

# PLTW Launch

## Launch Log

### Light: Observing the Sun, Moon, and Stars

Name:

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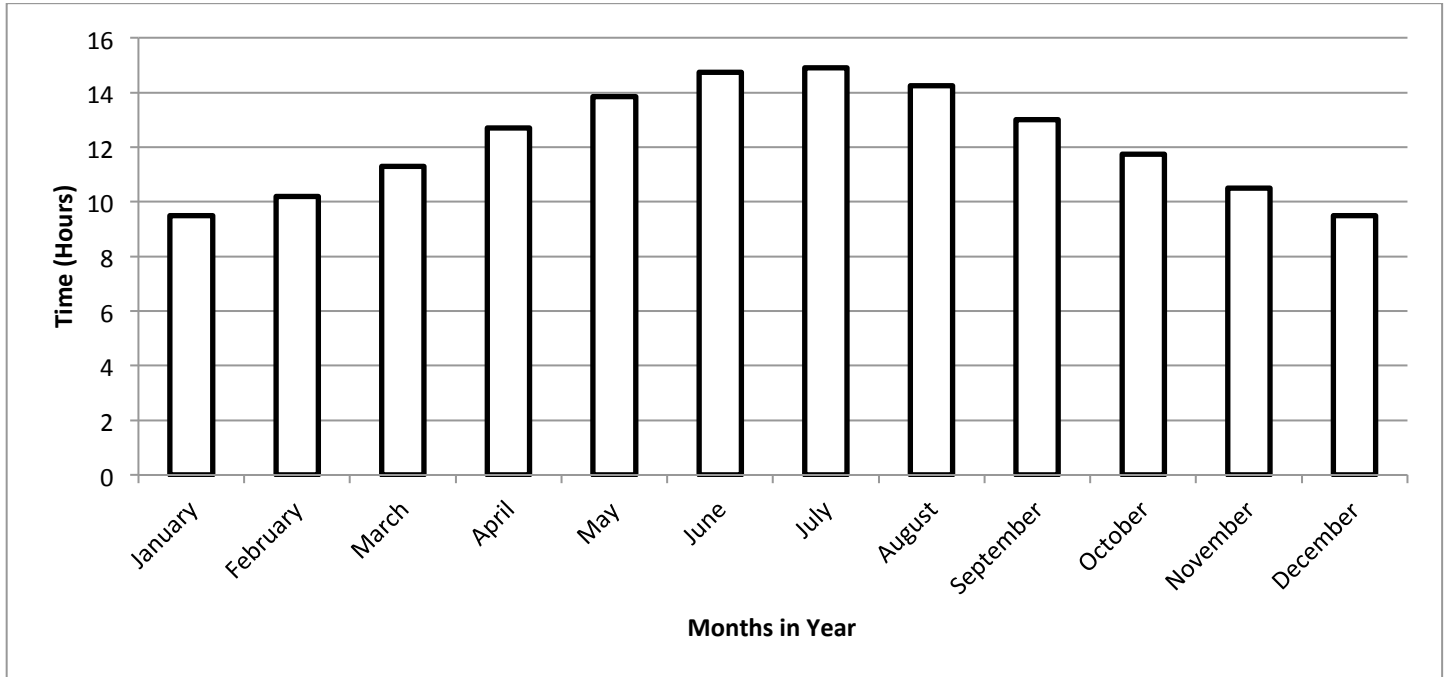
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# Activity 1: Patterns of the Sun

Color in the bars on the graph.

