

Introduction to sense: Sight

Humans and animals use their sense of sight to help to **keep safe**, to **find food** and to **communicate** with others.

Cats **squint** their eyes as a way to communicate that they would like to be **friends**, so if you squint back you will let the cat know that you want to be friends too.



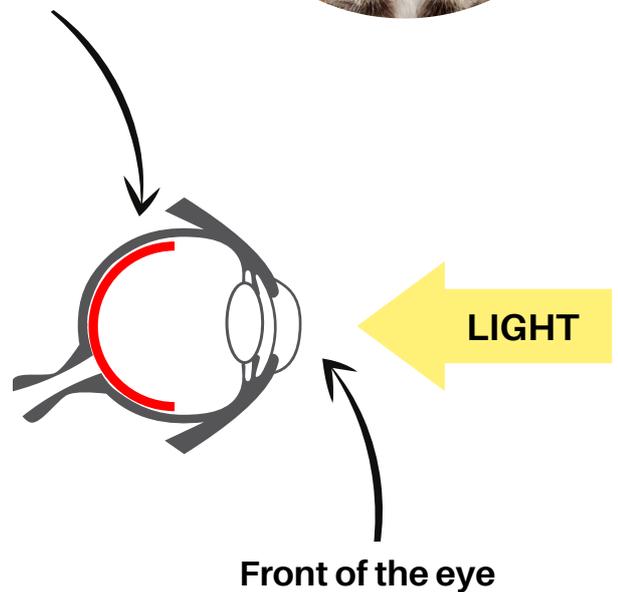
Human and animal eyes are similar, they both have a **retina** at the **back** to help them to see.

The retina is made up of **rods**, which are sensitive to light, and **cones**, which detect colour.

For example, humans and cats use the retina in different ways:

Humans have **more cones** than cats do, so they can **see colours better**.

Cats have **more rods** than humans do, so they can **see better in the dark**.



Checkpoint! What have you learnt so far?

How are human and cat eyes **similar**? How are they **different**?

Similarity Difference

Can you find the **retina** on the diagram above?

What do the **rods** in your **retina** do? How about the **cones**?

Rods Cones

Now that you know how **cats see differently** to us, how do you think this could help them to **find food** or **keep safe**?

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Challenge:

Create cat eye goggles and explore the world through the eyes of a cat!

You will need: 2 toilet roll tubes, clingfilm, blue and green paint/felt-tip pens, tape

1. Take a piece of **clingfilm** and tape it securely on a flat surface. Use the **blue** paint/felt-tip pen to **colour the clingfilm** (be careful to not colour too much, you need to be able to see through it!).
2. **Repeat** the first step but this time with the **green** paint/felt-tip pen.
3. Take one of the toilet roll tubes and tightly **cover the end** with the **blue** clingfilm, **secure** with tape.
4. Take the other toilet roll tube and **do the same** with the **green** clingfilm.
5. **Secure** the two toilet roll tubes side by side with tape so you can look through them like **binoculars**.



Using your cat eye goggles, look around your home and garden to see **what the world looks like to a cat!**



Questions to think about

What did you notice? Can you **explain** how the **world looks different**?

What happens when you **look** at **something red**? How do you think **cats** see coloured things like flowers?

How could you **show other people** what a cat can see? Could you create a poster or make a short video?

Did you know?

Eagles have **1 million rods** per square millimetre on their retina (humans only have **200,000 rods** per square millimetre).



Falcons can see **detailed images** even when they are **diving at 100mph!**

Horses and **zebras** have eyes on the **sides of their head**. This widens their range of vision to almost behind them, but it also means they have a **blind spot** right in front of their nose.

Always approach a horse from the side so they know you're coming!



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