DIY Bouncy Ball Recipe

FUN FACT

Bini the Bunny holds the world record for the most basketball slam dunks in one minute by a rabbit. Bini made 7 dunks in just 60 seconds! Now that's one bouncy bunny!

MATERIALS

Ball mixture
- Glue
- Cornstarch
- Food coloring
- Mixing bowl
- Measuring spoons

Borax Bath
- Borax
- Warm water
- Mixing bowl

DIFFICULTY

POLYMERS

Polymers are large molecules made from bonded (chemically linked) groups of similar atoms. The word polymer is Greek for "many parts." Polymers are made of many monomers (Greek for "one part"). A polymer is a chain of linked monomers. Polymers can be found all around us: bicycle tires, plastic plates, strands of our hair, and even super duper bouncy balls!

Why did the bucket bounce?

*Answer on the next page

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DIY SCIENCE TIME

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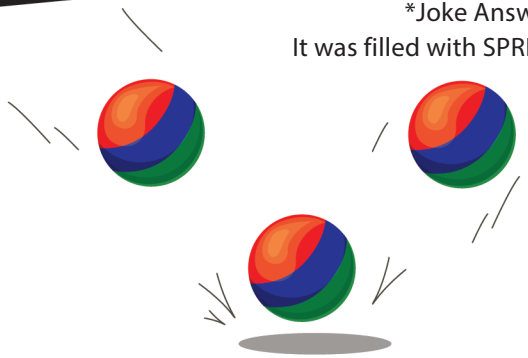
*Joke Answer -
It was filled with SPRING water!



DIY Bouncy Ball Recipe

EXPERIMENT

Step 1: Create a Borax bath by mixing together 2 Tbsp Borax into 1 cup of warm water in a mixing bowl.

Step 2: Create your ball mixture by mixing together 1 Tbsp cornstarch with 2 Tbsp of glue. If you want your ball to be colored, add food coloring and mix together in another bowl.

Step 3: Carefully drizzle your ball mixture into your Borax bath. Allow it to sit in the bath for 15-20 seconds. Stir and make sure that all parts of the mixture have been activated by the Borax bath (should feel firm).

Step 4: Remove your ball mixture from the Borax bath and form into a ball shape. A measuring spoon can be used as a guide to help shape your ball. Place your ball back into the Borax bath for 60 seconds.

Step 5: Be sure to wash your hands after handling the Borax bath.

Step 6: Try bouncing and testing your ball!

WHY IT WORKS

You are seeing a chemical reaction right before your eyes during this experiment. The glue is a polymer and the Borax links together the molecule chains of the glue. The cornstarch helps to thicken the mixture, allowing it to be formed and hold a ball-like shape. Although you can't see the molecules linking in the chemical reaction, we know a chemical reaction has taken place because our ingredients have combined to create a new item!

EXTEND YOUR LEARNING

- What happens if you changed the amount of cornstarch or glue used in the recipe? Could you make a larger ball?
- Does your bouncy ball behave differently if chilled in the freezer?
- Could you separate your recipe and use different food coloring to make a multi-colored ball?

WORKFORCE CONNECTION

A geneticist is a biologist who studies genetics, the science of genes, heredity, and variation of organisms. The genes they study are made of polymers called DNA. Two long strands of these polymers form the familiar double helix shape of DNA. The monomers that make up DNA strands are called nucleotides. Geneticists study the genes of organisms like human beings, animals, crops and bacteria.