### Average Hours of Daylight



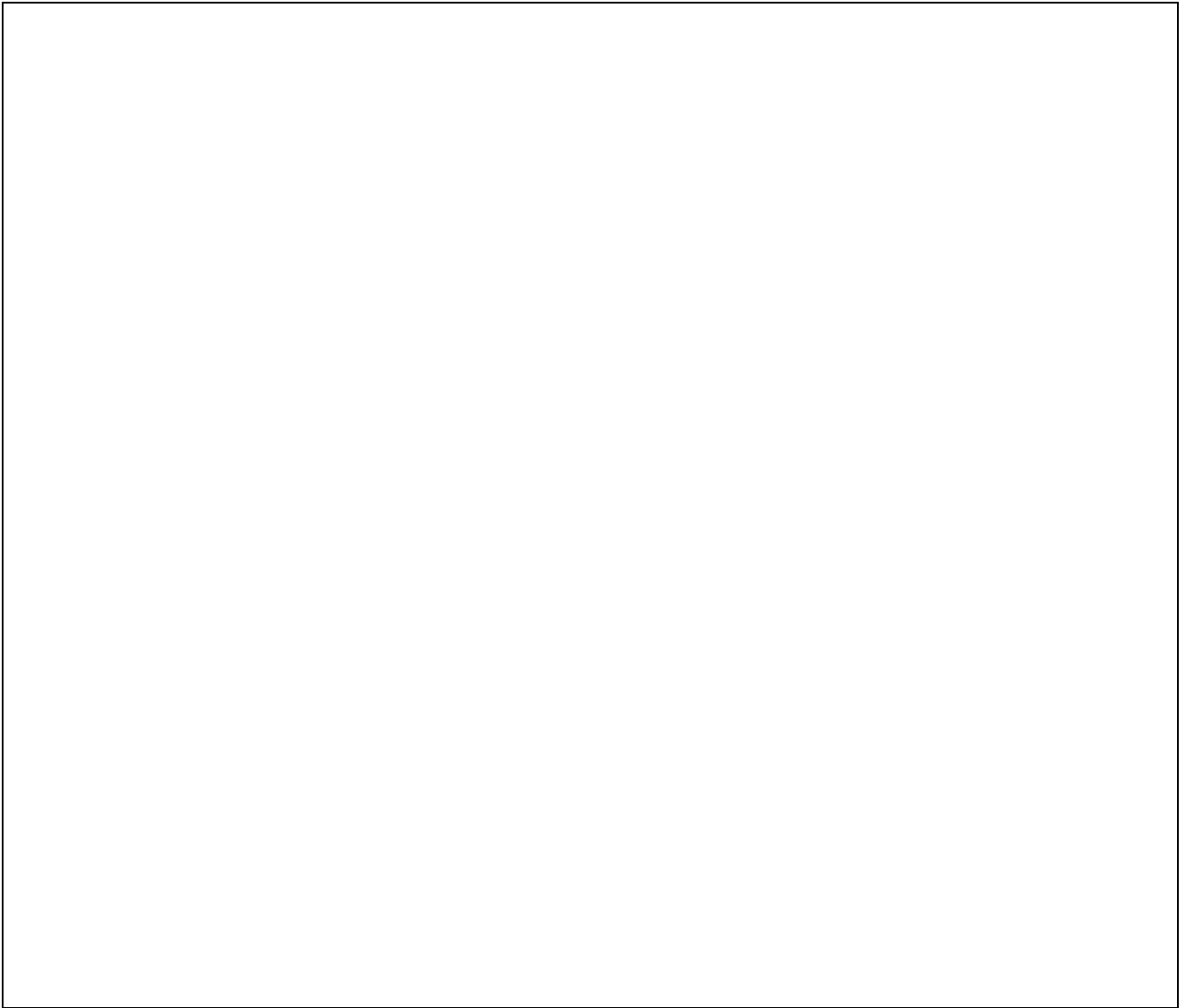
Fill in the missing words:

The Sun \_\_\_\_\_  
\_\_\_\_\_ in the morning

and \_\_\_\_\_  
\_\_\_\_\_ at night.

**rises**

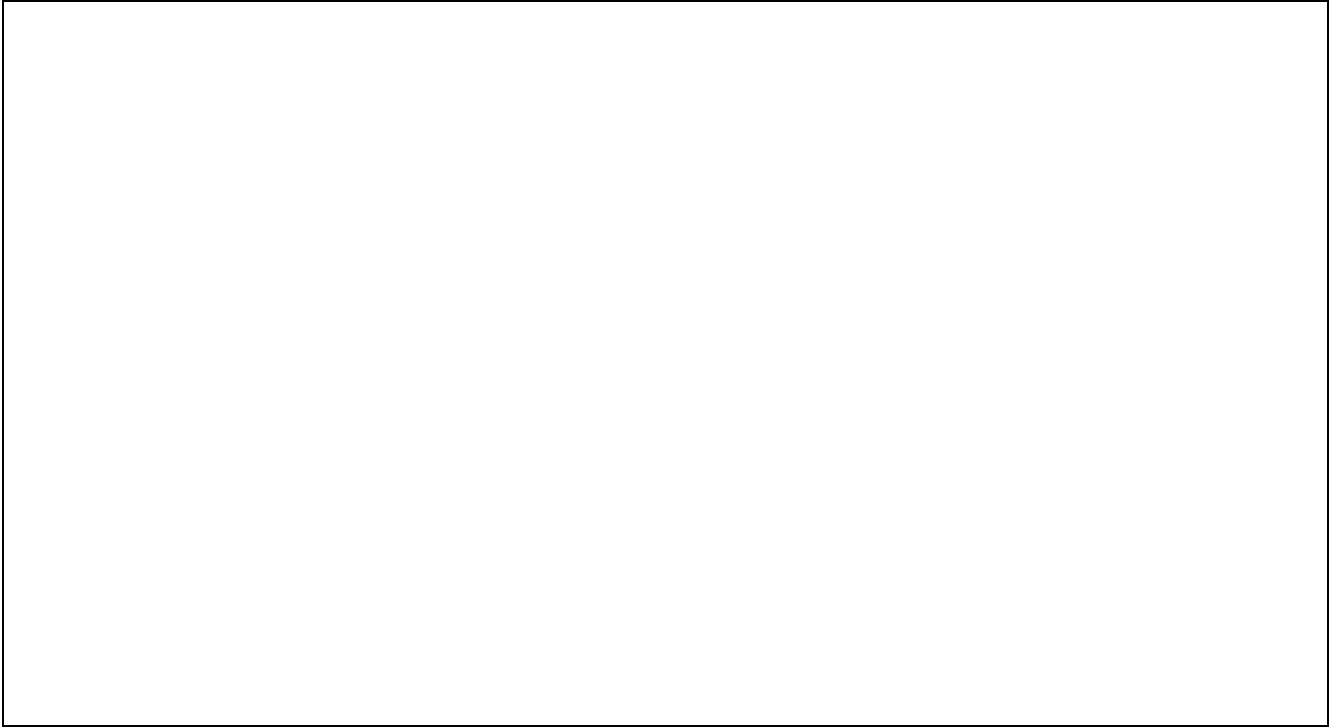
**sets**



Four sets of horizontal lines for writing, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

## Activity 2: Patterns of the Moon

Glue or tape your moon below. Draw a yellow sun and a blue Earth. Show how the light from the sun reflects off the moon to the Earth.

