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Project Title: Eyes

YouTube Link: _____

Short Explanation of Project: We picked eyes because
we wanted to learn how
do eyes see.

Do you have a signed photo release form for each student?

- Yes
- No

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Introduction

Why we chose this project...

What we hope to learn...

What is the problem/objective...

We were doing how do eyes see. We chose this because we want to know why do eyes see and other body parts don't. We hope to learn how do eyes see, why do they have different colours and what's behind your eyes. We also want to learn why do eyes see upside down and our brain helps it see normal.

Main Information

What we found out about our chosen topic.

The human eye has different parts. Eyelids help your eyes stay clean and moist while blinking. There is an iris that helps see light in the eye. There is a retina located at the back of the eye. It proceeds light and there is also an optic nerve which is in charge of your sight. The colours of the eye depends on the amount of melanin. If you have a small amount of melanin your eyes will be blue and if you have a bit more your eyes become green also if you have lots of melanin your eye becomes brown. The people that have brown eyes are common, blue is a bit rarer and green is even rarer. Some people have one eye blue and

the other one green! This is one in one hundred. This is called heterochromia. To control the amount of light entering the eye, the iris widens or narrows to change the size of the pupil. For example when it's dark the iris widens and the pupils dilates or gets bigger to allow as much light as possible to enter the eye, this is why your pupil gets bigger in the dark. Your eyes see upside down because the front part of the eye is curved, it bends the light, creating an upside down image on the retina. The brain eventually turns the image the right way up. The retina is a complex part of the eye, and its job is to turn light into signals about images that the brain can understand. The pupil is the part of your eye that controls

how much light gets in. In bright light, your pupils get smaller to limit the amount of light that enters. At the front of the eye we have the cornea. The cornea is the 'window of the eye.' It is a clear layer through which the light first passes. The cornea is covered by the conjunctiva. This is a membrane that covers the surface of the eye. The iris is the coloured part of the eye around the pupil. It contains the muscles that control the size of the pupil. The retina is made of cells that are sensitive to light. When the light hits them the cells send a signal to the brain. The brain turns these signals into pictures so that we can see. When you get a heart attack for a few seconds your pupils disappear.

Experimental Methods

Research Question:

Can we make a pinhole camera that that
sees like the eye?

Prediction/Hypothesis:

Our prediction is: it will work faintly

Materials used:

We used: a cardboard tube, a nightlight, tin foil,
greaseproof paper, scissors, a pencil, a torch and
tape.

Procedure:

Step 1: Cover one end of the cardboard tube with tinfoil and secure it with tape.

Step 2: Cover the other end of the tube with greaseproof paper and secure it with some more tape.

Step 3: Puncture a small hole, with a sharp pencil, in the centre of the tinfoil.

You now have a pinhole camera.

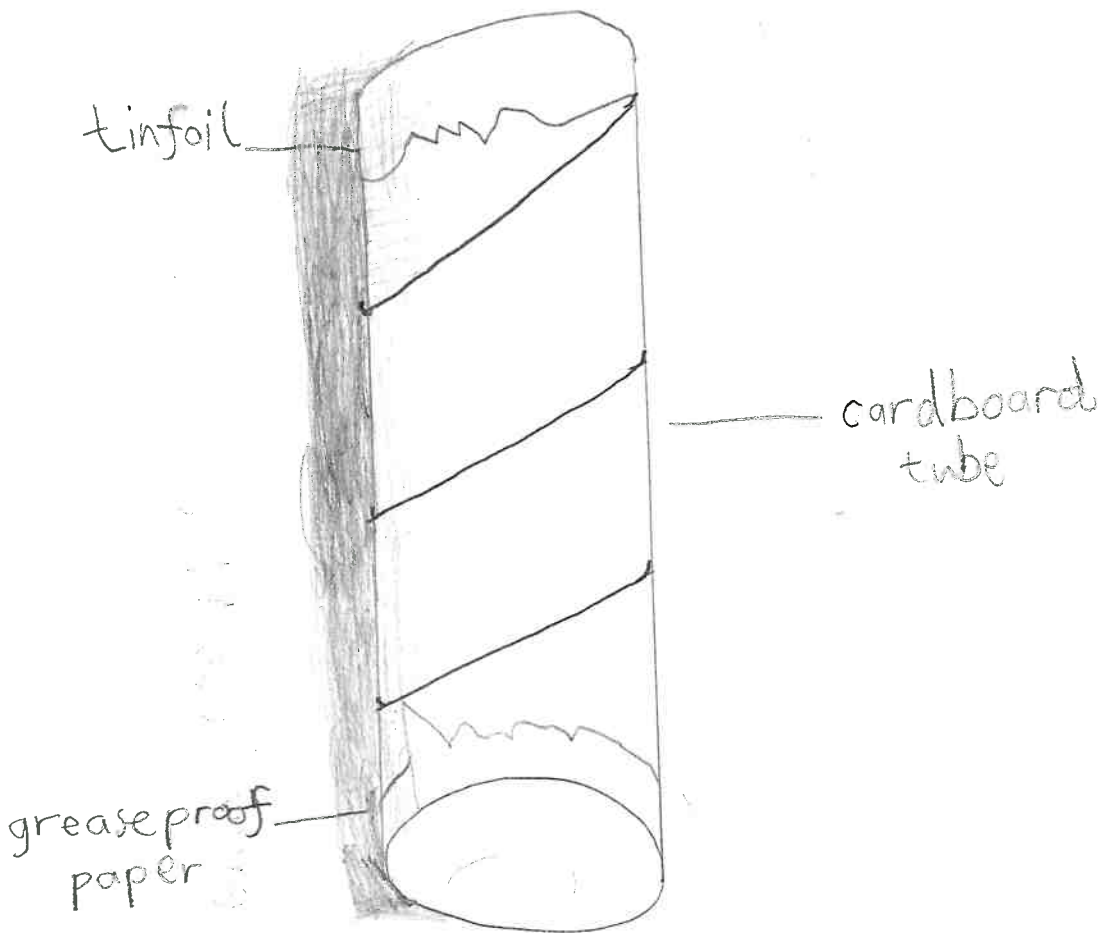
Observations:

We done 2 experiment with the pinhole camera. The first one worked and the second one did not work.

Conclusion:

We learned that we can make things look upside down. It was easy to make it but difficult to use it. We really enjoyed using it.

Diagram(s): Pinhole camera



Conclusions

What we learned.

The key discoveries that we made.

What we enjoyed most while doing the project.

What we found most challenging.

What we would do differently if we were to begin again.

We learned about how does the eyes see and other body parts do. We also learned why eyes have different colours. And we learned what is behind your eyes.

We discovered that eyes can see things upside down.

It was fun making and using the pinhole.

The most challenging was getting the pinhole to work.

We would try different materials to make the pinhole work.

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Acknowledgements

Support we received with our project...

• Our teacher: Muinteoir Colin

• Megan

• Zsombor

• Daniel

• Libby

• Muinteoir Cathol

