

Name\_\_\_\_\_ Date\_\_\_\_\_ Section\_\_\_\_\_

**8<sup>th</sup> Grade Science/ Unit 2 Space Science**

**Title:** Activity 4 Gravity and the Solar System

**Challenge Question:** Why is gravity important in the solar system?

**Background:**

*List three things you know about gravity. How does gravity affect the workings of the solar system?*

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**Materials:**

*Space Science* book

**Vocabulary:** Define the following terms in your own words.

Term	Definition	Picture or Example
gravity		
orbit		
aphelion		
perihelion		
centripetal force		
solar nebula		

**Procedures:**

1. Read pages 60 - 71 in the *Space Science* book.
2. Answer questions 1 - 3 and 5 - 17 from the reading.
3. Do Lesson Review on page 73, questions 1 - 9.
4. Create definitions for the Vocabulary. Answer Analysis Questions.
5. Write Conclusion.

**Data/Results:** *(Write your responses to the book questions on a separate sheet of paper.)*

**Analysis Questions:**

1. Why is it important to know the shape of the orbital path that planets take around the sun?

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2. What is gravity? How does gravity influence planetary motion?

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3. In general, what are Kepler's laws of planetary motion? What data did he use to calculate the measurements to write his laws?

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4. How were planetesimals formed?

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**Conclusion:** Why is gravity important in the solar system? *(Use evidence and examples from the assigned reading to support your answer.)*

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