

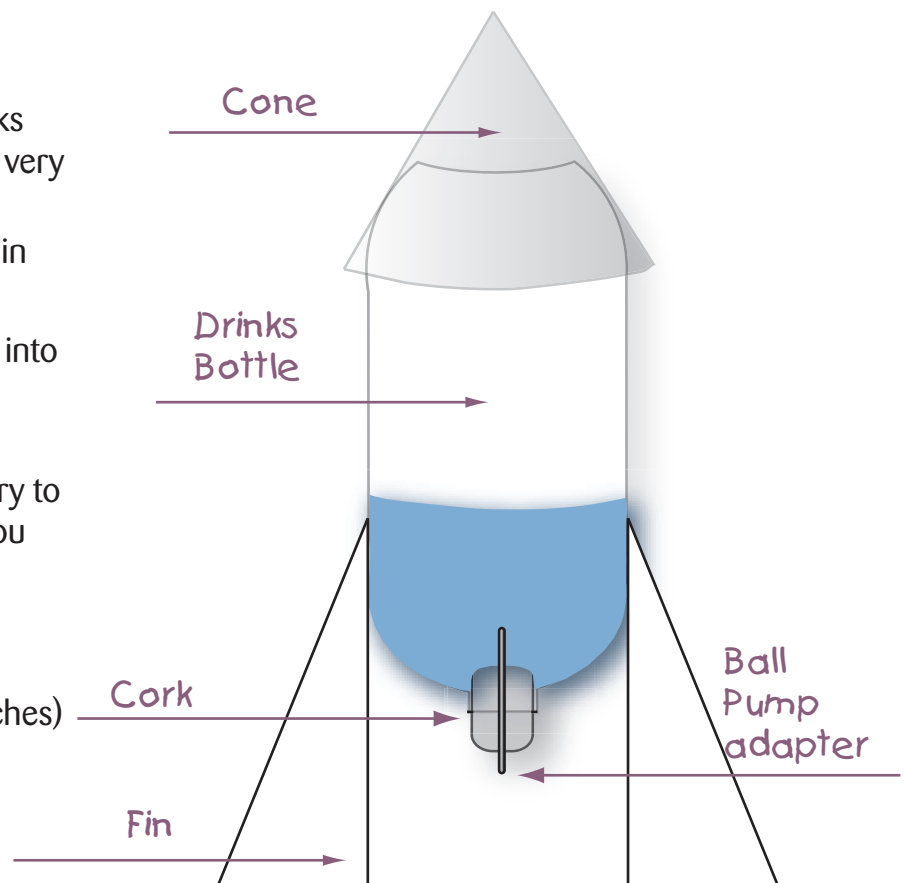


## Discover with Lucy

### How to make a Rocket

#### You will need:

- a grown up helper
- An empty, 2-litre, plastic drinks bottle. (For safety reasons it's very important that this is plastic)
- Cardboard - both thick and thin
- Scissors
- A large cork which fits snugly into your bottle
- A ball pump adaptor needle
- A bicycle or car tyre pump - try to get one with a long tube so you don't get too wet!
- Sticky tape
- A supply of water (4 litres of water should give you 6 launches)



#### What to do:

- Cut-out 3 fins from the thick cardboard using the template below.
- Cut out a cone from the thinner cardboard using the template below.
- Bend each tab on a fin in opposite directions and use these tabs to stick the fins onto your rocket using sticky tape. Make sure the fins extend at least 6cm below the nozzle and the rocket sits as level as possible.
- Wrap the cone template into a cone shape, and secure with tape. Fix it to the top of your rocket using lots of sticky tape.
- Ask your grown up to push the pump needle through the length of your cork.

