



**POLYMATH**  
LEARNING CENTRE

# Primary 6 Science

## Term 2 Concepts Review

Name : \_\_\_\_\_

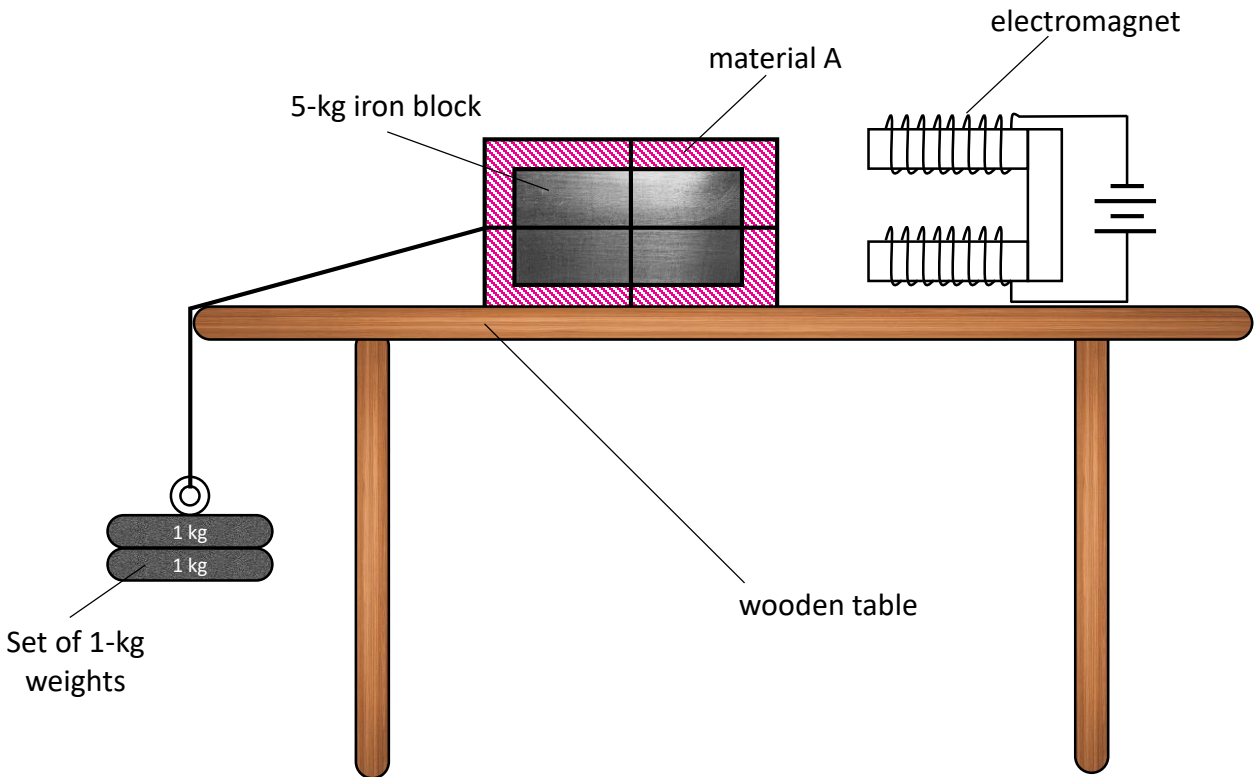
Date : \_\_\_\_\_



Term 2 Concepts Review



- 1) Larry set up the experiment shown below. He wrapped a 5-kg block of iron with material A and tied the block to a cable with a set of weights hung on it. He placed the set-up on a wooden table and placed an electromagnet next to the iron block. He hung 1-kg weights at the end of the cable until the iron block starts to move and drops to the ground. He repeated this experiment for 3 other materials – B, C and D – and recorded the results in the table below.



Material	Number of 1-kg weights hung before iron block falls
A	10
B	8
C	14
D	20

- a) Which of the 4 materials – A, B, C or D – is most suitable to be used to make the flooring of a toilet to prevent people from slipping? Explain your answer. [2]

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- b) Larry replaced the 5-kg iron block with a copper block of the same mass and repeated the experiment. He found out that each material now require fewer weights hung on it to pull the block to the ground. Explain why this is so. [2]

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- c) Without changing the wooden table and the materials, state what Larry can do if he wants to increase the number of weights he can hang on the iron block before it is pulled to the ground. Explain your answer. [2]

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- d) Other than the variables stated in the question, state two other variables that must be kept the same in order for the experiment to be fair. [2]

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2) Sally is skating on ice while Trish is rollerblading on a concrete pavement. The diagram below shows their speed at the start, midpoint and at the end of a 100 m stretch of ice or concrete. Both of them did not move their legs throughout the entire stretch of ice or concrete.

