

Topic	Bonding and structure	Level	GCSE (or any course for students aged 11-16)
Outcomes	<p>Students are able to identify substances present in everyday life</p> <p>Students are able to classify substances according to their bonding and structure</p>		
Information for teachers	<p>Students first work in pairs to identify different substances from the picture, imagining they were wearing 'molecular glasses'. Ideas from students can then be written on the whiteboard and students can then use the infographic to categorise each substance, or they could simply find an example for each type of substance and complete the boxes on the diagram.</p>		
Pedagogy focus	<p>Zooming in and out</p> <p>https://thescienceteacher.co.uk/zooming-in-and-out-in-science/</p>		
Other resources	<p>Other resources on bonding are here:</p> <p>https://thescienceteacher.co.uk/bonding/</p>		



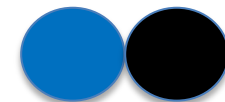
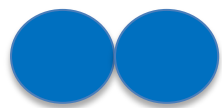
How many substances can you 'see'?
e.g. water, H₂O

- Sodium chloride ($\text{NaCl}_{(s)}$)
- Argon (Ar)
- Chlorophyll ($\text{C}_{55}\text{H}_{72}\text{O}_5\text{N}_4\text{Mg}$)
- Fructose ($\text{C}_6\text{H}_{12}\text{O}_6$)
- Diamond (C)
- Gold (Au)
- Silicon dioxide (SiO_2)
- Citric acid ($\text{C}_6\text{H}_8\text{O}_7$)
- Water (H_2O)
- Alcohol ($\text{C}_2\text{H}_5\text{OH}$)
- Oxygen (O_2)
- Carbon dioxide (CO_2)

structure

bonding

substance at 25 °C



Element

(made from only one type of atom)

Compound

(made from two or more elements chemically combined)

monatomic

Name:
Formula:

metallic
lattice

Name:
Formula:

covalent

molecule

Name:
Formula:

lattice

Name:
Formula:

covalent

molecule

Name:
Formula:

lattice

Name:
Formula:

ionic
lattice

Name:
Formula: