

Additional Science Biology

B2

Core Questions and Keywords and Definitions

Core Questions

Topic 1a – The Building Blocks of Cells

Question	Answer
In a plant cell, what is the role of a) chloroplast b) large vacuole c) cell wall d) mitochondria e) cytoplasm f) nucleus	a) Contains chlorophyll; where photosynthesis occurs b) Stores water and nutrients for plant c) Provides structural support for plant, made of cellulose d) Site of respiration e) Where all cell organelles are found f) Stores genetic information
In an animal cell, what is the role of: a) cell membrane b) cytoplasm	a) Controls what goes in and out of the cell b) Where all cell organelles are found
Which cell component supplies energy?	Mitochondria
State the function of DNA in cells.	It gives instructions to make proteins.
How does a light microscope enable us to better see cells?	Allows us to see more detail, such as bacterial cells have cell walls that are not made of cellulose and do not have nucleuses but have chromosomal DNA and a plasmid loop.
How have microscopes changed?	As they have improved from light to electron microscopes we have been able to see more detail and clearer images of cells
In a bacterial cell, what is the role of a) chromosomal DNA b) plasmid DNA c) flagella d) cell wall	a) Is the bacteria's DNA- it contains genetic information b) Contains additional genetic information c) Allows the bacteria cell to move d) Provide structure and support
Name the two types of DNA found in a bacterial cell.	1. chromosomal (DNA) 2. plasmid(s) (DNA)
If an object was viewed using an objective lens of X and another lens of Y- how much has the object been magnified?	I would use the calculation Length of object = length of magnified object/ the magnification E.g. For an object which was measure to be 1mm in length under a microscope with a magnification of 10x you would do this: Length of object = 1/10 Length of object = 0.1mm
What does the section of DNA called a gene codes for?	A single protein.
Describe how the two strands of a DNA molecule are linked together.	Weak hydrogen bonds between complementary base pairs.
What is a gene? What does it do?	It is a section of a molecule of DNA. It codes for a specific protein
What is the complimentary base for Adenine?	Thymine
What is the complimentary base for Cytosine?	Guanine
Who discovered the structure of DNA?	Watson, Crick, Franklin, Wilkins
Explain how the Human Genome Project has contributed to advances in medicine.	<ul style="list-style-type: none"> • genes / base sequence on human chromosome were identified which has allowed scientists to: • identify of faulty / mutated genes • test people for a genetic disorders • develop gene therapy • appropriate /early /personalised / genomic medication / counseling.
Who collaborated on this project?	It was an international effort involving 18 countries
Suggest how maize is genetically modified.	A new gene / DNA is located and inserted into the plant DNA by genetic engineering.

What are the advantages and disadvantages of golden rice production	<p>Advantages: Prevent people from suffering from a lack of vitamin A and so can prevent death from a poor immune system and prevent blindness</p> <p>Disadvantages: May cross-breed with wild rice plants and contaminate the wild rice DNA Worries that eating GM organisms may harm people (no evidence of this) Expensive to buy Do not produce fertile seed so new plants need to be brought by farmers every year</p>
What are the advantages and disadvantages of the production of human insulin by bacteria	<p>Advantages: Can now be used by vegans as it is not extracted from dead cattle anymore Not affected by disease in cattle Can be made in large quantities Made more cheaply</p> <p>Disadvantages: The insulin produced by the bacteria is slightly different and may not suit everyone</p>
Explain how a human insulin gene and a plasmid are used to genetically modify a bacterium.	<p>Cutting enzymes are used to remove the human insulin gene from the human chromosome and to cut open the plasmid. Sticking enzymes are used to insert the human gene into the plasmid. Then the plasmid containing human insulin gene inserted into a bacterium.</p>
Explain how growing herbicide-resistant plants may damage the environment.	<p>It may encourage the overuse of herbicide which may affect / contaminate food chains / webs and affect or kill larger organisms. OR cross fertilisation with weeds may lead to weeds become herbicide resistant.</p>
What is mitosis?	The production of two genetically identical daughter cells that are diploid
What is the purpose of mitosis in human cells?	To produce diploid body cells during growth or to replace damaged cells.
What is meiosis?	Cell division to form four cells with half the number of chromosomes (haploid). These cells are not genetically identical
Where and when does meiosis occur?	In sex organs (ovaries and testes) to produce gametes (eggs and sperm)

