

Name:

Date:



## Science Assessment Year 6: Light

### How We See Things

1. Name 3 light sources:

- a) .....
- b) .....
- c) .....

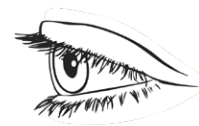
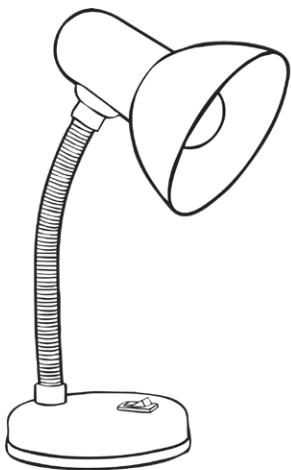
2. How can we see the moon at night?

.....

3. Fill in the gap in this sentence:

Light travels in a ..... line.

4. Draw **two** lines and arrows to show how the eye sees the apple.



3 marks



1 mark



1 mark



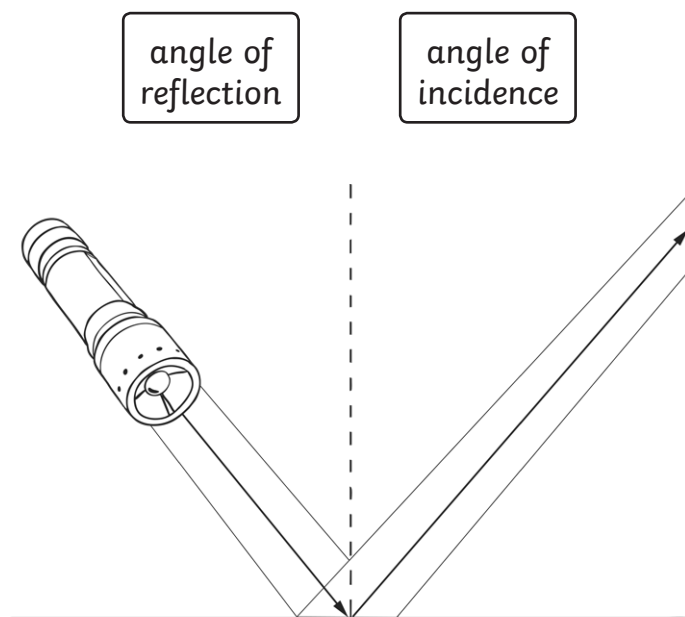
2 mark



Total for this page

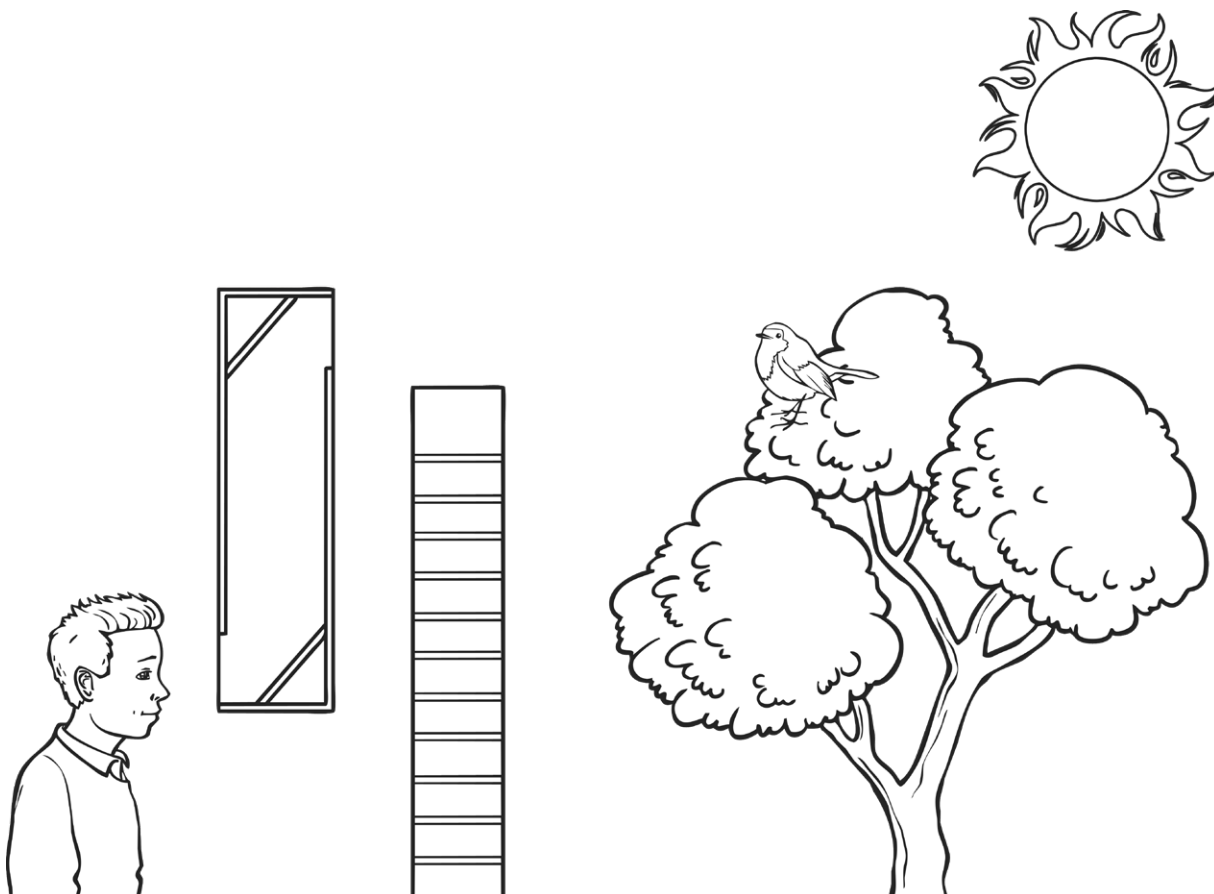
## Reflections

5. Draw a line from the two labels to the right place on the diagram:



2 marks

6. Draw 4 lines on this diagram to show how the person sees the bird through the periscope:



2 marks

Total for this page

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## Travelling Light

7. Name two precautions that people take to protect themselves from the harmful rays of the sun.

.....  
.....

2 marks