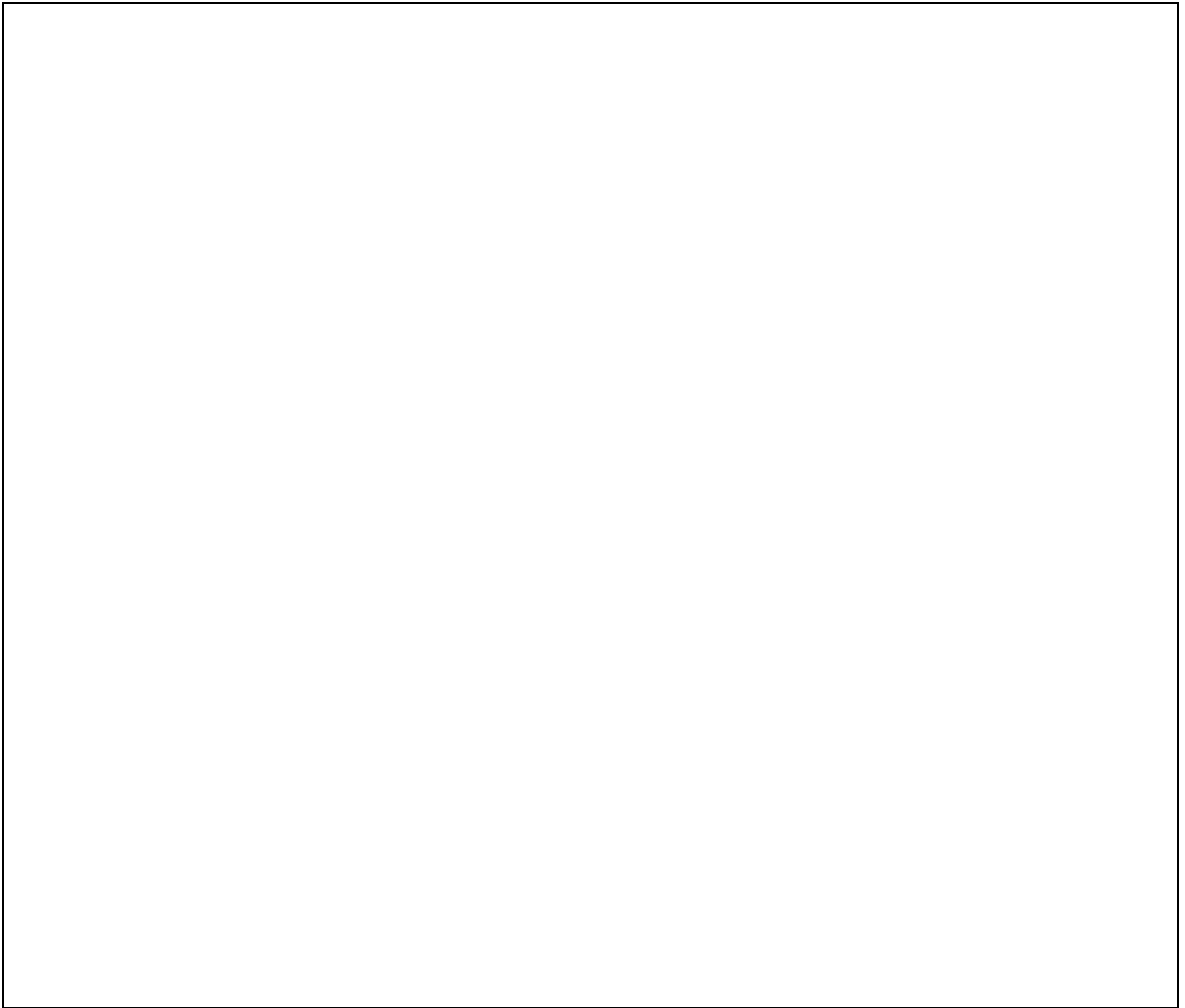


Fill in the missing words:

Light from the \_\_\_\_\_  
\_\_\_\_\_ reflects off

the \_\_\_\_\_  
\_\_\_\_\_ and into our eyes.