Topic 1b – Using Genetics

Question	Answer
What is cloning	Asexual reproduction that produces genetically identical cells
What are the stages in cloning a mammal?	Remove diploid nucleus from body cell. Take nucleus from egg cell, insert diploid nucleus into empty egg. Stimulate the new cell to divide by mitosis. Implant developing embryo into surrogate mammal.
What are the advantages of cloning mammals?	Able to make new organisms genetically identical to an adult organism that has desirable characteristics.
What are the disadvantages of cloning mammals?	Cloned animals seem to age more quickly and die young. If a clone is susceptible to disease or changes in environment, then all the clones will be susceptible. It will lead to less variation, and less opportunity to create new varieties in the future.

What are stem cells?	Cells that are able to differentiate into any type of cell. They have no hayflick limit and can therefore divide a limitless amount of times.
What is special about embryonic stem cells?	They can differentiate into any type of cell.
Why do we study embryonic stem cells	Adult organisms have very few stem cells as cells lose their ability to be stem cells as they age.
What are the advantages and disadvantages of using embryonic stem cells in scientific research?	A: They can differentiate into any type of cell and so they can be used to grow or repair tissues, organs or limbs, which can be used for transplants. D: Embryos are destroyed and some people feel that embryo has a right to life and that they can become cancerous
Name the first stage of protein synthesis.	Transcription.
Describe how proteins are made in the body	A complimentary strand mRNA is formed in the nucleus. The mRNA attaches to the ribosome. The code is read in triplets (codons), coding for specific amino acids. tRNA transfers amino acids into the right order in the ribosome. Amino acids form peptide bonds and link to form a chain.
Name the structure where translation occurs.	Ribosome(s) / polysome(s)
What is produced during the second stage of protein synthesis?	A polypeptide made of amino acids.
How are proteins different from each other?	They each have their own specific number and sequence of amino acids; this results in different shaped molecules that have different functions. Enzymes are proteins
What is a mutation?	A change in the sequence of a DNA strand, meaning that different proteins are made at protein synthesis
What result will a gene mutation have on an organism?	It may be harmful, beneficial or have no effect at all
Explain how a gene mutation can affect the structure of a protein.	Protein may have: <ul style="list-style-type: none"> • different amino acids • different order of amino acids • a different shape/structure • a different function/not function correctly
What type of chemical are enzymes?	Proteins.
What is an enzyme?	A biological catalyst that speeds up a chemical reaction.
List three reactions that enzymes catalyse	DNA replication, protein synthesis and digestion.
State two factors, other than temperature, that affect enzyme activity.	Substrate concentration and pH.
What is the lock and key model?	Enzymes have an active site, which only a substrate molecule can fit in to. Enzymes are specific as they will only work with certain substrates
What is denaturing and how does it work?	Denaturing is the process of damaging an enzyme so the active site is different / blocked / changed and the substrate cannot bind with the enzyme. This is often done at high temperatures.

Topic 2a – Organisms and Respiration

Question	Answer
What is respiration?	A chemical reaction that releases energy from food (organic matter)
What is the word equation for respiration?	Glucose + Oxygen → Carbon dioxide + water +(energy)
What is diffusion?	The random net movement of particles from an area of high concentration to areas of low concentration.
Which type of respiration releases most energy?	Aerobic. Anaerobic respiration does not release as much energy from glucose.
How does the human circulatory system help respiration work?	It removes carbon dioxide by diffusion into the lungs. It brings oxygen and glucose from blood capillaries into respiring cells.

