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Project Title: Telescope

YouTube Link: \_\_\_\_\_

Short Explanation of Project: We did our project on  
telescopes because we think it  
is cool the way they see  
so far and we wanted to  
try make a model that  
works ourselves.

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 are doing a model telescope for our project. We decided to do it for our project because we think making this project could be a fun experience. We would also hope to learn how telescopes work, how their lenses work and more. We hope this will be successful and that you will enjoy it.

# Main Information

What we found out about our chosen topic.

Early telescopes focused light using pieces of curved clear glass called lenses. However, most telescopes today use curved mirrors to gather light from the sky. The shape of the mirror or lens in a telescope concentrates that light is what we see when we look into a telescope.

The first telescope was patented in 1608. The first telescope magnified 3 times and Galileo's magnified 20 times. Galileo looked into the sky and was able to see the craters of the moon.

Newton completed his first telescope in 1668 and it's the earliest known functional reflecting telescope. After much experiment he chose an alloy (speculum metal) of tin and copper as the most suitable material for his objective mirror.

The mirror or lenses in a telescope are called the optics. Really powerful telescope can see very dim things and things that are really far away. To do that the optics - be those mirrors or lenses have to be really big.

A telescope made with lenses is called a refracting telescope.

A lens just like eye glasses. It bends light passing through it in eyeglasses. This makes things less blurry. In a telescope, it makes faraway things seem closer.



# Experimental Methods

Research Question:

Can we make a model telescope that works?

Prediction/Hypothesis:

We think that we'll be able to see things closer, but not as close as an astronomical telescope.

Materials used:

2 lenses, a cylinder, an empty can, 20 pringles, glue, a pair of scissors, black tape and recycled paper were used as materials for this project.



## Procedure:

When we were making our telescope First we got a cardboard tube and a pringles tube and put the pringles tube inside. After we got a sheet of paper and Pva glue and stuck the sheet of paper to the tube. Then we got electric tape and a magnifying glass. We taped the magnifying glass to the end of the tube and we folded the pringles box as an extender. After we got another cardboard tube and cut it in half. We used electric tape and taped it to the bottom of our telescope and made a stand. Afterwards we put a second magnifying glass on the eye part.

## Observations:

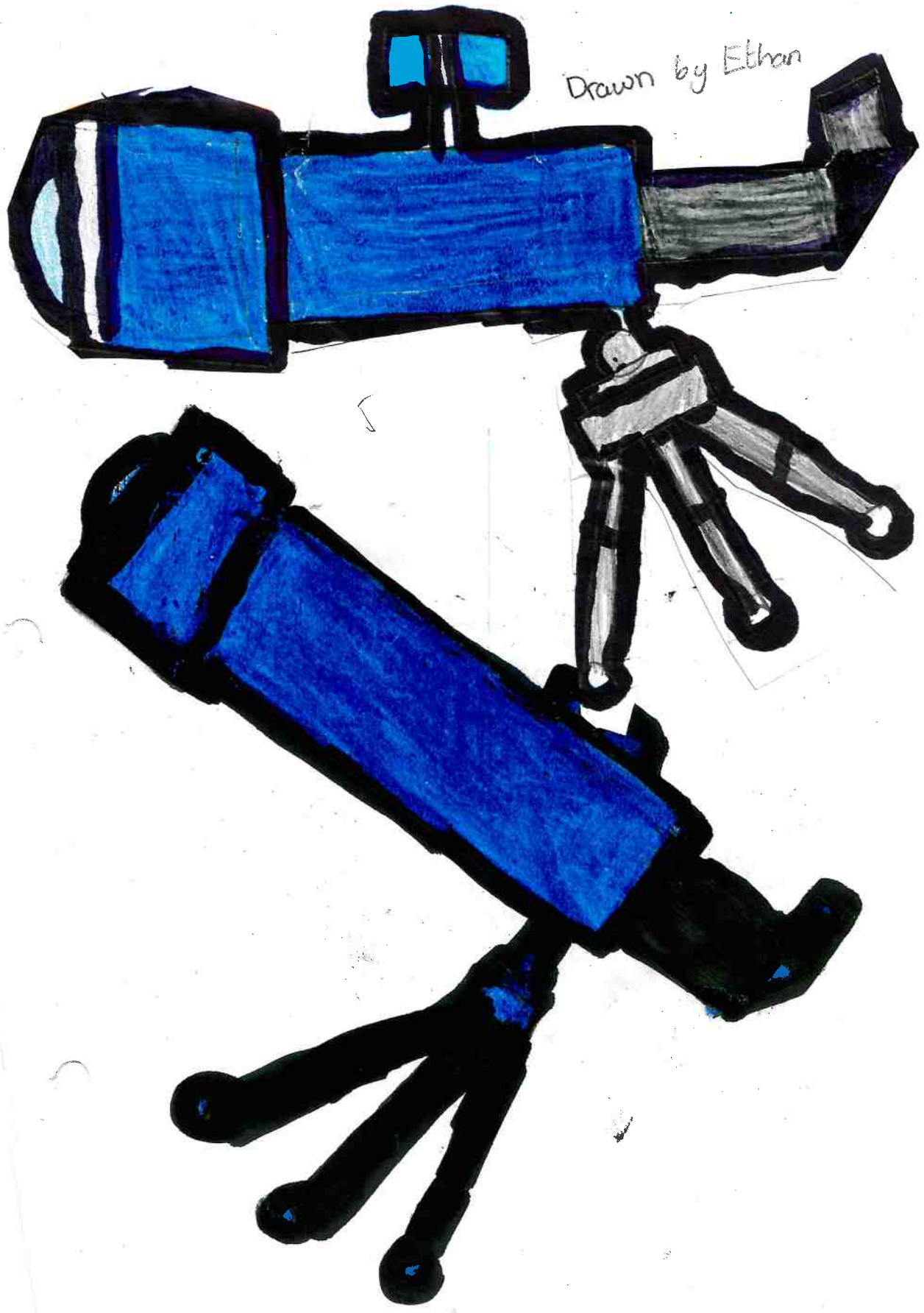
While testing the telescope we noticed that everything looked like it was upside-down.

