Shadows Discovery Stations

**Station 1**

Read the pages marked in *The Illuminating World of Light with Max Axiom* and fill in the blanks.

1. Light interacts with different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in different ways.

2. Clear glass is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Light passes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ transparent objects.

3. But objects like this painting are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Light can’t pass through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ objects.

4. Because opaque objects \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light, we see \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or dark spots behind them.

**Station 2**

Read the *World Book Online Shadow Article* and fill in the blanks.

5. A shadow is the darkness where an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light.

6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ use shadows to tell time.

Read the *All About Light book* and fill in the blanks.

7. Wherever you go, you will have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because the sunlight cannot pass through your body.

8. No, shadows change as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the source of light changes.

**Station 3**

*Shadow Hand Puppets Observation*

As you move your hands around at this station and create hand shadow puppets, make 2 observations about shadows and light and record them here.

9.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Station 4**

Complete the bar graph at this station for the size of a shadow and answer the questions below.

11. Describe how the size of the shadow changed as the object moved closer to the light.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. What did you notice about the darkness and shape of the shadow as the object moved closer to the light source.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Station 5**

Read from the pages marked in *How Does Science Work: Exploring Light* and fill in the blanks.

13. The sun does \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ move, it just looks like it does.

For 14-16, Sketch the shadow as the sun moves during the day

14. 15. 16.

**Night**

**Noon**

**Morning**



**Station 6**

Read *World Book Online Sundial Article* and fill in the blanks.

17. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the oldest known tool for measuring time.

18. It uses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cast by the sun.

19. These shadows change as the sun moves across the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

20. The length or angle of the shadow tells the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.