

**Main Ideas, Key Points,
Questions:**

After watching the video segment, write down key points, main ideas and big questions.

Objective(s):

- *To conduct an investigation of intermolecular forces using alcohol and water.*
- *To obtain, evaluate and communicate information about the four types of intermolecular forces.*
- *To conduct an investigation measuring the melting points of materials with ionic and covalent bonds (salt and sugar).*

Notes:

During the video segment, use words, phrases or drawings to take notes.

Summary:

*After watching the video segment, write at least three sentences explaining what you learned.
You can ask yourself: "If I was going to explain this to someone else, what would I say?"*

After watching the video and performing any associated labs and/or experiments, you should be able to answer the following:

1. Intermolecular forces occur between molecules. Are they stronger or weaker than intramolecular forces?
2. You have seen both cohesion and adhesion of water. Explain how intermolecular forces cause water molecules to stick to a material like a glass pitcher.

You should now conduct an investigation of adhesion and cohesion using water, isopropyl alcohol, pipettes and pennies.

3. Explain how intermolecular forces can help water vapor condense.

You should now separate into teams to investigate the four types of intermolecular forces and present their findings to the class.

4. Briefly explain what we mean by these four types of intermolecular forces:

Dispersion forces

Ion-dipole forces

Dipole-dipole forces

Hydrogen bonds

You should now conduct an investigation of the melting point of table salt and table sugar.