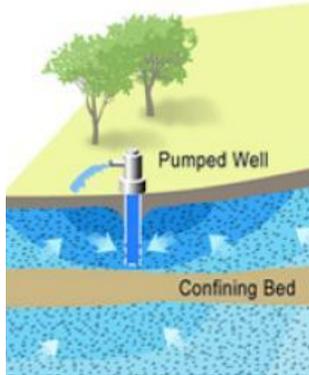




EDIBLE AQUIFER

Learn about aquifers and ground contaminants.

Materials



- Clear plastic cups
- Ice cream scoop
- Spoons
- Drinking Straws
- Food coloring
- Clear soda
- Vanilla ice cream or fruity sorbet
- Small gummy bears, chocolate chips, crushed cookies, cereal, or crushed ice
- Variety of sprinkles and sugars

Procedure

- Fill a plastic cup 1/3 full with gummy bears, chocolate chips, or crushed ice. This is your gravel.
- Add enough soda to just cover the candy or ice. This is the water.
- Add a layer of ice cream over the candy to seal in the soda. This is your confining layer.
- Add more candy or ice on top.
- Sprinkle colored sugar or sprinkles over the top. This is your soil.
- Drop food coloring in your remaining soda. The food coloring is contamination. Pour it over the top and observe. Does it mix with the soda beneath the confining layer?
- Using a drinking straw, drill a well through the center of your aquifer down to the bottom. What happened to the contaminants and the bottom layer of soda?
- Pump the well by slowly sucking up the soda through the straw. What happened?
- Slowly pour more soda on top. This is your rainfall, which refills the aquifer over time. Is it the same as it was before drilling the well?

Results

The contaminants polluted the groundwater when the well was drilled.

Why?

The confining layer helps protect the groundwater from contaminants and pollution on the earth's surface. Once a well is drilled to pump out the aquifer's water, contaminants can slip through the hole if the well is improperly maintained and spread throughout the groundwater. When rain replenishes the aquifer, it drains from the ground and can wash contaminants down with it.