8. Write true or false for these statements:

a) Light travels faster than sound. ....

b) Light can travel through space. ....

c) The moon is a light source. ....

d) Stars shine because they reflect the sun's light. ....

4 marks

.....

## Shadows

9. Describe what happens and what is created when you put an opaque object in front of a light source.

.....  
.....

2 marks

10. Describe how the size of a shadow changes as an opaque object is moved further away from the light source of a ray of light.

.....  
.....

2 marks

Total for this page

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11. Describe how the size of a shadow changes as an opaque object is moved closer to the light source.

.....

.....

2 marks

12. Join up the words below to their meanings:

Opaque

Lets almost all the light through  
so things can be seen clearly

Translucent

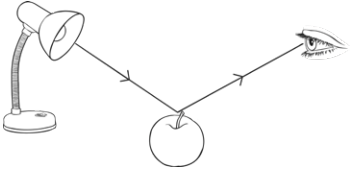
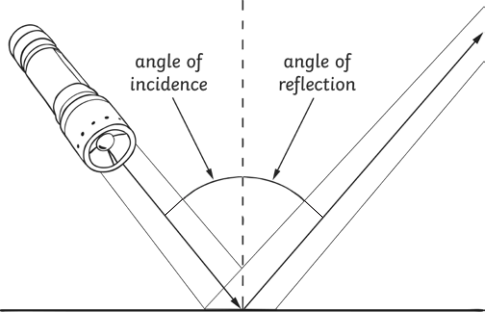
Lets no light through

