

Luna: Earth's Moon



(E.S. Indicator #1 – Describe how objects in the solar system are in regular and predictable motions that explain such phenomena as days, years, seasons, eclipses, tides, and moon cycles)

(E.S. Indicator #2 – Explain that gravitational force is the dominant force determining motions in the solar system and in particular keeps the planets in orbit around the sun)



The moon has a large influence on Earth. It is the brightest object in the night sky and has been the topic of many myths and legends. It has also helped ancient people establish calendars and planting schedules for crops. These ideas are just a few of the influences the moon has upon Earth. Your job is to educate people about the importance of the moon using a format developed by you. You should use specific examples to help you. Maps or diagrams will be extremely helpful.

You may choose to work independently or with one partner from your science class. All project formats and groups must be teacher approved. Projects are due on **October 6**.

Questions to address in your project: (On the final draft, to ensure you have included all parts, please highlight / color the answers the color in parentheses after the question.)

1. What is the current accepted theory for the formation of the moon? (yellow)
2. What is the difference between rotation and revolution? Be sure to include an example. (green)
 - a. Why does the moon stay in orbit around Earth? (green)
 - b. How does rotation and/or revolution of Earth cause seasons? (green)
 - c. Why do we only see one side of the moon here on Earth? (green)
3. Why do we see moon phases on Earth? (orange)
 - a. What are the phases of the moon? (orange)
4. What is an eclipse? (red)
 - a. What is the difference between a solar and lunar eclipse? (red)
 - b. What causes an eclipse? (red)
 - c. How often does a solar and a lunar eclipse occur? (red)
 - d. Why doesn't an eclipse happen every month? (red)
5. How does the presence of the moon impact tides on Earth? (pink)
 - a. What are the two different ways to classify tides? Describe them. (pink)
6. How does the moon's distance from Earth impact life on Earth? (blue)
 - a. What would Earth be like if the moon were farther from Earth? (blue)
 - b. What would Earth be like if the moon were closer to Earth? (blue)
 - c. What would Earth be like if the moon did not exist? (blue)

Answer the questions in a project format of your choice. Some possible suggestions are listed below.

(Posters and traditional PowerPoint presentations are not acceptable for this project.)

- Videotaped Newscast (we must be able to view this on school equipment)
- Newspaper or Magazine created with a publishing program (such as Publisher)
- Typed Children's Nonfiction book with illustrations (Dr. Seuss example)
- Interactive Web Site (includes internal navigation links)
- Project method of your choice (must be preapproved by teacher)

Projects will be presented in class.

To Do List and Deadlines: (We will be in the research computer lab 6 days for this project. Nightly homework outside of class is expected in order to finish this project. Using a flash drive to save a copy of your work may help facilitate this. Passes to the media center will be limited due to other classes scheduled there. These passes will be issued by Mrs. Ewart only. You will need to stay focused and working during our computer lab time. Be aware of your deadlines.)

USE YOUR CLASS TIME EFFICIENTLY!!

- _____ 1. Choose to work independently or with a partner. (Remember, partners can be like either a sail or an anchor of a ship. They can either help you by carrying their load of the work and get you to your destination quicker or drag you down by not working keeping you from getting to your destination. **CHOOSE WISELY!!** (Sept. 22)
- _____ 2. Choose project format. (Sept. 22)
- _____ 3. Have project format and group approved by teacher. (Sept. 23)
- _____ 4. Begin researching topic (Remember to have proper source citations for your notes. A work cited page is required. See the Raptors main page for citation examples. DO NOT PLAGERIZE!) (Sept. 22)
- _____ 5. Write and answer your questions. (Sept. 25)
- _____ 6. Write a draft of your project. (Sept. 26)
- _____ 7. Check to see that you have answered all of the project questions. (Sept. 26)
- _____ 8. Have your draft peer edited. (Signature of Peer Editing Partner _____)
- _____ 9. Meet with teacher to discuss project progress and peer editing. (Sept. 29)
- _____ 10. Use the sources from your notes to write your Work Cited page. (Sept. 30)
- _____ 11. Complete final copy. (Oct. 1)
- _____ 12. Color questions the appropriate color. (Oct. 2)
- _____ 13. Self evaluate final project. (Oct. 3)
- _____ 14. Present final project. (Oct. 6)
- _____ 15. Turn in final project. (Oct. 6)

**On the final draft, to ensure that you have included all parts,
please highlight / color the answers the color in parentheses after the question.**

Mrs. Ewart will be monitoring your research progress. Progress points will be awarded so stay on top of your work to meet the deadlines.

Name(s) _____ Block _____ Project Format _____



Luna: Earth's Moon Project Rubric



Rotation and Revolution	5	3	1	0	Self Eval	Teacher Eval
What is the current accepted theory for the formation of the moon? (yellow)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
What is the difference between rotation and revolution? Be sure to include an example. (green)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
Why does the moon stay in orbit around Earth? (green)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
How does rotation and/or revolution of Earth cause seasons? (green)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
Why do we only see one side of the moon here on Earth? (green)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
How does the presence of the moon impact tides on Earth? (pink)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
What are the two different ways to classify tides? Describe them. (pink)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
Phases and Eclipses	15	10	5	0	Self Eval	Teacher Eval
Why do we see moon phases on Earth? (orange) What are the phases of the moon? (orange)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
What is an eclipse? (red) What is the difference between a solar and lunar eclipse? (red) What causes an eclipse? (red) How often does a solar and a lunar eclipse occur? (red) Why doesn't an eclipse happen every month? (red)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		

Distance	5	3	1	0	Self Eval	Teacher Eval
What would Earth be like if the moon were farther from Earth? (blue)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
What would Earth be like if the moon were closer to Earth? (blue)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
What would Earth be like if the moon did not exist? (blue)	Question thoroughly answered with extra detail.	Question minimally addressed.	Incorrect information exists.	Question not addressed.		
Final Project	5	3	1	0	Self Eval	Teacher Eval
Creativity (project is unique and original)	Superior	Above Average	Improvements needed	Missing		
Communicated information in a clear and concise manner (important details are easy to follow)	Superior	Above Average	Improvements needed	Can not follow information presented		
Diagrams or Models (project includes diagrams or models to help explain the concepts)	Superior	Above Average	Improvements needed	Missing		

Presentation (15 points)

- _____ Student uses eye contact during presentation.
- _____ Student stands up and can be easily heard during the presentation by all class members.
- _____ Student project can be seen by the entire class.
- _____ Student sounds knowledgeable during the presentation.
- _____ Student takes the presentation seriously.

Total Project Score:

- _____ Rotation and Revolution (35 points)
- _____ Phases and Eclipses (30 points)
- _____ Distance (15 points)
- _____ Final Project (15 points)
- _____ Presentation (15 points)
- _____ Total Score out of 110 points



Teacher Comments: