

Year 3: Light

Topic overview for teachers

Age 7-8



This topic overview is based on the PLAN knowledge matrix (for England). Please use link:

<https://www.planassessment.com/light-y3>

The matrix includes:

- National Curriculum learning objectives
- Key learning
- Key vocabulary
- Common misconceptions
- Possible activities & evidence

Year 3 – Light

Topic	Key Learning	page
<i>Exploring that we need light to see things</i>	<ul style="list-style-type: none">• We see objects because our eyes can sense light.• Dark is the absence of light.• We cannot see anything in complete darkness.• Some surfaces reflect light.	4
<i>Exploring sources of light</i>	<ul style="list-style-type: none">• Some objects, for example, the Sun, a lit light bulb and a burning candle are sources of light.• Objects are easier to see if there is more light.	5
<i>Exploring reflective surfaces</i>	<ul style="list-style-type: none">• Some surfaces reflect light.• Objects are easier to see when there is less light if they are reflective.	6

Year 3 – Light

Topic	Key Learning	page
<i>Identify opaque, translucent and transparent materials</i>	<ul style="list-style-type: none">Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks some of the light.	7
<i>Exploring materials and their properties to make sunglasses</i>	<ul style="list-style-type: none">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.	8
<i>Exploring how shadows are formed</i>	<ul style="list-style-type: none">The size of the shadow depends on the position of the source, object and surface.	9



Light

Exploring that we need light to see things

Key Learning:

- We see objects because our eyes can sense light.
- Dark is the absence of light.
- We cannot see anything in complete darkness.
- Some surfaces reflect light.

I can...

- recognise that you need light to see things.

Activities and websites

- Discussing prior knowledge about light.

<https://www.bbc.co.uk/bitesize/topics/zbssgk7/articles/z2s4xfr>

- Seeing in the dark.

<https://www.bbc.co.uk/bitesize/clips/zb3s34j>

- Exploring the need for light to see things.
- Finding out more about using lights in the dark.

<https://www.bbc.co.uk/bitesize/clips/zygvr82>



Light

Sources of light

Key Learning

- Some objects, for example, the sun, a lit light bulb and a burning candle are sources of light.
- Objects are easier to see if there is more light.

I can...

- identify which objects are sources of light and which reflect light.

Activities and websites

- Explore light sources in a home.
- What is light?

<https://www.youtube.com/watch?v=1PsHHKwtXQU>

- Sorting light sources and reflective objects.
- Which is the odd one out?

<https://explorify.wellcome.ac.uk/en/activities/odd-one-out/sources-of-light>



Light

Exploring reflective surfaces

Key Learning

- Some surfaces reflect light.
- Objects are easier to see when there is less light if they are reflective.

I can...

- identify how objects with different surfaces (e.g. shiny vs matt) are more or less visible.

Activities and websites

- What do you already know about reflection?
- What is reflection?

<https://www.bbc.co.uk/bitesize/topics/zbssgk7/articles/zqdx82>

- Identifying how objects with different surfaces (e.g. shiny vs dull) are more or less visible.
- Finding out more about reflection.

<https://www.coolmathgames.com/0-rainbow-mechanic>

<https://wowscience.co.uk/resource/light-absorption-reflection-refraction/>

<https://explorify.wellcome.ac.uk/en/activities/what-if-we-didnt-have-mirrors>



Light

Identify opaque, translucent and transparent materials

Key Learning

- Shadows are formed on a surface when an opaque or translucent object is between a light source and the surface and blocks some of the light.

I can...

- identify materials that are opaque, translucent or transparent.

Activities and websites

- What do you already know about properties of materials?
- Identifying opaque, translucent and transparent materials.

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

- Finding and recording opaque, translucent and transparent materials around a home.
- Going further with translucent materials.



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 and websites

- What do you already know about sunglasses?
- Finding out more about opaque, translucent and transparent materials.

<https://www.youtube.com/watch?v=18xY0XygVGc>

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

- Exploring suitable materials for making sunglasses.



Light

Exploring how shadows are formed

Key Learning

- The size of the shadow depends on the position of the source, object and surface.

I can...

- explain how a shadow is formed.

Activities and websites

- What do you already know about shadows?
<https://www.bbc.co.uk/bitesize/clips/z8vfb9q>
<https://www.dkfindout.com/uk/science/light/shadows/>
- Exploring shadows.
<https://explorify.wellcome.ac.uk/en/activities/hats-going-on/shadow-shapes>
- Explaining how shadows are formed.
- Going further with shadows (see lesson plan page 6 for websites).