Activity 2

Does the angle of the light affect the shadow we see?

Names _____

Materials (per group):

Flashlight
Manilla folder
Small lump of clay
2" piece of drinking straw

Explore:

1. Open the folder and place it on a desk.
2. Place the lump of clay near the center of the folder and push it down to make it stay in place.
3. Insert the straw into the clay so that it stands perpendicular to the desk and folder.
4. Darken the room.
5. Move the flashlight into different positions to find the shortest and longest possible shadows of the straw.

A. How do you make the shortest shadows for the straw?

_____

_____

B. How do you make the longest shadows for the straw?

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_____

C. Can you make it so there is no shadow? Explain.

_____

Explore some more: _____

6. Position the flashlight to make a shadow about 4” long. While one student holds the flashlight in this position, another one tilts the folder in different directions.

D. What happens to the shadow when you tilt the folder?

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_____

Explore some more:

7. Make the 4” shadow on the flat folder again. While one student holds the light in place, another student turns the folder in a clockwise direction.

E. As you turn the folder, what happens to the shadow?

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F. As you turn the folder, does the shadow point to different places?

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_____

G. We have been looking at shadows. What do these shadows tell us about the light? (What can we learn about the light by looking at shadows?)

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