

Grade 7 Science



Unit 3:

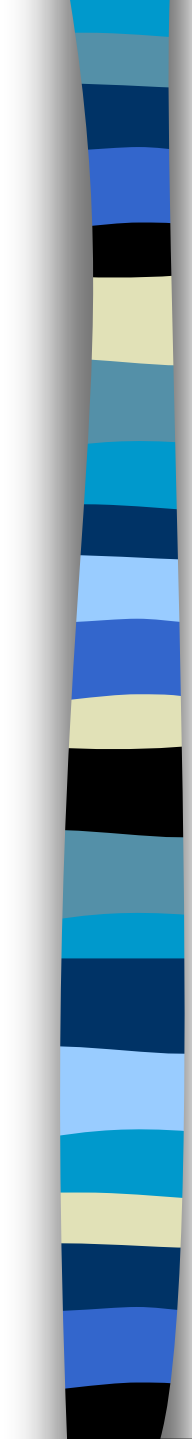
Mixtures & Solutions:

The Particle Theory



Particle Theory of Matter

- All matter is made up of tiny particles.
- These particles are always moving... they have energy.

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- There are spaces among particles.
 - There are attractive forces between the particles.
 - The particles of one substance differ from the particles of other substances.

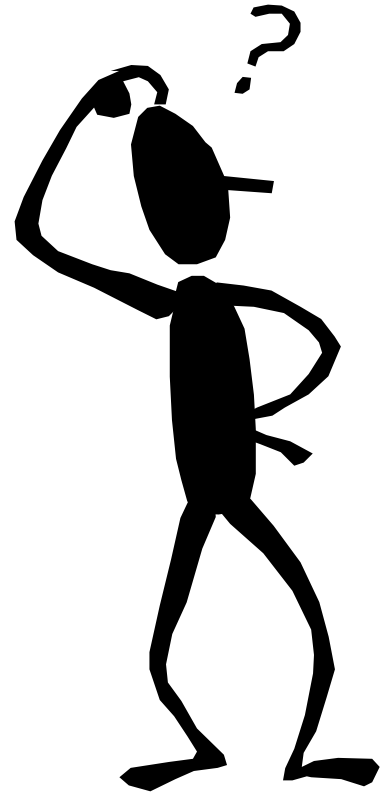


Student Activity...

With a partner decide:

1. How would you tell the difference between a pure substance and a mixture?

2. How would use the Particle Theory of Matter to support your answer to question #1?



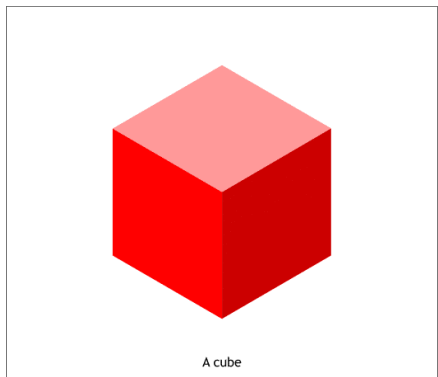


Mixtures vs. Pure Substances

Mixtures...

- MAY have distinct visible components.
- MAY appear uniform throughout.

- They are the physical combination of two or more pure substances.



Sugar

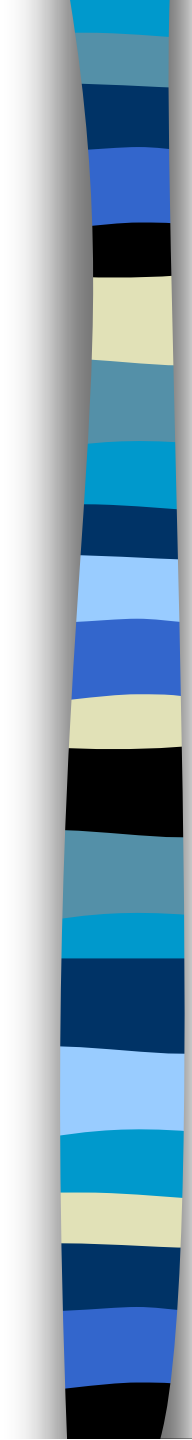
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Water

=

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Examples of Mixtures...

- salt water, kool-aid
- chocolate chip cookie
- muddy water
- salad dressing
- air



Pure Substances...

- ALWAYS appear as uniform throughout
- They contain either a single atom or two or more atoms chemically combined to form a different substance.



Examples of Pure Substances

- sugar ($C_{12}H_{22}O_{11}$)
- gold (Au), copper (Cu)
- distilled water (H_2O)
- carbon dioxide (CO_2)
- oxygen (O_2)



Student Activity...

Read pages 232, 236 and 237

Make a list of 15-20 solutions and mixtures that you encounter in a day. * those that may pose a safety risk.