<table>
<thead>
<tr>
<th>Topic</th>
<th>Bonding and structure</th>
<th>Level</th>
<th>GCSE (or any course for students aged 11-16)</th>
</tr>
</thead>
</table>
| **Outcomes**   | Students are able to identify substances present in everyday life  
                 Students are able to classify substances according to their bonding and structure |
| **Information for teachers** | 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. |
| **Pedagogy focus** | Zooming in and out  
| **Other resources** | Other resources on bonding are here:  
                 [https://thescienceteacher.co.uk/bonding/](https://thescienceteacher.co.uk/bonding/) |
How many substances can you ‘see’?
e.g. water, $\text{H}_2\text{O}$
• Sodium chloride (NaCl\(\text{s}\))
• Argon (Ar)
• Chlorophyll (C\(\text{55H}72\text{O}5\text{N}4\text{Mg}\))
• Fructose (C\(\text{6H}12\text{O}6\))
• Diamond (C)
• Gold (Au)
• Silicon dioxide (SiO\(\text{2}\))
• Citric acid (C\(\text{6H}8\text{O}7\))
• Water (H\(\text{2O}\))
• Alcohol (C\(\text{2H}5\text{OH}\))
• Oxygen (O\(\text{2}\))
• Carbon dioxide (CO\(\text{2}\))
substance at 25 °C

**Element**
(made from only one type of atom)

- monatomic
- metallic lattice
- covalent lattice

**Compound**
(made from two or more elements chemically combined)

- covalent lattice
- ionic lattice

structure bonding

Name: Formula:

Name: Formula:

Name: Formula:

Name: Formula:

Name: Formula: