Lab 1: Parallax

Have you ever wondered why two items sometimes appear to move closer together or farther apart the nearer or farther away you are from them? What you're witnessing is called parallax.

In astronomy, parallax is used to measure the distances of stars from Earth. In other science courses, parallax can give you different values when looking at scales and thermometers.

For example: Look at a thermometer. Record the temperature by looking directly at the mark, then record the temperature by looking at the thermometer from above and below it. Do all three temperatures match? The change in the thermometer mark is because of parallax.

Definitions:

Parallax: The apparent shift in an object when viewed from two different points.

Procedure:

1. Fully extend your arm from your body.
2. Hold up your thumb.
3. Close one eye and put your thumb so that it covers an object.
4. Don't move your arm, but switch eyes.
    a. Did you notice that your thumb no longer covers the object?
5. This time, repeat the procedure, but only extend your arm half the length.
    a. Did you notice that your thumb is farther away from the object?

The closer your eyes are to your thumb, the larger the distance between your thumb and the object.

Now take a look at the Keynote presentation titled "Parallax at the football field". The position of the blue and green papers do not move on the stands, only the position from where the photo is taken. Did you notice that the green paper seems to travel from the left of the blue sheet to the right of the blue sheet?

Try creating your own parallax.

1. Place two objects on a table.
    a. Do not move the objects.
    b. One object should be closer to you.
2. Move only the position from where you look at the object.
    a. Start from the far side and work your way past the objects and onto the other side.
    b. You should notice the objects start to "travel" past each other.
3. Take a photo every few steps and you will be able to create your own parallax presentation.