



## Sports Day

### What is this activity about?

To investigate how things travel through the air

### What you need:

- a ball
- lots of paper
- a ruler to help you make neat folds



### How is it linked to PK Porthcurno?



You may have seen this newspaper article in our Easter PK Play @ Home feature online, it was about the sports days that were held at the Cable and Wireless Training College here at Porthcurno.

If you did, we hope you enjoyed trying out the races, and shared a picture with us?

There were lots of field events- in this activity you can try out a throwing event, but we're not going to ask you to build and throw a javelin!

# Your Outdoor Challenge

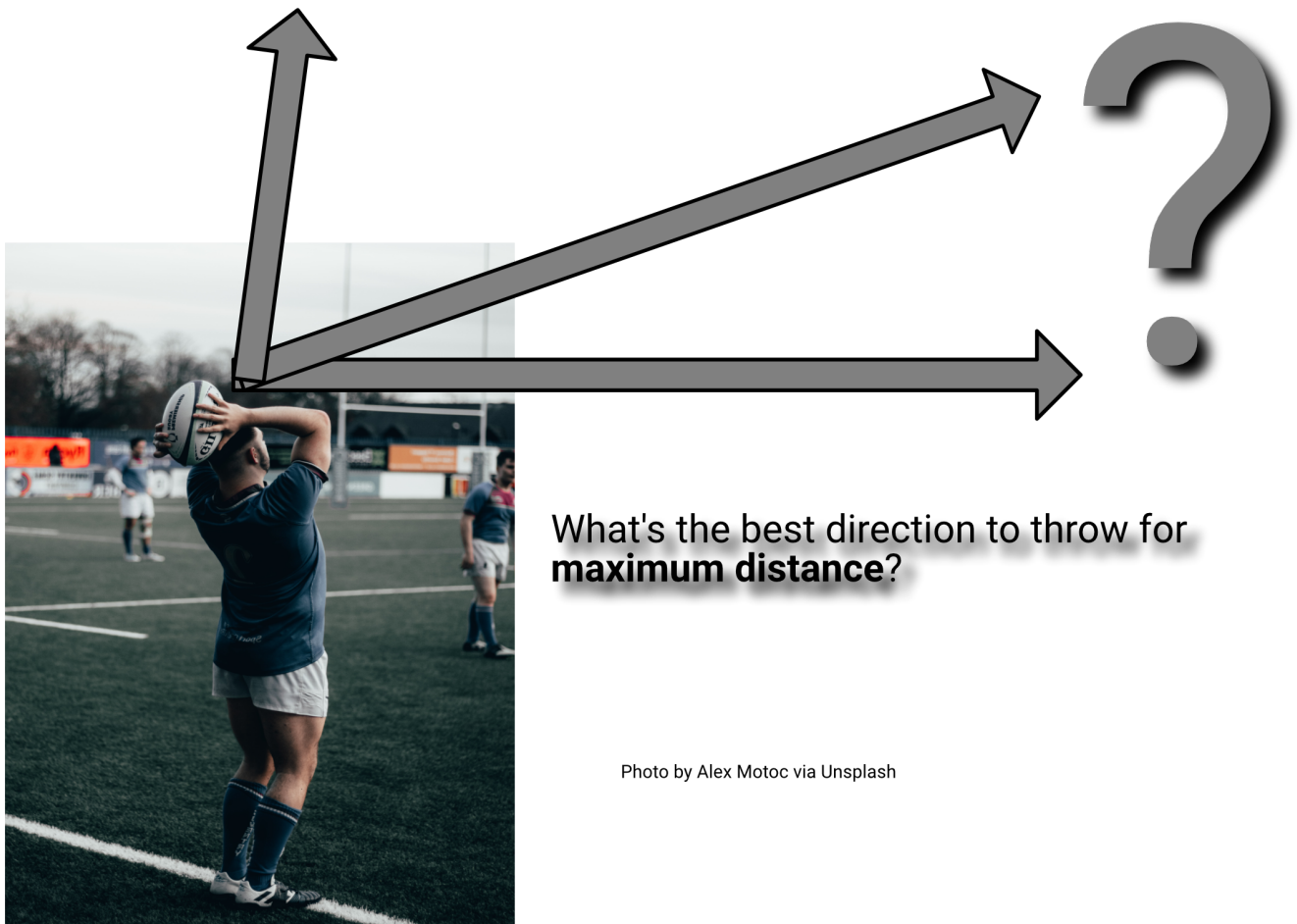
- Investigate the best way to throw a ball

Take a ball - cricket ball or tennis ball size is best - and find a clear outdoor space.

