Intermolecular Forces

* The chemical bonds between molecules
* Determine the physical state of molecular substances
* These bonds are broken as the substance undergo a change of state
* Are weaker than a covalent bond
* Three types known collectively as Van der Waals forces – London, dipole-dipole and hydrogen bonding
* Intermolecular forces affect the melting point, boiling point, capillary action, surface tension, volatility, and solubility of substances

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| Force | Description | Example |
| London forces | Hold covalent molecules together. Very weak. Momentary dipoles created by the electrons contained within the compound, which are constantly in motion. | All molecules |
| Dipole-dipole | Hold polar covalent molecules together. These forces are stronger than London forces. | Hydrogen chloride |
| Hydrogen bonding | Formed between the electropositive hydrogen and an electronegative dipole of oxygen, fluorine, or nitrogen. | Distilled water |