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**Student Activity- Separation of Matter?**

On your table you are given two vials. One vial contains a salt water solution. The other contains a heterogeneous mixture of sand and water. Your goal is to separate the solids in these mixtures from the water.

For the salt water vial, you will be given the following equipment to use for separation: a hot plate, an evaporating dish, a watchglass, crucible tongs, hothands and a stirring rod. Come up with a procedure for separating this mixture and write it down. (Confirm with your teacher before you begin).

**PROCEDURE FOR SALT WATER SEPARATION**

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For the sand/ water vial, you will be given the following equipment to use for separation: a Buchner funnel, filter paper, a vacuum filter flask, a stirring rod and a bottle of distilled water. Come up with a procedure for separating this mixture and write it down. (Confirm with your teacher before you begin).

**PROCEDURE FOR SAND/WATER SEPARATION**

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Solutions, or homogeneous mixtures, can be separated by a method similar to what you described in your first procedure. If you had recollected the water using a collection tube, this process would be called **distillation**. Heterogeneous mixtures can be separated by a method similar to what you described in your second procedure. This process is called **filtration**.

Note the symbol **(aq)** after a substance signifies that it is *dissolved in water*.

For example, NaCl(aq) means a salt water solution.