Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Earth Science Q1W3-Q1W4 September 12th-September 23rd**

Guidelines:

1. You may choose any combination of activities, but you must complete at least one activity from each topic area.

2. Your goal is to earn at least 100 points, but not more than 150. The All Do and Reloop are separate grades.

3. Please turn works in as you complete them, so PowerSchool can stay updated to reflect the work you complete.

|  |  |
| --- | --- |
| **Big Bang Theory** | * Essential Questions (all work choices must answer these questions):

1. How does the Big Bang Theory explain the formation of the universe/what evidence exists? 2. Explain the difference between a planet, star, galaxy, solar system and universe. * Vocabulary: theory, law, singularity and cosmic background radiation
 |
| **Plan** **To Do** | **Activity to Complete** | **Point Value** | **Date Completed** | **Points Earned**  |
|  | Create a Diary/Journal from the viewpoint of someone who witnessed the Big Bang.  | 15 |  |  |
|  | Construct a Mobile that illustrates the Big Bang.  | 20 |  |  |
|  | Prepare a Museum Exhibit that can be used to show the Big Bang. (G)  | 25 |  |  |
| **Hubbles Law**  | * Essential Questions (all work choices must answer these questions):

1. How does the electromagnetic spectrum, red shift and the Doppler Effect explain Hubble’s Law? * Vocabulary: electromagnetic radiation, Doppler Effect and red shift
 |
|  | Create a crossword puzzle that can be completed by a classmate that explains Hubble’s Law. | 15 |  |  |
|  | Perform a song or a rap that explains Hubble’s Law. (G)  | 20 |  |  |
|  | Design a Game Show that can be played by classmates that explains Hubble’s Law. (G)  | 25 |  |  |
| **Earths Motion**  | * Essential Questions (all work choices must answer these questions):

1. How do Kepler’s Laws explain planetary motion?2. How do rotation, revolution, precession and nutation differ?* Vocabulary: geocentric, heliocentric, rotation, revolution, aphelion, perihelion, precession and nutation
 |
|  | Design a quiz on Kepler’s Laws of motion. | 15 |  |  |
|  | Create a set of trading cards that explain Kepler’s Laws. (G)  | 20 |  |  |
|  | Make a Webquest that can be used to learn about Kepler’s Laws and planetary motion. | 25 |  |  |
| **All** **Do** |  | 9/20: Barycenter Lab with Lab Groups  | 100 |  |  |
| **Reloop** |  | * Experimental Design Scenarios (choose 3)-no control
 | 100 |  |  |
| **Extension****Work**  |  | **Free Choice:** Submit a proposal form to create a product of your choice.  | \_\_\_\_\_\_\_ |  |  |

**Earth Science Homework:** (All assignments are due the next day you have Science and MUST be checked with the control if not a video/lesson):

* Tuesday 9/13: Hubble’s Law Video Lesson with notes
* Thursday 9/15: Review your work from Q1W1 and Q1W2 (use pg. 6-study skills) in your planner
* Monday 9/19: Earth’s Motion Video Lesson with notes
* Thursday 9/22: Formation of the Solar System Video Lesson with notes

**Lesson Requests:**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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