

## An air-powered straw rocket

### Demonstrating Newton's Third Law

#### You will need....

- ✓ a 500 ml flexible plastic bottle
- ✓ a light plastic tube
- ✓ a drinking straw that can fit loosely over the plastic tube
- ✓ a small punch or auger
- ✓ a glue gun

#### Background:

Compressed air can be used to propel a straw rocket.

#### Follow these steps:

1. Bore a hole in the cap of the bottle just large enough to hold the plastic tube.
2. Insert the tube in the hole and attach it with hot glue.
3. Seal the straw at one end using a little hot glue or adhesive putty.
4. Place the straw on the plastic tube as shown in the picture.
5. Squeeze the bottle sharply.

#### So what happened?

When the bottle is squeezed sharply the straw rocket takes off.

#### What next?

1. Fins of adhesive tape can be fitted to the straw.
2. Investigate the relationship between the range and the mass of the 'rocket' — which can be weighted with adhesive putty.

