

Science - a branch of knowledge requiring systematic study and method, dealing with substances, life and natural laws.

Scientist - an expert in a science

Scientific Method for Investigations

Scientists try to find patterns in things and look for explanations for the pattern. The scientific method is a way of approaching and solving a problem, or answering a question.

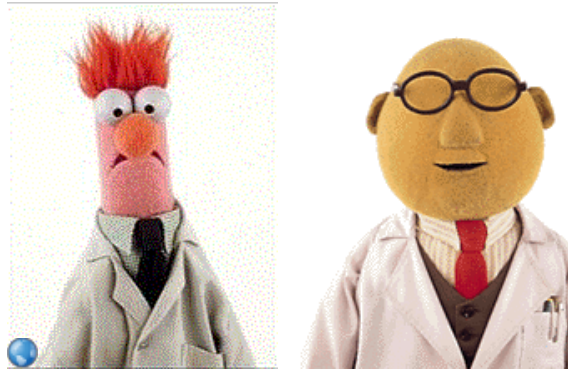


Here's the recipe.

- **Ask a question.**
 - **Gather information.**
 - **Form a hypothesis, propose a solution.**
 - **Test the proposed solution.**
 - **Evaluate the data. Is the hypothesis correct? Does it make sense?**
 - **Report results. Let others know.**
- Make changes. Propose a better solution.**

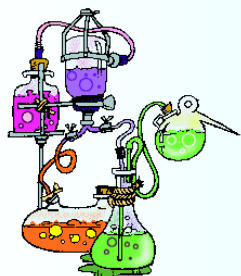


If your methods make sense, then others may accept your hypothesis as a theory. If not, then your hypothesis may be rejected. There is always the possibility that new observations or new information will disprove a long-standing theory.



Homework

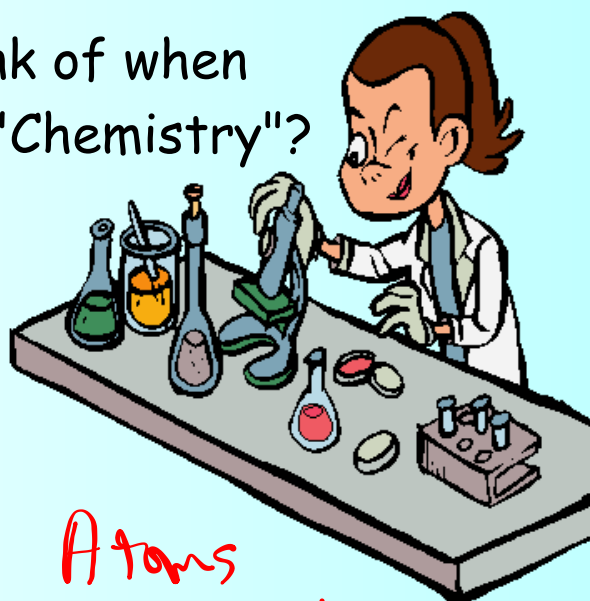
- Name of muppet characters
- Name of 4 types of scientists and what they study



Warm Up

1) What do you think of when you hear the word "Chemistry"?

Science
Potions
Chemicals / Reaction
Green Slime
Beakers
Bunsten Burners
Analysis
Bombs



Atoms
Compounds
Matter
Ionic

Drugs

meth labs



/ Homework

- Name of muppet characters
- Name of 4 types of scientists and what they study

What is Matter?

Matter is anything that takes up space and has a mass

- It is anything that has a mass and volume

What is Matter?


Mass is the amount of matter in a substance. It is often measured in gram or kilograms

Volume is the amount of space a substance occupies. It is often measured in litres.


Properties of Matter

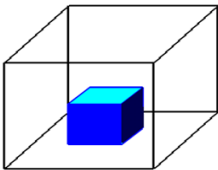
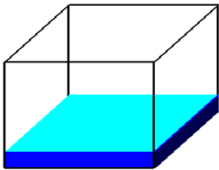
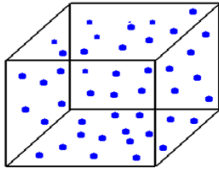
• Matter can be found in three phases

- > Solid
- > Liquid
- > Gas



States of Matter

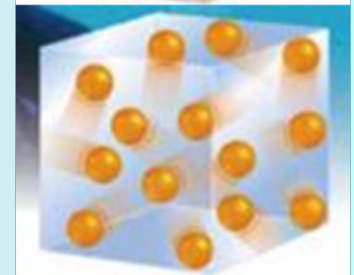
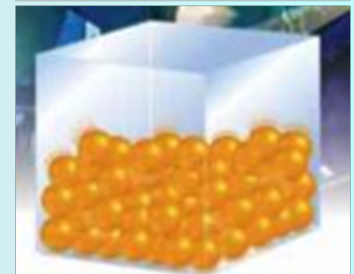
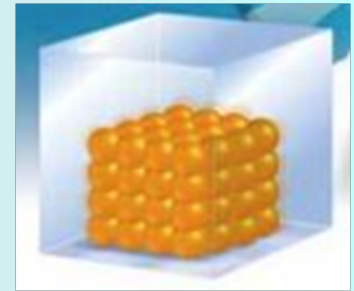


