

01.1 Organ

01.2 Palisade mesophyll → Contains many air spaces. Spongy mesophyll → Contains the most chloroplasts.

01.3 Transpiration

01.4 Lignin

01.5 So light can reach the palisade cells for photosynthesis.

01.6 stomata, guard cells

01.7 vacuole

01.8 Diffusion

01.9 Mitochondria

02.1 It acts as a barrier to stop pathogens entering.

02.2 $63/210 = 3/10$

02.3 Killed at pH1 was 187. Killed at pH5 was 31. So 156 more were killed.

02.4 It was the mean of the pH1 and pH3 values.

03.1 Platelets → Help clot the blood where the vaccine was injected. White blood cells → Transport oxygen to the measles virus.

03.2 1970

03.3 It went up a lot, then it stayed level, then it decreased.

03.4 It decreased then increased again.

03.5 Parents were worried their children would get condition X.

03.6 Have the research peer reviewed.

03.7 The research wasn't peer reviewed.

04.1 For starch, add iodine. It will go blue/black if present. For sugar, add Benedict's. It will go red if present.

04.2 amylase, sugar

04.3 The type of bread

04.4 White bread takes the least time. Wholemeal takes the most time.

04.5 He repeated the experiment for each bread type. He calculated a mean.

04.6 $(58+55+61)/3 = 58$

04.7 Each person's sense of taste is different.

05.1 Ionising radiation, Viruses

05.2 Mitosis

05.3 replicate, grow

05.4 40%

05.5 Chromosomes are pulled to each end of the cell.

05.6 cell membrane

05.7 $50 / 800 = 0.0625\text{mm}$. $0.0625 \times 1000 = 62.5\mu\text{m}$

05.8 cells, people

05.9 a fake pill

06.1 The size of the potato piece. The time it was in the solution.

06.2 You should dry it.

06.3 a weighing scale

06.4 0.1 g

06.5 D

06.6 $1.1 / 6.0 \times 100 = 18.3$

06.7 Line graph

06.8 sugar, osmosis, permeable membrane

06.9 0.2 mol/dm³

07.1 Arteries

07.2 It helps to push blood around the body to deliver oxygen.

07.3 Provides oxygen.

07.4 Statins

07.5 It widens the artery and allows more blood to flow.

07.6 Smoking increases the risk. Disease H is affected the most by smoking.

07.7 *[Student completes the graph fully and correctly.]*

07.8 Diet high in cholesterol.

08.1 Nucleus

08.2 A, D and E

08.3 They can't digest food because they don't have lipase. This means fat isn't broken down. So they can't absorb the fat. This means they get less energy and can't store fat.

08.4 They are one cell thick. They have a big surface area.

08.5 Less oxygen means less respiration. This means less energy is made. The person will feel tired.