Sally

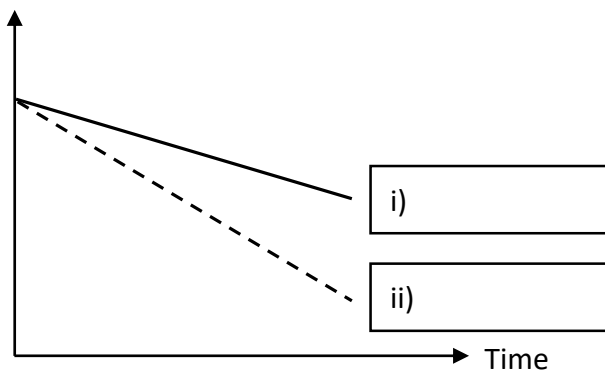


Trish



a) In the line graph below, fill in the type of energy possessed by the girls in the axis and label the respective graphs with “Trish” or “Sally”. [3]

Amount of \_\_\_\_\_ energy [1]



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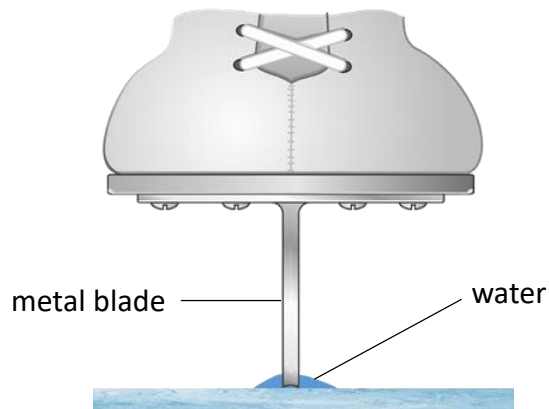
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- b) Using forces and energy terms, explain the change in speed of Sally compared to Trish.

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- c) The above diagram shows how ice skates work. When the metal blade of the skates come into contact with the ice, it melts the ice to create a layer of water surrounding the metal blade. In forces terms, explain how this allows the skater to skate on ice. [2]

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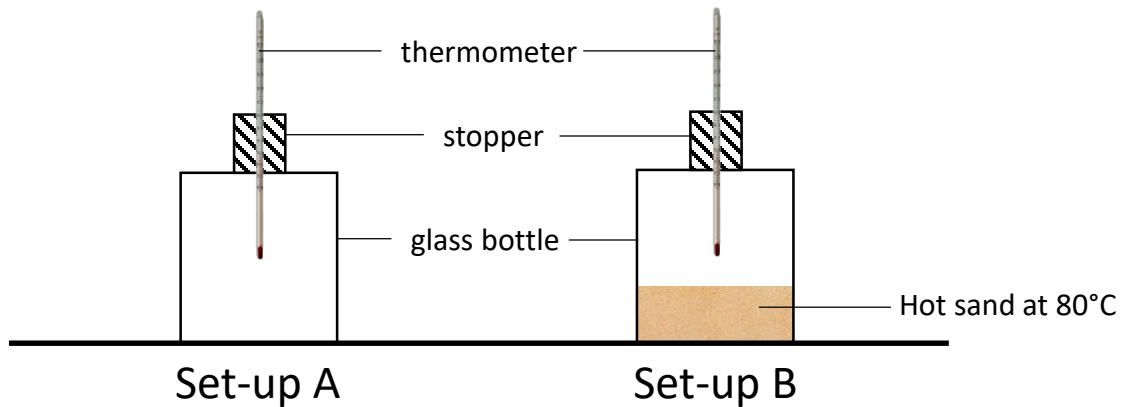
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- 3) Rick recorded the temperature of air in a glass bottle in set-up A as shown below. Then he heated some sand and poured them into the bottle. After 15 minutes, he recorded the temperature of air in the bottle as shown in set-up B.



temperature of air in the glass bottle	
Set-up A	Set-up B
30°C	40°C

What is the purpose of a set-up A?

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Question Type in Focus



**Question Type:** Control Set-up Question

Always use this format to answer control set-up questions:

It is a control setup used to compare and confirm that any changes in the **(measured variable)** is due to the **(tested variable)** only and not due to any other variables.

end of sample paper