**Viscosity, Adhesion and Cohesion**

Vocab – viscosity, adhesion, cohesion, flow rate, surface tension

**Viscosity:**

Viscosity of a fluid usually due to two factors:

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**: if the molecules of in a fluid have a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** shape, it will be **\_\_\_\_\_\_\_\_\_\_\_\_\_** for the molecules to move past each other.

 Water Canola Oil

Molecule

Shape:

Viscosity:

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** between particles: if the particles in a fluid are more **\_\_\_\_\_\_\_\_\_\_\_\_** to each other, it will be more **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** for the particles to move past each other.

You can compare the viscosity of fluids by comparing their **\_\_\_\_\_\_\_\_\_\_\_\_\_**. To calculate a flow rate, pour the fluids down a track and time how long it takes for the fluid to flow the full distance. Then **\_\_\_\_\_\_\_\_\_\_\_\_\_** the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the track by the **\_\_\_\_\_\_\_\_\_\_\_\_\_**.

**Temperature and Viscosity**

Both **\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_** have viscosity, though **\_\_\_\_\_\_\_\_\_\_** usually have very little viscosity. Temperature actually effects viscosity differently for **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** compared to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

**Liquids and Temperature:**

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**Gases and Temperature:**

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**Adhesion**

Adhesion is the property of a fluid to\_\_\_\_\_\_\_ or **\_\_\_\_\_\_\_\_\_** to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. We can clearly see the property of adhesion with **\_\_\_\_\_\_\_\_\_\_**. When we get out of the pool when swimming, some water will \_\_\_\_\_\_\_\_\_ to us. The adhesion of water is **\_\_\_\_\_\_\_\_\_\_** enough to work against the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

Imagine you are in a pool of a fluid that had no adhesion. When you leave the pool all of the fluid would **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of right away and you would be **\_\_\_\_\_\_\_\_\_\_\_** without having to use a **\_\_\_\_\_\_\_\_\_\_\_**.

Water gets its property of adhesion by being a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. This means one end of a water molecule has a slight **\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_** and the other end has a slight **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. It exerts an **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** to pull it to other object.

 🡨Glass of water

**Cohesion**

Cohesion is the property of a fluid to **\_\_\_\_\_\_\_\_\_\_** to **\_\_\_\_\_\_\_\_\_\_\_**. If a fluid **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to itself strongly it will want to stay as **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** as much as possible and can form **\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_**, rather than **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** over the surface it is on.

**\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_** is a property of liquid that is determined by how **\_\_\_\_\_\_\_\_\_\_\_\_** the liquid is. If a liquid strongly binds to itself it will take more **\_\_\_\_\_\_\_\_\_\_\_** to break through the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the liquid. Surface tension can make it appear like liquid surfaces have a **\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_** or **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Some animals and insects rely on surface tension of water to be able to escape from land predators.

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