Lemon Juice Rockets

Materials

- One empty 2-litre soft drink bottle
- One cork that fits tightly into the top of the bottle (the cork may require trimming with a sharp knife)
- Paper towels
- Toilet paper
- ½ cup lemon juice
- Funnel
- Water
- 2 teaspoonfuls of bicarbonate of soda
- Masking tape
- Crepe paper

Method

1. This experiment should be completed outdoors, or in a wet area.
2. Attach strips of crepe paper to the cork with masking tape. This will make the cork appear more like a rocket, as well as make it more visible as it flies through the air.
3. Pour the lemon juice into the bottle using a funnel.
4. Continue to fill the bottle with water, until it is about half-full.
5. Use toilet paper to wrap two teaspoonfuls of bicarbonate of soda into a long, thin sachet. Think of the concept of a Flake™ chocolate bar on a smaller scale, which is twisted at either end to secure. This needs to be able to fit fairly easily and quickly into the bottle.
6. Have the cork ready, quickly drop the sachet into the bottle, secure the cork, and shake gently to assist the toilet paper in breaking down.
7. Place the bottle on the ground, and allow the air pressure to mount. After a few moments the cork should fly out of the bottle … and the rocket is launched!

Note: Lemon juice is an acid, while bicarbonate of soda is a base. When the two elements mix together they produce carbon dioxide. Other acids may be used in place of lemon juice — household vinegar also works well.