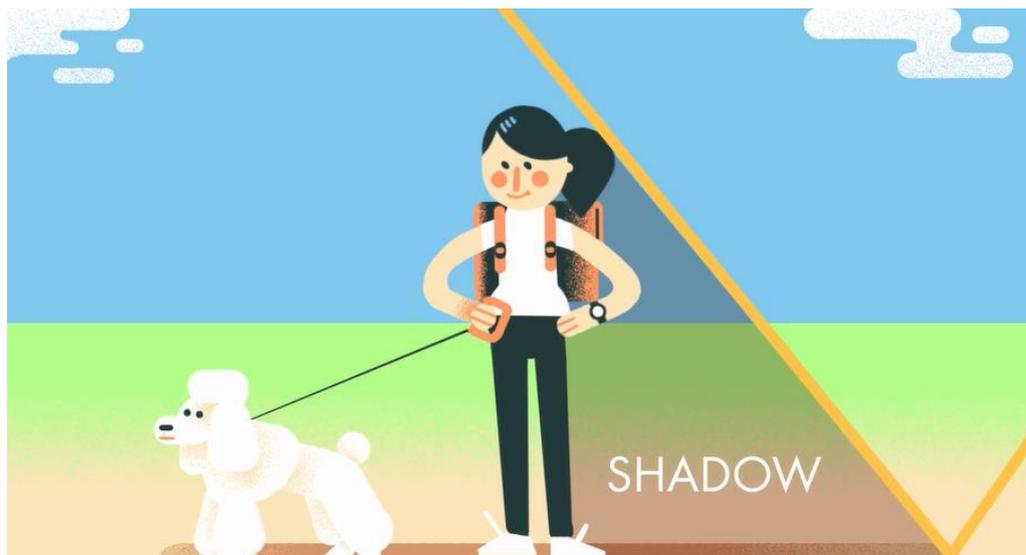


Shadows and Silhouettes

Key Stage 1

Topics covered: Light, shadows, transparent and opaque objects

Before you get started with this activity, you will need to watch our video 'Shadows On Other Worlds', <https://vimeo.com/161478146>



Teacher notes:

Here are some questions you might like to ask the students before the activity.

1. What is light?

A: Responses could include things like light allows us to see things, light travels in straight lines, not all objects give out their own light etc.

2. How are shadows formed?

A: Light travels in straight lines and cannot pass through opaque objects so a shadow forms behind that object.

3. What does opaque mean and what's the opposite?

A: Opaque means that you can't see through it. The opposite is transparent – something you can see through. Some objects are somewhat transparent and let some light through, we say they are translucent.

Activity 1: Matching Shadows

- Hand out the images on the following page or display them on the board.
- First instruct students to match the 4 objects to the shadows they would cast.
- Then instruct students to guess what objects caused the remaining 4 shadows.

Questions to ask the students:

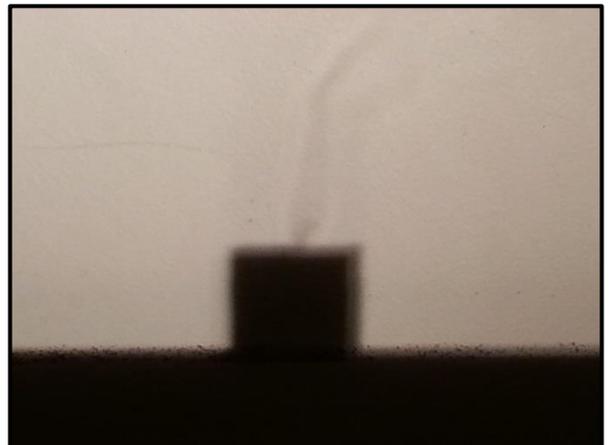
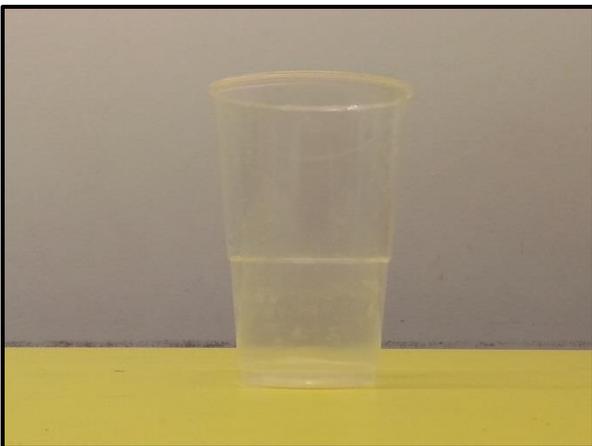
1. Why doesn't the whole of the candle cast a shadow?

A: Some parts of the candle are almost transparent (like the flame) so light can pass through that part and doesn't make a clear shadow of that part.

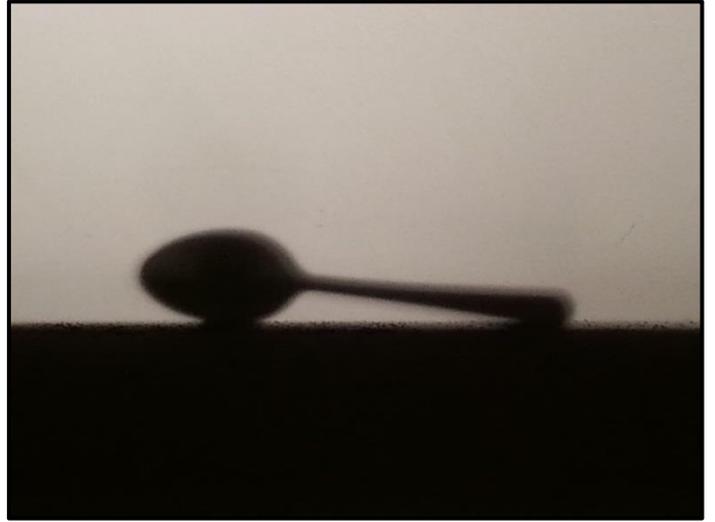
2. Would there be a shadow if light didn't travel in straight lines?

A: If light didn't travel in straight lines, it would be able to curve and travel around opaque objects; it would not be blocked, so a shadow would not form. Shadows prove light travels in straight lines.

Draw a line connecting each image to the correct shadow



What objects do you think created these shadows?



Shadows and silhouettes: **ANSWERS**

Key Stage 1

