

Answer

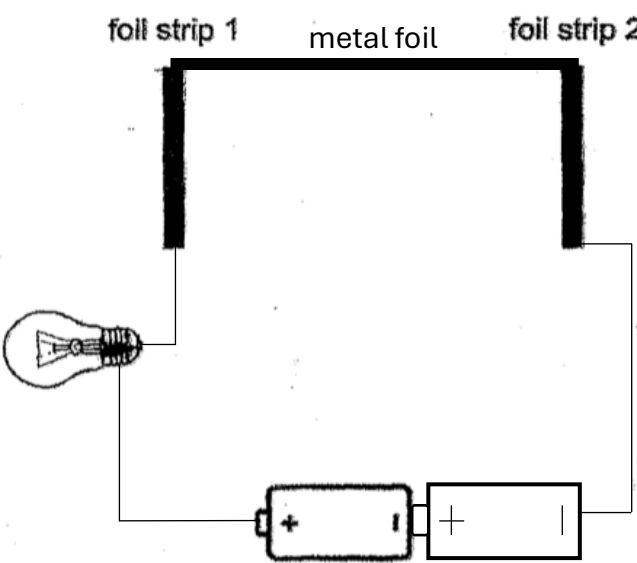
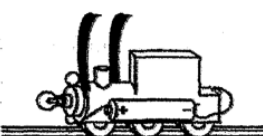


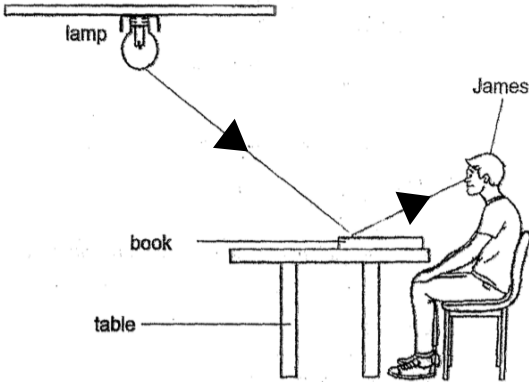
2024
Henry Park Primary School Prelim

Booklet B

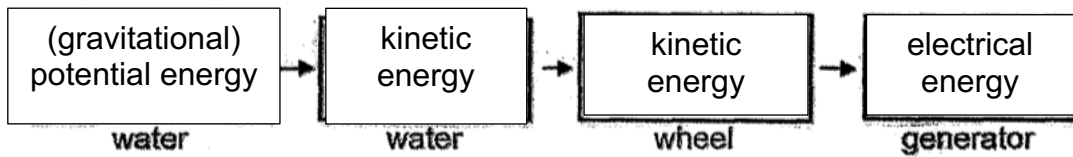
29)	a) Benefit for Bird P : By staying near animal R, <u>Bird P gets to feed on animal T for food.</u> [1m] Benefit for animal R : <u>Animal R is able to get rid of the animal T with the help of bird P, which is feeding its blood.</u> This allows R to be healthier. [1m] b) <u>With bird P, animal R is able to spot humans at greater distance and has a higher frequency of spotting humans.</u> [1m] This allows <u>animal R to escape away or hide from humans to ensure that it will not be killed.</u> [1m]
30)	a) <u>Pencil with sharper tip increased the depth of piercing into the plasticine.</u> [1m] b) The sharp tip allows the roots to make a deeper piercing into the soil, hence <u>better anchoring into the soil without being washed away by high tides.</u> [1m] Seedling can then absorb water for growth. c) The seedling and parent plant will <u>experience overcrowding and compete for water, nutrients, sunlight and space.</u> [1m]
31)	After resting, Alex's body <u>needs less energy</u> [0.5m] to carry out its life processes, hence less oxygen is needed. His <u>heart pumps blood slower, transporting less oxygen and digested food to all parts his body.</u> [1m] Also, <u>less carbon dioxide from the body is being transported by the blood to be removed</u> via respiratory system. [0.5m]

32)	a) <u>As the temperature of the seawater increases, the population of living thing B increases.</u> [1m] b) C is the predator of B. [1m] c) <u>As the temperature of seawater increases, the population of C decreases.</u> [0.5m] <u>Less C will feed on less B, causing the death rate to decrease.</u> [1m] At the same time, <u>B reproduces,</u> increasing the population of B. [0.5m]
33)	a) <u>Same type and amount of pond water.</u> [0.5m] This ensure <u>the type and amount of micro-organisms / nutrients / oxygen / carbon dioxide in the pond water is the same.</u> [1m] There is <u>only one changed variable, which is the presence of light.</u> [0.5m] b) Yes. Even in the presence of light, <u>P produced more carbon dioxide in container 1.</u> [1m] This suggest the <u>P does not carry out photosynthesis</u> [1m] and henceforth, an animal.
34)	a) By <u>observing the bubbles in the syringe, Mel counted the number of bubbles produced per minute.</u> [1m] b) Mel can ensure that <u>results are consistent without outliers</u> [0.5m] and <u>calculate the average of the 3 trials.</u> [0.5m] c) Carbon dioxide. By taking from same source of water, <u>the amount of carbon dioxide in the water must be kept constant before the start</u> of every set-up of different temperatures. [1m]

35)	a) 1 mark for <u>correct positioning of battery in series</u> 1 mark for <u>wires touching the tip and casing of bulb.</u> * Drawing of metal foil is optional  b) *note : unclear diagram [1m]  c) <u>Both foil strips are at the front of toy train and upon contact with the metal foil, there is a closed circuit for electric current</u> to flow through. [1m] d) Decrease. As there is <u>another bulb added in series, there will be less electric current flowing through the closed circuit.</u> [1m]
36)	a) P : gas [1m] Q : liquid b) <u>Water vapour from the surroundings lost heat to the cold ice cream tub and condensed into water droplets.</u> [1m] The <u>liquid water lost heat and froze into solid ice.</u> [1m]
37)	a) 25 °C [1m]

	b) Material Y. <u>Using Y, the temperature of cold water increased at a slower rate, indicating Y to be a poorer conductor of heat.</u> [1m] When the handle is made of <u>Y, the handle will gain heat slower from heated part A</u> [1m], hence cooler for hand to hold/touch.
38)	a) 1 mark for <u>correct direction of both arrows</u>  b) Material R <u>reflects light from the lamp.</u> / good reflector of light [1m] c) Allows James to <u>save electricity by using less lamps.</u> [1m]
39)	a) <u>Frictional force opposes motion of a moving object.</u> [1m] b) When <u>the canopy is opened, the time taken for toy parachute to reach the ground increased.</u> [1m] c) i) gravitational force [0.5m] ii) air resistance / air friction [0.5m] d) With large flaps, there is <u>more air resistance going against the weight of animal K, allowing it to float longer</u> in the air. [1m] This allows animal K to <u>escape from its predators more easily as K can have more time to glide in an opposite direction of its predator.</u> / <u>Animal K will have less chance to suffer from injury with softer landing on the ground</u> [1m]

- 40) a) 1 mark for GPE to KE (water)
1 mark for KE (wheel) to EE (generator)



- b) Increased. As the water is released from greater height, it possessed more gravitational potential energy which is converted to more kinetic energy of the moving water [1m] transferred to more kinetic energy of moving wheel which is finally converted to more electrical energy in the generator. [1m]
- c) Using water wheel does not produce any carbon dioxide from burning of fuels in power station, hence reducing air pollution [1m] / global warming.