### Conclusion:

When we made our telescope when we tested it was the wrong way but it is not a problem when we see in to space.

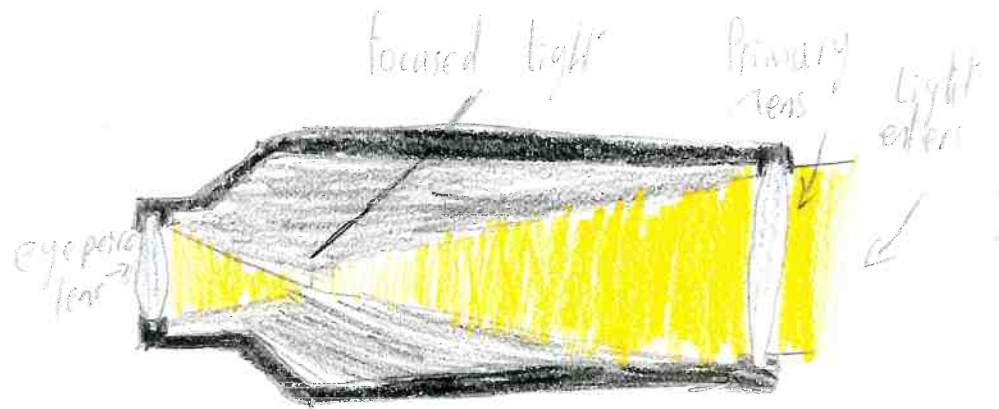
### Diagram(s):

