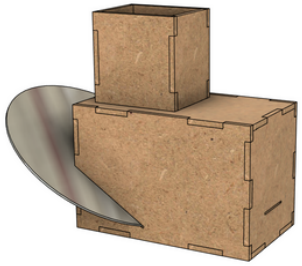
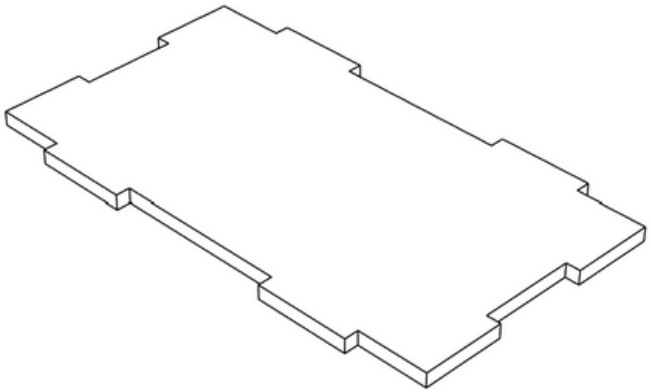
Spectroscope

Please see the YouTube video instructions to build the **Periscope**.



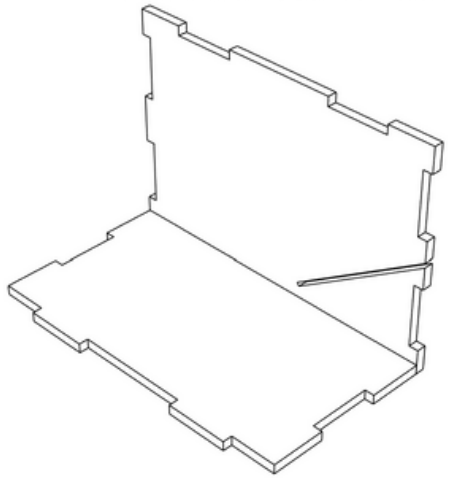
Follow each step in sequence and glue the pieces together as indicated in the images.

1



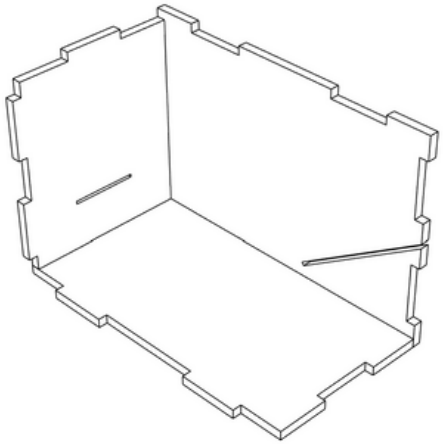
Start with the bottom panel of the spectroscope

2



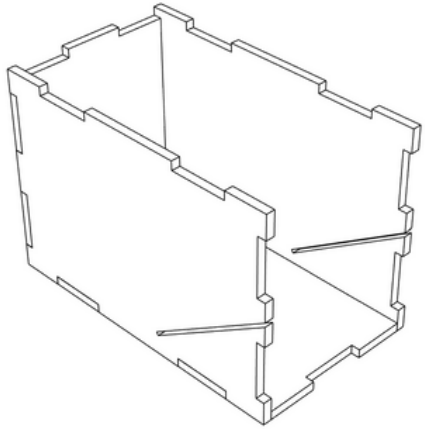
Glue the first piece into place. You can wipe any excess glue along the join to secure it even more.

3



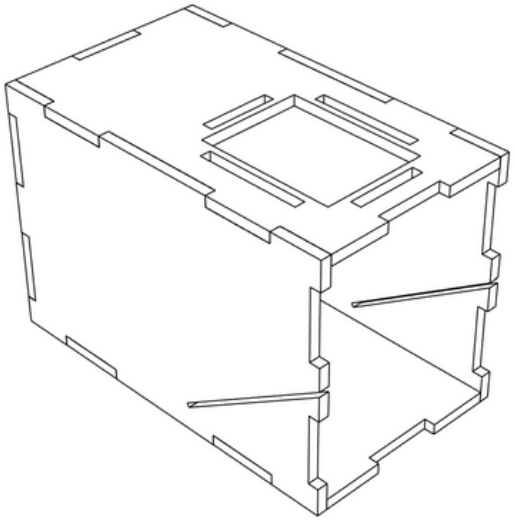
Glue the panel with the slot onto the side furthest from the side panel's slit.

