

QUESTION

Will increasing the amount of baking soda make the rocket go higher?

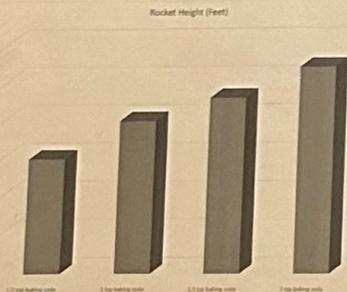
HYPOTHESIS

I THINK MORE BAKING SODA WILL MAKE THE ROCKET GO HIGHER

MATERIALS

- WATER BOTTLE
- PENCILS
- DUCT TAPE
- CORK
- MEASURING CUP
- 1/2 TEASPOON SCOOP
- FUNNEL
- VINEGAR
- BAKING SODA
- PAPER TOWEL

DATA



Pouring vinegar into bottle



Making baking soda pouch



Launch



Height of Launch 2



Height of Launch 4

PROCEDURE

1. TAKE AN EMPTY WATER BOTTLE AND TAPE THREE PENCILS INTO A TRIANGULAR SHAPE TO THE SIDES OF THE BOTTLE. THE ERASERS SHOULD EXTEND A FEW INCHES PAST THE TOP OF THE BOTTLE.
2. USE THE FUNNEL TO POUR 1/2 CUP OF VINEGAR INTO THE BOTTLE.

3. USE 1/2 TEASPOON SCOOP OF BAKING SODA AND PLACE IT ON A STRIP OF PAPER TOWEL ABOUT 5 INCHES LONG BY 2 INCHES WIDE. FOLD THE LONG SIDE OF THE PAPER TOWEL OVER THE BAKING SODA AND TAPE THE SEAM. FOLD OVER ONE OF THE SHORT ENDS OF THE PAPER TOWEL STRIP AND TAPE THE SEAM. THIS SHOULD CREATE A POUCH ABOUT 4 INCHES LONG.

4. THREAD THE BAKING SODA POUCH THROUGH THE MOUTH OF THE BOTTLE BUT DO NOT LET GO! ALLOW ABOUT ONE INCH OF THE PAPER TOWEL TO HANG OUTSIDE THE MOUTH OF THE BOTTLE.
5. CAREFULLY PLACE THE CORK INTO THE MOUTH OF THE WATER BOTTLE UNTIL IT IS TIGHT. IF THE CORK IS LOOSE IT WILL HELP TO WRAP SOME DUCT TAPE AROUND THE CORK TO MAKE IT A TIGHTER FIT.

6. TAKE THE BOTTLE ROCKET OUTSIDE TO A FLAT SURFACE.
7. TURN THE BOTTLE ROCKET UPSIDE DOWN AND SHAKE IT UP.
8. GENTLY PLACE THE BOTTLE ROCKET DOWN ONTO ITS LEGS AND MOVE AWAY!
9. IT COULD TAKE ABOUT 10 TO 20 SECONDS TO LAUNCH.

VARIABLES

Independent: Amount of Baking Soda
Dependent: Height of the rocket

RESULTS

	Vinegar	Baking Soda	Estimated Height
Launch 1	1/2 cup	1/2 tsp	15 feet
Launch 2	1/2 cup	1 tsp	20 feet
Launch 3	1/2 cup	1.5 tsp	23 feet
Launch 4	1/2 cup	2 tsp	27 feet

CONCLUSION

The bigger the chemical reaction, the more pressure is produced causing the rocket to fly higher.

APPLICATION

This experiment can be done as a competition with your friends or just for family fun.

REFERENCES

YouTube
Greenkidcrafts.com