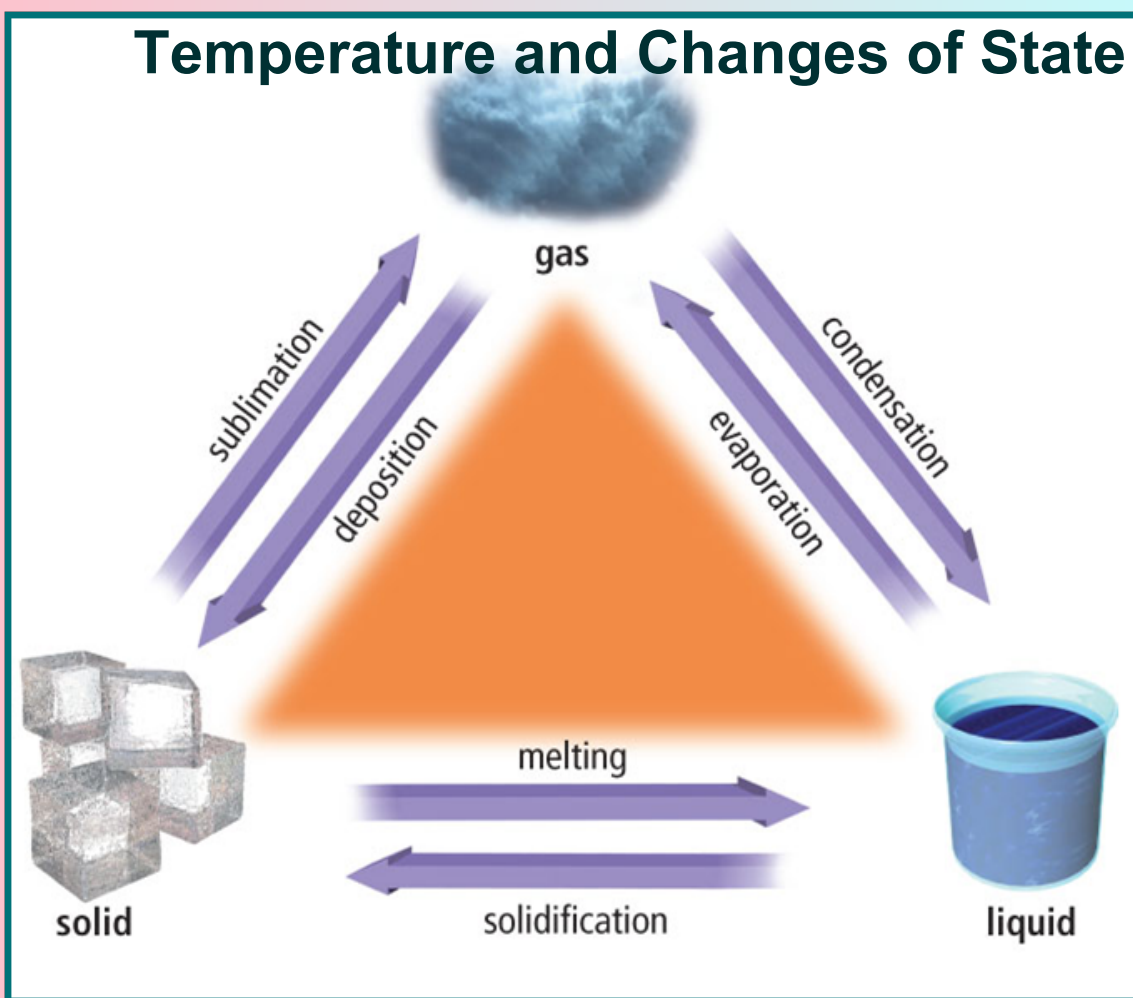
 <p>Solid Holds Shape Fixed Volume</p>	 <p>Liquid Shape of Container Free Surface Fixed Volume</p>	 <p>Gas Shape of Container Volume of Container</p>
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Think of an example of matter that exists in all three states?

Properties of Matter

- Matter is made of small particles. There are empty spaces between all of these particles that allow the particles to move.
- > Solid particles are packed together and cannot move freely. They only vibrate.
- > Liquid particles are farther apart and can slide past each other.
- * > Gas particles are far apart and move around quickly.

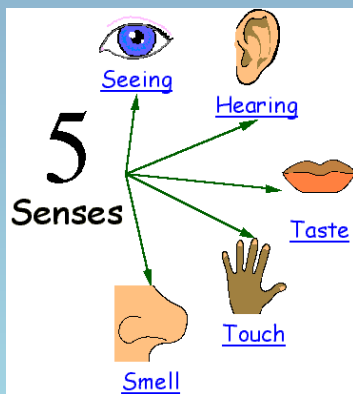




Physical Properties

One of the physical properties of matter is its state.

Another way to describe physical properties is using our senses.



What could we observe from each of the 5 senses?

- i) **Sight:** color, bright, dull
- ii) **Hearing:** Bubbling, crackling, snapping
- iii) **Taste:** sweet, salty, bitter
- iv) **Touch:** Rough, soft, slimy,
- v) **Smell:** Sweet, rotten,