

**Student: James Wright**  
**ID: 24110**

**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** To let light through to the layer below for photosynthesis.

**01.6** stomata, guard cells

**01.7** vacuole

**01.8** Active transport

**01.9** Mitochondria

**02.1** It's a waterproof barrier.

**02.2**  $63/210 = 3/10$

**02.3** 187, 31, 156

**02.4** He found the average of the pH1 and pH3 results.

**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 goes up, then levels off, then drops.

**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** For starch you add iodine. Positive is blue-black. Negative is yellow-brown. For sugar you add Benedict's. Positive is brick-red. Negative is blue. You must heat the sugar test.

**04.2** amylase, sugar

**04.3** The type of bread

**04.4** White bread is fastest. Brown bread is slower than white.

**04.5** He repeated the experiment to get more results. He calculated the average.

**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** 20%

**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 potato. same type of potato.

**06.2** pat them dry.

**06.3** a balance.

**06.4** 0.1g

**06.5** D

**06.6**  $(1.1/6.0) \times 100 = 18.33$ . This is 18.3.

**06.7** Line graph

**06.8** water, osmosis, permeable

**06.9** 0.2 mol/dm<sup>3</sup>

**07.1** Arteries

**07.2** It pumps blood around the body to get oxygen to the brain.

**07.3** it gives them oxygen for respiration.

**07.4** statins

**07.5** a stent is a tube that holds a blocked artery open so blood can get through.

**07.6** 1. Smoking increases your risk. 2. The risk for H is biggest.

**07.7** [Graph drawn perfectly.]

**07.8** not doing enough exercise.

**08.1** nucleus

**08.2** B, C and D

**08.3** They can't digest food because they don't have enough enzymes. Lipase which digests fat can't get out of the pancreas. This means fat isn't broken down and absorbed. So they don't get the energy and materials to build up body mass.

**08.4** 1. big SA. 2. good blood supply. 3. thin wall.

**08.5** Less O<sub>2</sub> in blood means less aerobic respiration. So less energy is released. So muscles get tired quickly.

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