

Telescopes & Technology

Activity 1 – One Small Speck of Dust

Look at the picture. Describe 2 differences you see between the stars in this image.

Activity 2 – Is it Technology?

Look at the supplies in the container. Organize the items as technology or not technology, and then record the answers in the data table below.

TECHNOLOGY	NOT TECHNOLOGY

Activity 3 - Through the Looking Glass

Materials

Chunk of Clay, ruler, and 3 lenses

1. Use modeling clay to form a base to hold one of the lenses upright on your desktop. Rotate your lens so that the light from the lamp passes through it.
2. Hold the construction paper so that the light passing through the lens lands on the paper. Slowly move the paper closer to or farther from the lens until you see the sharpest image of the light on the paper.
3. One group member will hold the paper in this position, while another group member, with the ruler, measures the distance between the lens and the paper in cm. Record the measurement in cm on the data table below. This is known as a focus measurement.

LENS #	FOCUS MEASUREMENT (CM)

4. Repeat steps 1 and 2 for the remaining lenses.
5. List something the lenses have in common and something they have that is different.
6. What do you think is causing the distance each lens will focus to be different?

7. What SEP did you use in this experiment?
8. What CCC is shown in this experiment?
9. Clean up – the clay makes the lenses dirty, so get a wet wipe and dry paper towel from the teacher to clean the lenses and put back into the correct baggies. Return supplies to the supply table.

Activity 4 – Different Telescopes

Use pages 496 – 501 in the red science textbook of knowledge to answer the following questions.

1. Draw an example of a reflection telescope.



2. Draw an example of a refracting telescope.



3. What limits the size and magnification of a refracting telescope?
4. Name 2 ways the atmosphere limits what astronomers can detect in space.
5. What is the difference between optical and non-optical telescopes?
6. What is the advantage of linking radio telescopes?