

Science: Week 2 - Tuesday 2nd March

LO: To explain that objects are seen because they give out or reflect light into the eye

Working scientifically: I identify scientific evidence that supports or refute ideas or arguments.

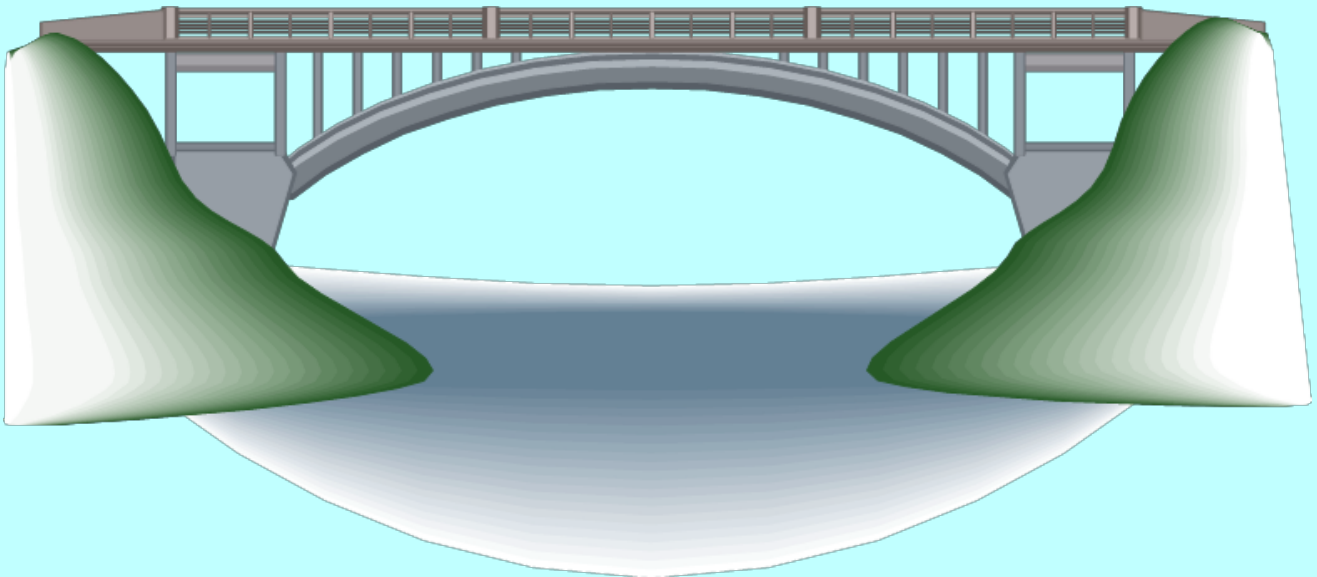


Success Criteria

I know that light travels in straight lines. 1:

I can explain how light reflects off surfaces. 2:

I can use my scientific knowledge to help solve a problem. 3:



Light from a torch travels in which direction?



In arcs.

In straight lines.

In random lines.

All of the above.

Light from a torch travels in which direction?

In arcs.



In straight lines.

In random lines.

All of the above.

Which of these is not a light source?



A candle flame.

The Sun.

The Moon.

A torch.

Which of these is not a light source?



A candle flame.

The Sun.

The Moon.

A torch.

How is light reflected?

- First, watch the BBC bitesize clip.
- Second, read the powerpoint slides (on Year 6 home learning page) called 'Reflecting Light'.

Task 1: Write an explanation to show how light reflects off a surface.

- Write the heading: **How light is reflected?**
- Using what you have just learnt, write an explanation of how light reflects off a surface.
- Draw an image to represent this. **Remember light travels in a straight line so you MUST USE A RULER!**

<https://www.bbc.com/bitesize/clips/zyntsbk>



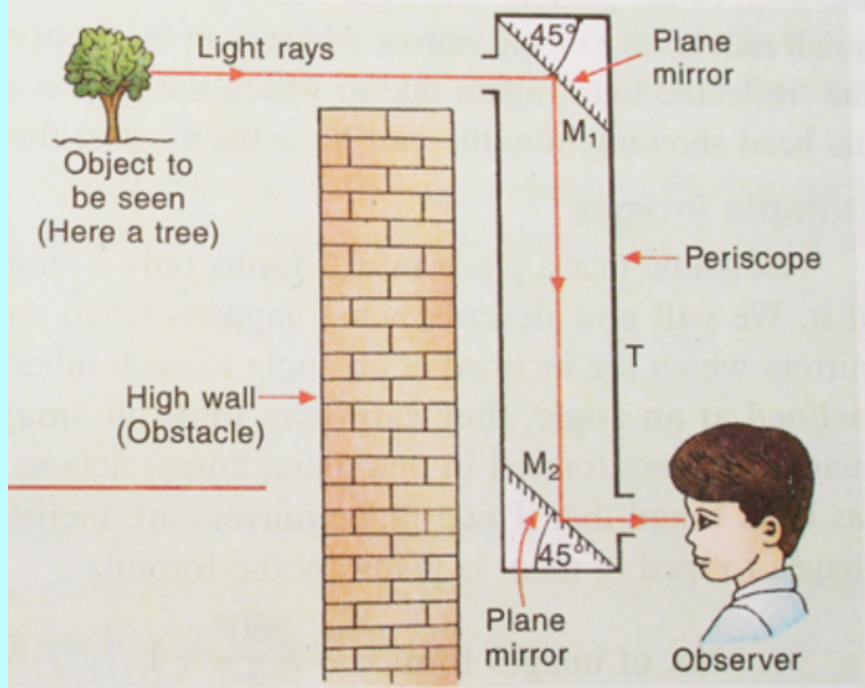
Link is on the Year 6 home learning page.

