



Build Your Own Rocket

WHAT DO WE NEED?

AN EMPTY PLASTIC BOTTLE (500ML)	A CORK THAT FITS TIGHTLY INTO THE BOTTLE
WHITE VINEGAR	STICKY TAPE
BICARBONATE OF SODA	A PIECE OF KITCHEN ROLL
STRAWS FOR LEGS	A SPOON

STEPS:

1. Attach four straws to an upside down bottle using tape so that the top stands 2 cm above the ground and is stable. Decorate the rocket.
2. Cut one piece of kitchen roll.
3. For a 500ml bottle, cut the kitchen roll in half and put one spoon of baking soda in the center, roll and twist the ends to keep the soda in place. For a 1L bottle, use a full sheet and two spoonfuls of soda.
4. Fill the bottle with vinegar to 1/4 full and secure the top.
5. Take the setup outside and test its stability on level ground.
6. Stand 5 meters back when launching the rocket as it will shoot up quickly.
7. One person will act as the launcher, remove the top, insert the baking soda into the vinegar, put the cork in, turn the bottle over and place it on the launch pad. Step back 5 meters and watch the launch.





FOLLOW THIS TO BE SAFE

Important Safety Reminder for Adults: No special gear or knowledge required with adult supervision and following instructions. Safety reminders to assist adults during planning and conducting the activity. Read instructions fully before starting.

- Stand at least 5 meters (5 adult paces) away during rocket launch.
- Wash hands after handling vinegar.
- Replace vinegar cap promptly.
- If vinegar sprays during launch and lands on clothes, wash immediately with water.
- Wash the launchpad with water after launch.

IF THE ROCKET DIDN'T TAKE OFF... WHAT YOU SHOULD DO?

Rocket Safety: Do not approach if it fails to launch. Wait, pressure may be building. If still inactive after a few minutes, cover bottle with cloth and remove cork from a safe distance over a drain. Possible causes: building pressure, loose cork, tightly pushed cork, old vinegar, tightly wrapped baking soda, insufficient vinegar/baking soda, or combination.

Reasons for Rocket Failure:

- Loose cork (allowed gas escape),
- Tightly pushed cork,
- Old vinegar (lacks acidity),
- Tightly wrapped baking soda (failed to open),
- Insufficient vinegar/baking soda,
- Or a combination of these.

