THINGS YOU WILL NEED:

- Tray with small compartments or small dishes
- Water in a small cup or dish
- Vinegar in a small cup or dish
- Eye dropper or straw
- 2 candy pieces made of sugar with a letter or symbol like Skittles, or sugar cubes (have an extra piece for tasting!)
- Paper and pencil/crayon to record your results
- Optional: blue food coloring

When we do science experiments, we use our “Powers of observation.” These are our 5 senses: eyes for looking, ears for hearing, noses for smelling, tongues for tasting, and hands for touching.

In this experiment, we are using our eyes for looking, ears for listening, noses for smelling, tongues for tasting and hands for touching.

We are going to dissolve our candy or sugar in liquids. Dissolve means to break something up into teeny tiny pieces so small that our eyes can’t see it. It will still be sugar, but the pieces of sugar will be very, very small.

CANDY

Candy is made mostly of sugar. If you are using candy for this experiment, read the ingredients on the package. It should have sugar in the ingredients.

- Let’s look at our candy or sugar cube. What does it look like?
- Let’s smell our candy or sugar cube. What does it smell like?
- Let’s touch our candy or sugar cube. What does it feel like?
- Let’s taste a sample of our candy or sugar cube. What does it taste like?

Now let’s take our tray or dishes. If using a candy with a letter or symbol, place each piece face up in a separate compartment or dish. If using a sugar cube, place them in separate compartments or dishes.
WATER
Water is made up of Hydrogen and Oxygen. Water is found all over our planet. Our bodies are made mostly of water.

- Let’s pour our water into a cup. What does it sound like when we pour it?
- Let’s look at our water. What does it look like?
- Let’s smell our water. What does it smell like?

Because water is clear and hard to tell apart from our vinegar, at this point you can add a drop of blue food coloring to the water.

Now let’s take our eye dropper or straw*. Suck up water with your eye dropper or straw. Choose one candy or sugar cube, squirt drops one at a time, counting the drops as you go. Keep counting until the letter is dissolved on your candy or the sugar cube is dissolved. Write down the number of drops!

*You can use a straw as a dropper by putting it in your liquid and covering the other end with one finger. It will hold the liquid in until you take your finger off.

VINEGAR
For this experiment, we will use a small amount of vinegar.

- Let’s pour our vinegar into a cup. What does it sound like when we pour it?
- Let’s look at our vinegar. What does it look like?
- Let’s smell our vinegar. What does it smell like?

Vinegar is made up mostly of water. Do you think it looks like water? Does it sound like water when you pour it? There is a small amount of something called acetic acid in vinegar which is why it doesn’t smell like water.

Now let’s take our eye dropper or straw. Suck up the vinegar with your eye dropper or straw. On the other candy or sugar cube, squirt drops one at a time, counting the drops as you go. Keep counting until the letter is dissolved on your candy or the sugar cube is dissolved. Write down your number!

Compare the two numbers: are they the same? Is one bigger than the other? Which one? The one that took fewer drops is the one that was better at dissolving the sugar. Which do you think is better at dissolving sugar? Is it water or acid?

The answer is water. Water molecules and sugar molecules like each other, so the water is better at pulling the sugar apart.

If you used Skittles or M&Ms, or something similar, don’t forget to observe what happens to the letter on your candy!