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01.1 Organ

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

01.3 Transpiration

01.4 Lignin

01.5 Light needs to get through the epidermis to the palisade cells which do photosynthesis.

01.6 stomata, guard cells

01.7 vacuole

01.8 Active transport

01.9 Mitochondria

02.1 It's a barrier against pathogens.

02.2 $63/210 = 3/10$

02.3 187, 31, 156

02.4 He calculated the midpoint between pH1 and pH3.

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

03.2 1968

03.3 it increased, then plateaued, then decreased.

03.4 It went down.

03.5 Parents were worried their children would get condition X.

03.6 Have the research peer reviewed.

03.7 Not enough evidence.

04.1 Starch: add iodine, blue-black is positive. Sugar: add Benedict's and heat, red/orange/green is positive.

04.2 amylase, sugar

04.3 The type of bread

04.4 White bread is broken down fastest. Wholemeal is slowest.

04.5 Repeated the investigation. Calculated a mean.

04.6 58

04.7 Each person's sense of taste is different.

05.1 Ionising radiation, Viruses

05.2 Mitosis

05.3 grow, replicate

05.4 40%

05.5 Chromosomes are pulled to each end of the cell.

05.6 cell membrane

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

05.8 cells, people

05.9 placebo

06.1 same size of potato piece. same time in solution.

06.2 Dry them.

06.3 a balance

06.4 0.1g

06.5 C

06.6 $(1.1 / 6.0) \times 100 = 18.3$

06.7 Bar chart

06.8 water, osmosis, permeable

06.9 0.2 mol/dm³

07.1 Arteries

07.2 It pushes blood around the body to get oxygen to the cells.

07.3 it puts oxygen into their lungs.

07.4 statins

07.5 The stent opens up the artery so more blood can flow to the heart muscle.

07.6 The risk of getting disease H from smoking is very high. Smoking also increases the risk of disease E, F and G.

07.7 [Graph drawn with correct axes and bars for F and G, but bar H is plotted at 60 instead of 70]

07.8 High alcohol intake.

08.1 In the nucleus.

08.2 A, D and E

08.3 A person with CF has trouble digesting food because the enzymes from the pancreas are blocked. Lipase can't break down fats and amylase can't break down starch. Because the food is not digested into small molecules, it cannot be absorbed into the blood. This means the person can't get energy from respiration, so they find it hard to gain mass.

08.4 1. Large surface area. 2. Good blood supply. 3. One cell thick walls.

08.5 Less oxygen means less energy from respiration. They would get breathless.
