Looking at Lenses

How do lenses affect light as it passes through them?

Predict how a change in lens shape affects the appearance of an image.

My Predictions

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My Observations

Use the following table to record your observations.

Distance from book	Convex Lens A	Convex Lens B	Concave Lens C	Concave Lens D
150 cm (59 in.)				
100 cm (39 in.)				
75 cm (30 in.)				
50 cm (20 in.)				
25 cm (10 in.)				
10 cm (4 in.)				
5 cm (2 in.)				

Analyze Results

Use your observation table to compare the four different lenses you used.

Create Explanations

1. How do lenses affect light as it passes through them?

2. Did all the lenses form an image on the poster board? Why or why not? How do they compare in size with the object?

3. How did the thickness of the convex lenses affect the focal length? Why?

Water Drop Lens

How can you make your own lens?

Predict which liquid will form the strongest convex lens.

My Predictions

My Procedure

Outline the steps you will take to make the drop lens.

My Observations

Draw or describe any observations you make with the lens in chart form.

Create Explanations

What did you learn?

Simple Optics

What combination of lenses will make a model of an optical device?

Predict how combining different lenses will affect the image seen on the card.

My Predictions

My Procedure

Outline the procedure in which you will use the materials provided to build a simple optical device.

My Observations

In the space provided, draw the device that you constructed. Does the device you built magnify the images or make distant objects appear closer? You may wish to use a chart to record your results.

Create Explanations

What did you learn?