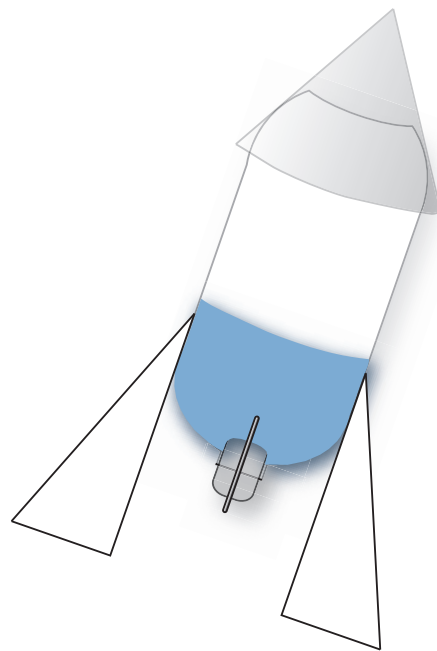


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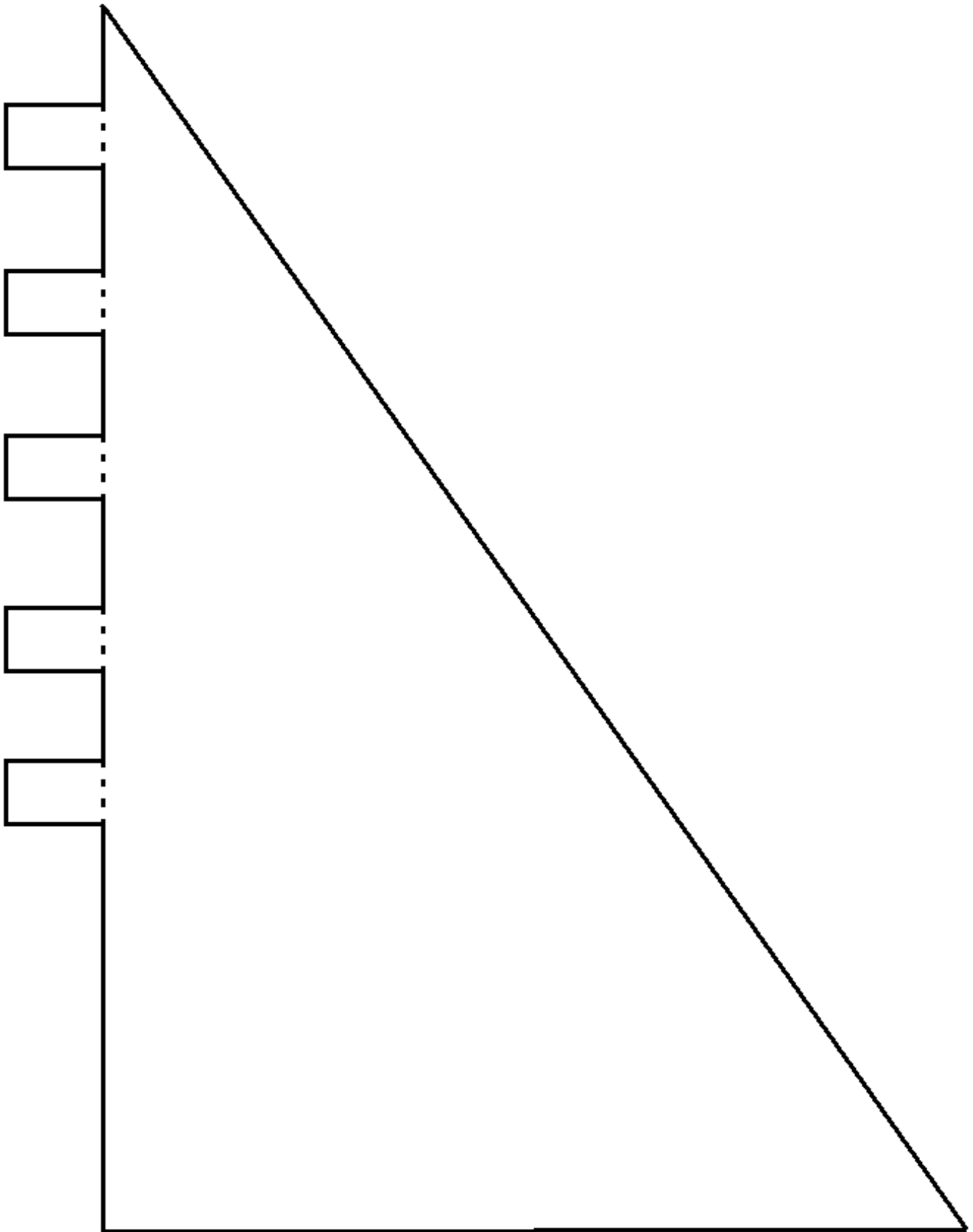
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### How to launch your rocket:

- With your grown up helper, take your rocket and water supply to a wide open space away from trees and cars.
- Attach your ball pump needle to your pump.
- Fill the rocket approx. 1/3 full with your water.
- Push the cork into the rocket so that your rocket is now attached to the pump.
- Place the whole rocket on the ground pointing upwards and as level as possible. If the rocket is tilting slightly, make sure it is tilting away from you and other people.
- Pump the air pump slowly.
- Once the pressure inside the rocket is great enough to force out the cork, you'll have lift off!



Fin Template  
Cut out 3 of these



Cone Template  
Cut out 1 of these