See how far you can throw the ball. How will you record where the ball got to, or measure the distance?

See who can throw the ball the furthest.

Now investigate the best **direction** to throw for maximum distance. Should you throw straight ahead, straight up, or somewhere in between?



What's the best direction to throw for maximum distance?

Photo by Alex Motoc via Unsplash

# Your Indoor Challenge

If you are unable to go out to throw a ball, or the weather's too bad, or you just want another thing to do, try an indoor throwing event. This will test your design and making skills more than your throwing ability.

Build paper planes and fly them in the longest space you can find at home (or ask your teacher if your class can do this activity in school).

You can set up two kinds of competition with paper planes.

First, go for distance. Which plane flies furthest? How will you measure or record the results?

Now, go for accuracy. Set a target and see which plane lands closest. Are there ways to **control** your plane's flight?



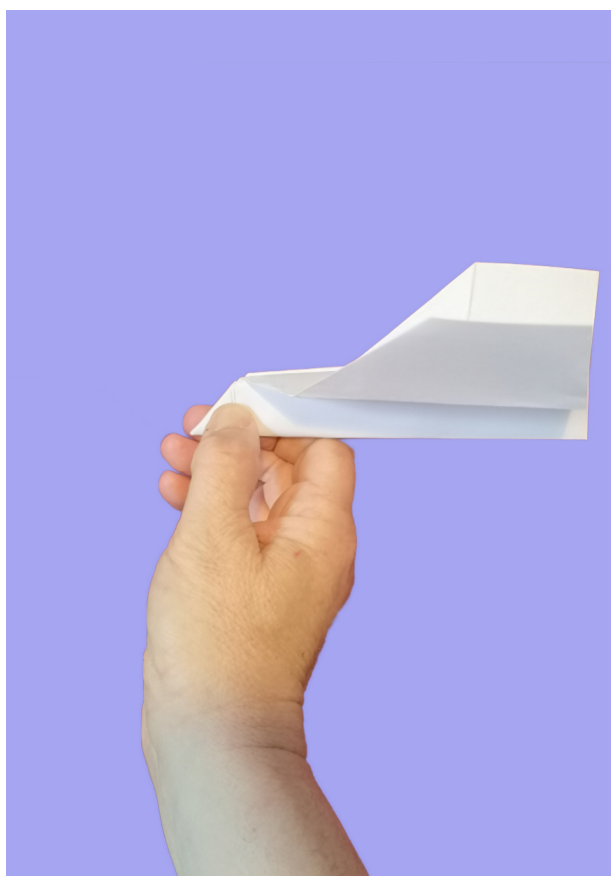
Photo by NeONBRAND on Unsplash

## Did you know?

The science of how things travel after they've been launched and let go is called ballistics. If you know Newton's Law's of Motion and Gravitation, you can make very accurate predictions of where things will land. If you can throw things high and fast enough, they will orbit the Earth instead of landing. You'll need a very big rocket to do the throwing!

There are lots of websites and books which will show you paper plane designs. We did an Ecosia search for 'paper plane designs' and all the ones we saw were family-friendly.

The next couple of pages show you how we folded our plane. As always, we would love to see your efforts - feel free to share on our social media channels.



#PKPorthcurno #PKSportsDay #PlayfulMuseums



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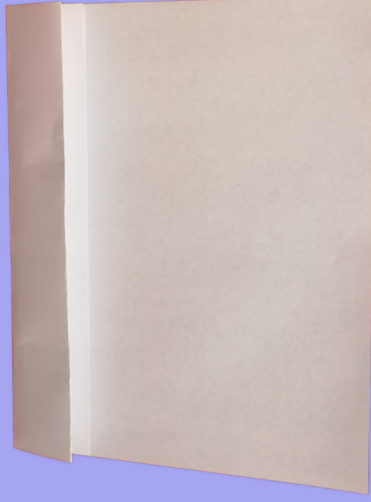
# How to fold a paper plane like ours



Start with your sheet of paper.  
We used A4 size.



