



by Danielle Wood

What's cooler than an explosion? Not much! This simple science experiment lets kids build their own pop rocket, with help from a basic chemical reaction. Have an adult on hand to make sure you keep kids safe. Then put on your safety goggles and let her rip!

Materials:

Empty 35-mm film canister with a snugly fitting lid
Alka-Seltzer tablets (or other fizzy antacid tablets)
Goggles, sunglasses, or other eye protection
Water
Paper (optional)

Directions:

1. Whatever you do, don't try this experiment inside—your rocket will shoot right into your ceiling! Instead, pick a level space outdoors. Don't forget to put on safety glasses or other eye protection.
2. Ideally, your film canister should be one with a cap that fits inside the rim, not over the outside of the rim. This makes the experiment work much better. But whatever kind you've got, open it up and fill it between $\frac{1}{4}$ and $\frac{1}{3}$ full of water.
3. This next step needs to happen very quickly (in just a few seconds!) so get your antacid tablet unwrapped and ready. Break it in half and put the film canister lid right next to it.
4. Drop the half tablet into the film canister and quickly snap on the lid. Make sure it's tight. Then place the rocket with the lid down on a level, firm surface.
5. Stand back and watch it rocket to the sky!

Once your experiment is over, talk to your child about what happened. Explain that sometimes when

you combine two materials (like the alka seltzer and the water) you get a chemical reaction. In this case, a gas is created and lots of bubbles form. Since the bubbles of gas have no where to go in order to escape, they push against the sides of the canister, pushing against the lid until there's so much pressure, the lid pops off!

Ask your child what she thinks would happen if you tweaked the amount of water you put in the film canister or added more or less antacid tablet. Try adding some paper decorations to the canister, to make it look more like a rocket. Ask her if she thinks this will weigh it down or cause it to fly differently. Then try it out and see if her predictions are correct!