Why do heart and breathing rate increase with exercise?	Higher oxygen demand by the cells, because of an increased rate of respiration, the heart rate and breathing rate is increased to supply enough oxygen
Why do heart and breathing rate remain high after exercise?	To circulate enough oxygen to break down lactic acid built up in muscles.
How do you calculate cardiac output?	Cardiac output=stroke volume x heart rate
Why do cells respire anaerobically during lots of exercise?	Not enough oxygen available to cells that respire very quickly
What is the word equation for anaerobic respiration?	Glucose → lactic acid
What is EPOC?	Excessive post-exercise oxygen consumption.
Why does EPOC occur?	Oxygen is needed after exercise to break down lactic acid into carbon dioxide and water. Lactic acid damages cells.

Topic 2b – Photosynthesis

Question	Answer
What is the word equation for photosynthesis?	Carbon dioxide + Water → Glucose + Oxygen (light on the arrow)
Describe the process that takes place in the leaf to produce oxygen.	<ul style="list-style-type: none"> • By photosynthesis (1) • in the chloroplast (chlorophyll) (1) • light, carbon dioxide and water are needed • to produce glucose
How is the leaf adapted for photosynthesis?	Large surface area. Contains chlorophyll to absorb light. Have stomata for gas exchange.
Describe how carbon dioxide enters the leaf.	<ul style="list-style-type: none"> • by diffusion (1) • from an area of high concentration to an area of low concentration (down a concentration gradient) (1) • through the stomata (1)
What factors could limit the rate of photosynthesis in a plant cell?	<ul style="list-style-type: none"> • light intensity • CO₂ concentration • temperature
Explain how limiting factors affect the rate of photosynthesis.	The maximum rate of photosynthesis is controlled by the factor that is in the shortest supply.
What is the role of the xylem vessels?	To transport water
What is the role of the phloem vessels?	To transport sugars and other plant chemicals, including hormones
How are root hair cells adapted for taking up water?	Large surface area, thin cell walls, low water concentration in cells due to transpiration
What process do root hair cells use to absorb water?	osmosis
What is osmosis?	The movement of water molecules from an area of higher concentration to an area of low concentration through a partially permeable membrane
What drives transpiration?	Water loss from leaves due to evaporation
How are minerals taken up by the plant?	Active transport at the roots
Describe how a plant takes in water from the soil.	<ul style="list-style-type: none"> • Into the root hairs (1) • Through a partially permeable membrane • by osmosis • down a concentration gradient
How are root hairs adapted to take up water?	Long thin extensions reach into the soil – this gives a large surface area for substances to enter the root.
What does the term biodiversity mean?	The variety of all living things.
What does the term distribution mean?	Where a particular organism is found.

What does the term population mean?	How many of a particular organism is found in an ecosystem or habitat.
List four techniques for sampling a population.	Pooters; sweep nets; pitfall traps; quadrats.
What environmental factors affect the distribution and population size of living things?	Temperature; light intensity; pH.

