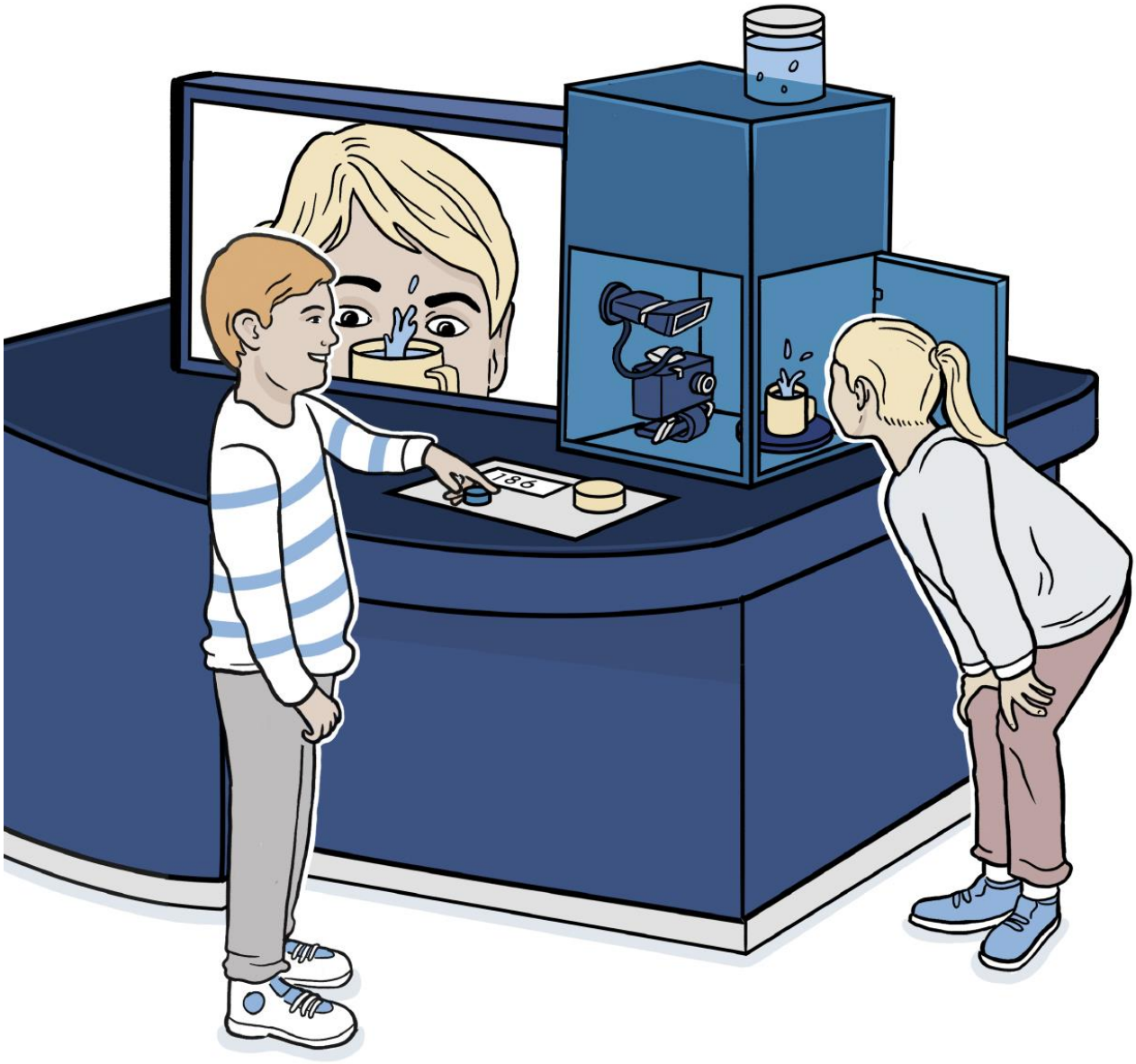
Can you capture a splash?

WATERDROP PHOTOGRAPHY



(Type)	Ages	Topic	Time
Science background	7-14	Sound	<10 Mins
	Skills used		
	Observation - Curiosity		

Overview for adults

This exhibit is a high-speed camera which takes photographs 40 times faster than the human eye can blink. Because it is so quick, it's able to capture detailed pictures of things that happen around us that we normally can't see. Like beautiful water droplets.

What's the science?

A camera takes a photograph because light travels into the camera through its lens and lands on a sensor inside the main body. The sensor turns that light information into the photograph we see. To control how light hits the sensor, a camera lens contains a shutter which opens and closes to let light in only when we want to take a photograph. To take a photograph of something happening very quickly, modern cameras open and close their shutters for only fractions of a second. We call this a fast shutter speed. This needs a lot of light to be reflecting off the object and into the camera, so you often need a flash to make this work.

Science in your world

High speed photography is around us all the time. Next time you see a picture of a fast car or plane, or even of Mo Farah running around a track, these photographs were taken in the same way as our exhibits works.

Try it out for yourself – the sport mode on your camera will unlock its fastest shutter speeds so you won't get blurry pictures at your sports day.

Things to think and talk about …

- What shape does the water drop make when it lands?
- Does it always make that shape?

Things to investigate …

- What happens when you change the delay on the camera?
- Can you get your face to appear in the water drop? Which way up is it and why?

Museum links

Some of the earliest cameras didn't have shutters so it took hours to take a photograph – find some of those cameras and the pictures they took in our Kodak Gallery.

Did you know…?

Harold Edgerton (nicknamed Papa Flash by his mates) was fascinated by the challenge of freezing fast movement. He spent 50 years trying to make the 'perfect' splash photo.