

Light

*Exploring materials and their properties
to make sunglasses*

*Year 3 / Key Stage 2
Age 7-8*



For parents and carers

Thank you for supporting your child's learning in science.

Before the session:

- Please read slide 2 so you know what your child learning and what you need to get ready.
- As an alternative to lined paper, slide 5 may be printed for your child to record on.

During the session:

- Share the learning intentions on slide 2.
- Support your child with the main activities on slides 3 & 4, as needed.
- Slide 6 is a further, optional activity.
- Slide 7 has a glossary of key terms.

Reviewing with your child:

- Slide 8 gives an idea of what your child may produce.



Light

Exploring suitable materials for making sunglasses

Key Learning

- The light from the sun can damage our eyes and therefore we should not look directly at the sun.
- We can protect our eyes by wearing sunglasses or sunhats in bright light.

I can...

- explore suitable materials for making sunglasses.

Activities (pages 3-5): approx. 30-40 mins

- Use lined paper, ruler and pencil.
- Alternatively, print page 5 as a worksheet.





Explore, review, think, talk....

What do you already know about... sunglasses?
(5 minutes)

- Talk or think about why we wear sunglasses?
- How do they help us when it's sunny?
- What might happen if we didn't wear them?

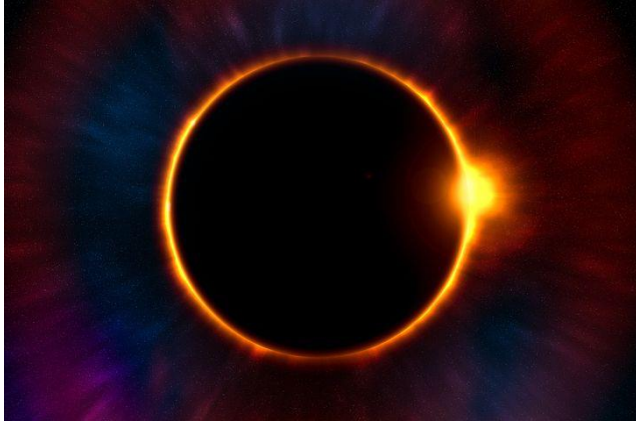


- Sunglasses protect our eyes from strong sunlight.
- Sunglasses block some of the sunlight from entering our eyes, which makes it easier for us to see.



Watch, read, listen...

*Opaque, translucent, transparent materials
(10 minutes)*



- Watch this clip about people watching a solar eclipse (England, 1999):
- <https://www.youtube.com/watch?v=18xY0XygVGc>
- Why do you think they are wearing special glasses?

Read this article from DK:

- <https://www.dkfindout.com/uk/science/light/transparent-and-opaque-objects/>



Instructions for Activity

- Give the children a range of materials and ask them to consider which would be most suitable for making a pair of sunglasses.
- Use a torch as a light source and record your observations and notes if each material is suitable or not for using as sunglasses.

Learning outcome: I can explore suitable materials for making sunglasses.

Material	Suitability?	Notes
Which of these materials would make good sunglasses? Why?		

Glossary of terms

bright: If an object is **bright** it gives out or reflects much light.

dark (scientific): **Dark** is the absence of light.

dark (everyday): very little amount of light.

dull: If an object is **dull** it is not shiny or bright.

light: **Light** is the form of energy that makes it possible for eyes to see.

material: Anything used for building or making something else.

shiny: Reflecting or glowing with light.

surface: The outside limit or top layer of something.

Possible learning outcome for reviewing your work: I can explore the need for light to see things

Material	Suitability?	Notes
Tin foil	Not suitable	It is not suitable because we cannot see anything – it is opaque.
Coloured paper	Not suitable	It is not suitable because it's opaque.
Cling film	Not suitable	Cling film is not suitable because it lets all of the light through. It's transparent.
Tissue	Suitable	Tissue is suitable because it lets some of the light through and is translucent.
Bubble wrap	Suitable	It is suitable because it's translucent.
Which of these materials would make good sunglasses? Why? I think the bubble wrap would be the best. You can see more through it. The tissue is hard to see through and might make you bump into things		