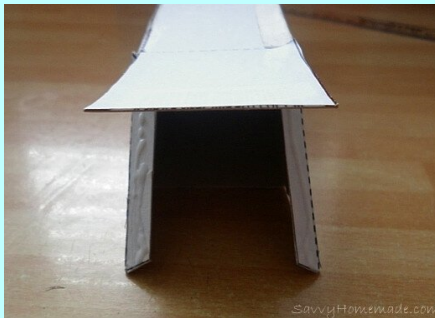
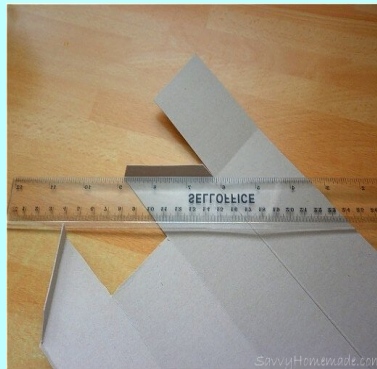
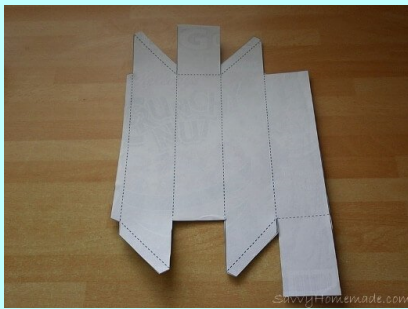
How can we use our knowledge of light to help this child see the tree over the wall?



TASK 2: Design and draw a piece of equipment that you can use to see over a wall.

Helpful hint - think about periscopes.

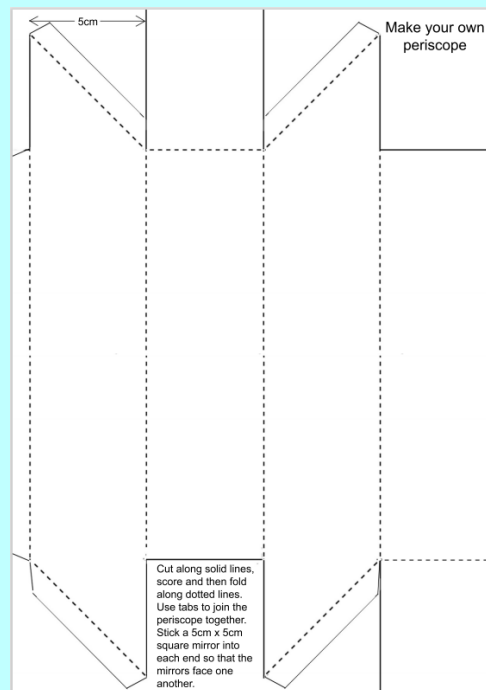




TASK 3: If you have access, to the equipment you could also have a go at making a periscope - remember to be careful when cutting anything out.

Equipment needed:

- card
- glue
- mirror (or reflective surface)
- pencil
- ruler
- scissors



Template can be downloaded from the Year 6 home learning page.

1.

TASK 4: Have a go at these questions, then check the answers at the end.

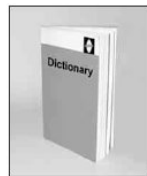
Torch light

- (a) Sanna is investigating which materials are good reflectors of light. She shines a torch on different objects from a distance of 20 cm.



She looks at the objects to see how well each reflects light.

Tick **TWO** boxes to show which objects are the **best** reflectors.



