



Grade 7 Science

Unit 3: Pure Substances and Mixtures



Rate of Dissolve

Today we will be doing a series of demonstrations. This material **WILL** appear on your end of unit test (next week), so you should be paying **VERY** close attention as we discuss what is happening.

I expect that you...

- listen respectfully.
- remain quiet so others can hear.
- provide input when appropriate and when called upon.
- remain seated, so as not to disturb others.

Before we start, looking at the title of this slide, what will we be looking at in our demonstrations?

Things that affect how quickly something dissolves.

Please join me at the back counter.

Rate of Dissolve

Agitated vs Non-Agitated (Stir)

- We found that by agitating it dissolved faster.
- The particles are brought together more, allowing for more contact, easier to use attractive forces to break solute-solute bonds.



Hot Solvent vs Cold Solvent (Heat)

- The hot solvent dissolved the solute faster.
- Particle theory tells us that heat increases movement of particles, meaning more solvent gets to solute more quickly.



Large Surface Area vs Small Surface Area (Crush) (same volume)

- The larger surface area solute dissolved faster.
- The solvent has to attract the solute in order for it to dissolve, by increasing the surface area (by crushing it) there is more solute available to be reached by the solvent, meaning more particles can be dissolved at one time.