4



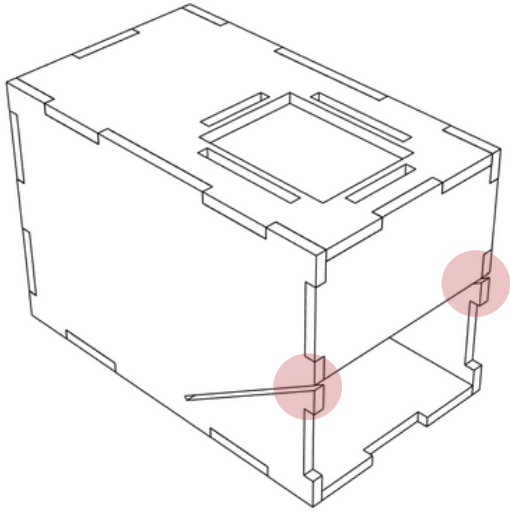
Now glue the second side panel on in the same orientation as the first.

5



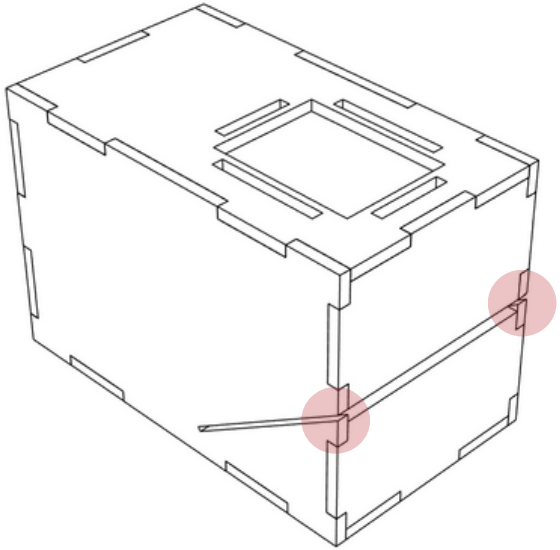
Glue the top panel into place, with the opening on the side of the slits, as in the image above.

6



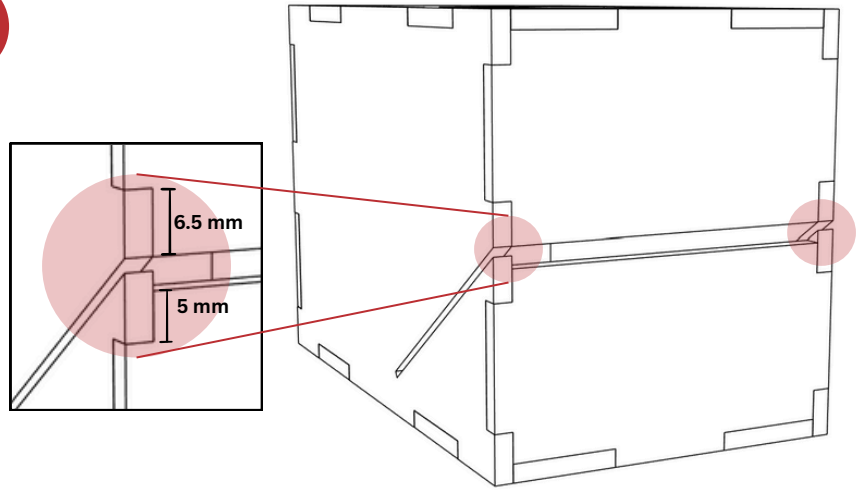
Now we will close off the box with the last 2 pieces. The 2 pieces are not the same size. Position them first, **do not glue them yet.** The bottom of your 1st piece should line up perfectly with the top edge of the slit.

