

# Separation Methods

Name: \_\_\_\_\_

Section# \_\_\_\_\_

Mixtures are a combination of two or more different types of matter that can be separated by physical changes. In this activity we will be exploring how we can separate the different substances in a mixture by taking advantage of their unique properties. At each station read the directions and complete each station, identify the proper separation methods to be used.

Floatation, Magnetism, Paper Chromatography, Distillation, Evaporation and Filtration

Separation Method: <b>Station 1</b> Mechanical Sorting: <b>Sand and Iron Filings</b>	
What type of separation method would you use:	
Explain how it works	
Does this method separate homogeneous mixtures, heterogeneous mixtures, or both?	

Separation Method : <b>Station 2</b> Mechanical Sorting <b>Marbles and Styrofoam chips</b>	
What type of separation method would you use:	
Explain how it works	
What property would you use to separate this mixture? ____ Size ____ weight ____ magnetism ____ colour ____ density (floatation) ____ solubility	

Separation Method : <b>Station 3</b> Ink on paper	
What type of separation method would you use:	
Explain how it works	
Is ink a mixture of different substances? _____	
How do you know this? _____ _____	
Which markers Ink was affected by the water? _____	
Why?(use PTM) _____	

Separation Method : <b>Station 4</b> Salt and Pepper	
What type of separation method would you use:	
Explain how it works.	
Does this method separate homogeneous mixtures, homogeneous mixtures, or both?	

Separation Method : **Station # 5** Salt Solution

What type of separation method would you use to recover the solute

Explain how it works.

Describe the appearance of solution used \_\_\_\_\_  
\_\_\_\_\_

What type of mixture is this \_\_\_\_\_ homogeneous or \_\_\_\_\_ heterogeneous

What happened to the solvent? \_\_\_\_\_

Describe the appearance of the dish after the solvent disappeared?

Separation Method : **Station # 6** Distillation

Watch the demonstration of simple distillation and answer the following questions.

What type of mixture is this? \_\_\_\_\_ homogeneous or \_\_\_\_\_ heterogeneous

The solution is heated until the solvent changes state and becomes a \_\_\_\_\_. This water vapour is

\_\_\_\_\_ as it travels through the condenser and changes state again turning back into a \_\_\_\_\_ and is

collected in a second flask at the end of the condenser.

What is used to cool the water vapour in the condenser? \_\_\_\_\_

What was left in the original flask? \_\_\_\_\_

Distillation is a method that can be used to separate and recover a \_\_\_\_\_ and a \_\_\_\_\_ from a solution