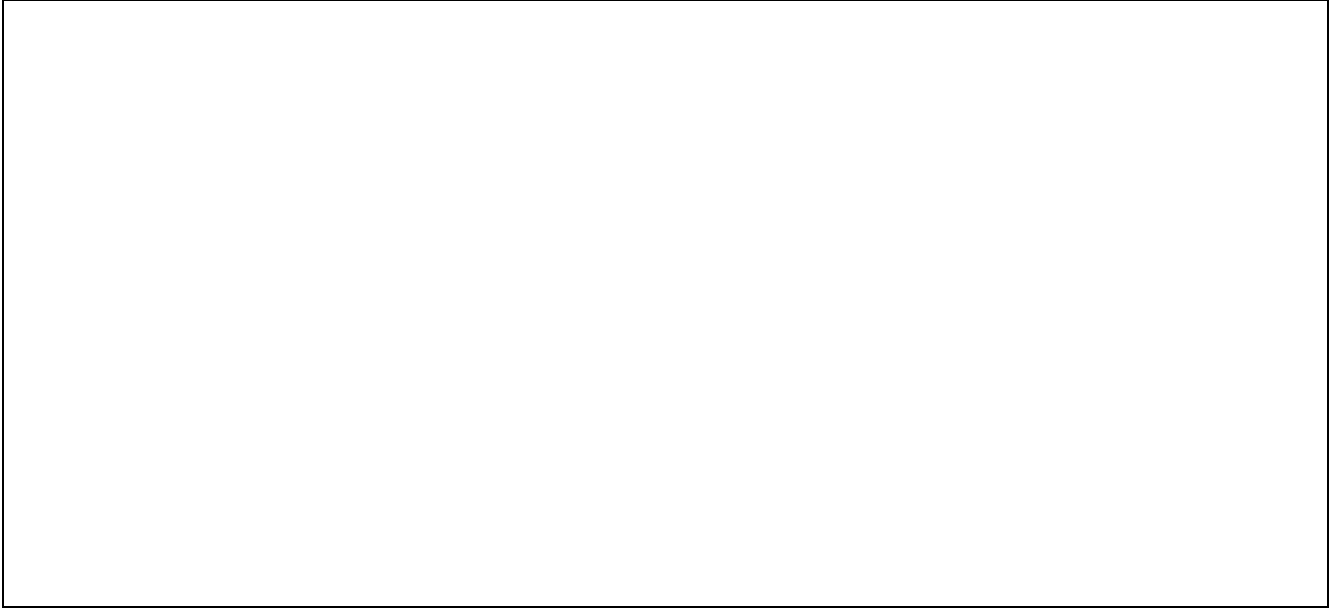
**sun      moon**



Four sets of horizontal lines for writing, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

