



Water and Light

Hi Kids! I'm Kelvin the Pipe Protector!

We put a lot of things in our water (and down our drains). Things like toilet paper, or food scraps, or shampoo, or toothpaste. And even though we never see that stuff again after they go down the drain, we probably KNOW that they do not disappear.

But sometimes, we put things in water and they actually do seem to disappear. Like when we add salt to our water before boiling it. What do we think happens to all this stuff? And how do we tell the difference between water that is clean and water that has stuff in it?

It turns out, we have lots of different tools to help us tell the difference. Light is one tool we use all the time across our system. We use light to inspect our pipes underground. We also use light to tell how dirty our water is.

In this activity, we will be using light, just like our scientists and engineers, to help us see what happens to all that stuff we put in our water, even if it looks like it disappears.

► **FIRST,** make sure you have all of the items you will need for this activity:



Two clear plastic or glass containers, (lids optional). Recycled food containers work great! You can even use a simple plastic cup.



Salt. You can also use sugar, a sugar substitute, baking soda, or really any powder that will “disappear” when we put it in water. Salt is best though.



Something to stir with. This might be a spoon, or a straw, or a coffee stirrer, or a stick.



A light source. This could be a small flashlight, a cat toy laser, or the flashlight app on a cell phone.



Water.



Pen, colored pencils, crayons, or markers for sketching.



NEXT, prepare your materials for the activity:



Prepare your containers.

Wash them and remove enough of the label so that you can see clearly into them.



Fill your containers.

Fill half way with water.



Gather your salt (or other powder) and your light source.



Gather your containers, stirring tool, and your sketching supplies together. Some towels for cleaning up are nice to have, too.