Drawn by Ethan

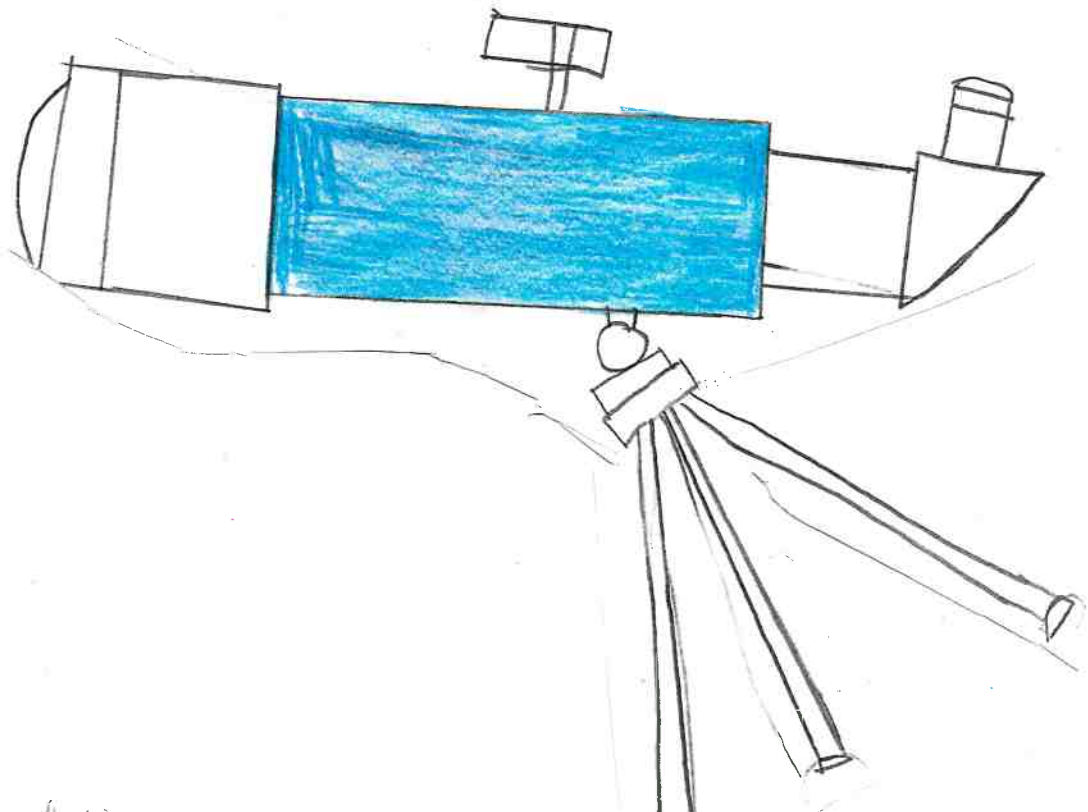
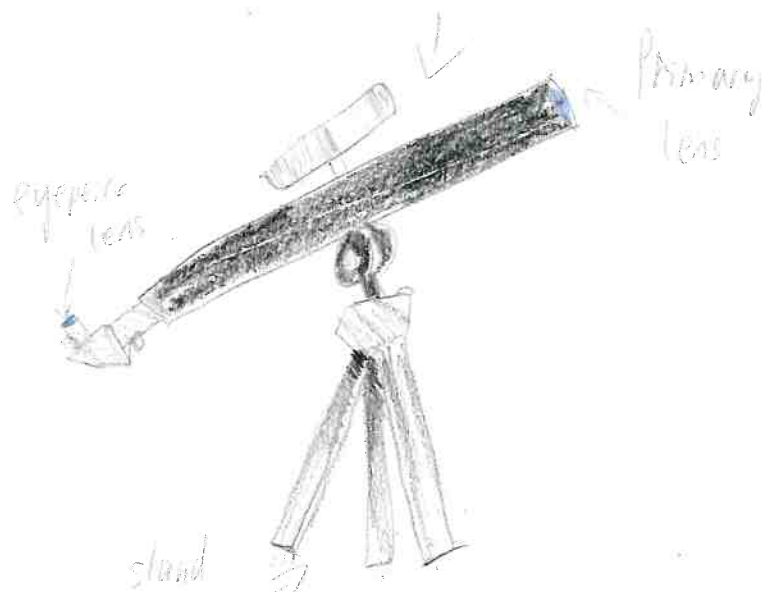


Drawn by Meiya

Inside of a telescope



Outside of a telescope



# 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 conclude that you can build a model telescope successfully and we also learned that everything you see through our telescope is upside down but everything looks clearer when it's upside down. During the project we most enjoyed building the telescope and researching about telescopes. Although we found building the telescope the most enjoyable we also



found it the hardest because  
everything was falling off  
during the taping process.  
If we were to restart our  
project we would remove  
the stands and we would  
also use less tape.

# Acknowledgements

Support we received with our project...

The people who helped us and  
were included in this project was  
our teacher m. colin, M. Cohen Owen,  
Maya, Ethan and isabella



# References

Books, websites, articles or other references that helped us with our project.

• Wild about Space articles

• www.nasa.com

• Google

• Youtube.com

• Wikipedia