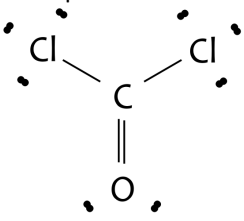
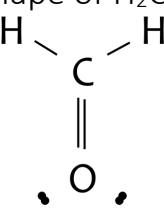
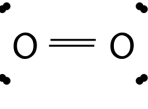
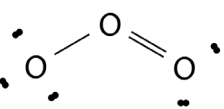

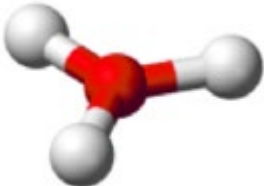
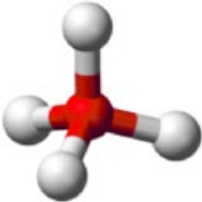
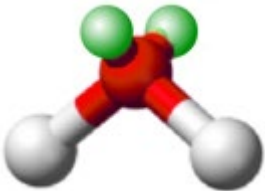
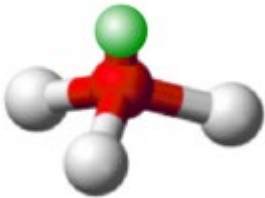

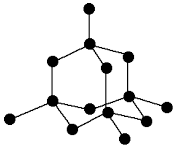
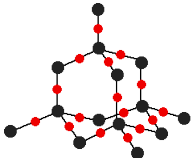
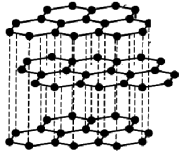



<p>Shape of SF₂</p> <pre> : F - S - F : </pre>	<p>Shape of HCl</p> <pre> .. H - Cl : .. </pre>	<p>Shape of CO₂</p> <pre> O = C = O </pre>	<p>Shape of F₂O</p> <pre> : F - O - F : </pre>
V shaped or bent	Linear	Linear	V shaped or bent
<p>Shape of NCl₃</p> <pre> .. : Cl : : Cl - N : : Cl : .. </pre>	<p>Shape of PBr₃</p> <pre> : Br - P - Br : : Br : .. </pre>	<p>Shape of SO₂</p> <pre> .. O - S = O .. </pre>	<p>Shape of CCl₄</p> <pre> .. : Cl : : Cl - C - Cl : : Cl : .. </pre>
Trigonal pyramid	Trigonal pyramid	V shaped or bent	Tetrahedral
<p>Shape of CH₂Cl₂</p> <pre> H : Cl - C - Cl : H </pre>	<p>Shape of PCl₃</p> <pre> .. : Cl : : Cl - P - Cl : .. </pre>	<p>Shape of PH₃</p> <pre> H H - P - H .. </pre>	<p>Shape of H₂O</p> <pre> .. H - O - H .. </pre>
Tetrahedral	Trigonal pyramid	Trigonal pyramid	V shaped or bent
<p>Shape of CCl₄</p> <pre> .. : Cl : : Cl - C - Cl : : Cl : .. </pre>	<p>Shape of H₂S</p> <pre> .. H - S : H </pre>	<p>Shape of CH₃Br</p> <pre> H H - C - Br : H </pre>	<p>Shape of SO₂</p> <pre> .. O - S = O .. </pre>
Tetrahedral	V shaped or bent	Tetrahedral	V shaped or bent

<p>Shape of COCl_2</p> 	<p>Shape of H_2CO</p> 	<p>Shape of O_2</p> 	<p>Shape of O_3</p> 
<p>Trigonal planar</p>	<p>Trigonal planar</p>	<p>Linear</p>	<p>V shaped or bent</p>
<p>Definition: Uneven sharing of electrons, where one atom in bonding pair is more electronegative</p>	<p>Definition: Ability of an atom in a bond to attract electrons towards itself</p>	<p>The 5 most electronegative elements</p>	<p>Determined by the number of regions of electron density around an atom (bonding and nonbonding)</p>
<p>Polar covalent bond</p>	<p>Electronegativity</p>	<p>F O N and Cl S</p>	<p>Shape of molecule</p>
<p>NaCl Type of particles? Type of bond?</p>	<p>SO_3 Type of particles? Type of bond?</p>	<p>SiO_2 Type of particles? Type of bond?</p>	<p>MgO Type of particles? Type of bond?</p>
<p>Ions Ionic bond</p>	<p>Molecules Weak intermolecular</p>	<p>Atoms Covalent</p>	<p>Ions Ionic bond</p>
<p>S_8 Type of particles? Type of bond?</p>	<p>SCl_2 Type of particles? Type of bond?</p>	<p>C (diamond) Type of particles? Type of bond?</p>	<p>SiCl_4 Type of particles? Type of bond?</p>
<p>Molecules Weak intermolecular</p>	<p>Molecules Weak intermolecular</p>	<p>Atoms Covalent</p>	<p>Molecules Weak intermolecular</p>