Topic 3a – Growth and the Circulatory System

Question	Answer
What evidence do we use to back up the theory of evolution?	The fossil record
Fossils can provide evidence for evolution. Explain why the fossil record is incomplete.	<ul style="list-style-type: none"> • soft tissue of organisms does not form fossils (1) • some fossils are yet to be found (1) • fossils may be damaged (1) • conditions not correct for fossil formation (1) • fossils may only be fragments / not whole organisms (1)
What is growth?	An increase in size, length or mass
Plant growth occurs when cells do three things...what are they?	Plant cells divide, elongate and then differentiate.
What are meristems in plants?	Special areas just behind the tip of roots and shoots where the cells keep dividing.
How does growth in animals differ from growth in plants?	Animals stop growing when they become adults.
What do red blood cells do?	Transport oxygen
How are red blood cells adapted?	<ul style="list-style-type: none"> • biconcave disc shape gives it a large surface area to volume ratio for oxygen to diffuse into and out of the cell • has no nucleus – this makes as much room for haemoglobin and oxygen as possible
What does the haemoglobin in red blood cells do?	<ul style="list-style-type: none"> • combines reversibly with oxygen • combines with oxygen in the lungs to become oxyhaemoglobin • releases oxygen to the tissue cells for aerobic respiration
What do white blood cells do?	<ul style="list-style-type: none"> • fight infection by microorganisms and other foreign cells • some make antibodies which bind to microorganisms • some surround the foreign cells
What does plasma do?	Liquid part of blood that transports glucose, hormones, waste and dissolved CO ₂ around the body (amongst other things)
What do platelets do?	<ul style="list-style-type: none"> • Cause blood to clot • scab is formed over the wound • this prevents blood loss and stops microorganisms getting into the body
Put these words in order of smallest to largest- Organ, organism, organ system, cell, tissue	Cell-tissue-organ-organ system- organism
List the four main blood vessels associated with the heart	Pulmonary artery, pulmonary vein, aorta and vena cava
What do the left atrium and ventricle do?	Pump oxygenated blood around the body
What do the right atrium and ventricle do?	Pump deoxygenated blood to the lungs
What do the valves do?	Prevent backflow
Which ventricle has the thicker muscle	Left
What is the role of the arteries?	Transport blood from the heart to organs that need it
What is the role of the veins?	Transport blood to the heart
What is the role of the capillaries?	Exchange materials with tissues
Suggest why the heart can be referred to as a 'double-pump'.	<ul style="list-style-type: none"> • the heart has two sides/left and right side (1) • destination of blood from one side e.g. left side pumps to body (1) • type of blood from one side e.g. right side pumps deoxygenated blood(1)
Describe how the circulatory system transports substances around the body.	<ul style="list-style-type: none"> • arteries / aorta transport blood away from heart (1) • veins / vena cava transport blood to the heart (1) • capillaries exchange / pass materials / named substance with tissues / cells (1)

	<ul style="list-style-type: none"> substances carried in plasma / oxygen carried in red blood cells (1) credit correct description of passage of blood through heart (1)
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Topic 3b – The Digestive System

Question	Answer
What is the alimentary canal?	A muscular tube running from the mouth to the anus.
List the parts of the alimentary canal.	<ul style="list-style-type: none"> Mouth Oesophagus Stomach Small intestine Large intestine Anus
By what process is food moved through the digestive system?	peristalsis
Where is digested food absorbed into the blood vessels?	Through villi in the small intestine.
How are villi adapted to absorb the products of digestion?	<ul style="list-style-type: none"> Large surface area, single layer of cells good capillary network.
What are the functions of the liver?	To process food molecules To produce bile
State where bile is stored.	In the gall bladder
State two roles of bile in digestion.	<ul style="list-style-type: none"> neutralisation (of stomach acid) / raise pH (1) emulsification / break down of fats (1)
What does carbohydrase do?	Digests starch into simple sugars
What substrate does amylase work on?	Starch
What is the role of lipase?	Digests fats into fatty acids and glycerol
What molecules are proteins broken down to form?	amino acids
Where is the enzyme which digests starch into simple sugars in the small intestine is produced?	pancreas
Lipase and bile are involved in the digestion of fat. Give the names of the two products of fat digestion by lipase.	<ul style="list-style-type: none"> fatty acid(s) (1) glycerol (1)
Name three functional foods that some claim may benefit health if eaten as part of a healthy diet	Probiotics Prebiotic oligosaccharides Plant stanol esters
The active ingredients in prebiotics are	oligosaccharides

Keywords and Definitions

Keyword	Definition
Cell membrane	The semi-permeable "container" that holds a cells contents together and controls what enters and leaves a cell.
Cell wall	Made of cellulose this tough outer layer surrounds some cells and can control the shape of the cell.
Cells	The smallest unit of life, many of these make up an organism.
Cellulose	The compound which makes up the cell wall in plant cells.
Chlorophyll	The green substance in some plant cells that absorbs sunlight.
Chloroplasts	These contain chlorophyll to absorb sunlight for photosynthesis.

Chromosomal DNA	The double-helix shapes DNA structure found in many cells, including human cells.
Cytoplasm	The gel-like substance which holds all of a cells contents.
Direct proportion	Where two things both increase at the same ratio to each other.
DNA	A molecule containing the genetic code.
Electron microscope	A special type of telescope for looking at objects smaller than a light microscope can magnify sufficiently.
Flagella	Long thread-like parts of some cells that help them move.
Light microscopes	A device which uses lenses to magnify small things.
Magnification	The act of making something appear bigger (using a lens).
Mitochondria	The place in a cell where respiration occurs.
Nucleus	The part of a cell which controls its activities.
Organelles	A part of a cell with a specific function.
Plasmid DNA	A ring of DNA capable of replicating itself. Found in bacteria commonly.
Vacuole	A space in a cell which may contain water or solution. Plant cells often have one large vacuole.
Adenine (A)	The base that pairs with thymine.
Adult stem cells	A stem cell that comes from an adult, as opposed to an embryo.
Alleles	A particular form of a gene.
Amino acids	The building blocks which form proteins and which proteins break down in to during digestion.
Asexual reproduction	Reproduction involving mitosis to form identical off-spring.
Base triplets	The method used to read the RNA code in sections of three.
Bases	The building blocks of DNA that can be adenine, thymine, cytosine and guanine.
Beta-carotene	The substance that makes carrots orange and is important for vitamin A.
Biodiversity	The range of different biological life.
Chromosomes	The structures made up of DNA. Found in cells nuclei in animals.
Clones	Identical genetic copies.
Codons	Segments of three of the genetic code.
Complementary base pairs	Adenine and thymine or cytosine and guanine - pairs of bases that bond together.
Cytosine (C)	The base that pairs with cytosine.
Daughter cells	The cells that form after the first stage of mitosis or meiosis.
Differentiated	A cell which has become more specialised.
Double helix	The shape of the DNA molecule.
Embryo	The ball of many cells in the initial stages of pregnancy.
Embryonic stem cells	Stem cells found in the embryo.
Enucleated	A cell with the nucleus removed.
Fertilisation	The fusion of gametes (sex cells) to make a new cell, e.g. sperm and egg.
Gametes	Sex cells.
Genes	The name given to a section of DNA that controls a particular characteristic.
Genetic code	The code formed by genes / DNA.
Genetic engineering	Manipulating (altering) an organisms genes using technology.
Genetically modified organisms (GMOs)	AN organism that has genes altered intentionally by humans.
Genome	All of organism's genetic information.
Golden rice	A genetically modified rice designed to contain more beta-carotene (to produce vitamin A).
Guanine (G)	The base that pairs with guanine.

Haploid	Containing half the number of normal chromosomes.
Herbicide	Something designed to kill particular plants.
Human Genome Project (HGP)	The research project to map all human genes.
Hydrogen bonds	The weak bonds holding the double helix together.
Implanted	When something is inserted into something else.
Meiosis	Cell replication that involves the formation of daughter cells with different (and half the number of) chromosomes.
Messenger RNA (mRNA)	The RNA which moves from the nucleus to the ribosomes.
Mutation	An alteration to the genetic code.
Parent cell	The original cell that undertakes mitosis or meiosis.
Polypeptide	A chain of amino acids.
Protein synthesis	The building of new proteins.
Ribosome	The place in a cell where protein synthesis occurs.
Sexual reproduction	Reproduction involving meiosis to give variation in offspring.
Stem cell	An unspecialised cell which can become other types of cell.
Surrogate mother	A mother who has been artificially inseminated (has had a donor embryo that is not her own).
Thymine (T)	The base that pairs with adenine.
Transcription	DNA being copied into RNA.
Transfer RNA (tRNA)	The RNA that brings amino acids to the ribosomes to be built into proteins.
Uracil (U)	Part of the RNA code that replace thiamine.
Uterus	The womb.
Zygote	The initial cell formed after fertilisation.
'Lock and key' hypothesis	The idea that an enzyme's active site fits particular molecules.
Active site	The place on an enzyme where the reaction occurs.
Catalyst	Something which speeds up the rate of reaction but is not part of the reaction.
Denatured	The permanent damage of an enzyme.
Digestion	The breakdown of larger molecules of food into smaller ones.
Enzymes	A biological catalyst. It helps control the rate of a reaction.
Specific	Relating to one in particular.
Substrate	The molecule an enzyme acts on.
Aerobic respiration	Respiration that requires oxygen.
Anaerobic respiration	Respiration without oxygen that leads to lactic acid build up.
Capillaries	The blood vessels that carry blood to cells.
Cardiac output	The amount of blood pumped by the heart (from a ventricle) in one minute.
Concentration gradient	The difference between two areas of concentration.
Diffusion	The net movement of particles from an area of high concentration to low concentration.
Excess post-exercise oxygen consumption (EPOC)	The oxygen required to break down lactic acid after anaerobic respiration.
Gas exchange	The exchange of different gases (e.g. carbon dioxide and oxygen).
Glucose	Simple sugar.
Lactic acid	The acid that builds up as a product of anaerobic respiration.
Respiration	The release of energy from glucose.

Stroke volume	The amount of blood pumped from one ventricle in a heartbeat.
Active transport	The uptake of minerals against the concentration gradient (from low to high) that requires energy.
Distribution	How something is spread out.
Ecosystem	A system of living things that are interact with each other.
Environment	A particular place or surroundings.
Habitat	An environment occupied by a particular species.
Limiting factor	A factor which causes a limit to something (e.g. limits photosynthesis).
Osmosis	The net movement of water molecules from an area of high concentration to low concentration across a partially permeable membrane.
Partially permeable membrane	A membrane that only lets some (smaller) molecules pass through it.
Phloem	The (tubes) in a plant that carry sugar solution and some minerals around the plant.
Photometer	An instrument for measuring light intensity.
Photosynthesis	The release of energy from the reaction between carbon dioxide and water.
Pitfall traps	A hole dug to catch some species for sampling.
Pond net	A net for catching some species from ponds.
Pooter	A device used to collect insects.
Population size	The number of individuals.
Quadrats	A square used to identify an area for sampling.
Random sampling	Sampling by using a method that gives random individuals or areas of study.
Representative	Something that is an example that represents the bigger population.
Root hair cells	The long thin cells on roots that give a large surface area for diffusion to occur.
Sampling	A method of selecting a smaller set of individuals from a population.
Starch	A carbohydrate (large molecule).
Stomata	The tiny pores on the epidermis of land plants.
Surface area to volume ratio	The ratio of something's surface area to its overall volume.
Sweep net	A net for catching some species.
Systematic sampling	Sampling using a logical/mathematical way of working out where to sample from.
Transpiration	The process by which moisture is carried through plants.
Xylem	The (tubes) in a plant that transport water (and some minerals).
Antibodies	Proteins that identify and neutralise foreign bodies in the blood.
Aorta	The blood vessel which carries oxygenated blood from the heart to the body.
Arteries	Blood vessels which carry blood away from the heart.
Blood vessels	"Tubes" which carry blood.
Circulatory system	The system that transports blood etc. around the body.
Deoxygenated	Without oxygen.
Elongation	To become longer.
Evolution	The theory that species change over time due to survival of the fittest.
Fossil record	The overall record of fossils found.
Fossils	The preserved remains or traces of animals or plants.
Growth	An increase in size or quantity over time.
Haemoglobin	The iron compound in red blood cells that reacts with oxygen etc. in order to carry it from the lungs.
Left atrium	The entrance chamber to the heart for oxygenated blood from the lungs.
Left ventricle	The second chamber for oxygenated blood which pumps the blood to the body.
Organ	A collection of tissues working together.
Organ systems	Organs working together to perform a function.

