Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour \_\_\_\_\_\_\_\_\_\_

**Station 4: Convex and Concave Mirrors and Lenses**

**Focus Question:** How does light behave when it hits a convex/concave lens vs. convex/concave mirror.

**Task:** You are going to observe and gather data from two sources to compare the behavior of light when it hits a convex/concave lens vs. a convex/concave mirror. Using these two sources, you are going to construct a model illustrating and explaining your response to the focus question.

# Part 1: Watch the following two Videos: Concave Mirror - Why is your reflection upside down on a spoon? | Smart Learning for All. And the convex video *This video is about mirrors not lenses.* Also watch the video about convex Mirrors.

<https://www.youtube.com/watch?v=N6n0FAZ_6N8&t=47s>

2. You will need two different colored writing utensils. Gather evidence to help you respond to the focus questions: How does light behave when it hits a convex/concave lens vs. convex/concave mirror?

-You may record your video evidence in your first color which is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

-Remember you are eventually going to construct a model. Make sure you add quick sketches/diagrams along with your evidence

**Part 2: Online Exploration**

1. Get your assigned Chromebook, and go to <http://ca.pbslearningmedia.org/asset/lsps07_int_refractdemo/> (also on my blog) Hold CTRL and click to open the site.

2. Play the convex lens video and then the concave lens video. While you are watching the video, gather and record evidence on your data table (in your second color \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_).

|  |  |
| --- | --- |
| Convex Mirror Evidence | Sketch |
| Concave Mirror Evidence | Sketch |
| Convex Lens Evidence | Sketch |
| Concave Lens Evidence | sketch |

**Part 3: Constructing a Model**

1. Using the evidence you have gathered, construct a model responding to the focus question: How does light behave when it hits a convex/concave lens vs. a convex/concave mirror?

- Your model should include a clear and detailed labels, explanations, and diagrams that respond to the focus question

Part 4: Discussion the Invention Convention with Ms. Murphy and get her signature

X\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(Yellow) Part 3: Constructing a Model**

1. Using the evidence you have gathered, construct a model responding to the focus question: How does light behave when it hits a convex/concave lens vs. a convex/concave mirror?

- Your model should include a clear and detailed labels, explanations, and diagrams that respond to the focus question

|  |  |
| --- | --- |
| Convex Lens | Convex Mirror |
| Concave Lens | Concave Mirror |

Part 4: Discussion the Invention Convention with Ms. Murphy and get her signature

X\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_