



Light Play

Aims

The aim of the activity is for children to learn about light/ shadows and to learn about simple circuits. This activity is suitable for children aged from 3.

Intended Learning Objectives

All children will be able to:

- create a basic circuit with a LED and battery pack.
- create a lightshow using an app.
- play with light and shadow using an OHP projector.

Some children will be able to:

- describe how a basic circuit works;
- use the lightshow for other purposes e.g. creating a gif.
- create an animated film of the light and shadow play on the OHP.

Materials

- An overhead projector and screen.
- A section of transparent plastic shapes.
- A selection of coloured cellophane.
- Battery holders for 2 x AA batteries, with connectors.
- AA batteries.
- LEDs of different colours.
- A selection of Washi tape.
- Smartphone or tablet containing the apps **Pablo and iMotion**.
- Small cardboard boxes with acetate lids.
- A dark room, or blackout tent.



If available, a portable printer such as a HP Sprocket can enable you to extend the activity.

Activity

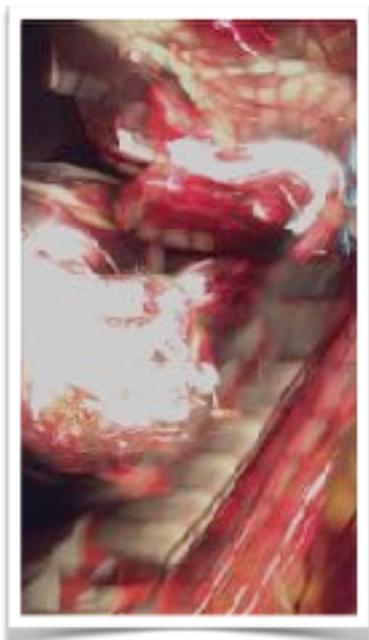
Light play on the OHP

1. Project light onto a wall using an OHP. and screen or interactive whiteboard.
2. Let children play with cellophane and plastic shapes, plus found materials, to create images and explore light and shadow.
3. Enable children to create an animated film of the light play using the app **iMotion**.



Light play with torches

1. Let the children play with the battery holders and LEDs as they learn to connect them and turn the lights on and off.
2. Encourage the children to decorate their torch using Washi tape.
3. An extension of this activity is to give the child a cardboard box with acetate on the top and place the torch inside, along with different colours of cellophane paper, to create a lightbox.
4. In a dark room/ tent, show the child how to use the app **Pablo** on a smartphone or tablet to create a lightshow with their torch and/ or lightbox.
5. Use the HP Sprocket to print off the lightshow as a sticker photograph.



HP Sprocket Pablo Lightshow Sticker



Pablo Lightshows turned into Christmas Calendars

Notes created by Broomhall Nursery School, Sheffield.

Note

Thanks to Mark Shillitoe for inspiration.

<https://about.me/markshillitoe>