Oxygenated	With oxygen.
Pentadactyl	Five toes or fingers on a limb.
Percentile	A value below which a certain percentage of individuals fall (e.g. 20% fall below the 20th percentile).
Plasma	The pale yellow part of blood that holds the blood cells etc. in suspension.
Platelets	The part of the blood that leads to clotting.
Pulmonary artery	The blood vessel that carries deoxygenated blood to the lungs.
Pulmonary vein	The blood vessel that carries oxygenated blood from the lungs to the left atrium.
Red blood cells	The blood cells that carry oxygen (and have no nucleus).
Right atrium	The entrance chamber to the heart for deoxygenated blood.
Right Ventricle	The second chamber in the heart for deoxygenated blood that pumps it to the lungs.
Septum	A wall dividing something into two parts (as in the heart, lungs and nose).
Tissue	A collection of cells working together.
Valves	A "flap" that opens to allow blood to flow in the correct direction and closes to prevent backflow.
Veins	Blood vessels that carry blood towards the heart.
Vena cava	The blood vessel that carries deoxygenated blood to the heart.
White blood cells	The blood cells that fight infection.
Alimentary canal	The gut (tubes of the digestive system).
Amino acids	The small molecules that make up proteins.
Amylase	The enzyme that breaks carbohydrates down into maltose (or glucose/simple sugars).
Anus	The opening at the end of the digestive system.
Bifidobacteria	A "good bacteria" that helps with digestive health.
Bile	The substance which neutralises stomach acid and helps to emulsify fats.
Bolus	The ball of food swallowed down the oesophagus.
Carbohydrases	Enzymes that break down carbohydrates into simpler sugars (e.g. glucose or maltose).
Carbohydrates	Complex sugar molecules.
Cholesterol	A waxy substance from fats needed by the body but which can block arteries if too much is present in the blood.
Digestive system	The system that breaks down food into smaller molecules for absorption.
Emulsifies	Something that allows two liquids that will not mix well to intersperse.
Emulsion	A mixture of two or more liquids that will not mix well normally.
Faeces	The waste from digestion.
Fats	Food molecules that are broken down into glycerol and fatty acids.
Fatty acids	An acid that make up fats.
Functional foods	A food with an ingredient that has an additional purpose (such as promoting health of the digestive system).
Gall Bladder	The place where bile is stored.
Glycerol	A liquid that make up fats.
Lactobacillus	A bacteria that helps break down lactose.
Large Intestine	The part of the digestive system where water is mainly absorbed.
Lipases	The enzymes that break down fats into fatty acids and glycerol.
Liver	The organ with many jobs including bile production.
Oesophagus	The tube that carries out peristalsis to carry a bolus of food from the mouth to the stomach.
Oligosaccharides	A type of sugar that may act as a prebiotic.
Pancreas	The organ that releases enzymes into the digestive system.
Pepsin	The enzyme found in the stomach that breaks down proteins and works in acidic conditions.
Peristalsis	The action of moving a bolus of food through the oesophagus.
Plant stanol esters	Plant extracts that reduce certain cholesterol levels.
Prebiotics	Foods that help promote growth of good bacteria.
Probiotics	Live microorganisms that may benefit the host.

Proteases	The enzymes that break proteins down into amino acids.
Proteins	Complex molecules built from amino acids.
Saliva	A watery substance found in the mouth that contains amylase.
Small intestine	The part of the digestive system where digestion and absorption occurs of all food groups.
Stomach	The part of the digestive system containing acid and pepsin.
Sugars	Carbon, hydrogen and oxygen molecules found in food (i.e. a type of carbohydrate).
Villi	The small structures on the intestines that increase surface area and allow absorption to happen.