Fold down about 5 cm from the  
top.



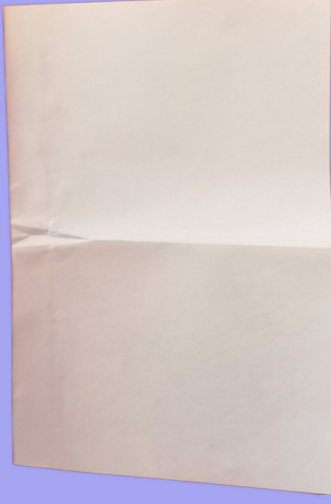
Fold the top part in half.



Fold the top part in half  
again.



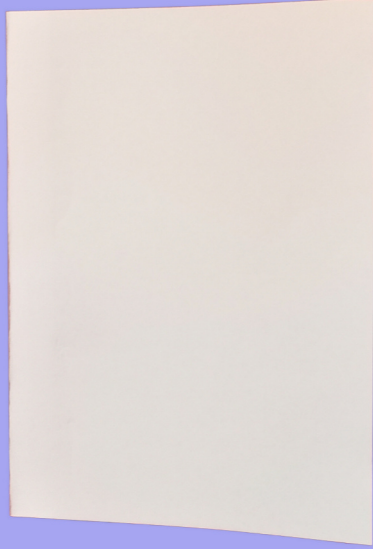
Fold the paper in half.



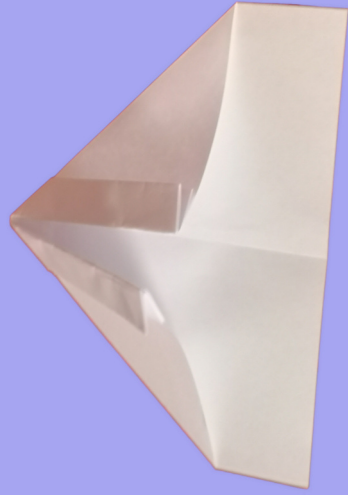
Open it out again.



Fold one corner in to the  
middle.



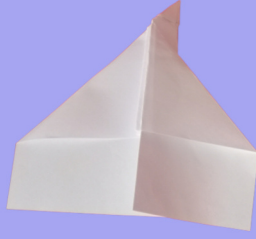
Turn the paper over.



Fold the other corner in to the middle.



Fold in half.



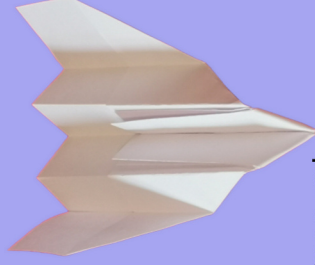
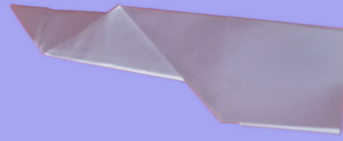
Fold down one wing.



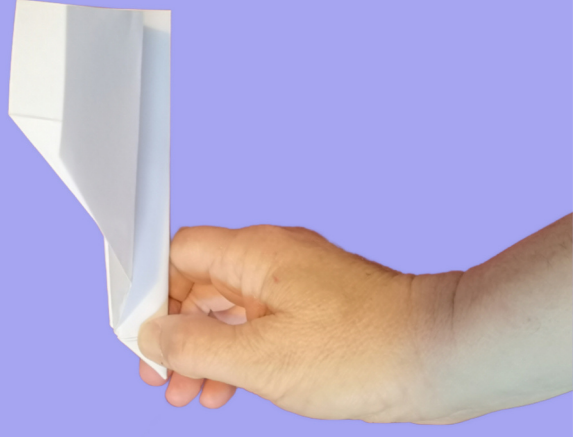
Turn over and fold the other wing to match.



Turn up one wing tip. Then turn over and fold the other wing tip to match



Open out.



And you're ready to launch!