

## Answers to sample questions in slides for Science Workshop for Parents

### Qn 1 – Diversity

- (a) Which of the material was most suitable to make a towel? Give a reason for your answer.  
Material Z. It absorbs the most amount of water.

### Qn 2 – Systems

- (a) Tom said that the new plants which grew from the seeds will have fruits that are definitely sweet. Is he correct? Explain your answer.  
No. It may inherit the characteristics of plant Y and the fruits can be sour.

### Qn 3 – Cycles

- (a) State the surface(s) of the lenses that had water droplets forming on them.  
Both the back and front surfaces.
- (b) Explain how water droplets are formed in part (a).  
Warm water vapour from the surrounding (1/2m) touches the cold back and front surfaces of the glass (1/2m), loses heat (1/2m) and condenses to form water droplets (1/2m).

### Qn 4 – Energy

- (a) State the relationship between the duration of light received by the plants per day and the mass of the fruits.  
As the duration of light received by the plants per day increases, the mass/size of the fruits increases.
- (b) Give an explanation for the results obtained in the experiment.  
When there is more light, there is more photosynthesis taking place (1/2m) and more excess food (1/2m) is transported to the fruits causing the mass to increase.

### Qn 5 – Systems

- (a) What would happen when the iron ring touches the curly copper wire?  
The buzzer would sound.
- (b) Explain your answer in part (a).  
When the iron ring touches the copper wire, the iron ring is a conductor of electricity (1/2) and a closed circuit would be formed / electricity flowed through the circuit (1/2m).

### Qn 6 – Interactions

- (a) What will happen to the population of the sea turtles when the temperature rises due to global warming?

The population will decrease.

(b) Explain your answer in part (a).

There will be fewer males being hatched to mate with the female turtles.

(c) What is the relationship between the average amount of rainfall and the number of male turtles being hatched?

As the average amount of rainfall increases, the number of male turtles that are hatched increases.

(d) Explain your answer in part (c).

The rain cools down the temperature of the eggs so more male turtles are born when there is more rainfall.

#### Qn 7 – Interactions

(a) What can John conclude from his experiment?

The wider the diameter of the disc, the shallower the depression.

(b) How are the large feet of the arctic hare useful during winter?

The feet prevent the hare from sinking into the soft snow and allows them to move quickly.

#### Qn 8 – Energy

(a) Without adding anything to the experiment, what can Amy do to increase the amount of gas that is collected in the test tube in one hour? Explain your answer.

She can move the lamp closer to the plant. Higher light intensity (1/2m) will cause photosynthesis to take place at a faster rate (1/2m) resulting in more oxygen gas being collected.

(b) Amy noticed that the amount of gas produced got lesser and lesser over time even though the light intensity remained the same. Give a reason why this occurred.

The amount of carbon dioxide in the water has decreased (1/2m) resulting in photosynthesis taking place at a slower rate (1/2m).