Name_____ Section_____ Date_____

LT: I can define different elements of the solar system

Do Now: 1. List the following from smallest (1) to largest (4):

_____ Galaxy
_____Earth
_____Universe
_____Solar System

2. List 3-4 things that can be found in the solar system (example: planet)

Intro the Threshold 4: The Earth and the Solar System

Part 1: Video Clip (7 minutes)

1. What does is mean for something to be "to scale?"

2. How many miles did he need to make this scale model of the solar system?

3. Why do you think Earth and the Solar System is threshold 4?

Part 2: Review of thresholds 1-3

As you know, we are using the Big Bang as the origin story of the universe. According to this theory, the universe began _____ years ago, when all the _____ in the universe was packed into a point smaller than you and I can imagine. When it exploded, it created time, space, and forces like gravity.

For about 200 million years, the universe was nothing more than an incredibly hot, murky cloud of _____, _____, and electrons. As the universe cooled, _____ caused these to clump together into dense clouds. Hydrogen atoms smashed together and fused into helium atoms, releasing energy called _____. These are our stars.

When a star runs out of hydrogen, it collapses. Depending on its _____, it can collapse and expand a number of times, each time creating a heavier, more complex element. Some of the most common elements are _____, _____, and _____. Some elements need extremely hot temperatures to form, which can only be found in _____ or _____. Elements are important because_____.

Part 3: Parts of a Solar System Definitions

Write a 1-2 sentence definition of the parts of a solar system. Work on putting things in your own words. When you are done, rank the parts of the solar system from most valuable (1) to least valuable (6).

Part of the Solar System	Definition	Ranking (1-6)

Part 4: Thinking Bigger.

1. What did you list as the most valuable part? Why?

2. What did you list as the least valuable part? Why?

Unit 4: Earth and the Solar System

Driving Question: How and why do theories become generally accepted?

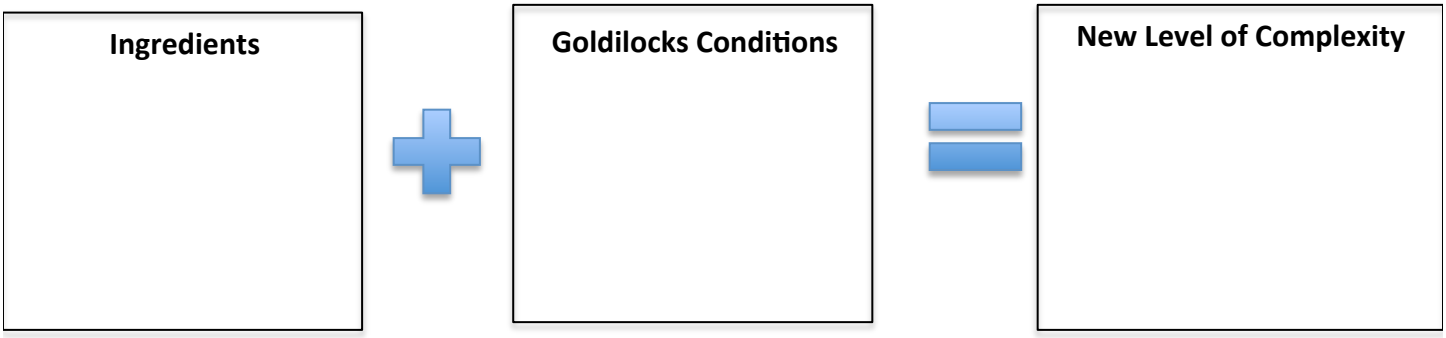
Unit Description: In your mind, you should divide this unit into two parts. First, we're going to look at how the solar system formed and how the planets are similar and different. Then we're going to zoom in on Earth and look at how the continents and oceans formed. This unit is expected to end by winter break, December 23rd.

By the end of the unit, you should understand and be able to:

- ❑ Define the concept of accretion and use it to explain the formation of the stars and planets
- ❑ Describe the Earth's unique features
- ❑ Independently research a question, evaluating and citing sources
- ❑ Describe the theory of plate tectonics
- ❑ Describe the effect plate tectonics has on the geography of the continents.

Your assessments this unit will be:

- ❑ A travel brochure about a planet
- ❑ Some sort of research paper (maybe on whether or not there's life on other planets?)



Key Vocabulary

Vocab Word	Definition