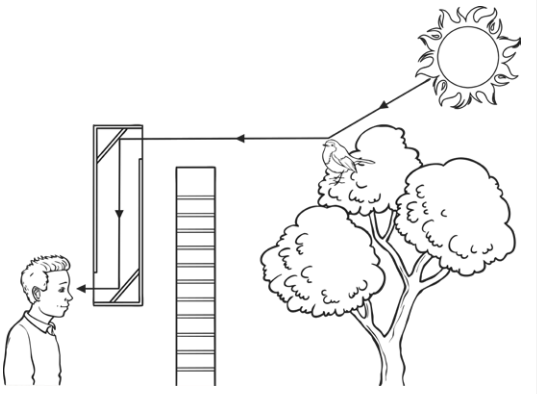
Transparent

Lets some light through but  
not very detailed shapes

2 marks

Total for  
this page

question	answer	marks	notes
<b>1. Name 3 light sources.</b>			
	1 mark each up to a maximum of 3 for any of these: <ul style="list-style-type: none"> <li>• the sun</li> <li>• fire</li> <li>• stars</li> <li>• candles</li> <li>• light bulbs</li> <li>• gas lamps</li> <li>• fire work</li> </ul>	3	No marks for moon - it is not a light source. 1 mark for any others which are sources, not mentioned on this list.
<b>2. How can we see the moon at night?</b>			
	1 mark for: <ul style="list-style-type: none"> <li>• It reflects the sun's light</li> <li>• It reflects light to Earth</li> </ul>	1	The word 'reflection' <b>must</b> be used to gain the mark.
<b>3. Fill in the gap in this sentence.</b>			
	1 mark for: <ul style="list-style-type: none"> <li>• Light travels in a <b>straight</b> line.</li> </ul>	1	Accept spelling mistakes where the correct word is obvious.
<b>4. Draw two lines and arrows to show how the eye sees the apple.</b>			
	1 mark each for: <ul style="list-style-type: none"> <li>• a straight line with an arrow in the correct direction going from the lamp to the apple</li> <li>• a straight line with an arrow in the correct direction going from the apple to the eye.</li> </ul> 	2	No marks for lines with no arrows. No marks for arrows in wrong direction.
<b>5. Draw a line from the two labels to the right place on the diagram.</b>			
		2	1 mark for each label placed correctly as shown in this diagram. No marks for labels on any other angles. Accept slight errors in exact positioning of labels so long as it is obvious as to which angle the label refers.

question	answer	marks	notes
<b>6. Draw 4 lines on this diagram to show how the person sees the bird through the periscope.</b>			
	<p>2 marks for 4 lines with at least one arrow showing correct direction of light travel.</p>  <p>1 mark for 3 lines from bird to eye not including the one from sun to bird. All lines must include at least one arrow.</p>	2	<p><b>No</b> marks for straight lines with no arrows.</p> <p><b>No</b> marks for straight lines with arrows pointing the wrong direction.</p> <p>No marks for lines that are not straight.</p>
<b>7. Name two precautions that people take to protect themselves from the harmful rays of the sun.</b>			
	<p>Answer: 1 mark for each up to a total of 2 from:</p> <ul style="list-style-type: none"> <li>• sunglasses</li> <li>• suncream/block</li> <li>• clothes that cover your body</li> <li>• staying in the shade/indoors/under a sunshade</li> </ul>	2	
<b>8. Write true or false for these statements.</b>			
	<p>a. Light travels faster than sound. <b>True</b>            b. Light can travel through space. <b>True</b>            c. The moon is a light source. <b>False</b>            d. Stars shine because they reflect the sun's light. <b>False</b></p>	4	One for each correct answer.
<b>9. Describe what happens and what is created when you put an opaque object in front of a light source.</b>			
	<p>1 mark each for:</p> <ul style="list-style-type: none"> <li>• A shadow is formed/created.</li> <li>• The opaque object blocks the light from the source (to form the shadow).</li> </ul>	2	

question	answer	marks	notes									
<b>10. Describe how the size of a shadow changes as an opaque object is moved further away from the light source.</b>												
	1 mark each for: <ul style="list-style-type: none"> <li>• The further away the object is...</li> <li>• ...the smaller the shadow.</li> </ul>	2										
<b>11. Describe how the size of a shadow changes as an opaque object is moved closer to the light source.</b>												
	1 mark each for: <ul style="list-style-type: none"> <li>• The closer the object is...</li> <li>• ...the larger/bigger the shadow.</li> </ul>	2										
<b>12. Join up the words below to their meanings:</b>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center; padding: 5px;">Opaque</td> <td style="width: 10%;"></td> <td style="width: 70%; padding: 5px;">Lets almost all the light through so things can be seen clearly</td> </tr> <tr> <td style="text-align: center; padding: 5px;">Translucent</td> <td></td> <td style="padding: 5px;">Lets no light through</td> </tr> <tr> <td style="text-align: center; padding: 5px;">Transparent</td> <td></td> <td style="padding: 5px;">Lets some light through but not very detailed shapes</td> </tr> </table>	Opaque		Lets almost all the light through so things can be seen clearly	Translucent		Lets no light through	Transparent		Lets some light through but not very detailed shapes	2	1 mark for two correct, 2 marks for all three correct.
Opaque		Lets almost all the light through so things can be seen clearly										
Translucent		Lets no light through										
Transparent		Lets some light through but not very detailed shapes										
		total 25										