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**Big Ideas/Substantive Concepts**

Properties of light

Reflection

Colour

Refraction

Pupils should be taught to:

• 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

Questions:

How does light travel?

What colour is light made of?

Reflection-how does light help us to see objects?

Which surfaces make the best reflectors?

Why do we see objects as a particular colour?

What happens to the appearance of objects when placed in water?

**Key Vocabulary**

|  |  |
| --- | --- |
| **Tier 2** | **Tier 3** |
| impurity | refraction |
| emit | incidence |
| absorb | spectrum |
| constituent | prism |
| filter | lux |
| artificial | pigment |
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Year 6: Light

**Resources:** [CUSP curriculum](https://www.unity-curriculum.co.uk/history/history-ks2/) and [Curriculum vision](https://www.curriculumvisions.com/indexHistory.html) resources for online non-fiction texts

Making connections to prior learning

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| **Year 4:** Electricity**Year 4:** Sound and States of Matter**Year 4:** Earth and space**Year 5:** Properties and changes in materials |

Working Scientifically

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| --- | --- | --- | --- |
| Plan enquiries, including recognising and controlling variables where necessary | Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work | Take measurements, using a range of scientific equipment, with increasing accuracy and precision | Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models |
| Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions | Present findings in written form, displays and other presentations | Use test results to make predictions to set up further comparative and fair tests | Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments |

**Outdoor Learning Opportunities**

Alfresco Learning: UKS2 - Working Scientifically

Alfresco Learning: Year 6 - Light