

Name _____ Date _____ Section _____

8th 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?

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 in your Science notebook.)*

Analysis Questions:

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

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

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

4. How were planetesimals formed?

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