

Teach a parent: This units concepts :

Planetary Motion

Structure of the Sun

Structure of the Earth

Help your parent become an expert !

Be sure they write what they have learned from your teaching

Parent Response

1. _____ I'm not sure my child really understands, therefore, I don't either.
Please work with him/her and let's try again.
2. _____ The concept was explained thoroughly with effective examples he/she created.
"By golly, I think they've got it!"
3. _____ WOW! My child did an exceptional job! It was logically explained, therefore I caught on immediately and feel confident about teaching it to others. The self-created examples were a perfect fit. My child even asked me a question at the end to make sure I understood. I believe my child could effectively teach this concept to others.

Parent Signature: _____ Date: _____

Mom or Dad Comments: Please explain how your student taught you this concept and what you learned in 2-3 sentences for each

* This is critical for them to receive full points

Planetary Motion : _____

Structure of the Sun _____

Structure of the Earth _____

Additional notes: _____

Formation of the Solar System

Draw, Label (summarize info) & Color the Structure of the Sun (pg433)

Draw Label (summarize info) & Color the Structure of the Earth (pg439)

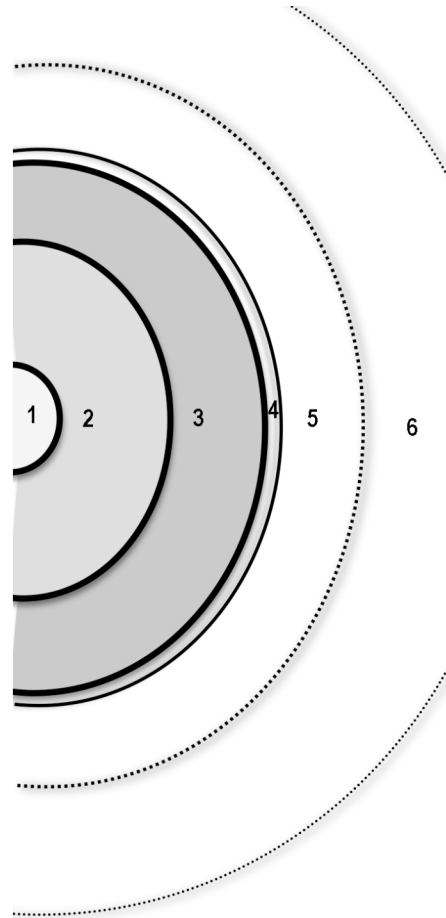
Name: _____ Pd _____

Parent Signature of completion: _____

Science Number: _____

Vocabulary: Section 1

Word/pg	Definition: Book or your words
Solar system	_____
nebula	_____
Solar nebula	_____
planetesimal	_____
rotation	_____
orbit	_____
Revolution & period of revolution	_____
ellipse	_____
Astronomical unit	_____



STRUCTURE OF THE SUN

- 1) _____
 - Over 15 million°C
 - Where energy is produced through _____, a process where two or more nuclei join together to form a large nucleus
 - Made of mostly _____ gas
 - Pressure is 340 billion times the air pressure on Earth.
 - Takes *millions* of years for the energy to travel from the core to the sun's surface.
- 2) _____
 - Very _____ region about 300,000 km thick
 - Takes _____ years to pass through
- 3) _____
 - 200,000 km thick
 - Hot & cool gases _____ in _____ currents
 - Related to changes in the sun's magnetic properties
- 4) _____
 - "Surface" of the sun
 - 500 km thick
 - Temperature of ~ _____ °C
 - First visible layer of the sun
 - Activity on the sun occurs here
 - Cooler dark regions are called _____
 - Giant storms are called _____
- 5) _____
 - 3,000 km thick
 - Too _____ to see
 - Inner atmosphere made of thin gases
- 6) _____
 - Outer atmosphere
 - Latin word for "crown"
 - Extends _____ times the sun's diameter
 - Gases are so thin that it is visible only during a total _____

- a. The sun is _____ times more massive than Earth and contains _____% of the mass of the entire solar system.
- b. What layer does nuclear fusion occur? _____
- c. It takes _____ minutes for sunlight leaving the photosphere to reach Earth.
- d. True or False (circle one): For unknown reasons, the corona is hotter than the surface of the sun.
- e. When scientists observe the surface of the sun, what layer are they actually looking at? _____
- f. What are the streams of charged particles emitted from the sun deep into space called? _____
- g. The sun is made of _____% hydrogen & 7.8% _____.

Section 2: The Sun: Our Very Own Star

1. Look at figure 9 on page 433. Label the sun's layers from the outside. Write 1 fact about each layer.

- a) _____:

- b) _____:

- c) _____:

- d) _____:

- e) _____:

- f) _____:

2. Read the section titled *Activity on the Sun's Surface*. What are sunspots?

Section 3: The Earth Takes Shape

Look at figure 17 on pg 439. Define each of the 3 layers of the earth.

- 1) Crust: _____
- 2) Mantle: _____
- 3) Core: _____

3. Skim pages 440-442. How did the Earth's composition change over time?

4. According to the section titled *Oceans and Continents* on page 443, the oceans probably formed early on Earth, by about 4 billion years ago. How and when did the continents begin to appear?

Third Rock from the Sun

Complete this worksheet after you finish reading Chapter 17, Section 3.

- 1. Write your birth date in the empty box in Column B.
- 2. Draw a line from each time period in Column B to the corresponding event in Column A.

Column A
Blue green algae began photosynthesizing.
Plate tectonics began.
Earth was formed.
Life began on Earth.
A giant global ocean covered the Earth.
Continents really started to grow.
Less than 10 percent of the continents had formed.
Oxygen levels increased rapidly.
You were born.

Column B
1.5 billion years ago
2.5–2.0 billion years ago
2.5 billion years ago
3.5 billion years ago
3.7–3.4 billion years ago
4.0 billion years ago
4.6–3.9 billion years ago
4.6 billion years ago

- 3. On a separate sheet of paper, create a timeline that ranges from 4.6 billion years ago to the present day.
- 4. Label each of the events listed in Column A at the appropriate points on your timeline.
- 5. Before the formation of the ozone layer, what protected blue-green algae from the dangers of UV radiation?

Vocabulary: Section 2 & 3

Word/pg	Definition: Book or your words
Corona	_____
Chromosphere	_____
Photosphere	_____
Connective Zone	_____
Radiative Zone	_____
Nuclear fusion	_____
sunspot	_____
Crust	_____
Core	_____
mantle	_____

Chapter 17: Formation of the Solar System Pages 422-447

Section 1: A Solar System is Born

5. What is a nebula?

6. Look at figure 2 on page 425. What 2 forces balance each other to keep a nebula of dust and gas from collapsing or flying apart?
_____ and _____
7. Look at figure 3 on pages 426-427. Copy the steps below (summarize)
 - 1) _____
 - 2) _____
 - 3) _____
 - 4) _____
 - 5) _____
 - 6) _____
8. Why does the composition of giant gas planets differ from that of the rocky inner planets? _____
9. Copy figure 5 on page 429 in the box below. Be sure to label rotation, revolution, and orbit.
10. Look at figure 7 on page 431. Read the paragraph next to it. On what properties does the force of gravity between two objects depend?
_____ and _____