C5.1 Glossary

Alcohol	An organic compound that contains a hydroxyl (OH) group. *Ethanol is the **alcohol** found in alcoholic drinks.*
Alkane	A hydrocarbon molecule with the general formula C_nH_{2n+2}. *Methane, ethane and propane are all **alkanes**.*
Alkene	A hydrocarbon molecule with the general formula C_nH_{2n}. ***Alkenes** contain a carbon-carbon double bond.*
Amino acid	A naturally occurring monomer that contains two different functional groups. ***Amino acids** can be joined together to make polypeptides and proteins.*
Carboxyl group	The functional group found in carboxylic acids (-COOH). *Ethanoic acid contains a **carboxyl group**.*
Carboxylic acid	An organic compound that contains a carboxyl (COOH) group. *Ethanoic acid is a **carboxylic acid** found in vinegar.*
Catalyst	A substance that speeds up a chemical reaction without being used up. *Ethanol can be made from ethene, but this requires a **catalyst**.*
Combustion	A reaction where a substance burns in oxygen. ***Combustion** of alkanes produces carbon dioxide and water.*
Covalent bonding	The type of bonding found between non-metals, where electrons are shared to provide full outer shells. ***Covalent bonding** is found in both covalent molecules and giant covalent structures.*

Cracking	The process by which longer hydrocarbon chains are broken down into shorter hydrocarbons. ***Cracking*** *produces an alkane and an alkene.*
Crude oil	A finite resource found in rocks made from the ancient biomass of plankton. ***Crude oil*** *is a non-renewable resource that is used to provide fuels and make plastics.*
DNA	A molecule containing the genetic information for functioning and development of living organisms and viruses. ***DNA*** *is made up of two strands of repeating nucleotide units.*
Ester	An organic compound made through the reaction between an alcohol and a carboxylic acid. ***Esters*** *are often used in scented products as they have pleasant, fruity smells.*
Fermentation	An anaerobic process where glucose is broken down to produce ethanol and carbon dioxide. ***Fermentation*** *is a method of producing ethanol.*
Fractional distillation	The process by which crude oil is separated into groups of similar compounds based on their boiling points. *During* ***fractional distillation****, crude oil is evaporated and fractions condense at different temperatures.*
Functional group	An atom or group of atoms that is responsible for the chemical properties of a compound. *Alcohols, alkenes and carboxylic acids all contain a* ***functional group****.*
Homologous series	A group of compounds that have similar chemical properties and the same general formula. *The alkanes are a* ***homologous series*** *that all have the general formula* C_nH_{2n+2}.

Hydration	A process which adds water. *Alcohols can be made from alkenes by **hydration**.*
Hydrocarbon	A molecule that contains carbon and hydrogen atoms only. *Alkenes and alkanes are **hydrocarbons**.*
Hydroxyl group	The functional group found in alcohols (-OH). *Ethanol contains a **hydroxyl group**.*
Intermolecular forces	Attractive forces that hold molecules of a substance together. *Covalent molecules have low melting and boiling points because little energy is required to overcome the **intermolecular forces**.*
Molecule	A small group of non-metal atoms chemically joined together *There are millions of **molecules** of water in a swimming pool.*
Monomer	A repeating subunit used to make a polymer. *Glucose is the **monomer** that makes up starch (a polymer).*
Physical property	A property of a substance that can be observed at any time *A **physical property** of iron is that it is hard.*
Polymer	A substance made up of repeating subunits (monomers). *Plastic is a **polymer**.*
Saturated	A compound that contains only carbon-carbon single bonds. *Alkanes are **saturated** as they contain only single bonds between carbon atoms.*
Thermosetting	Polymers that do not melt when they are heated. *A **thermosetting** plastic's shape cannot be changed.*

Thermosoftening	Polymers that melt when they are heated. *The shape of a **thermosetting** plastic can be changed when it is heated.*
Unsaturated	A compound that contains one or more carbon-carbon double (or triple) bonds. *Alkenes are **unsaturated** as they contain a double bond between carbon atoms.*
Viscosity	A measure of a substance's resistance to flow or how easy it is to pour. *Water has a low **viscosity**, so is not very viscous, but honey has a high viscosity and is very viscous.*