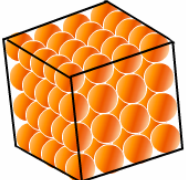
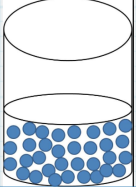
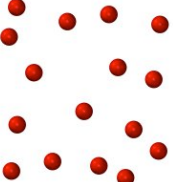


# Separating Mixtures

## Mixtures & Solutions Investigation 1

## States of Matter

	<b>Solid</b>	definite volume & shape
	<b>Liquid</b>	definite volume, but not shape
	<b>Gas</b>	no definite shape or volume

All have mass & occupy space

# States of Matter

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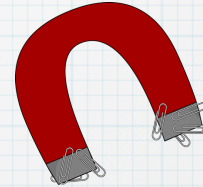
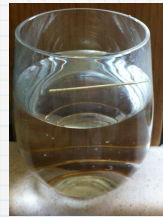
# Mixture



- \* any two or more materials that are combined
- \* ingredients can be separated
- \* Mixtures don't have to be made by a person.

# Separating a Mixture

- \* screening
- \* filtering
- \* floating
- \* using a magnet
- \* evaporation



# Dissolve



- \* the process of a material becoming incorporated uniformly into another

# Evaporation



The process of a liquid drying up.  
The change of state from a liquid to a gas.

# Crystal




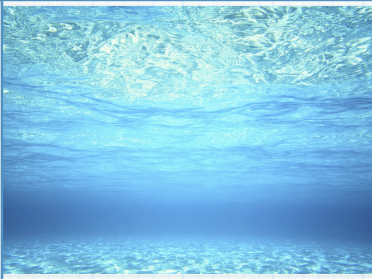

A natural form of a substance. Crystal shape is also a physical property that helps to identify a substance.

**Solutions are mixtures,  
but mixtures aren't  
always solutions.**

1.2

## **Solubility**


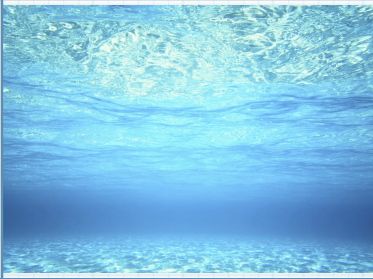

The ability of one substance to spread out uniformly throughout another substance.

		
<b>solute</b>	<b>solvent</b>	<b>solution</b>

1.2

# Solubility

The ability of one substance to spread out uniformly throughout another substance.

		
salt	water	salt water

# Separating a Solution

How can you separate a solution?



# Separating a Solution

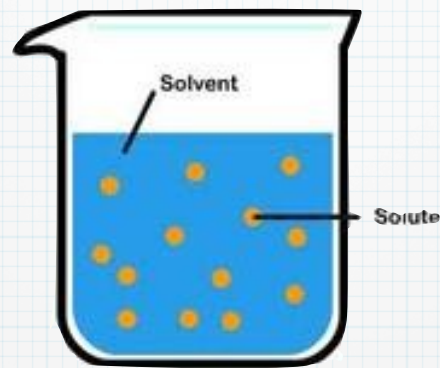
How can you separate a solution?

When a solution evaporates, it leaves the dissolved solid material behind.



Salt Crystal

## Solution



Solution

- \* A solution forms when a solute (solid) dissolves in a solvent (liquid).
- \* Solutions are transparent mixtures.

# Salt & Water

Mixture or Solution?



# Salt & Water

Mixture or Solution?

## Mixture

- \* two or more ingredients mixed together

## Solution

- \* salt dissolves and the water stays clear

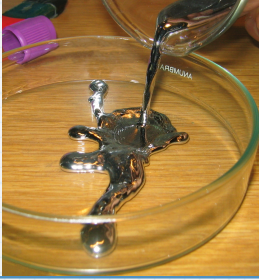
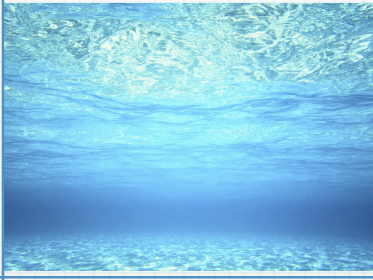

**BOTH**

**A MIXTURE & SOLUTION**



# Liquid. Solution. Water.

What's the difference?

		
liquid	water	solution

## Liquid



a state of matter that has mass, occupies space, has definite volume, but flows to fill a container up

# Water



a specific kind of liquid

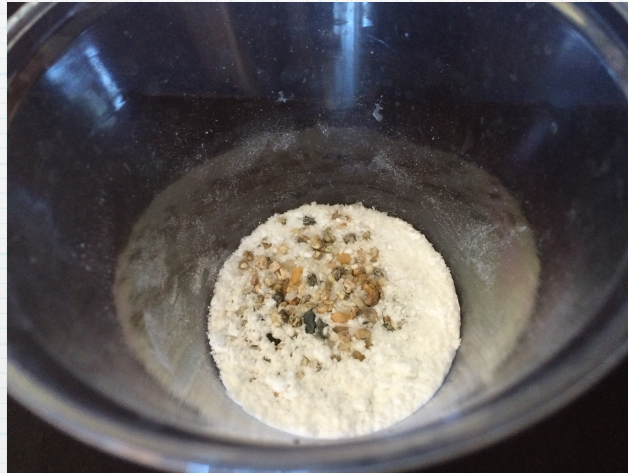
# Solution



a mixture in which one material seems to disappear into another. Water solutions occur when a material (solid) dissolves in water.

# Separating Mixtures

A cup contains gravel, salt and powder.  
How can you separate the three?



1. Add water to the dry mixture.
2. Place an empty cup below the funnel with filter paper inside and place the screen over the funnel.
3. Pour the mixture through the filter over the funnel to capture:

- Gravel in the screen
- Powder in the filter paper &
- Salt solution in the cup



4. Pour some salt solution in an evaporation tray to evaporate the water and leave behind the salt.