Week 5 Virtual Binder Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_

Sjuts Office Hours: Tuesday-Friday 2:30-3:30 P.M. → <https://lps.zoom.us/j/188685904>

Smith Office Hours: Monday/Wednesday 12:30-1:30 P.M. and Friday 12:00-1:00 P.M → <https://lps.zoom.us/j/8246353539>

Objectives: Text Key Concepts

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| 1. Explain the evolution of astronomical theories due to changing technologies and methods.  | GS 28.1  | Hipparchus, Ptolemy, Copernicus, Brahe, Kepler, Galileo, Newton, Hubble, Penzias and Wilson Geocentric, Heliocentric, Sextant, Parallax, Retrograde motion, Telescope (reflector/refractor, space/land- based, wavelengths), Spectroscopy, Space probes |
| 2. Explain the common terms and methods astronomers use to locate and study celestial objects in the sky.  | GS 28.3 | Declination, Right Ascension, Ecliptic, Zenith, Altitude, Azimuth, Paths of celestial bodies, North star and Southern cross, constellations  |

Week 5 Virtual Binder Objective Work:

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| Objective 1: |
| Objective 2: |

Objective 1 Tasks:

* Read through Objective 1 History of Astronomy Notes and view the embedded video clips. Supplement reading with Ch 28.1 in Geoscience textbook if needed.
* Complete History of Astronomy Notes
1. Timeline Directions: Use the Objective 1 PowerPoint (***video clips embedded***) to create a timeline with the following scientists:

Hipparchus, Ptolemy, Copernicus, Brahe, Kepler, Galileo, Newton, Hubble, Penzias & Wilson

|  |  |  |
| --- | --- | --- |
| DATE | LOCATION | SCIENTIST/EVENT |
| ~130 B.C. | Greece |  |
| 140 B.C. | Greece |  |
| 1543 A.D. | Poland |  |
| 1572 A.D. | Denmark |  |
| 1609 A.D. | Germany |  |
| 1609 A.D. | Italy |  |
| 1668 A.D.1687 A.D. | England |  |
| 1929 A.D. | USA |  |
| 1964 A.D. | USA |  |

1. Key Term Directions: For each of the following terms, write the definition and insert an image. You may use the Objective 1 PowerPoint, Ch 28.1 in your Geoscience textbook, and Google.

|  |  |  |
| --- | --- | --- |
| Key Term | Definition | Image |
| Geocentric |  |  |
| Heliocentric |  |  |
| Sextant |  |  |
| Parallax |  |  |
| Retrograde motion |  |  |
| Refracting telescope |  |  |
| Reflecting telescope |  |  |
| Space-based telescope |  |  |
| Telescope at different wavelengths |  |  |
| Spectroscopy |  |  |
| Space probes |  |  |

Objective 2 Tasks:

* Read through Objective 2 Stargazing Terminology Notes and view the embedded video clip.
* Complete Stargazing Vocabulary

Directions: Use the following resources (one article and three simulations) to better understand the terms below. For each of the following terms, write the definition and insert an image.

Resources: Objective 2 PowerPoint
<http://www.skyandtelescope.com/astronomy-resources/what-are-celestial-coordinates/>

<http://astro.unl.edu/classaction/animations/coordsmotion/radecdemo.html> (allow Flash)

<http://astro.unl.edu/classaction/animations/coordsmotion/altazimuth.html> (allow Flash)

<http://astro.unl.edu/classaction/animations/coordsmotion/celhorcomp.html> (allow Flash)

|  |  |  |
| --- | --- | --- |
| Key Term | Definition | Image |
| Declination |  |  |
| Right ascension |  |  |
| Ecliptic |  |  |
| Zenith |  |  |
| Altitude  |  |  |
| Azimuth  |  |  |
| North Star |  |  |
| Southern Cross |  |  |

Reflection Question:

Look at slide 5 on the Objective 2 Stargazing Terminology presentation. If you were trying to quickly communicate to your classmate how to find Venus in the night sky, would you share the declination and right ascension or the altitude and azimuth? Explain.