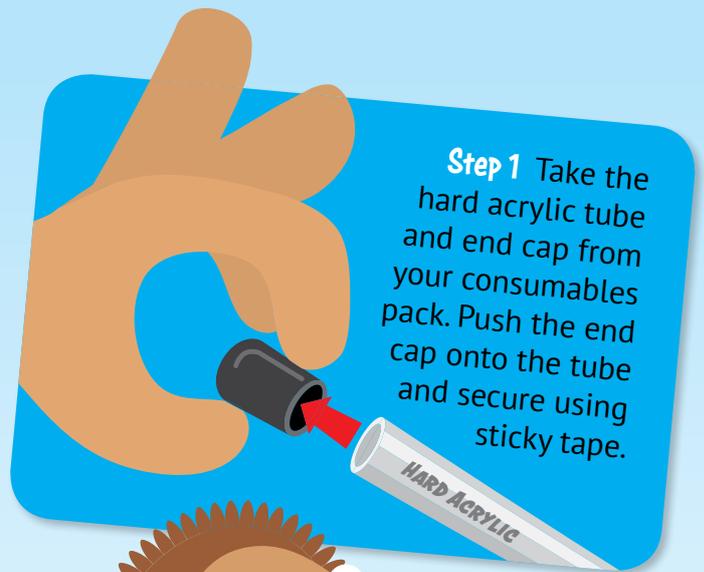


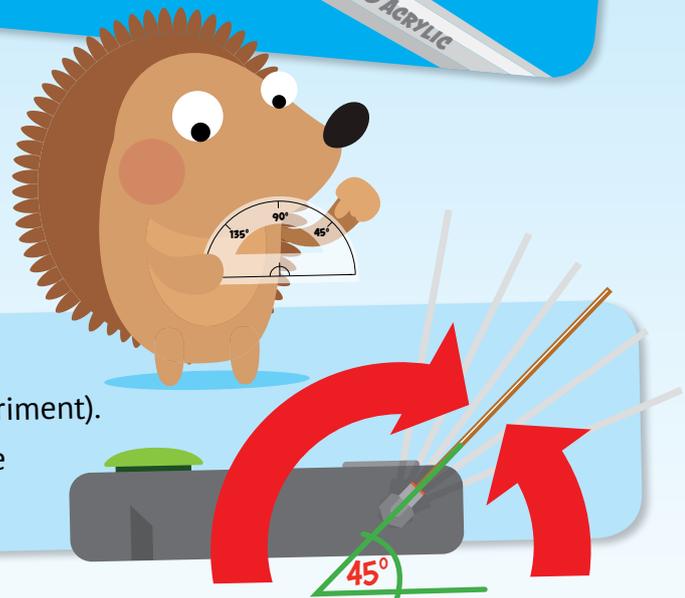
# PAPER AEROPLANE CHALLENGE



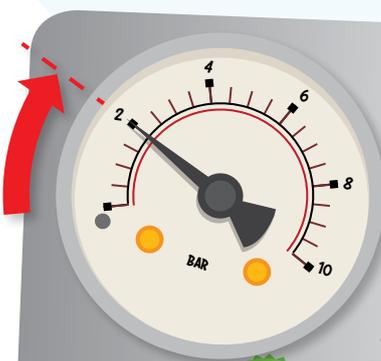
**Step 2** Using one piece of A4 paper design and make a paper aeroplane and stick it securely to the acrylic tube.



**Step 1** Take the hard acrylic tube and end cap from your consumables pack. Push the end cap onto the tube and secure using sticky tape.



**Step 3** Set up the launch system and pump.  
(There is no need to attach the tether lines for this experiment).  
Using a protractor, set the angle of the brass launch tube to 45 degrees from the floor.



**Step 4** Pump up the launch box to 2 bar and slide your paper aeroplane onto the brass launch tube.  
Now use the launch system to fire your paper aeroplane into the air and measure how far each one has travelled.  
Compete against other members of the class to see which aeroplane goes the furthest.



# WHOOSH!

Things to think about...

What forces are acting on the paper aeroplane?

How does the shape of the aeroplane affect the distance it travels?

How can you modify your design to make it go further?

**SAFETY WARNING!** Always remember that everyone should stand well back, behind the aeroplanes, when they are being launched.