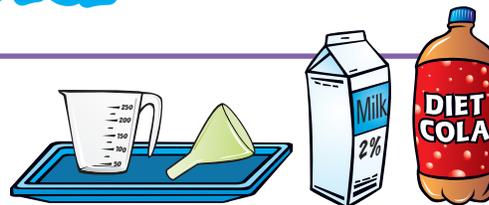


What you need:

- Bottle of diet cola
- Milk, 2%, 250mL (1 cup)
- Measuring cup
- Funnel
- Tray



What you do:

Step 1: Place the cola bottle on the tray and remove the label.

Step 2: Open the cola bottle and pour out some of the liquid into the measuring cup. Take note of the amount.

Step 3: Pour out the cola into the sink, and pour the same amount of milk into the cup.

Step 4: Place the funnel at the bottle opening. Slowly pour the milk into the funnel.

Step 5: Cap the bottle to close it. Observe your experiment every hour or so. What happens to the cola?



What's going on:

Adding milk to the cola causes a chemical reaction! The proteins in the milk react with phosphoric acid molecules in the cola by attaching to them. This attachment makes the molecules denser, and they sink to the bottom of the bottle. The clear, less dense liquid floats to the top, giving you clear cola!

Now try this:

Phosphoric acid is very acidic. Most colas use just a small amount of it in their recipes. However, there is enough phosphoric acid in colas to cause chemical reactions like in this experiment. Phosphoric acid can also be used to remove rust, tarnish, and burned bits on pots and pans. The length of time it takes for these chemical reactions vary. Try placing a dirty penny in a glass of cola. How long do you think it will take for the cola to clean the penny? Make your hypothesis and test it out!