Paper book



Metal spoon



Wooden spoon



Woolly hat



Glass jar



Compact disc

2 marks

(b) Tick **ONE** box to show which of Sanna's objects does **not** make a dark shadow.

metal spoon

wooden spoon

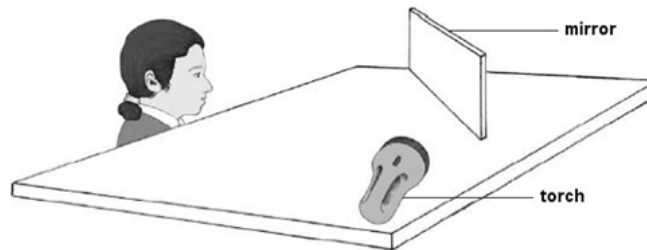
woolly hat

glass jar

1 mark

(c) The picture below shows Sanna looking at the torch light reflected in a mirror.

Draw **TWO** arrows to show the direction the light must travel for Sanna to see light from the torch in the mirror.



2 marks

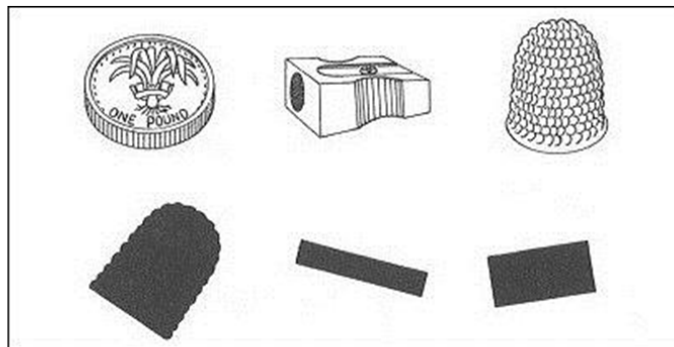
2.

Light

(a) The things below all make shadows in light.

Draw **ONE** line from each object to the shadow it could make.

Use each shadow **ONCE**.



(b) Jenny investigates which materials allow light to pass through. She holds different materials out in the sun.



Complete the table below to predict Jenny's results.

Tick **ONE** box in each row. One has been done for you.

| Material | Some light passes through | No light passes through |
|---------------|-------------------------------------|--------------------------|
| tissue paper | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| glass | <input type="checkbox"/> | <input type="checkbox"/> |
| mirror | <input type="checkbox"/> | <input type="checkbox"/> |
| clear plastic | <input type="checkbox"/> | <input type="checkbox"/> |
| cardboard | <input type="checkbox"/> | <input type="checkbox"/> |
| foil | <input type="checkbox"/> | <input type="checkbox"/> |

2 marks

(c) Jenny sits by a lamp.

A shadow forms.



She wants to see if any other objects will cause a shadow in a dark room. She turns the lamp off. She sits in front of these objects instead of the lamp:



television



mirror



plant



night safety jacket

(i) Which **ONE** of these four objects will cause a shadow of Jenny in a **dark** room?

.....

1 mark

(ii) Why does a shadow form when Jenny sits in front of this object?

Tick **ONE** box.

Because the object...

is translucent.

reflects light.

is a light source.

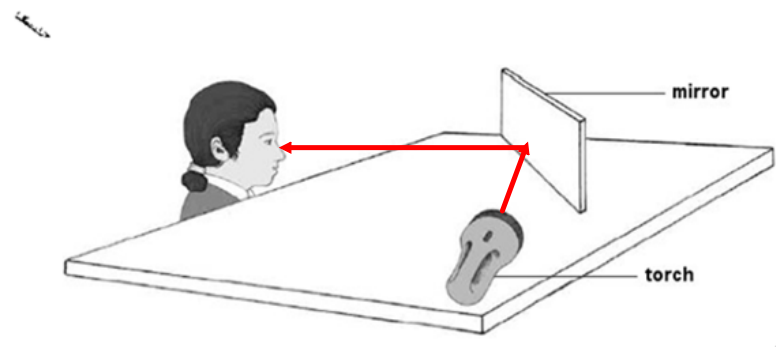
is transparent.

ANSWERS:

1. a) metal spoon and compact disc

b) glass jar

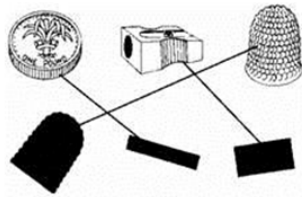
(c) The picture below shows Sanna looking at the torch light reflected in a mirror.
Draw **TWO** arrows to show the direction the light must travel for Sanna to see light from the torch in the mirror.



c)

2.

(a) Award **ONE** mark for **all three** lines correctly matched:



(b) Award **TWO** marks for correct classification of all **five**:

| Material | Some light passes through | No light passes through |
|---------------|---------------------------|-------------------------|
| tissue paper | ✓[given] | |
| glass | ✓ | |
| mirror | | ✓ |
| clear plastic | ✓ | |
| cardboard | | ✓ |
| foil | | ✓ |

(c) (i) • television.

(ii) Award **ONE** mark for:

•

is a light source.

Attachments

Edward Jenner Story.mp4

microbes_lesson_2_ppt.ppt

Session_2_pics_illnesses_to_match.doc