

Edible Aquifer

MATERIALS:

- Blue or red Food Coloring = pollution
- Vanilla Ice Cream = sub soil layer
- Clear Soda (i.e. Sprite) = precipitation, rain event
- Crushed Ice = bedrock layer
- Colored Cake Sprinkles or Sugars = topsoil layer
- Drinking Straw = well pump
- Clear Glass or Cup = aquifer boundary



DIRECTIONS:

1. Fill a cup or glass 1/3 full with crushed ice (*represents Gravel & Soil).
2. Add soda to just cover ice (*represents ground water.)
3. Add a layer of ice cream to serve as a “**confining layer**” over the water-filled aquifer.
4. Add more crushed ice (*gravel & soil) on top of the confining layer.
5. Colored sugar & sprinkles represent different types of soils and are added to the top to create the porous top layer (*top soil).
6. Add several drops of food coloring (*represents pollutants or contaminants.)
7. Using your straw, drill a well into the center of the aquifer.
8. Begin to pump the well by drinking through the straw. Watch the water table decline. What happens to the pollutant contaminants?
9. Note how the contaminants can get sucked into the well area and end up in the ground water by leaking through the confining layer.
10. Recharge your aquifer by adding more soda which represents a rain shower.
11. Enjoy eating your edible aquifer!