



Overview

We'll use scrap paper, and scissors (you can tear the paper if you don't have scissors) to make simple tumbling fish that fall gently to the ground when you drop them. Make big ones, small ones, fat ones, thin ones and see which tumble to the ground slowest.



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This page will print, but looks a little funky. Click the button for a PDF version which looks a bit better. This is a stop-gap while we work on a better solution!

What you'll need

- Scrap paper – junk mail leaflets work well
- Scissors (if you don't have them, you can tear it)

Duration

15 minutes or so.

Suitable for...

Age 5 and up.

Safety notes

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- Supervision: you might want to be in charge of the scissors.
- Be careful if you are standing on a chair to drop your tumbler.

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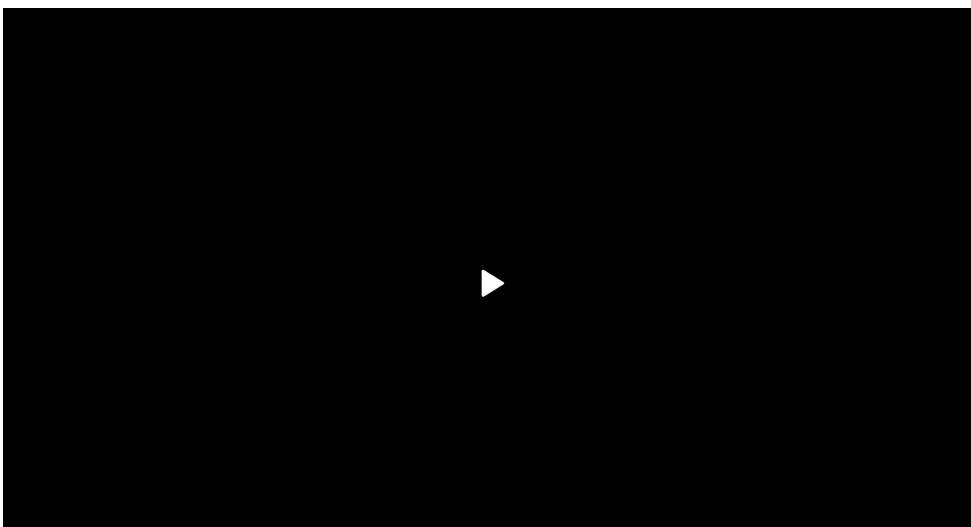
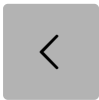
What to do

Step 1: build the tumbler

Get some scrap paper and scissors.

Cut a long thin rectangle. Draw two lines on the strip (shown in the picture). Snip the two lines, and then curl the paper around and connect the two snipped lines together.

The short video below shows more detail on how to make the tumbler.



Step 2: Drop your Tumbler

Hold your tumbler high in the air and drop it. It should spin as it falls towards the ground. If you want an extra bit of height, try standing on a chair to drop it.



Step 3: Try different sized rectangles

It doesn't take long to make another tumbler. Try:

- A long thin rectangle
- A short, fat rectangle
- Different types of paper
- Fish with short tails
- Fish with long tails



To see which falls slowest, drop two at the same time to compare them.

Things to discuss

Use these questions to talk about what's happening

- How does the tumbler fall to the ground?
- What movement does the tumbler make?
- How could you make a better tumbler?

Other things to try

These tumblers are quick and easy to make.

If you want to start experimenting you could video one falling and then watch it back in slow motion to get a better look at what's happening.

Use the stopwatch on your phone to see how long the drops take and write your results down on a piece of paper.

