

This activity is designed to get children thinking about shadows.

Cosmic has lost his shadow. He knows that it was with him all day but now it is missing. Gem and Aunt Stella try to help him to find it. Gem finds it under the street lamp and Aunt Stella finds it on the wall. Where has the sneaky shadow been hiding?

### Through this activity you will support your group to:

- Think about how shadows are made
- Experiment with making shadows indoors and outside
- Record their results and create a shadow play to share

### **Kit list**

- Torches or other light sources
- Card or thick paper coloured translucent material can add interest
- Shadow theatre light source (projector or bright lamp), screen (made of translucent material) e.g. a white sheet
- Sticks to attach to the shadow puppets
- Musical instruments (optional)

### What to do

- 1. Follow the instructions on the ACTIVITY CARD. Make sure you give children time to talk about their ideas.
- 2. Read the story. Get the children to talk about the questions and the opinions of Cosmic, Gem and Aunt Stella.
- **3.** Children can explore shadows using torches or other light sources.
- 4. They can make shadow puppets and make up plays.
- **6.** Children can cut out a variety of shapes e.g. people, animals or cars. They can use them to create a shadow play.
- **7.** Some children may need help to think of a story for their play.
- 8. Let them share their play.
- **9.** There are follow up activities for children who want to do more finding out and earn a bonus sticker.

## Things to think about

Children may think that shadows are there all the time, even when it is dark. They may think that shadows have faces or coloured clothes. It is important that they are allowed to talk about and explore their own ideas, without being told that they are wrong.

A shadow theatre is ideal to disseminate the information. Put a bright light source behind a screen. Children hold their cut-out characters on sticks in front of the light and behind the screen so that the shadows are cast on the screen.

A shadow is formed when something blocks light from the Sun or another light source. A shadow is dark, whatever the colour of the object. If light comes from more than one direction, or the object is translucent, shadows might look grey or coloured.

### Take it further

As children explore they will find that the closer the object is to the light source, the bigger the shadow. The shadow is always on the opposite side of the object from the light source.

You do not need complete darkness to explore shadows with torches or other light sources. Light coming through a window can form shadows. However, it is helpful to minimise light coming through windows to make the shadows formed by torches clearer.

## **Keywords**

- Shadows
- Light
- Colour

### Watch out!

Make sure children do not touch a hot light source.

Observe the organisation's policy for working outdoors.

Do not look directly at the sun.

Beware of trip hazards if working in dark conditions









Cosmic is very worried. His shadow is missing. It was there when he was out playing. It was still with him when he walked down the path to Aunt Stella's house. But now it is nowhere to be seen.

"Come here quickly," shouts Gem. "I've found a shadow!" Gem is under the streetlight looking down at her feet.

Just then Aunt Stella comes out of the house. She is carrying a big torch. "I'll help you find your sneaky shadow," she says, waving the light around the garden, "and there it is!" He calls Gem to see if she will help him to find his shadow. Perhaps it's still in the garden. They go outside to look for it. It is getting dark and it is hard to see anything at all.

Cosmic runs over and looks down at his feet too. "You've found it! Great!" He rushes to tell Aunt Stella but when he looks down his shadow is missing again. Oh no!



There on the wall is Cosmic's shadow. "Wow! Where did that come from?" asks Cosmic. Can you guess?

Gem thinks you will see your shadow if there is bright light Aunt Stella thinks you can only see your shadow when the sun is shining Cosmic thinks shadows hide when it goes dark

Have you ever looked at your shadow? Does your shadow ever disappear?

# Your challenge



Find out what makes a shadow and what makes it disappear.



Talk to your buddy about how you are going to find out.



Try using light from a window or with a torch. You could also look on a walk, outdoors or in the garden where possible. What do you see? Can you find places where you can see your shadow and where your shadow disappears?

Make shapes in front of the light with your hands. What do you see?

Make some little people and other shapes from card. What happens when you put them in front of the light?

You could use your little people to make a shadow play. Ask an adult to help you to set up a shadow theatre.

## **Test your ideas**

Can you think of other things that you can do to make shadows and see whether Gem, Cosmic or Aunt Stella is right?

## **Share your ideas**

Talk about why Cosmic's shadow was missing. Share your shadow play.

## Extra things to do

Can you make coloured shadows? Can you make your shadows change size? Make up more shadow plays.





