



## Adding Matter

### Getting Ready

Put five pencils in a cup and add five more. There's ten pencils total and the cup is twice as full as it was. Let's do an activity where you can add stuff together and this isn't so!!

### Stuff to Make it Happen (Materials)

2 transparent measuring cups\*      table salt\*      water\*      spoon

### Making it Happen (*Be careful, water spills must be cleaned up right away!*)

1. Fill the first measuring cup to exactly 1/2 cup of table salt. Do your measuring from the side of the cup so you can be exact! Don't pack the salt, keep it loose in the cup.
2. Put exactly 1/2 cup of water into the other measuring cup.
3. Make your predictions now. When you add the salt to the water will you get exactly one cup of salt and water? Maybe you think there will be less than one cup, or perhaps you are sure there will be more than one cup? Make your predictions.
4. Decision time!! Pour all the salt into the water and gently stir them together. Tap the spoon gently on the inside of the cup so nothing is lost when you're done.
5. What happened? Where did some of the stuff go? It's less than a full cup!
6. Wash out and completely dry the cups. Redo the activity, only this time pour the water into the salt and mix it up again! Did the same thing happen again?

### Understanding the Science

When you poured the salt and water together you made a special kind of a **Mixture**. (A mixture is when two or more different kinds of **Matter** are put together.) The salt looked like it disappeared, but it didn't. The water **Dissolved** the salt, breaking the large piece of salt into extremely tiny parts which the water surrounded. (These tiny parts are called **Ions**.) You've seen powdered drink mixes or sugar **Dissolve** when water did the same thing to them. In breaking down the salt into these ions, any air or space between the larger salt particles you measured out was gone! The **Volume** of the mixture was less than one cup due to the spaces between the original salt particles being taken up by the water!

### Let's Check the View! (Questions and Assessments)

1. If you put 1/2 cup of cooking oil with 1/2 cup of water, you get exactly one cup. Why do you think this happens?

