg. _____ (1 mark)

5. Frypan handles are usually made of plastic or wood. Explain why.

(2 marks)

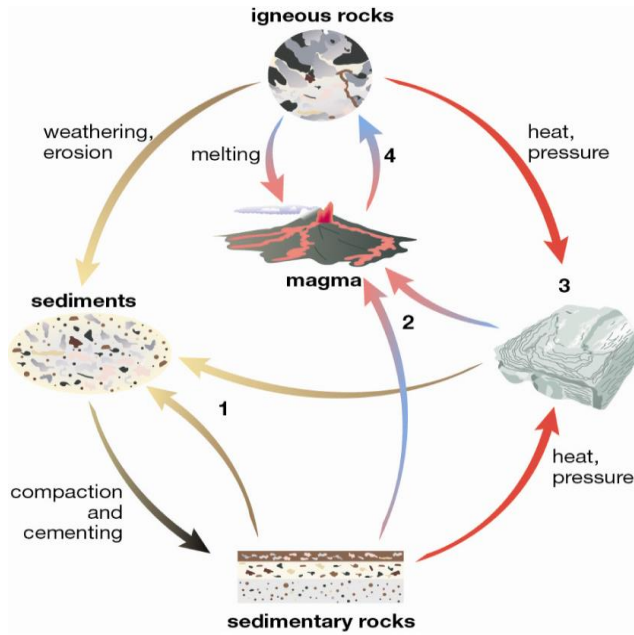
6. The sun provides us HEAT and LIGHT energy. Name the method of heat transfer from the Sun to the Earth.

(1 mark)

EARTH (20 marks)

7. Complete the missing labels on the diagram of the rock cycle below.

(4 marks)



1-

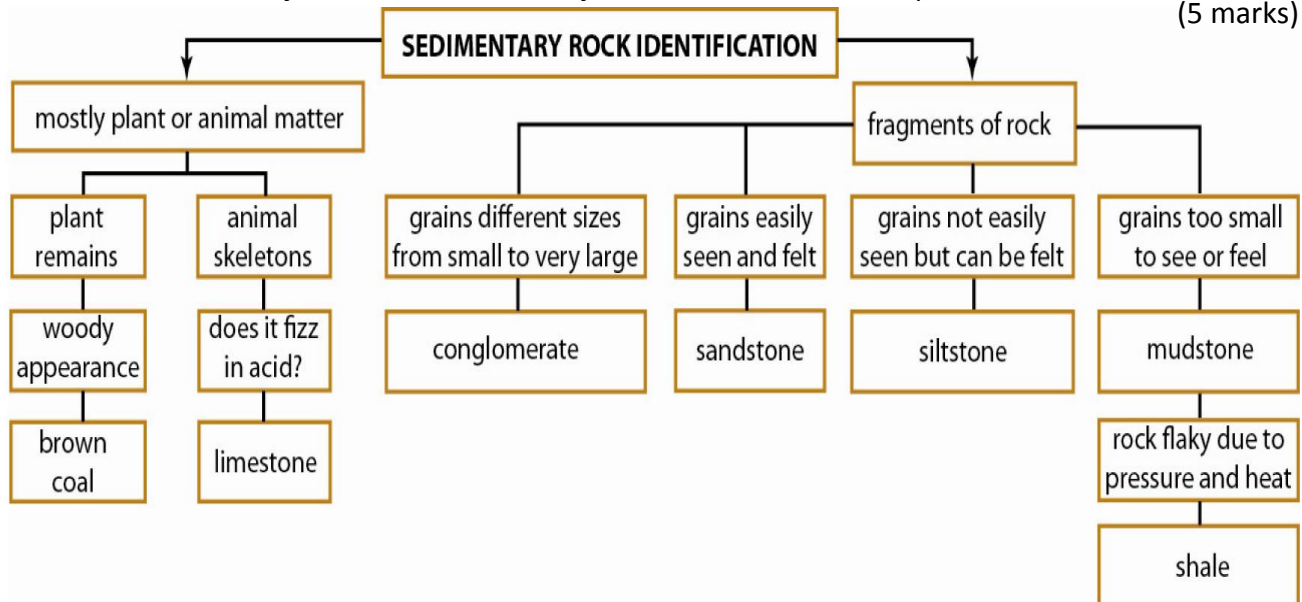
2-

3-

4-

8. Use the **sedimentary rock classification key** below to answer these questions.....

(5 marks)



a) Using the information in the key, describe siltstone

b) **State** the major difference between conglomerate and sandstone.

c) **Compare** siltstone and mudstone.

d) Gemma found a rock with grains in it that were easily visible and of roughly the same size (0.5 mm). **Identify** this rock.

e) Tyrone found a rock that he recognised as a mudstone, and it had abundant fossil shells in it. **Assess** the limitations of this key in light of Tyrone's discovery.

9.

a) Define weathering

(1 mark)

b) Describe weathering by temperature change

(1 mark)

c) Describe two ways weathering can occur by water

(2 marks)

d) Contrast erosion and weathering.

(1 mark)

10. List 3 different mining methods and briefly state what each method involves.

Method 1

(2 marks)

Method 2

(2 marks)

Method 3

(2 marks)

Investigation

A pair of students wished to test which material was the best insulator, so they conducted an experiment where they wrapped a cup of hot chocolate in the various materials and measured how far the temperature dropped after 5 minutes. The results are in the table below.

<u>Temperature drop (°C)</u>	<u>Temperature drop 1</u>	<u>Temperature drop 2</u>	<u>Temperature drop 3</u>	<u>Average Temperature drop</u>
<u>Material</u>				
Tin Foil	2	2.5	3	2.5
Paper	10	11	9	
Wool	4	1	4	

- 1) Complete the table by filling in the average temperature drops (2 marks)
- 2) Graph the results on to the graph paper provided (5 marks)



- 3) For this experiment state the:
Independent Variable (1 mark):

Dependant Variable (1 mark)

Two Control Variables (2 marks)

- 4) Which material was the best insulator?
Discuss why this material was the best, referring to the methods of heat transfer. (4 marks)

END OF BOOK TWO

END OF EXAMINATION

