

# Y6 – Light

## Inspiration

Creativity – problem solving

## Partnership with parents

Community

### Key Questions

- How does light travel?
- How are objects seen by the human eye?
- How do we see things?
- Why are shadows shaped the way they are?

### Working Scientifically

- plan enquiries, including recognising and controlling variables where necessary.
- use appropriate techniques, apparatus and materials during fieldwork and laboratory work.
- take measurements using a wide range of scientific equipment, with increasing accuracy and precision.
- report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships and conclusions.

Also covered in:  
Y3 - Light

### By the end of this unit children will be able to:

- know 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 by explaining how a periscope works
- 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
- ask their own questions about light, and select the most appropriate ways to answer these questions
- draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways

### Knowledge

- Light travels in straight lines
- We can see things when light is reflected from objects and some of the reflected light enters our eyes.
- When light from a source cannot travel through a material then a shadow is formed.
- The size of the shadow changes depending on the distance between the light source and the object causing the shadow.
- When you are further away from the light source, less light is blocked and the shadow is smaller
- When you are closer to the light source, more light is blocked and the shadow is larger.
- Shadows are the same shape as the object blocking the light



### Topic Specific Vocabulary

Light source, shadow, reflection, opaque, transparent, translucent, dark, bounce, travels, straight line, distance

### NC Subject content

- 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

### Subject Specific/Academic Vocabulary

This vocabulary should be explicitly taught in context. Other tier 2 words should also be explored as they are encountered.

Year 3	Year 4	Year 5	Year 6
Benefit, impact, issues, occur, process, sequence, source, variables	Appropriate, consequences, identified, procedure, range, relevant, significant, specific, theory, transfer	Factors, affect, analyse, contribute, demonstrate, outcome, react, volume,	Component, exclude, function, imply, initial, justify, sufficient.

### We are scientists

Linked to war unit in History (links to Blitz). Making periscopes.