7



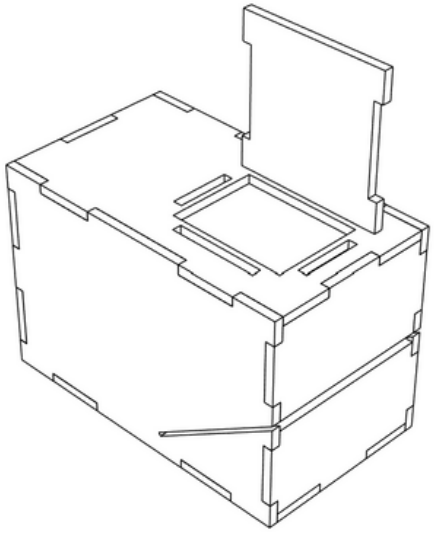
Position your last piece in place, **do not glue yet.** The top edge of your piece should stop below the bottom edge of the slit.

8



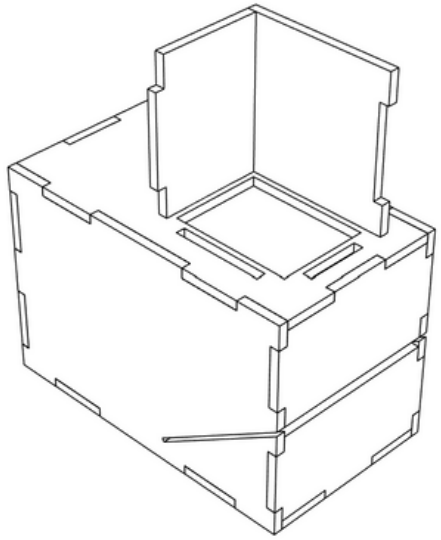
Check that the slit is not blocked by your pieces, if it looks blocked, switch the pieces around. Use the diagram to check which piece should be where. Once it is correct, glue in place.

9



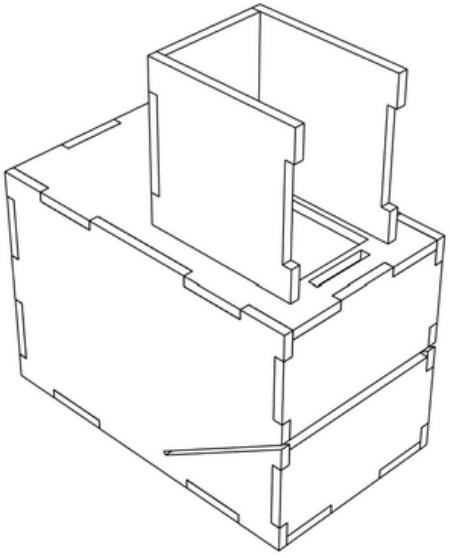
Glue the first of your viewing-tube pieces into place.

10



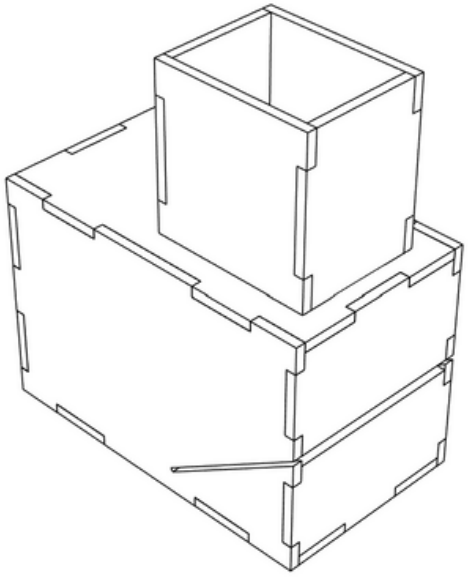
Repeat step 9 for the next piece above.

