Drops of Water Activity:

Prepare 4 baggies or containers of the “mystery substances” and label them A, B, C, D.

General idea of the activity is for students to determine what the substances in each bag/container are by using the observable properties. They will also test the solubility of each substance with drops of water.

Students will need: hand lens, paper plate divided into sections labeled A, B,C,D for the spoonful of each substance and for testing the drops of water, pipette/dropper, container of water

- An example set of substances: sugar, salt, baking soda, baby powder (these are all white, so students have to utilize other properties to determine what the mystery substance is)
- Other substances you could use: flour, baking powder, drink mix (like kool-aid, lemonade, etc), sand, corn starch, shake/drink powder…
- You could compare types of salt: iodized, sea, kosher, garlic

You could pose a scenario like: Yesterday, I wanted to bake some cupcakes for a party. As I was gathering my ingredients from my pantry, I realized four bags had lost their labels. Since we’ve been investigating properties of matter, I thought maybe you could help me determine and label each of my “mystery ingredients”. (You’d want to be sure that each of your ingredients could be found in the kitchen)

Drops of Water

Take a spoonful of the substance in each container and place them on a paper plate.

Use your senses to make observations about the mystery substance.

Record your observations.

What do you think it is?

Then add drops of water to each substance.

Observe and record what happens.

How did the properties of the substances help you determine what the mystery substances were?