Edible Aquifer

green or red food coloring
vanilla ice cream
club soda or sprite
different size chocolate chips
cake decoration sprinkles and sugars
drinking straws
spoons
clear cups

1. Fill a small, clear cup about one-third of the way with your **chocolate chips**. This represents all of the **sand, gravel, and rocks** in the aquifer.

2. Cover the “gravel, sand, and rock layer” with **clear soda**. This is our **groundwater**. See how the "water" fills in the spaces around the "gravel, sand, and rock."

3. Spread a **layer of ice cream** over the chips and soda. This layer of our aquifer is called the **confining layer**, which is usually clay or dense rock. The water is confined below this layer. Today our confining layer is going to consist of ice cream.

4. Add another layer of **“gravel and sand,” chocolate chips.**

5. The next layer is our **porous, top layer of soil**. **Decorating sprinkles and some colored sugar** can be used to represent this layer.

6. Add some **food coloring** to a small amount of soda. The coloring represents **pollution.** Can you think of some pollutants that can affect groundwater? Watch what happens when we pour it on the land.

7. Using your **straw, drill a well** (push the straw down toward the bottom of the cup) into the center of your aquifer. Slowly begin to **pump the well by sucking on the straw.** Watch as the **water table goes down**. Also, watch and see how the **contaminants can get sucked into the well area** and end up in the groundwater by eventually leaking through the confining layer.

8. Pretend it's raining and **recharge the aquifer by adding more soda.** A real aquifer takes a lot longer to recharge, this is just an example to speed up the process and give you a little more soda to drink

9. Now it's time to eat up your aquifer!