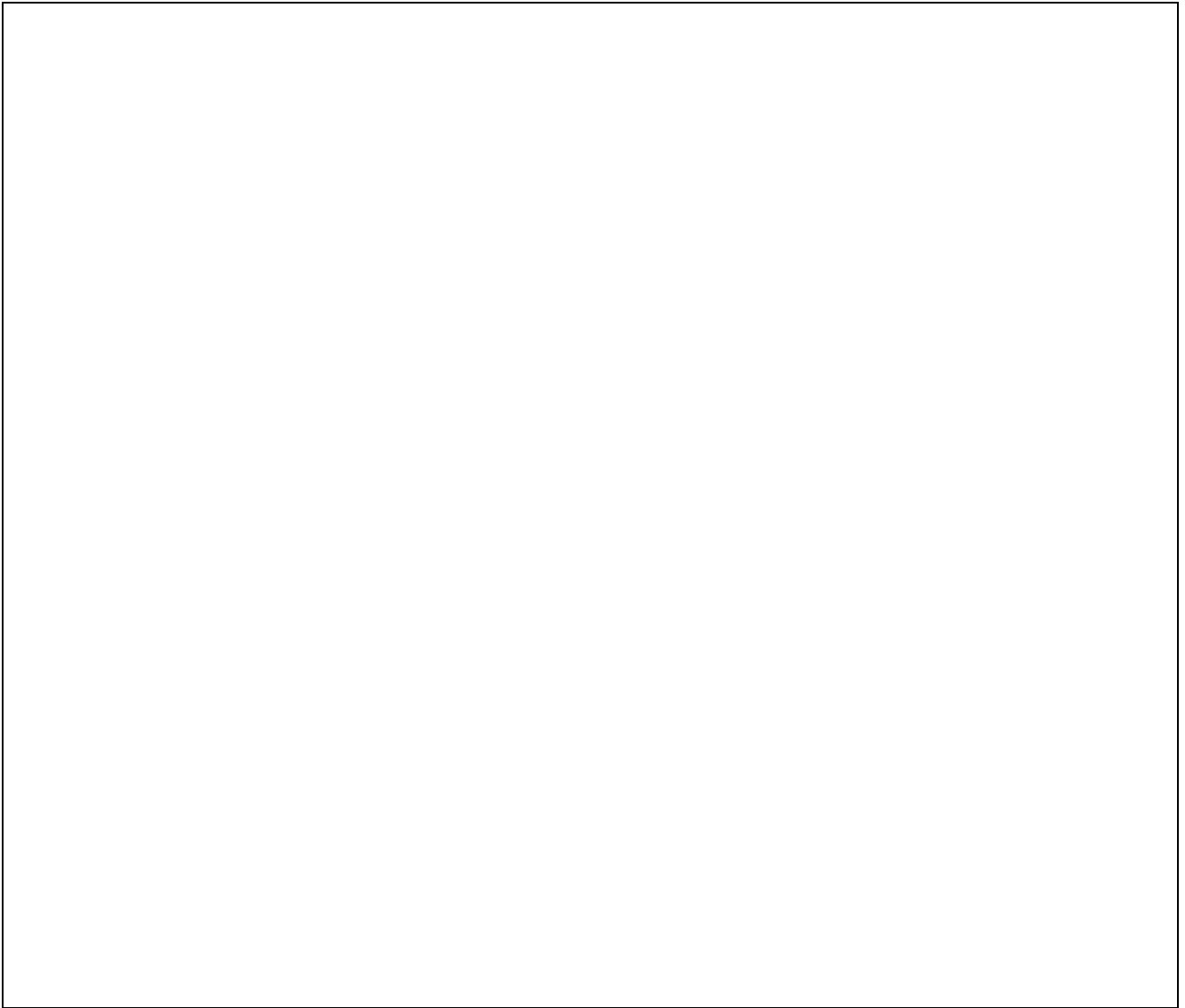
## Activity 3: Patterns of the Stars

Draw a picture to show the sky at night:



Draw a picture to show the sky during the day:



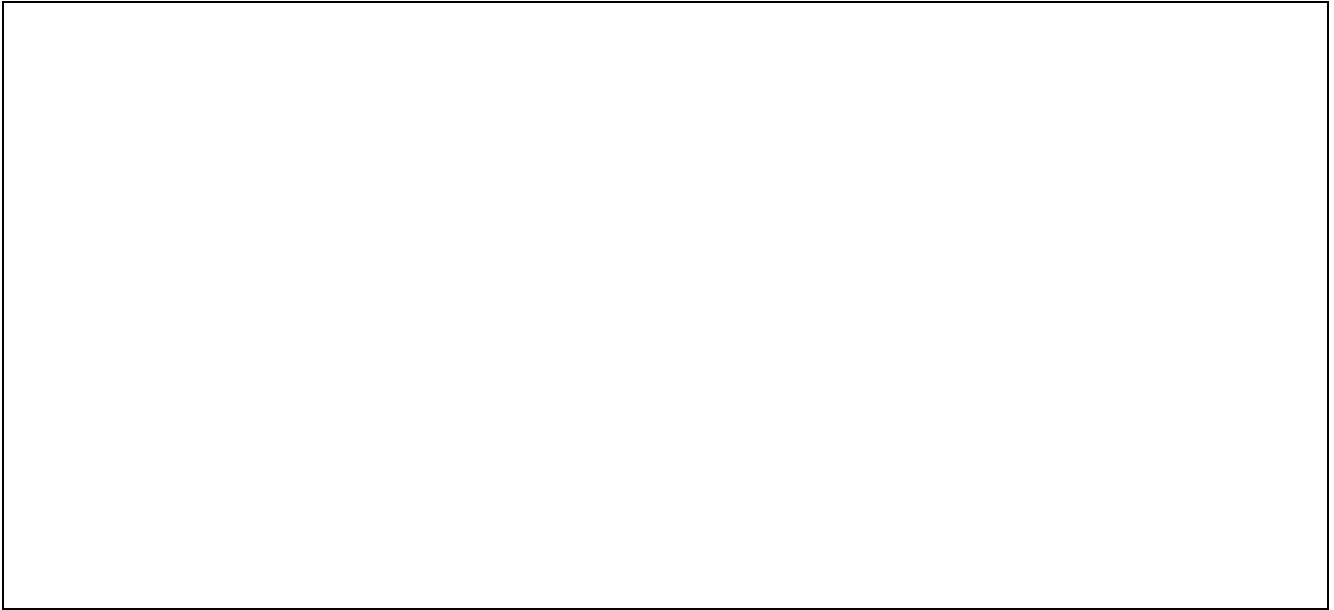


Four sets of horizontal lines for writing, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

