

- Activation energy** - amount of energy needed for a reaction to begin
- Active site** - area of an enzyme where the specific substrate binds
- Adenine** - base found in DNA, RNA and ATP
- Adenosine diphosphate (ADP)** - formed when one phosphate group is removed from ATP in a hydrolysis reaction
- Adenosine triphosphate (ATP)** - a nucleotide derivative, an immediate energy source
- Adhesion** - how water molecules are attracted and 'stick' to other substances e.g xylem vessel walls
- Amino acids** - monomers of proteins
- Amylopectin** - branched α -glucose polymer found in plants, a type of starch
- Amylose** - coiled α -glucose polymer found in plants, a type of starch
- Antiparallel** - when two polynucleotide strands run in opposite directions in DNA
- ATP hydrolase** - enzyme which hydrolyses ATP to ADP and P_i
- ATP synthase** - enzyme which synthesises ATP from ADP and P_i (condensation reaction)
- Base** - a nitrogen-containing organic molecule which is part of a nucleotide
- Benedict's test** - test for sugars
- Biuret test** - test for proteins
- Cellulose** - β -glucose polymer found in plant cell walls
- Cohesion** - how water molecules are attracted and 'stick' to each other using hydrogen bonds
- Collagen** - a structural protein found in connective tissue
- Competitive inhibitor** - molecule which competes with the substrate to bind to the active site of an enzyme
- Complementary base pairing** - hydrogen bonding between bases C and G or bases A and T/U
- Condensation reaction** - joins two molecules by forming a new chemical bond and eliminating a water molecule
- Cysteine** - amino acid containing sulphur
- Cytosine** - base found in DNA and RNA
- Denatured** - when an enzyme is no longer functional
- Deoxyribonucleic acid (DNA)** - double-stranded polynucleotide, a type of nucleic acid
- Deoxyribose** - pentose sugar found in DNA
- Dipeptide** - two amino acids joined with a peptide bond
- Disaccharide** - two monosaccharides joined with a glycosidic bond e.g sucrose (glucose+fructose), lactose (glucose+galactose) and maltose (glucose+glucose)
- Disulphide bridge** - bond between two sulphur atoms, important in protein structure
- DNA helicase** - enzyme which breaks hydrogen bonds between DNA strands
- DNA polymerase** - enzyme which forms phosphodiester bonds between DNA nucleotides
- Double helix** - twisted shape of DNA, two strands held together with hydrogen bonds
- Emulsion test** - test for lipids
- Enzyme** - a biological catalyst and soluble protein
- Enzyme-substrate complex** - the enzyme plus the substrate bound to the active site

- Ester bond** - chemical bond between a fatty acid and glycerol, formed in a condensation reaction
- Extracellular** - outside a cell
- Glycerol** - molecule found in triglycerides and phospholipids
- Glycogen** - branched α -glucose polymer found in animals
- Glycosidic bond** - chemical bond between monosaccharides, formed in a condensation reaction
- Guanine** - base found in DNA and RNA
- Hexose sugar** - a monosaccharide with six carbon atoms
- Hydrogen bond** - attraction between partial positive and partial negative charges (must involve hydrogen)
- Hydrolysis reaction** - breaks a chemical bond between two molecules by inserting a water molecule
- Hydrophilic** - attracts water
- Hydrophobic** - repels water
- Inorganic ion** - an ion which does not contain carbon (with exceptions)
- Inorganic phosphate (Pi)** - a single phosphate group which can be used to phosphorylate other molecules
- Intracellular** - within a cell
- Iodine test** - test for starch
- Ionic bond** - bond between positively and negatively charged ions, important in protein structure
- Isomers** - molecules with the same molecular formula but a different arrangement of atoms
- Latent heat of vaporisation** - amount of heat energy required for a substance to evaporate
- Metabolite** - a molecule used in a metabolic reaction
- Monomers** - smaller units from which larger molecules (polymers) are made
- Monosaccharide** - monomers of carbohydrates e.g glucose, fructose and galactose
- Non-competitive inhibitor** - molecule which binds to an enzyme away from the active site but changes the shape of the active site
- Nucleotides** - monomers of nucleic acids (DNA and RNA)
- Pentose sugar** - a monosaccharide with five carbon atoms
- Peptide bond** - chemical bond between amino acids, formed in a condensation reaction
- Phosphodiester bond** - chemical bond between nucleotides, formed in a condensation reaction
- Phospholipid** - lipid similar to a triglyceride but with one fatty acid substituted with a phosphate group
- Polymers** - large molecules made up of large numbers of monomers joined together
- Polynucleotide** - a polymer of many nucleotides joined with phosphodiester bonds
- Polypeptide** - a polymer of many amino acids joined with peptide bonds
- Polysaccharide** - polymer of many monosaccharides joined with glycosidic bonds
- Protein** - one or more polypeptide chains, can have different levels of structure
- Ribonucleic acid (RNA)** - single-stranded polynucleotide, a type of nucleic acid

Ribose - pentose sugar found in RNA and ATP

Saturated fatty acid - fatty acid with no double carbon bonds

Semi-conservative replication - DNA replication which results in two DNA molecules each containing one original strand and one new strand

Solvent - a substance which is able to dissolve other substances

Specific heat capacity - the amount of energy required to raise the temperature of 1g of a substance by 1°C

Substrate - molecule complementary to an enzyme's active site

Sugar-phosphate backbone - chain of pentose sugars and phosphate groups joined with phosphodiester bonds in a nucleic acid

Surface tension - formed where water meets air due to cohesion

Thymine - base found in DNA only

Triglyceride - lipid formed by joining three fatty acids to one molecule of glycerol using condensation reactions

Unsaturated fatty acid - fatty acid with at least one double carbon bond

Uracil - base found in RNA only