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- All alkanes have the suffix -ane
- 2. Identify the longest continuous chain of carbon atoms (the parent chain
- 3. Identify any side chains from the parent chain. These are called alkyl groups. An alkyl group removes a hydrogen from the parent chain
- 4. Add numbers before an alkyl group to show which carbon the alkyl group is attached to

Structural formula Unlike displayed formulae, structural formulae do not show single bonds, although double and triple bonds mat be shown Molecular formula The actual number of atoms of each element in a compound Displayed formula The displayed formula of a compound shows the arrangement of atoms in a molecule, as well as all the bonds The simplest whole number ratio of atoms of each element in a compound Empirical formula An algebraic formula that can describe any member of a family of compounds. General formula The skeletal formula of a compound shows the bonds between the carbon atoms, but not the atoms themselves. Hydrogen atoms are also omitted, but other atoms are shown Skeletal formula A functional group is th part of the molecule that is largely responsible for the molecule's chemical properties

A functional group is th part of the molecule that is largely responsible for the molecule's chemical properties As well as hydrogen carbon can bond to oxygen nitrogen and the halogens. Resulting in the formation of alcohol and amine groups.



alkynes: Contain at least 1 triple carbon-carbon bond.

Alkenes: Contain 1 or more carbon-carbon double bonds

Alkanes: Contain only single bonded carbon-carbon bonds

Aromatic: Some or all of the carbon atoms are found in a benzene ring

Aliphatic: Carbon atoms are joined together in straight unbranched chains or branched straight chains

Alicylic: Carbon atoms are joined toghter in ring like structures

Naming Aliphatic alkanes

Different formulas

Functional groups

Naming hydrocarbons

Organic chemistry

Organic chemistry is the study of carbon-containing compounds.

There are over 16,000,000 organic compounds that have been discovered.

Hydrocarbons

Why carbon is special

Carbon atoms can also bond to other carbon atoms to form long chains.

It is in group 4 of the periodic table with 4 electrons in its outer-shell

This means each carbon atom can form 4 covalent bonds with other atoms. These can be single, double or triple bonds

If the compound is saturated then the name will end in -ane.

If the compound id unsaturated the compound name will end in -ene.

A hydrocarbon is a compound only made up of carbon and hydrogen

They can be saturated which means there are no double bonds or they can be unsaturated which means there is a double bond between 1 or more of these carbon atoms

Homologous series

There are so many carbon compounds they are organised into 'families' which are groups of carbon compounds with a similar chemical structure

The simplest homologous series is the alkanes which contain single carbon to carbon bonds. eg. Methane, Ethane, Propane.

A homologous series is: A family of compounds with similar chemical properties who's successive members differ with the addition of -CH2- groups