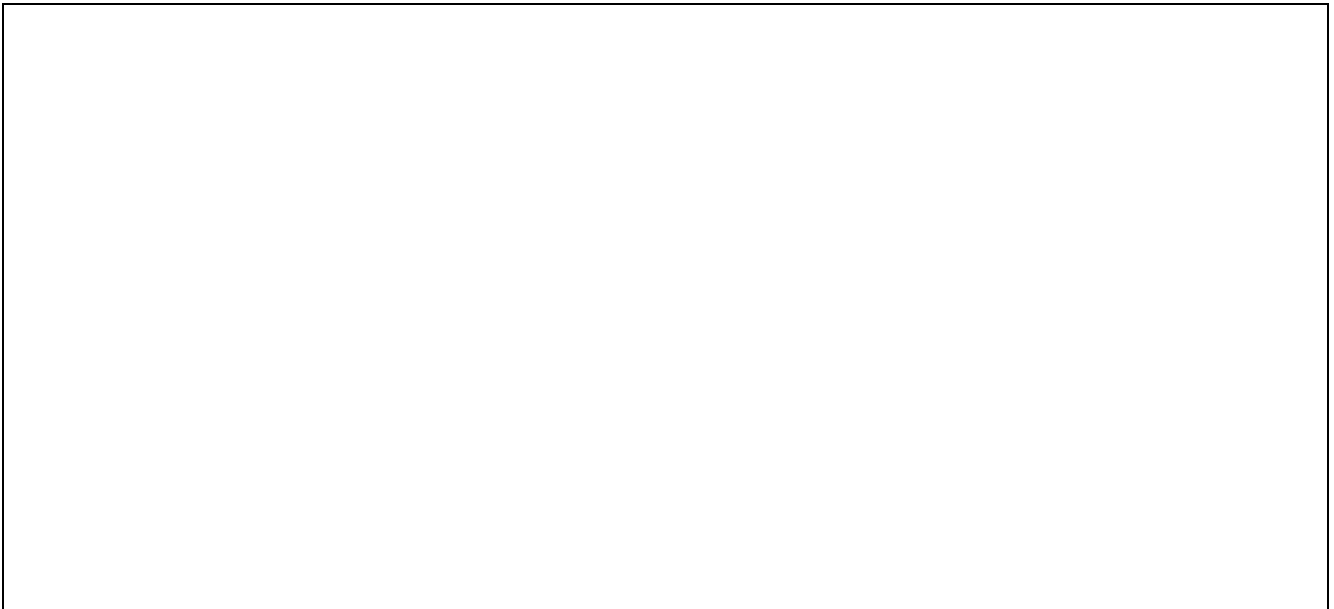


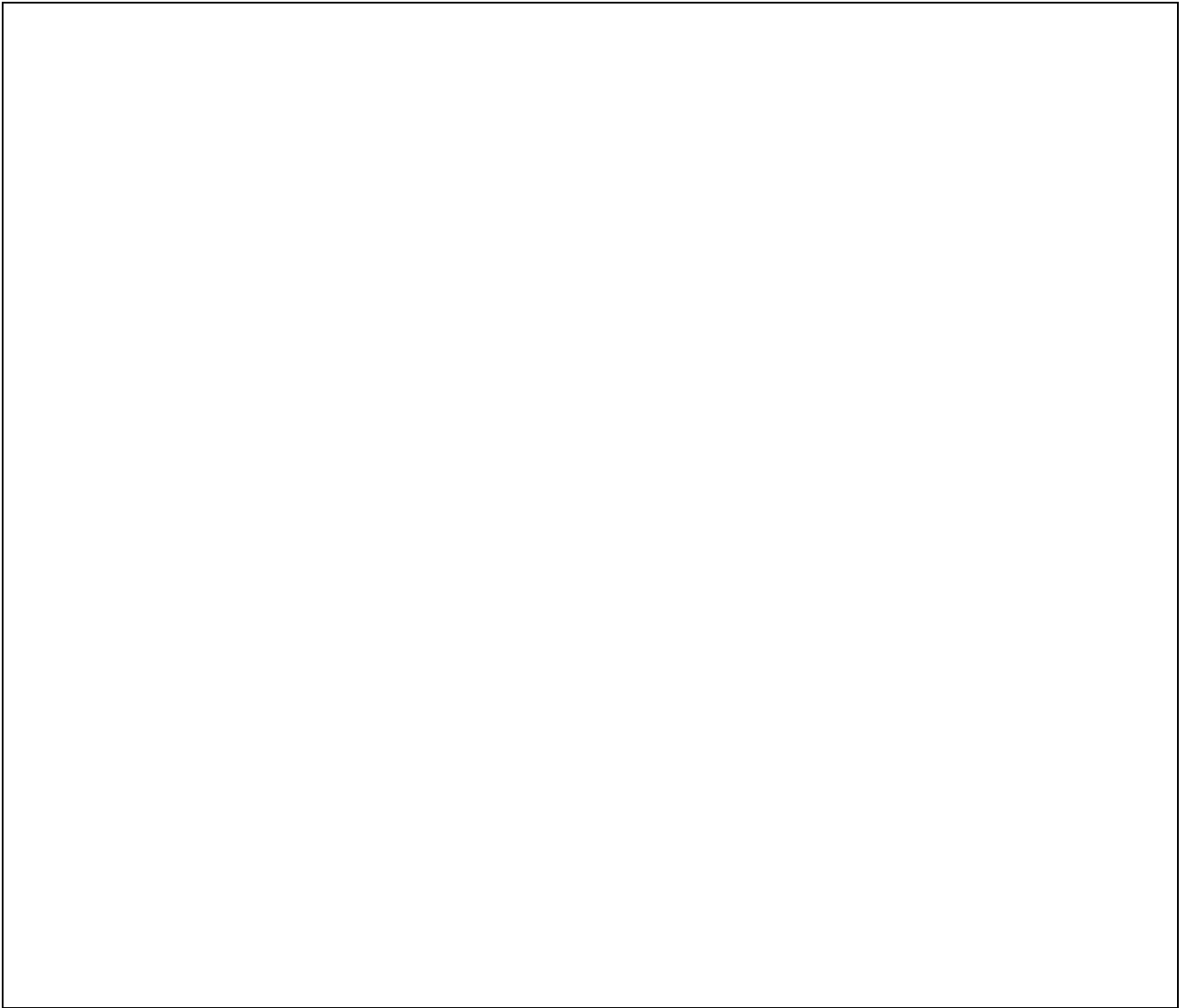
## Project: Mystery Beads

Draw a picture of your mystery bead bracelet. Describe how the beads look when you are in your classroom.



