

Year 6 – Term 2

## How far reaching are the consequences of our choices?

### SCIENCE



secondary sources: books, photographs, and videos where necessary).

Report and present findings from enquiries, including conclusions, causal relationships, and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations, e.g. The \_\_\_-er the \_\_\_, the \_\_\_-er the \_\_\_\_.

Make systematic and careful observations.

- Read, spell, and pronounce simple scientific vocabulary correctly.

### Long-term Memory Knowledge

Light travels in straight lines.

Light travels from a light source to our eyes.

We see things because the light travels from a light source to an object and then is reflected to our eyes (not the other way round).

Shadows are the same shape as the opaque object that blocked the light.

The size of a shadow changes depending on the position of the light source.

### Key Vocabulary

light source	something that produces light – can be natural (the sun) or artificial (a torch)
reflect	throw or bounce back
shadow	an area created when an object blocks the light
refract	when the light rays bend after travelling through different materials
lens	part of the eye that refracts light to help us to see

### Progression in Resources

Torches, mirrors

### Relevance

Now	Children know why they can see some things and not others, depending on the light source; they understand the importance of protecting our eyes; they know why shadows occur where they do.
Future	Children know the importance of caring for their eyesight; they use knowledge of light and shadows in everyday life, e.g., choosing a property with a south-facing garden.
Aspiration	As adults, children seek a career in ophthalmology; they can support their own children with eye-care, understanding and being able to explain its importance.

### National Curriculum Links

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.

### Essential Prior Learning

We need light to see things.

Light sources can be natural (e.g., the sun) or artificial (e.g., a torch).

Light is reflected from some surfaces.

Shadows are formed by an absence of light – when an object blocks the light source.

### Progression in Skill

Plan different types of scientific enquiries to answer scientific questions, including recognising and controlling variables where necessary (using