

BOUNCIEST BALL OF ALL

CLAYTON SMITHERS – K

SCIENCE FAIR 2023



QUESTION

- **HOW CAN YOU MAKE THE BOUNCIEST BOUNCY BALL?**

HYPOTHESIS/PREDICTION

- **THE MORE SQUISHY THE BALL, THE MORE BOUNCY IT WILL BE**

RESOURCES

- **RECIPE WITHOUT BORAX**

- **[HTTPS://WWW.WIKIHOW.COM/MAKE-A-BOUNCY-BALL-\(WITHOUT-BORAX\)](https://www.wikihow.com/make-a-bouncy-ball-(without-borax))**

- **RECIPE WITH BORAX**

- **[HTTPS://WWW.THE36THAVENUE.COM/HOW-TO-MAKE-A-BOUNCY-BALL/](https://www.the36thavenue.com/how-to-make-a-bouncy-ball/)**

- **SIMILAR EXPERIMENT IN YOU TUBE**

- **[HTTPS://WWW.YOUTUBE.COM/WATCH?V=KA9209L2ZLI](https://www.youtube.com/watch?v=KA9209L2ZLI)**

PROCEDURE

- **FOLLOW THE RECIPE**
- **GET THE MEASURING YARD STICK TO TEST THE BOUNCE**
 - **RELEASE THE BALL ON TOP OF THE MEASURING STICK**
 - **TRY TO MEASURE THE BOUNCE**

RECIPE 1 – WITHOUT BORAX

• INGREDIENT

- 2 TABLESPOONS (15 G) OF CORNSTARCH
- $\frac{1}{8}$ CUP (30 ML) OF WATER
- 1 DROP OF FOOD COLORING

• INSTRUCTIONS

- PUT 2 TABLESPOONS (15 G) OF CORNSTARCH INTO A PLASTIC CONTAINER.
- ADD $\frac{1}{8}$ CUP (30 ML) OF WATER TO THE CORNSTARCH AND MIX WELL.
- MIX IN 1 DROP OF FOOD COLORING.
- MICROWAVE YOUR MIXTURE FOR 30 SECONDS AND LET IT COOL FOR 2 MINUTES BEFORE TOUCHING.
- FORM YOUR MIXTURE INTO A BALL.
- LET YOUR BOUNCY BALL DRY FOR AT LEAST 10 HOURS.



PICTURES



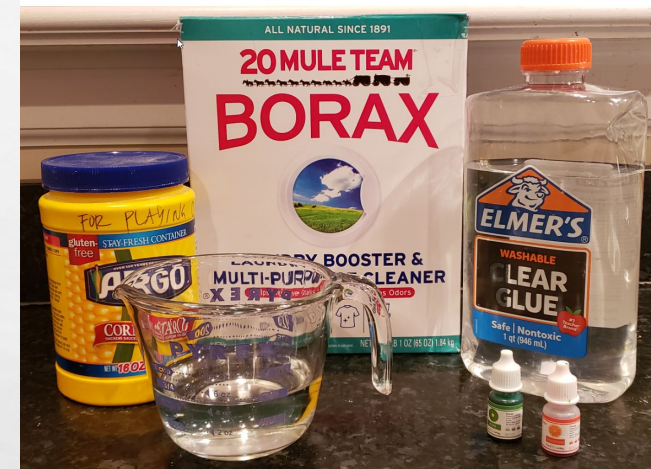
RECIPE 2 – WITH BORAX

INGREDIENT

- **½ CUP WARM WATER**
- **1 TB BORAX**
- **1 TB OF CORNSTARCH**
- **2 TB WHITE LIQUID GLUE**
- **FOOD COLORING**

INSTRUCTIONS

- **MIX THE WARM WATER AND THE BORAX IN A CUP**
- **MIX THE GLUE, CORNSTARCH, AND FOOD COLORING, IN ANOTHER CUP**
- **POUR THE GLUE MIXTURE INTO THE WATER-BORAX CUP.**
- **TAKE OUT THE GLUE MIXTURE, USING A FORK, AFTER 10 SECONDS**
- **SQUISH THE GLUE MIXTURE WITH YOUR HANDS AND DIP IT BACK IN THE WATER, IF IT IS STILL STICKY**
- **ROLL THE MIXTURE IN YOUR HANDS TO MAKE A BALL. (THE MORE YOU HANDLE THE MIXTURE THE FIRMER IT WILL BECOME.)**



PICTURES



3 TRIALS



BOUNCE – 3 TRIALS / AVERAGE

	Without Borax	With Borax
1	Green – it broke before we can bounce	Lime green – 11 inches
2	Red – 6.5 inches	Pink – 14 inches
3	Blue – 12 inches	Brown – 13 inches
Average	6.17 inches	12.67 inches

OBSERVATIONS

Without Borax (Team "PJ Mask")	With Borax (Team "Pete The Cat")
Only 3 ingredients, easy to remember	Harder to make, more dishes to wash
They are still round, even after a day	Balls flatten at the bottom part after a day, but it can be round again by rolling it in your hands
Its nice to hold when the ball is warm, I like making them	It is fun to roll the ball, though it is sticky
Sometimes they break	They last longer
Squishy	Soft, not so squishy

CONCLUSIONS

- **BEING SQUISHY DOES NOT MAKE THE BOUNCIEST BALL**
- **BALLS WITH BORAX MAKE THE BOUNCIEST BALLS**
- **BORAX AND GLUE ARE THE MAGIC INGREDIENTS. WITHOUT THEM, THE TWO RECIPES HAVE THE SAME INGREDIENTS.**
- **EACH TYPE HAS GOOD THINGS AND BAD THINGS IN THEM. BOTH OF THEM BOUNCE, SO IT IS REALLY UP TO YOU TO CHOOSE WHICH IS BEST FOR YOU.**