Observe your mystery beads in the sunlight. Describe how they have changed in the sunlight.





Four sets of horizontal lines for writing, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

# Problem: Take Cover!

**Ask:** What is the problem?

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# Reflection

Ask	
• I can explain the design problem.	
• I can find information that I need to solve the problem.	
<b>Teacher Notes</b>	

Use this space if you need more room for drawing.

**Explore:** How can you try to solve the problem? Write or sketch ideas below.



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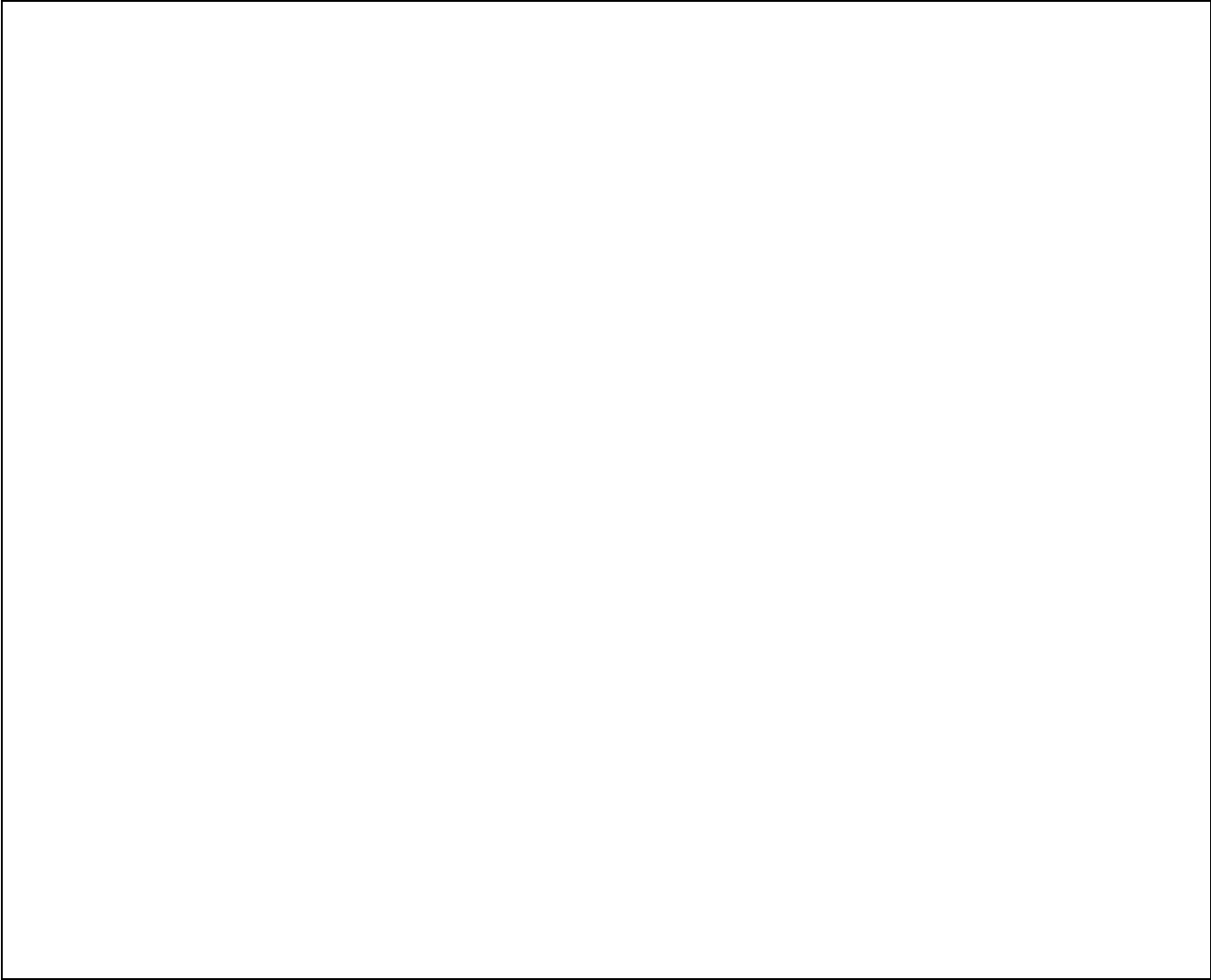
Talk to your team and share ideas. **Circle one idea** that you think will work best to solve the problem.

# Reflection

Explore	
• I can research to find out about ways to solve the problem.	
• I can brainstorm ideas for how to solve the problem.	
<b>Teacher Notes</b>	

Use this space if you need more room for drawing.

