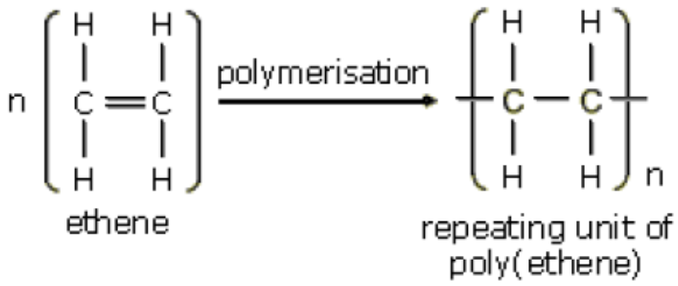
AQA C7c Polymers
CHEMISTRY TRIPLE

Addition Polymerisation

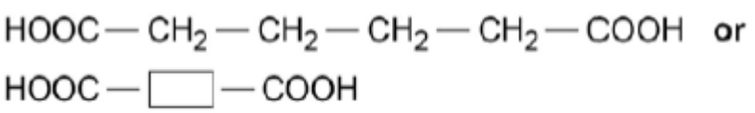
Polymers	Alkenes are used to make polymers by addition polymerisation	Many small molecules join together to form polymers (very large molecules)
Displaying Polymers	In addition polymers, the repeating unit has the same atoms as the monomers.	It can be displayed like this: 

Condensation Polymerisation

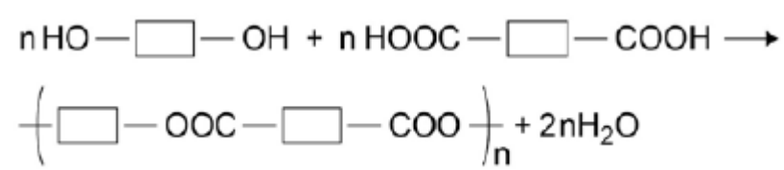
Condensation polymerisation	Condensation polymerisation involves monomers with two functional groups	When these types of monomers react they join together and usually lose small molecules, such as water. This is why they are called condensation reactions.

For example:
ethane diol

and hexanedioic acid



polymerise to produce a polyester:

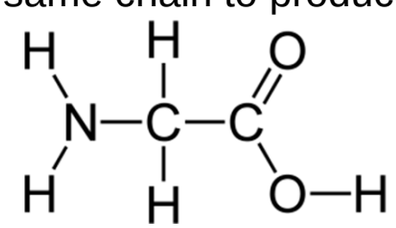


DNA and naturally occurring polymers

DNA	Deoxyribonucleic acid is a large molecule essential for life. DNA gives the genetic instructions to ensure development and functioning of living organisms and viruses.
DNA Structure	Most DNA molecules are two polymer chains made from four different monomers, called nucleotides, in the form of a double helix.
Natural polymers	Other naturally occurring polymers important for life include proteins, starch and cellulose.

Amino acids

Amino acids have two functional groups in a molecule. They react by condensation polymerisation to produce polypeptides. Different amino acids can be combined in the same chain to produce proteins.



Glycine