

# 8K Light

## Extension questions

Science Interactive LTD, PO BOX 50764 LONDON NW6 9AT email: [sales@science-interactive.co.uk](mailto:sales@science-interactive.co.uk)

web: [www.science-interactive.co.uk](http://www.science-interactive.co.uk)

Answer the following questions:



Click mouse to reveal answer

- Q1. What enters the eye to let us see colours?
- Q2. Name a valuable, extremely hard, colourless gemstone?
- Q3. What are lenses, windows and prisms usually made of?
- Q4. What do we call something that can be seen through clearly?
- Q5. What do we call something that lets light through but does not let us see clearly?
- Q6. What do we call something that does not transmit light?
- Q7. Where on an object is the light absorbed or reflected?
- Q8. Give a word that means a picture formed by light?
- Q9. What do you see in a mirror?
- Q10. What do we call the bending of light when it passes from air to water?
- Q11. What do we call the line at right angles to a surface or interface?
- Q12. What is the scientific term for the incoming light ray?
- Q13. Name the main optical component in spectacles (glasses) and telescopes?
- Q14. Which colour surface reflects all incident light equally?
- Q15. Which colour surface absorbs all incident light?
- Q16. What is the scientific term for the colours of the rainbow?

# 8K Light

## Extension questions

Science Interactive LTD, PO BOX 50764 LONDON NW6 9AT email: [sales@science-interactive.co.uk](mailto:sales@science-interactive.co.uk)

web: [www.science-interactive.co.uk](http://www.science-interactive.co.uk)

### Answers:

- A1. Light
- A2. Diamond
- A3. Glass
- A4. Transparent
- A5. Translucent
- A6. Opaque
- A7. The surface
- A8. Image
- A9. A reflection
- A10. Refraction
- A11. The normal
- A12. The incident ray
- A13. A lens
- A14. White
- A15. Black
- A16. Spectrum



Click mouse to reveal answer

---

1: When a blue object is looked at through a red filter it will appear to be ?

---

A Green

---

B Blue

---

C Red

---

D Black

---

---

2: A glass prism will separate out white light into ?

---

A White and blue light

---

B Green, red, yellow and blue light

---

C All seven colours of the spectrum

---

D Indigo and violet light

---

---

3: The speed of white light in air is  $300,000 \text{ kms}^{-1}$ . This is the same as ?

---

A  $300,000 \text{ ms}^{-1}$

---

B  $3,000,000 \text{ ms}^{-1}$

---

C  $3000,000,000 \text{ ms}^{-1}$

---

D  $30,000,000 \text{ ms}^{-1}$

---

---

4: Someone looks at their toe whilst having a bath, which is correct ?

---

A The toe seems nearer

---

B The toe seems darker

---

C The toe seems further away

---

D The toe seems smaller

---

---

1: When a blue object is looked at through a red filter it will appear to be ?

---

A

---

B

---

C

---

D Black

---

---

2: A glass prism will separate out white light into ?

---

A

---

B

---

C All seven colours of the spectrum

---

D

---

---

3: The speed of white light in air is  $300,000 \text{ kms}^{-1}$ . This is the same as ?

---

A

---

B

---

C  $3000,000,000 \text{ ms}^{-1}$

---

D

---

---

4: Someone looks at their toe whilst having a bath, which is correct ?

---

A The toe seems nearer

---

B

---

C

---

D

---

Answer all the questions below:



Click mouse to reveal answer

1) Unscramble the following words:

ectruspm

curolo

ergeny

rioeflectn

2) Make three sentences using the following nine words or phrases:

light  
light  
ray diagrams

transfers energy  
reflected / refracted  
light rays

source  
dispersed  
travel

3) Match the word or phrase with the right meaning:

Light



The result of white light being split into its seven colours

Refraction



Travels in waves in all directions from a point source

Spectrum



Change of direction when moving to different materials

Answer all the questions below:

1) Unscramble the following words:

spectrum

colour

energy

reflection

2) Make three sentences using the following nine words or phrases:

light  
light  
ray diagrams

transfers energy  
reflected / refracted  
light rays

source  
dispersed  
travel

3) Match the word or phrase with the right meaning:

Light



Travels in waves in all directions from a point source

Refraction



Change of direction when moving to different materials

Spectrum



The result of white light being split into its seven colours

## complete the sentence

Science Interactive LTD, PO BOX 50764 LONDON NW6 9AT email: sales@science-interactive.co.uk

web: www.science-interactive.co.uk

Place the right word or words to complete the sentence:

 [Click mouse to reveal answer](#)

source

reflects

black

waves

bulb

seven

shiny

bends

filters

- a) When light travels from a \_\_\_\_\_ , it travels in all directions at 300,000 km per second.
- b) When light meets a \_\_\_\_\_ object like a mirror, most of the light is reflected.
- c) Light travels in \_\_\_\_\_ and does not require a medium to transmit it.
- d) Good examples of light sources include a light \_\_\_\_\_ and the sun.
- e) White light is a mixture of the \_\_\_\_\_ colours of the rainbow.
- f) Light \_\_\_\_\_ when it either speeds up or slows down going from one material to another.
- g) Coloured \_\_\_\_\_ change the colour of the light passing through them.
- h) Black objects appear \_\_\_\_\_ in white light because they absorbs all colours of light.
- i) We can see the moon because it \_\_\_\_\_ the light from the sun.

## complete the sentence

Science Interactive LTD, PO BOX 50764 LONDON NW6 9AT email: sales@science-interactive.co.uk

web: www.science-interactive.co.uk

Place the right word or words to complete the sentence:

source

reflects

black

waves

bulb

seven

shiny

bends

filters

- a) When light travels from a source, it travels in all directions at 300,000 km per second.
- b) When light meets a shiny object like a mirror, most of the light is reflected.
- c) Light travels in waves and does not require a medium to transmit it.
- d) Good examples of light sources include a light bulb and the sun.
- e) White light is a mixture of the seven colours of the rainbow.
- f) Light bends when it either speeds up or slows down going from one material to another.
- g) Coloured filters change the colour of the light passing through them.
- h) Black objects appear black in white light because they absorbs all colours of light.
- i) We can see the moon because it reflects the light from the sun.