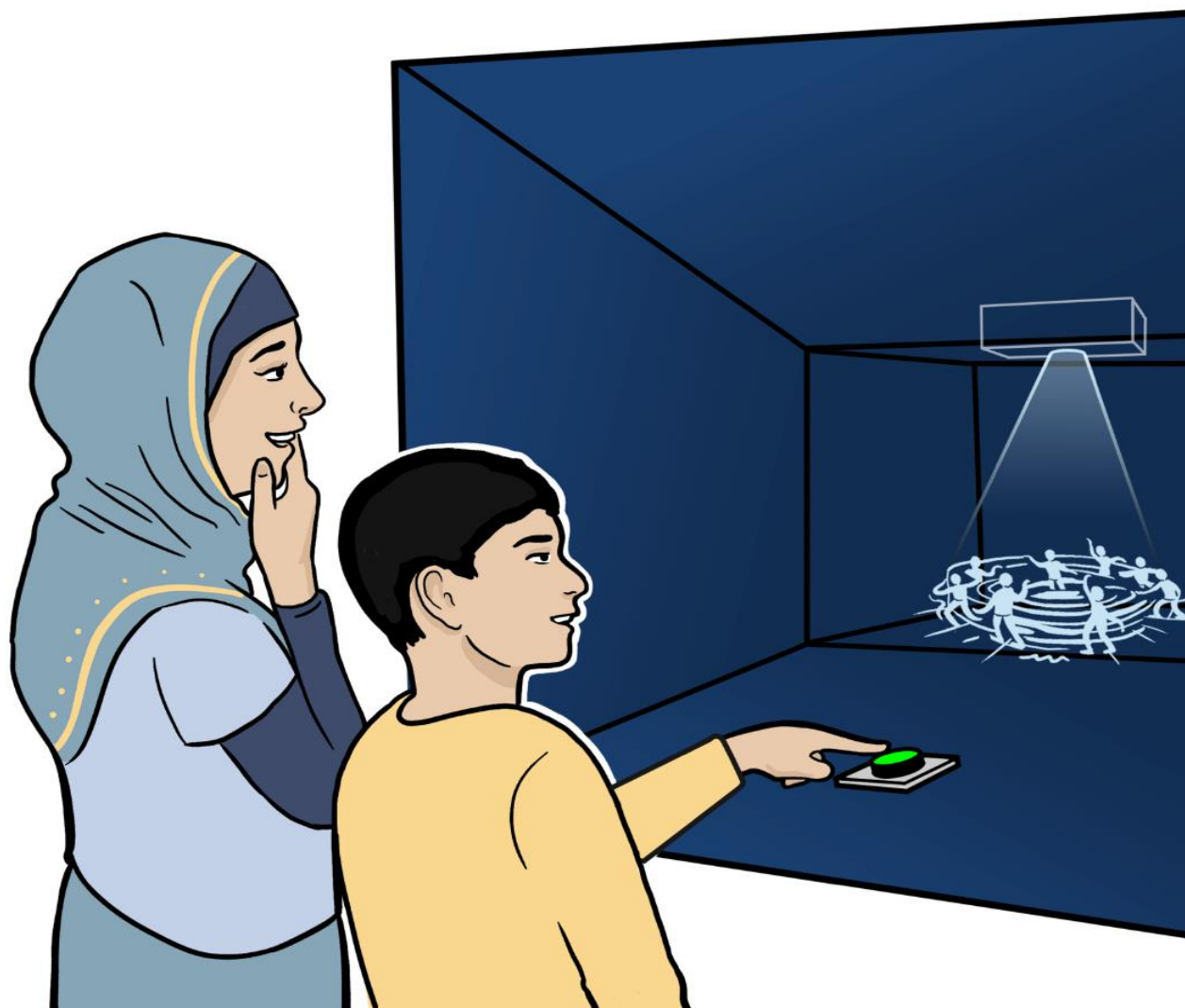


# Can still figures dance?

ZOETROPE



(Type)	Ages	Topic	Time
Science background	3-14	Light	<10 mins
	Skills used Observation - Curiosity		

## Overview for adults

This exhibit is a modern version of a Zoetrope, an optical toy from the Victorian era that plays animations. All animations are a series of still pictures. When you play them at 24 pictures a second, your brain blends them all together and you see a moving picture. Film works in the same way. This exhibit was made by artist Akinori Goto.

## What's the science?

Light reflects off the zoetrope and into your eyes. Outlines of figures are hidden in this model. As strips of light shine on them they are lit up one at a time, creating the 'still images' that produce the animation.

As the model turns, different figures are lit up in different poses to look like a single figure dancing.

## Science in your world

Without a zoetrope and other early optical toys, we would never have created film and television. A film works in exactly the same way as an animation: lots of pictures played one after another which your brain turns into a moving image.

It takes around 172,800 pictures to make a 2 hour film. That's also the reason zoetropes went out of fashion – you'd need one bigger than an Olympic stadium to fit a 2 hour animation on.

## Things to think and talk about ...

- How many figures can you see dancing?
- What's your favourite animated film?

## Things to investigate ...

- Can you spot the hidden figures when the model isn't moving?
- Why not make a flip book when you get home?

## Museum links

Take a look at a different kind of zoetrope and some of the other early animation machines called optical toys in our Animation Gallery on level 5.

You'll also find the world's first film cameras right next to them.

## Did you know...?

The single lens Cine Camera was invented by Louis Le Prince in the 1890s. He used it to make the world's first film, which was shot at Roundhay Park in Leeds!