

## Concave Mirror as a Telescope Lab

Set up a concave spherical mirror. Set up a light bulb with clear glass close to (less than the focal length from) the mirror. Record the size of the reflection of the light bulb filament on a wall. About how many times bigger is the reflection than the actual filament. Explain how a mirror could be used as a Telescope.

Place the light bulb 1 meter away and find the reflected image on a thin strip of paper about the focal length away. Adjust the distance until you can see the sharpest image possible. (Actually you may see several images of the filament on the metal mirrors) Try to measure the size of an image of the filament. Explain how mirrors could be used to print really small patterns on computer chips.

Write up these two parts in word, then cut and paste directly into an e-mail message, and send to [sshumway@sanjuanschools.org](mailto:sshumway@sanjuanschools.org)

- Procedures for set up similar to a telescope
- Measurements
- Explanation of how mirrors could be used in making telescopes
- Procedures for set up similar to photolithography equipment in chip manufacturing
- Measurements
- Explanation of how mirrors could be used in duplicating very small versions of some pattern.