



Light and Shadow Knowledge Organiser Y3-4 Term 6

Key Knowledge

- Recognise that they need light in order to see things and that dark is the absence of light
- Notice that light is reflected from surfaces
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Recognise that shadows are formed when the light from a light source is blocked by a solid object
- Find patterns in the way that the size of shadows change.
- Set up simple practical enquiries, comparative and fair tests.
- Make systematic and careful observations, taking accurate measurements.
- Gather, record, classify and present data in a variety of ways
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support their findings.

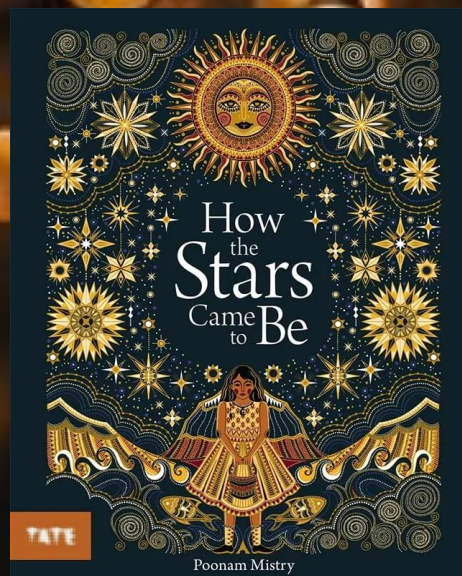
Key Vocabulary

Light – a kind of energy that travels from a light source.

Shadow – Dark shapes that are formed when an opaque or translucent object is in the way of travelling light.

Sun – the strongest source of light in the daytime. Our nearest star.

Reflect – to bounce back from a surface in the opposite direction.



Links to Other Subjects

D.T. Shadow Puppets

- Investigate and analyse existing products
- Indicate the design features of their products that will appeal to intended users
- Select tools and equipment suitable for the task
- Measure, mark out, cut and shape materials and components with some accuracy
- Assemble, join and combine materials and components with some accuracy
- Apply a range of finishing techniques, including those from art and design, with some accuracy



Prior Learning

- Identify sources of light, including the Sun
- Explore shadows and reflection
- Understand about visibility and its importance in the dark
- Understand that darkness is the absence of light
- Explore how you can shine light through some materials and not others

Preparing for the Future

- Recognise that light appears to travel in straight lines
- Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
- Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
- Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them