

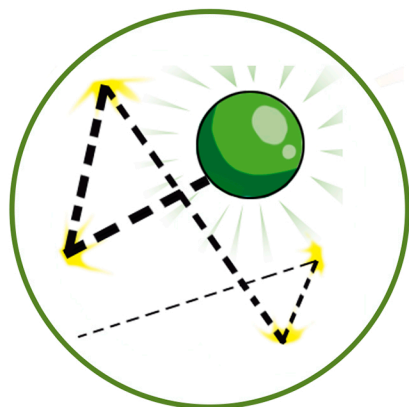
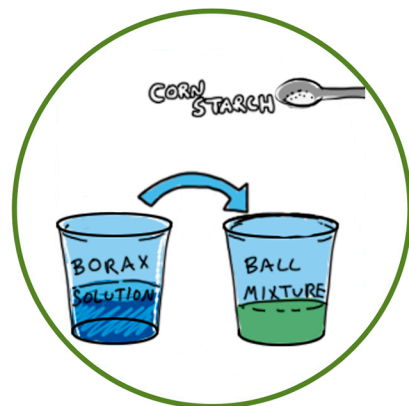
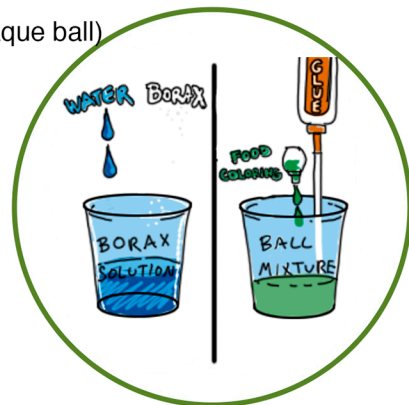
EXPERIMENT WHILE MAKING A BOUNCY BALL!

YOU WILL NEED:

- Borax (found in laundry section)
- warm water
- corn starch
- glue (clear glue makes a see transparent ball and white glue makes an opaque ball)
- 2 small mixing cups
- a stirring stick (plastic spoon)
- food coloring (optional)

WHAT TO DO

1. Label one cup 'Borax Solution' and the other cup 'Ball Mixture'.
2. Pour 4 ounces (120ml) of warm water into the cup labeled 'Borax Solution' and 1 teaspoon of the borax powder into the cup. Stir the mixture to dissolve the borax.
3. Pour 1 tablespoon of glue into the cup labeled 'Ball Mixture'. Add 3-4 drops of food coloring, if desired.
4. Add 1/2 teaspoon of the borax solution you just made and 1 tablespoon of cornstarch to the glue. Do not stir.
5. Allow the ingredients to interact on their own for 10-15 seconds and then stir them together to fully mix.
6. Once the mixture becomes impossible to stir, take it out of the cup and start molding the ball with your hands. The ball will start out sticky and messy, but will solidify as you knead it. Once the ball is less sticky, continue rolling between your hands until it is smooth and round!



HOW DOES IT WORK?

This activity demonstrates an interesting chemical reaction, primarily between the borax and the glue. The borax acts as a “cross-linker” to the polymer molecules in the glue – basically it creates chains of molecules that stay together when you pick them up. The cornstarch helps to bind the molecules together so that they hold their shape better.

MAKE IT AN EXPERIMENT:

You can turn this activity into a true experiment by adjusting the amount of borax, glue, and cornstarch to get the highest bounce. You can also experiment to discover the best way to get the bouncy ball to keep its bounce over time. Have fun!