

## What is chemistry?

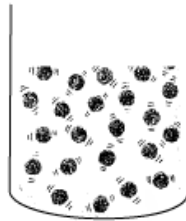
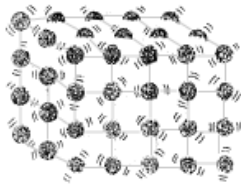
- “**Chemistry** is the study of the composition, structure, and the properties of matter and the changes it undergoes.”

» from Modern Chemistry

## Particle Theory of Matter.

- All matter is made up of particle
- All particles are moving
- There are spaces between the particles
- Particles in solids and liquids attract each other.
  
- <http://preparatorychemistry.com/KMT.htm>
  
- [http://www.clickandlearn.org/Gr9\\_Sci/Particle\\_Theory.htm](http://www.clickandlearn.org/Gr9_Sci/Particle_Theory.htm)

Can you describe the motion of particles in the 3 states of matter?

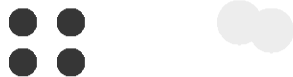


## Pure Substance

### Pure Substance

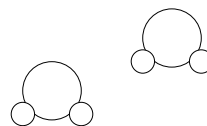
#### Element

Made up of atoms or molecules



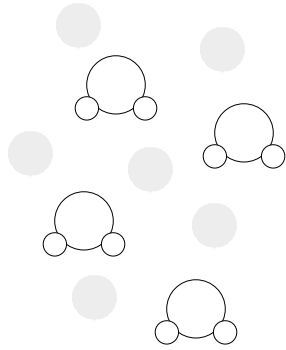
#### Compound

Made up of molecules



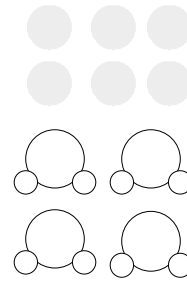
# Mixtures and the Particle Theory

## Solutions



Homogeneous mixture

## Mechanical Mixture



Heterogeneous mixture

# TEST

# YOURSELF

The following describes what state of matter?

- The particles that make up this substance are packed tightly with small spaces between them. They held in place by the attractive forces between them but they are vibrating back and forth.

- A LIQUID

- B GAS

-  SOLID


- D PLASMA

Which of the following is not a homogeneous mixture?

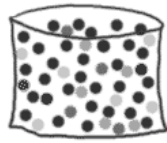
- A Air

- B Power Aid

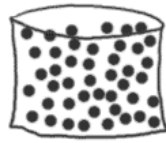
- C Tap Water

-  Oil and water

How would you classify the following substances?



Tap Water



Distilled

Which of the following is an element?

- A Limestone (calcium carbonate)



Oxygen gas


- C Water

- D Fire

How would you classify the following?



Which of the following could you not separate by chemical or physical means?

- A      A Solution
- B      A Compound
-       An Element
- D      A Mechanical Mixture

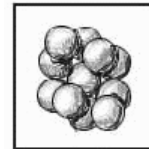
Diamond is an example of which of the following?




Element

- B Compound
- C Solution
- D Mechanical Mixture

The following particle diagram illustrates which of the following types of matter?



- A mixture
- B pure substance
- C compound
- D element
-  2 of the above
- F 3 of the above

Which of the following terms  
doesn't belong?

• A pure substance



solution

• C element

• D compound