

# Play with movement?

Entrance Tunnel



(Type)	Ages	Topic	Time
Science background	3-14	Light + Sound	<5 mins
	Skills used Observation - Curiosity		

## Overview for adults

This exhibit was made by Bradford light and sound artist group *Adept*. The laser beams above the floor are connected to sensors that play sounds. As you walk through the lasers, you break the connection to the sensor, which plays a note. As you walk through, you create your very own soundtrack.

## What's the science?

Light from one side of the tunnel is beamed continually onto sensors which are sensitive to light at the other side. While the sensor is detecting the laser light, no sound is played. But if you block the laser light by walking through the laser beam, the sensor detects the lack of light and triggers a computer to play a note.

## Science in your world

This exhibit is sending very basic information (on and off) to the sensor with a laser beam. This isn't as unusual as it sounds. The internet is now powered by fibre optic cables which transmit massive amounts of information at the speed of light down reflective cables. By switching the lights on and off at lightning speeds, data can be sent down the cable at the speed of light.

## Things to think and talk about ...

- How many notes can you play at once?
- Can you play a simple tune?

## Things to investigate ...

- Can you spot the laser lights on your shoes or legs?
- Can you get through the tunnel without activating any lasers?

## Museum links

Take a look at a different ways of transferring information in our Life Online Gallery in the foyer. Before we had fibre optic cables and the machines and devices of today, there were lots of ways to transmit information. Check out the 'Break the internet' interactive!

## Did you know...?

Fibre optic cables also power endoscopes which are tiny cameras with long bendy cables attached. They let engineers look into closed off sewers and pipes, but they can also be used by doctors to see what's wrong inside your body at the hospital.