

Chapter 7: The Phases of the Moon as Presented in Children's Books

Student Worksheet

Objective: To assess the accuracy of moon phases as illustrated in children's books.

Introduction: This challenging activity uses easy reading material to enhance your understanding of the phases of the moon. You will be asked to look at pages from children's books to determine how well the story and the depicted moon phase match. You will draw on your knowledge of moon phases, waxing and waning moons, and the rise and set times for the moon in different phases. This information was presented in chapter 3 of your book.

Engage: Do you think moon phases are accurately portrayed in children's books? Why or why not? Brainstorm some common mistakes a book illustrator might make.

Procedure:

Warm-up: With your partner, fill in the chart below to work out the phases and rise and set times of the moon. This will be a good tool to use for reference throughout this project. For each numbered moon: label the phase (for example: waxing gibbous, waning crescent...), draw the appearance from Earth in the blank circle, and list rise and set times. before going on, check your work against figure 1.17 on page 27 of your textbook.

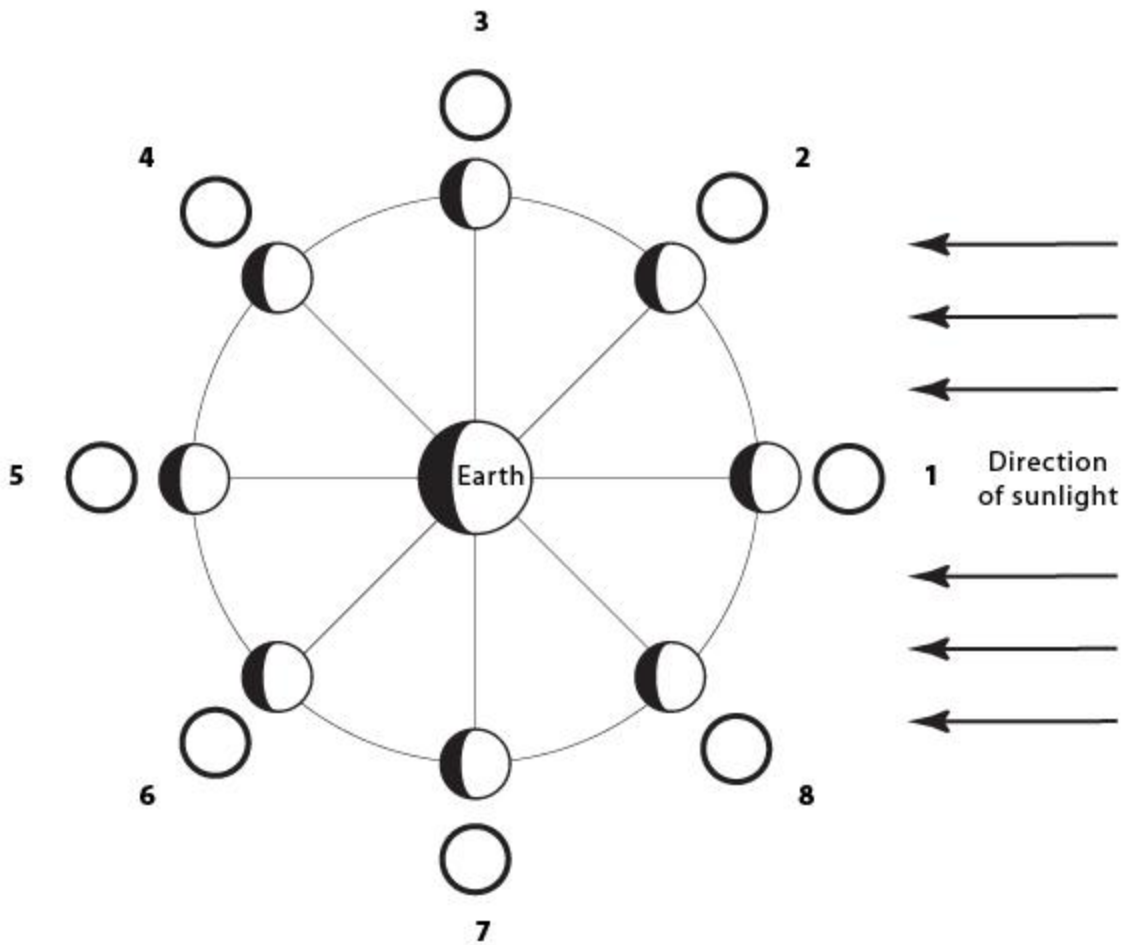


Figure 1 Moon Phases

Assess the books:

You and your team will assess the accuracy of the moon illustrations in at least three books.

Book one title: _____

1. Find the illustration (or illustrations) of the moon in the book. What phase or phases are shown?

2. What is the rise and set time of the moon in this phase (or in these phases)?

3. What time does it seem to be in the book? Why?

4. Is the moon illustration compatible with the intended time in the story? If not, approximately what time of day or night would it have to be to see the moon as it is illustrated?

5. Is the horizon visible? If so, indicate if the moon should be rising or setting and if the horizon shown should be the eastern or western horizon.

Book two title: _____

1. Find the illustration (or illustrations) of the moon in the book. What phase or phases are shown?
2. What is the rise and set time of the moon in this phase (or in these phases)?
3. What time does it seem to be in the book? Why?
4. Is the moon illustration compatible with the intended time in the story? If not, approximately what time of day or night would it have to be to see the moon as it is illustrated?
5. Is the horizon visible? If so, indicate if the moon should be rising or setting and if the horizon shown should be the eastern or western horizon.

Book three title: _____

1. Find the illustration (or illustrations) of the moon in the book. What phase or phases are shown?
2. What is the rise and set time of the moon in this phase (or in these phases)?
3. What time does it seem to be in the book? Why?
4. Is the moon illustration compatible with the intended time in the story? If not, approximately what time of day or night would it have to be to see the moon as it is illustrated?
5. Is the horizon visible? If so, indicate if the moon should be rising or setting and if the horizon shown should be the eastern or western horizon.

Conclusion:

1. How many of the books that you examined were moon accurate? Compare your results with 2 other groups.
2. What is the safest moon phase to include in a book to avoid having moon phase inconsistencies? Why?
3. In your opinion what might be the most common inaccurate moon phase in children's book illustrations? Why?

Extend:

- Create a story that takes place over about a month. Sketch some pages that accurately show the changing phases of the moon.
- Look up the lunar cycles for a moon around another planet. Does that moon go through the same phases as our moon? What is the cycle like?
- What was our moon's cycle like 4 billion years ago?