**Model:** Draw or attach a picture of your final design.



Four sets of horizontal lines for writing, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

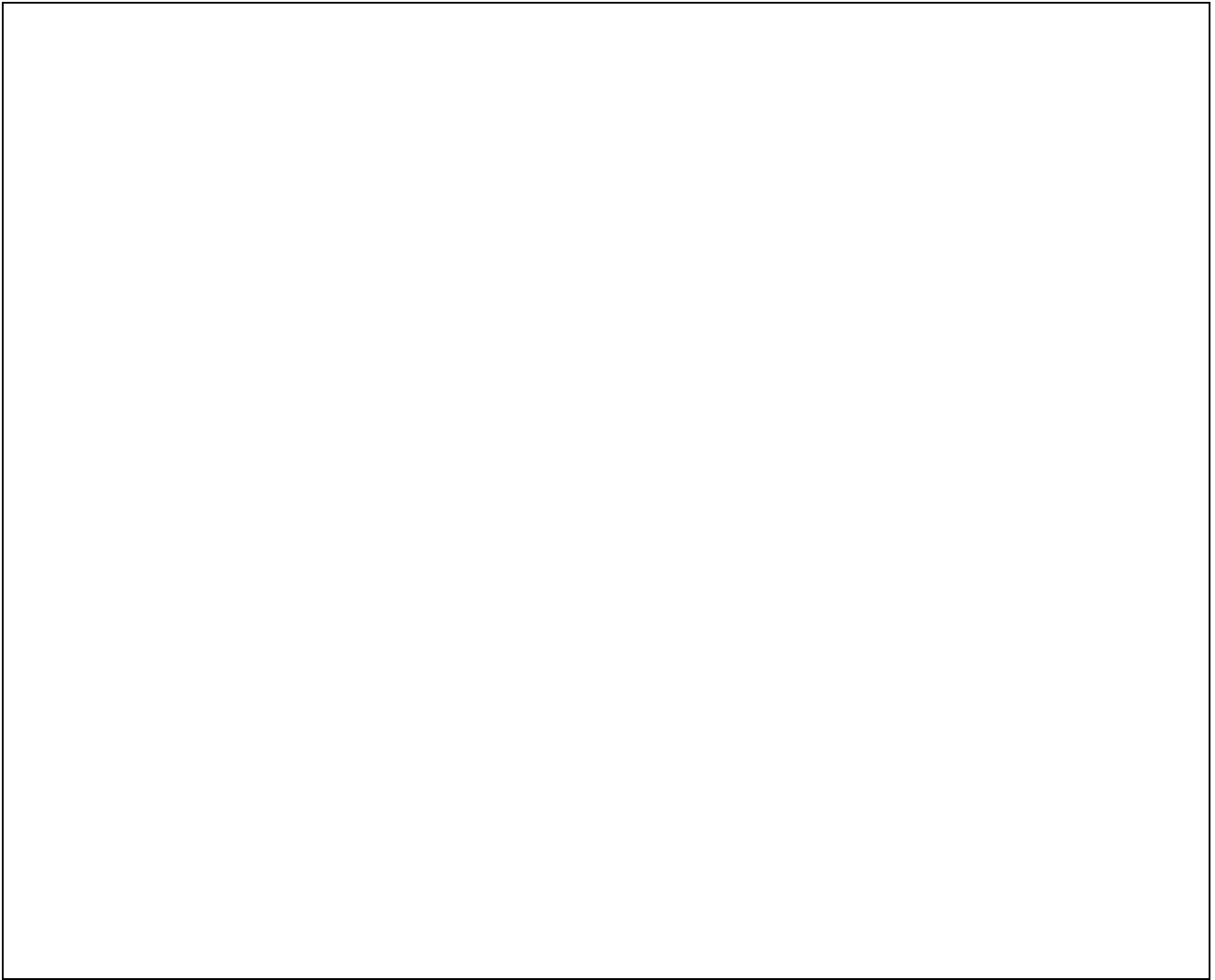
# Reflection

<b>Model</b>	
• I can draw a sketch of my plan.	
• I can explain my sketch and my plan.	
• I built a model that solves the design problem.	
<b>Teacher Notes</b>	

Use this space if you need more room for drawing.



**Evaluate:** Draw or attach a picture of your partner and you testing the design.



Explain one strength and one weakness of your model.

Handwriting lines for the response, consisting of solid top and bottom lines with a dashed midline.

# Reflection

<b>Evaluate</b>	
<ul style="list-style-type: none"><li>• I can explain the strengths and weaknesses of my model.</li></ul>	
<ul style="list-style-type: none"><li>• I can compare how my model performed against other models.</li></ul>	
<b>Teacher Notes</b>	

Use this space if you need more room for drawing.

**Explain:** Did your model solve the problem? Why or why not?

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**Explain:** How would you change your design? How would these changes improve your design?

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Use this space to draw a picture of how you would change your design.



## Reflection

Explain	
• I can explain how my model works and how it solved (or did not solve) the problem.	
• I can suggest ways to improve my design.	
• I can predict how my improvements will solve the problem.	
<b>Teacher Notes</b>	