

Lesson 8 - Colour

Science - Physics - Key Stage 3

Light and Space

Miss Wickham



Recap questions

1. What happens to light waves when it meets a mirror surface?
2. Where do light rays need to meet to produce a clear image?
3. What 3 things can happen to light waves when they meet a surface?
4. What happens to a light ray when it travels from air into water?
5. What is different about the properties of air and water that causes this?



Task

Fill in the gaps:

Red



Yellow



Blue



Violet



Task

Complete the following gap fill:

White light is made up of the ____ colours of the _____ light spectrum. These colours include; red, orange, _____, green, blue, _____ and _____, in order of lowest frequency to highest frequency. White light can be caused to split into the colours by using a _____ - this is called _____.

Key words: dispersion, 7, indigo, prism, yellow, visible, violet



Task

- answer the following questions

1. Explain why a red car appears red.
2. Why do objects appear black?
3. Which colour in the visible light spectrum has the highest frequency?
4. Draw a ray diagram to show how a green apple appears green.



Task

- answer the following questions

1. Explain why a red t-shirt will appear red under white light.
2. What colour will a blue hat appear under green light?
3. If we mix red, green and blue together, what colour is made?
4. Explain why a green car appears green in daylight.
5. What colour is made if red and green are mixed?



Answers



Recap questions

1. What happens to light waves when they meet a mirror surface?
They are mostly reflected
2. Where do light rays need to meet to produce a clear image?
The retina (not just the 'back of the eye')
3. What 3 things can happen to light waves when they meet a surface?
Reflected, transmitted, absorbed
4. What happens to a light ray when it travels from air into water?
Refraction
5. What is different about the properties of air and water that causes this?
Air is less dense than water



Task - answers

Fill in the gaps

Red

Orange

Yellow

Green

Blue

Indigo

Violet



Task - answers

Complete the following gap fill:

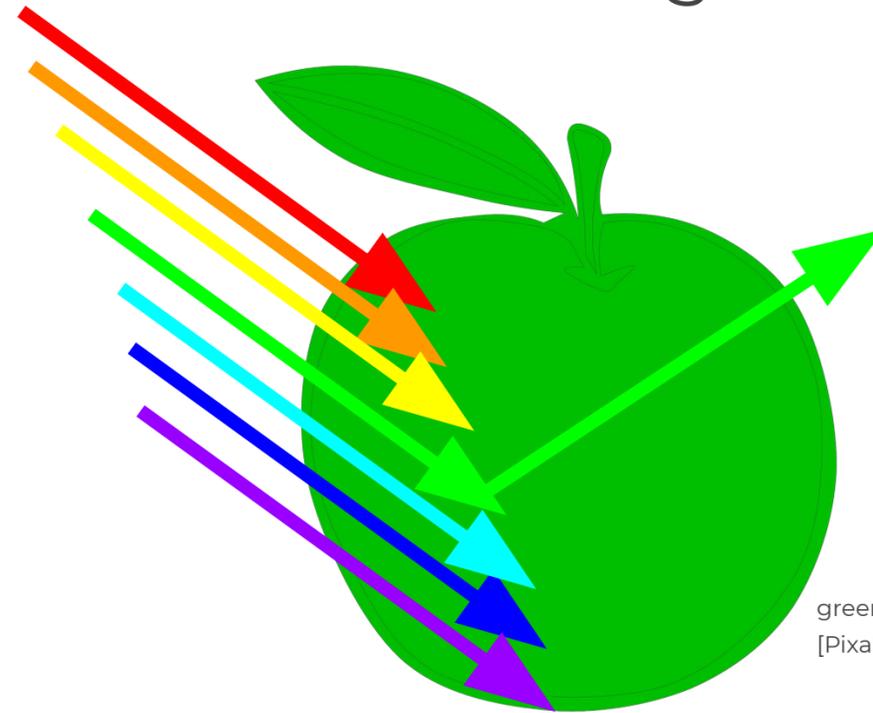
White light is made up of the **7** colours of the **visible** light spectrum. These colours include; red, orange, **yellow**, green, blue, **indigo** and **violet**, in order of lowest frequency to highest frequency. White light can be caused to split into the colours by using a **prism** - this is called **dispersion**.

Key words: dispersion, 7, indigo, prism, yellow, visible, violet



Task - answers

1. Explain why a red car appears red. **All other colours absorbed, red is reflected**
2. Why do objects appear black? **All colours absorbed, no colour reflected**
3. Which colour in the visible light spectrum has the highest frequency? **Violet**
4. Draw a ray diagram to show how a green apple appears green.



green apple by Clker Vector Images
[Pixabay]



Task - answers

1. Explain why a red t-shirt will appear red under white light.

The red is reflected and all other colours are absorbed by the t-shirt

2. What colour will a blue hat appear under green light?

The hat will appear black because no light is reflected

3. If we mix red, green and blue together, what colour is made?

White

4. Explain why a green car appears green in daylight.

The green is reflected and all other colours are absorbed

5. What colour is made if red and green are mixed?

Yellow