<p>Cu</p> <p>Type of particles? Type of bond?</p>	<p>C (graphite)</p> <p>Type of particles? Type of bond?</p>	<p>Intermolecular attractions / forces are _____ molecules</p>	<p>Intramolecular attractions / forces are _____ molecules</p>
<p>Atoms Metallic</p>	<p>Atoms Covalent</p>	<p>between</p>	<p>within</p>
<p>Polar or nonpolar molecule?</p>	<p>Polar or nonpolar molecule?</p>	<p>Polar or nonpolar molecule?</p>	<p>Polar or nonpolar molecule?</p>
<p>Nonpolar</p>	<p>Polar</p>	<p>Nonpolar</p>	<p>Polar</p>
<p>Polar or nonpolar molecule?</p>	<p>Polar or nonpolar molecule?</p>	<p>Polar or nonpolar molecule?</p>	<p>Polar or nonpolar molecule?</p>
<p>Polar</p>	<p>Polar</p>	<p>Nonpolar</p>	<p>Polar</p>
<p>General name given to pairs of bonding or nonbonding electrons, double and triple bonds</p>	<p>Definition: Ability to conduct electricity by movement of electrons or ions</p>	<p>Type of solid: Consists of small covalently bonded molecules with weak attractions between molecules</p>	<p>Temperature at which (s) → (l); its value reflects the strength of bonds between particles</p>
<p>Regions of electron density / negative charge / electron clouds</p>	<p>Electrical conductor / conductivity</p>	<p>(Covalent) molecular</p>	<p>Melting point</p>

Temperature at which (l) → (g); its value reflects the strength of bonds between particles	Nonpolar solutes will dissolve in _____ solvents e.g. _____	Polar solutes will dissolve in _____ solvents e.g. _____	Type of solid: Consists of large covalently bonded molecules with strong attractions between atoms
Boiling point	Nonpolar Cyclohexane	Polar Water	Covalent network
Type of solid: A 3D crystal lattice made up of alternating + and - ions	Definition: Charged particles formed when atoms have lost or gained electrons	Name for a positively charged ion	Name for a negatively charged ion
Ionic	Ions	Cation	Anion
Most ionic solutes e.g. NaCl will dissolve in _____ solvents	Attractive force between molecular dipoles	Type of solid: Consists of metal cations in a sea of delocalised electrons	Definition: Electrostatic attraction between oppositely charged ions
Polar e.g. water	Weak intermolecular attraction	Metallic	Ionic bond
Definition: Attraction between positively charged nuclei of metal atoms and loosely held valence electrons	Definition: Bond formed by the sharing of a pair of electrons	Trend in bonding types moving across a period L to R e.g. NaCl AlCl ₃ PCl ₃ Cl ₂	Definition: Diagram showing bonding between atoms in a molecule and any lone pairs of electrons in the molecule
Metallic bond	Covalent bond	Ionic to covalent	Lewis diagram

Bond between two atoms containing 4 electrons (2 pairs)	Bond between two atoms containing 6 electrons (3 pairs)	Type of solid: Crystal lattice of ions held together by electrostatic attractions	Type of solid: Molecules held together by weak intermolecular attractions
Double bond	Triple bond	Ionic solid	Covalent molecular
Type of solid: Atoms held together by nondirectional attractions between delocalised electrons and metal ions	Type of solid: Many atoms in a regular 3D lattice held together by covalent bonds	Shape of molecule & bond angle: 	Shape of molecule & bond angle: 
Metallic solid	Covalent network solid	Linear 180°	Trigonal planar Approx. 120°
Shape of molecule & bond angle: 	Shape of molecule & bond angle: 	Shape of molecule & bond angle: 	Shape of molecule & bond angle: 
Tetrahedral Approx. 109°	V shaped / bent Approx. 109°	Trigonal pyramid / pyramidal Approx. 109°	Linear Bond angle n/a
Identity of this covalent network solid 	Identity of this covalent network solid 	Identity of this covalent network solid 	 UPDATED
Diamond, C	Silicon dioxide / silica / SiO ₂	Graphite, C	No Brain Too Small