Science Knowledge Building

Processes and Changes	Methods	Observing and Recording	Scientific Vocabulary	Uses and Implications	Cross-Curricular (STEM)
Know that objects are seen through reflected or given out light and that a shiny surface reduces the absorption of light	Understand how to use previous knowledge to support a methodology when conducting an experiment about light	Know how to analyse and identify how light can be refracted	Know the names of different parts of the eye and understand the terms 'refraction' and 'translucent'	Know that studying how light behaves can support a wide range of industries and technologies such as improving eye health	Know how adaptations have lead to improvements in the use and quality of light-emitting devices
Know how the position of the sun in the sky affects the size of a shadow	Know how to make adaptations to create an experiment about shadows	Understand how reflections work by exploring light and supporting findings with clear and concise diagrams and labels	Know and understand the terms 'reflect', 'periscope' and 'transparent'	Understand how periscopes work and how their use has been influential e.g. World War 1	Know that light is needed to make a range of objects work e.g. camera
Understand that numerous factors can affect or prevent change	**Know what makes a good methodology and explain how adaptations can lead to improvements**	**Identify, analyse and explain findings to support or dismiss theories or arguments**	**Know how to use a range of scientific vocabulary in various contexts**	**Know that science has implications for world issues and that it can be used for good or bad**	**Understand how their own STEM skills can benefit future science work in school and beyond**

Wars of the World