

**Harry Williams**  
**ID: 23105**

**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** So light can get to the palisade cells for photosynthesis.

**01.6** stomata, guard cells

**01.7** Vacuole

**01.8** Active transport

**01.9** Mitochondria

**02.1** It is a physical barrier.

**02.2** 63/210

**02.3** Killed at pH1 = 187. Killed at pH5 = 31. More killed = 156.

**02.4** Maybe he guessed what the next number in the pattern would be.

**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 went up, then stayed high for a bit, then went down really fast.

**03.4** It decreased.

**03.5** Parents were worried their children would get condition X.

**03.6** Have the research peer reviewed.

**03.7** The author was biased.

**04.1** To test for starch you add iodine and it goes blue-black. To test for sugar you add Benedicts and it turns red.

**04.2** amylase, sugar

**04.3** The type of bread

**04.4** 1. White bread is the quickest to taste sweet. 2. Wholemeal is the slowest.

**04.5** He repeated the tests and 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** grow, replicate

**05.4** 40%

**05.5** Chromosomes are pulled to each end of the cell.

**05.6** cell membrane

**05.7**  $50 / 800 = 0.0625$  mm.  $0.0625 \times 1000 = 62.5$  um

**05.8** cells, people

**05.9** Placebo

**06.1** 1. Same size of potato. 2. Same volume of salt solution.

**06.2** Dry them with a paper towel.

**06.3** a balance

**06.4** 0.1 g

**06.5** D

**06.6**  $1.1 / 4.9 \times 100 = 22.4\%$

**06.7** Line graph

**06.8** water, osmosis, permeable

**06.9**  $0.2 \text{ mol/dm}^3$

**07.1** Arteries

**07.2** It pushes blood around the body to deliver oxygen.

**07.3** It gives them oxygen.

**07.4** Statins

**07.5** It's a tube that holds the artery open so blood can get through.

**07.6** 1. Smoking increases the risk for all the diseases. 2. The risk is highest for disease H.

**07.7** [Graph drawn with correct bars and scale, but no y-axis label]

**07.8** Having a bad diet with lots of fat.

**08.1** nucleus

**08.2** A, D and E

**08.3** They can't digest food because they don't have enough lipase to break down fat or amylase for carbs. So the food isn't broken down into small molecules. This means they can't gain mass because the small molecules like glucose can't be absorbed into the blood. So they get less energy for building tissues.

**08.4** 1. Large surface area. 2. Thin walls.

**08.5** Less oxygen means less aerobic respiration. This means less energy is released, so the person will feel tired and their muscles might not work properly.

---