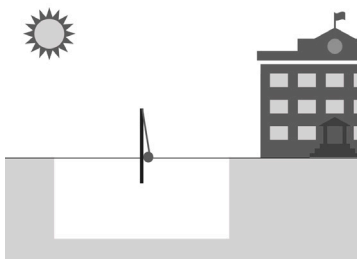


Name: _____ Teacher: _____

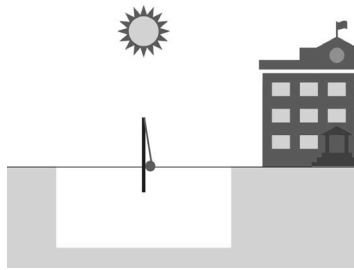
EARTH AND THE SOLAR SYSTEM: SHADOW PATTERNS | FORMATIVE ASSESSMENT TASK 5-ESS1-2

TASK 1

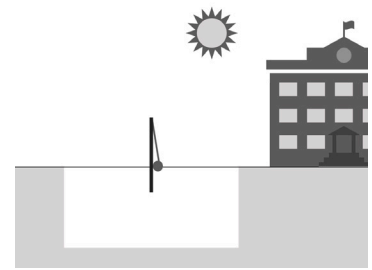
The following images show the tetherball pole on the playground at different times of the same day. On each image draw what the shadow of the tetherball pole would look like.



A



B

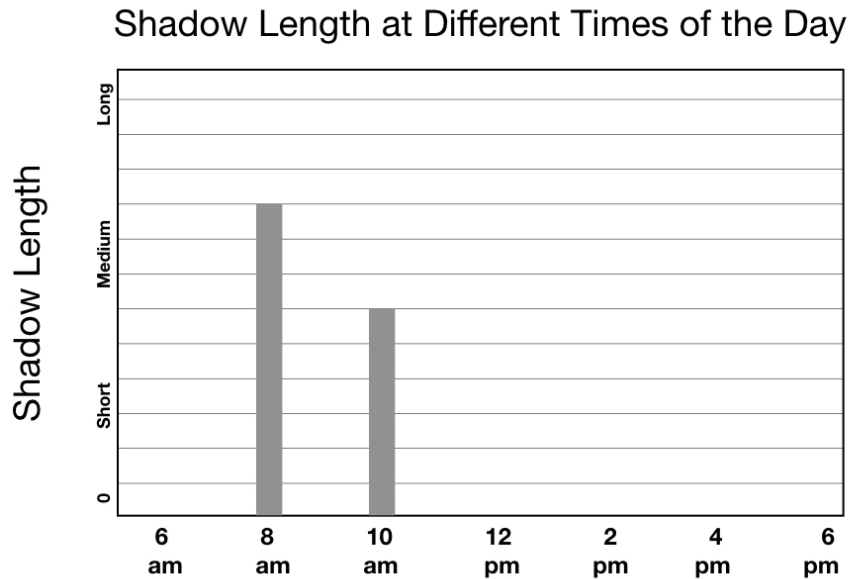


C

1. Explain your thinking about why the shadows look the way they do at the different times of the day.

TASK 2.

Below is a graph showing the relationship between the length of an object's shadow and the time of day that the shadow is occurring. Two data points have been provided and the other five pieces of data are missing. Complete the graph by adding bars for the five missing data points in order to show the correct relationship between shadow length and time of day.



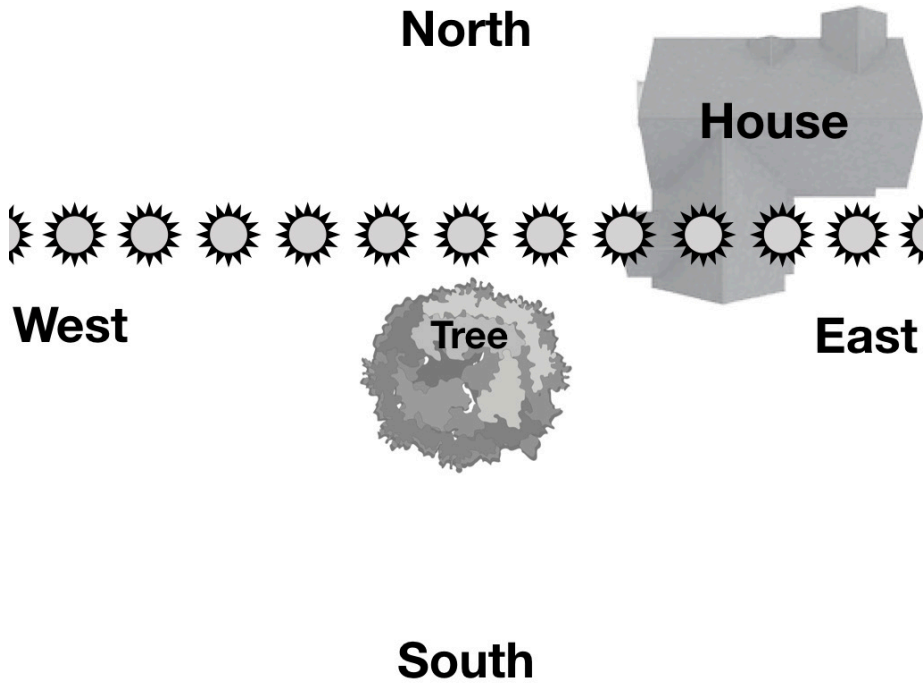
2. How is shadow length changing over the course of a single day according to the pattern above?

3. Explain what you think is causing the shadow length to change over the course of the day. Be sure to include evidence to support your thinking.

TASK 3.

Shandra wants to put in a sandbox in her backyard. In her backyard there is a large tree. She wants the sandbox to be in the shade at around 2:00 pm in the afternoon during the summer (June, July, & August). In the image below you can see the path that the sun would travel at this time of year.

- On the picture circle the sun where you think it would be at 2:00 pm.
- Draw where you would place the sandbox so that it will be in the shade at this time.



4. Using evidence from Task 1 and Task 2, provide Shandra with an explanation for why you recommend placing the sandbox in that specific location.
