# Intermolecular forces investigation

## Assessed criteria: Criterion C - Processing and Evaluating

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|  | Level descriptor |
| 7-8 | The student is able to:  i. **correctly collect, organize, transform and present** data in numerical and/ or visual forms  ii. **accurately interpret** data and **explain** results **using correct scientific reasoning**  iii. **evaluate** the validity of a hypothesis based on the outcome of a scientific investigation  iv. **evaluate** the validity of the method based on the outcome of a scientific investigation  v. **explain** improvements or extensions to the method that would benefit the scientific investigation. |

**Objective**

To relate a physical property to the intermolecular forces found in different chemicals.

**Theoretical background**

Many physical properties are related to the types and strength of intermolecular forces found in a chemical substance.

In this lab session we will look at the rate of evaporation, surface tension and viscosity.

**Blog tasks**

The whole report must be posted to your group blog. Make sure you include:

1. An introduction to the physical property that your group was investigating and how it is related to IMF´s.
2. A description of the 2 groups of chemicals including; name, structure and types of IMF present.
3. A prediction (hypothesis) of the results you expect with scientific explanations.
4. Suitable tables of results (title, headings, units).
5. To what extent do your results match what you had expected?
6. An evaluation explaining areas where error could have occurred and how you would improve these areas in a future investigation.
7. At least 2 references in APA format.

**Help**

* Molecules with a similar molecular mass are expected to have similar Van der Waals forces so any differences in physical properties are caused by the other IMF´s.
* Similar types of chemicals (e.g. alcohol) will have similar dipole-dipole and H-bonding forces so any differences in physical properties are caused by Van der Waals forces.