11

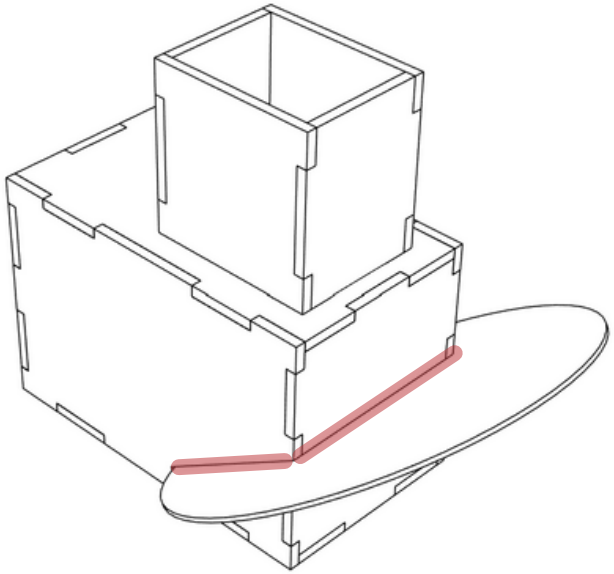


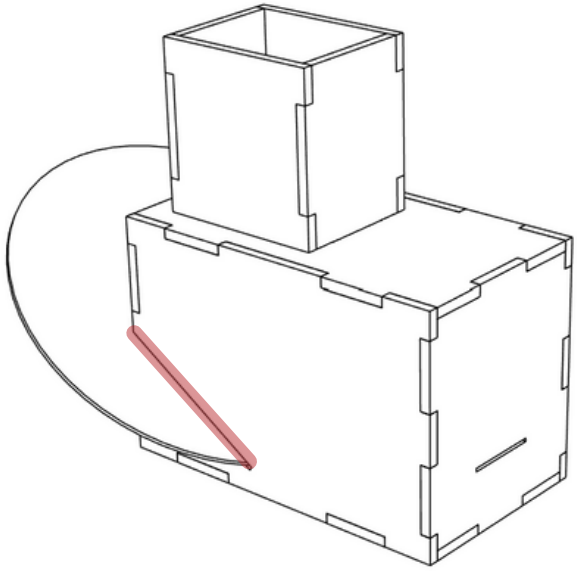
Repeat step 9 for the next piece above.

12



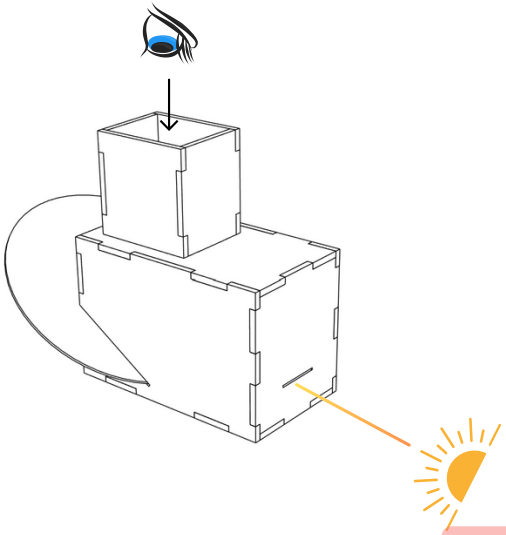
Repeat step 9 for the next piece above, completing the viewing-tube.



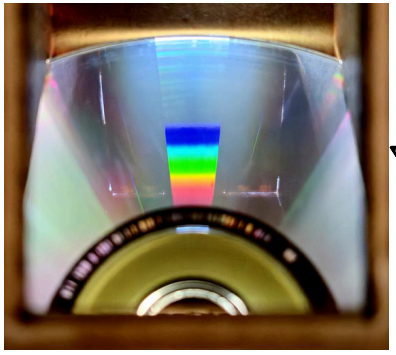


Insert your CD into the slit, making sure the shiny side is facing up. Roll out some thin rolls of Curious Gum, and use them to seal all the edges of the slit around the CD, to prevent any stray light from entering the spectroscope. The darker the inside, the better the viewing results.

Experiment Time...

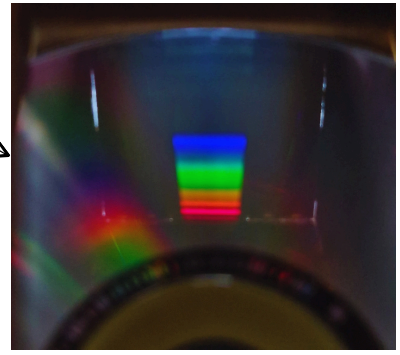


To use your spectroscope, point the side with the slit at a source of light, and look through the viewing tube. Experiment with looking at different light sources (sunlight, fluorescent ceiling light, bright laptop or phone screen etc.) to see how the spectrums of light they produce differ from each other. Research as to why this happens (it's very interesting!).



White light from the sun.

Light from laptop screen.



Please Note: DO NOT look directly at the sun, as this may damage your eyes.