

## How far can you throw your shadow?

### As Speakers we can:

- Discuss how a shadow is created
- Talk about the properties of light
- Use appropriate scientific language to compare and contrast different types of shadow.
- Talk about how light reflects, refracts and is absorbed by different materials.

### As Writers we can:

- Explain how shadows are created
- Create a fact file, containing important and relevant pictures and information.
- Write a prediction or conclusion related to a practical activity.
- Answer questions related to information we read.
- Explain key terms related to the topic.

### As Readers we can . . .

- Research properties of light.
- Select appropriate information and materials from our research.
- Read passages and whole texts related to the topic.

### Focused Class Texts:

- Fun with Hand Shadows Frank Jacobs
- The house of shadows Karen Dolby
- What makes a shadow?

### Suggested texts for home reading:

<https://www.sciencekids.co.nz/light.html>

<https://www.topmarks.co.uk/Search.aspx?q=light>

### As Mathematicians we can:

- Record the length of our shadows at different times of the day and interpret the data.
- Create bar charts using Excel to improve ICT skills.
- Measure and compare different shadows.

### As responsible citizens we can:

- How can we form new relationships with others?
- How do relationships change over time?
- Work well as a team in the classroom.
- Understand the different roles people can play within a team.
- Do we work well as a team outside of the classroom?

### In R.E we can:

- Understand the importance of light.
- Research and find examples of light, dark and shadow in significant religious texts and understand its meaning.

### As Scientists we can:

- Investigate different types of light source and recognise that the moon is not an original light source but a reflection of the sun.
- Make estimations, measurements and comparisons when investigating shadows.
- Use scientific vocabulary to describe finding made through experimentation.

### Investigative skills:

- Practical activities, making predictions, recording results, analysing our findings.

## What do rocks tell us about the way the earth was formed?

### Key questions:

1. What is a light source?
2. How are shadows formed?
3. Why are shadows the same shape as the object they block?
4. Why do our shadows change direction and size?
5. How can we record and compare shadows?
6. Can you create a stained glass window which is translucent?

### As Historians/Geographers, we can:

Research how they used to tell the time (Sundials) using the shadow cast by the sun. Why is this not always helpful?

Learn about Shadow Theatre.

Investigate the different amounts of light different countries get.

Investigate the amount of light we get in the UK, when are the shortest and longest days? How does this compare to Europe and the other continents.

### As Artists and Designers, we can:

Create our own shadow puppets different characters and plan and story for making a play with them. People and animals.

Create a Stained glass window which is translucent, link this to R.E and visit the church to get ideas.

### Learning beyond the classroom:

Visit an observatory.

Visit a church to look at stained glass windows and the effect they have.

Visit Selhurst Park and look at lights that "pretend to be the sun" to help the grass grow at night.

### Using Technology, we can:

Which scientists are most relevant in the topic of light and shadow? Research one or more to show their importance and how they changed science with their discoveries.

Type up your findings in an imaginative way.

### As sporting enthusiasts, we can:

Research if you can actually 'throw your shadow'.

### As musicians, we can:

Identify the piece's structure and the instruments/voices.

Find the pulse while listening.

Play instrumental parts accurately and in time, as part of the performance.

Explain the difference between pulse and rhythm.

### As home learners, we can:

Film and edit shadow puppet productions.

Create a sundial.

Create your own rainbow by splitting light through a prism.