

'Light' – Science

Set w/c 11th May 2020

So far this half term (at home), we have been focusing on the science of light. This week, we will learn a little more about HOW light is actually seen by the human eye. It's so clever!

- 1) Start off by drawing a diagram of the human eye. Label it or write a few sentences to explain anything that you already know. Don't do any extra research or discussion – just record WHAT YOU ALREADY KNOW. If you find that you don't actually know much, that's ABSOLUTELY FINE! Just draw an eye (you know what they look like) and write on to it anything that you do know, however simple.

- 2) Next, here is a great clip explaining how the eye works. **As always, ask permission before using the Internet.**
<https://www.bbc.co.uk/bitesize/clips/zf9c87h>

You may also do other research into how the human eye works. This could be by discussing it with somebody at home, using the Internet to research it a little more, or by reading any books that you may have to help you with this.

- 3) Finally, complete another diagram of the human eye. Label all the parts that you found out about in the video clip and during your other research. With each label, write a little explanation about the function of that part of the human eye. Try to use the following key words when labelling:

Cornea	Retina	Iris	Pupil	Lens	Optic Nerve
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If you wish, you can create a model of the human eye inside a box rather than drawing a diagram. You could make the eye using materials you have at home (get creative!) and fix it inside a small box (a shoe box is ideal). Then, write a short explanation about the functions of the different parts of the eye and stick them down around the model of the eye inside the box. Use string or similar to create the joining between your label and the correct part of the eye.

On the next few pages, you will find some information about the human eye and a suggested way of drawing it. PLEASE ONLY USE THIS IF YOU HAVE NO INTERNET ACCESS OR IF YOU ARE AN ADULT AND WANT TO MAKE SUGGESTIONS TO YOUR CHILD. I would rather you conduct your own research on this, if possible.

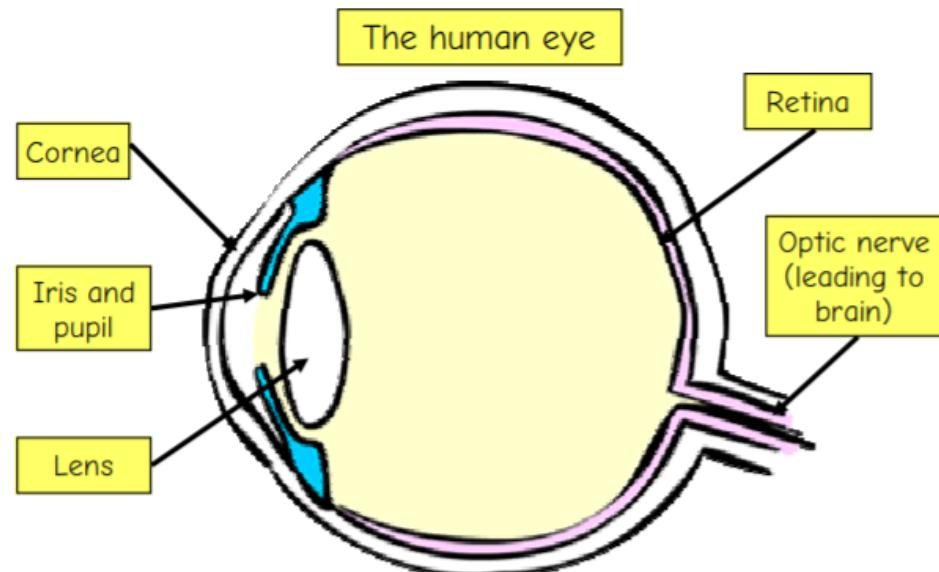
The human eye

The human eye is made of several parts with different functions.

The **cornea** is the outer coating of the eye. It is tough in order to protect the fragile interior of the eye, and transparent so that light can enter.

The **iris** is a ring-shaped structure behind the cornea. It is opaque, but has a hole in the middle called a **pupil** which allows light to enter the eye. The iris can change shape to allow different amounts of light into the eye. The colour of the iris determines a person's eye colour.

The **lens** is transparent, but contains a different type of fluid than the rest of the eye. This causes light to change direction (refract) as it passes through it. The lens has muscles which change its shape, focussing light into a small area on the retina.



The **retina** is found at the back of the eye. It consists of specialised cells which are sensitive to light. The retina contains rod cells (which are sensitive to light and dark) and cone cells (which are sensitive to colours). When light strikes the retina, it sends signals to the optic nerve.

The **optic nerve** is a cable-like structure which passes signals from the eye to the brain, which makes sense of the signals and gives us the sense of sight.

Activity

Cut out the descriptions and use them to complete the diagram on the following page, adding your own arrows. For an added challenge, write your own descriptions.

The human eye

