Galileo: Revealing the Universe. Teacher's Vocabulary List by Activity

For convenience, academic vocabulary used in this lesson is arranged in order of appearance in each of the three lesson plan activities. The student version is also arranged in order of appearance but not divided per activity. Students might also be encouraged to write a definition in their own word for each of the vocabulary terms.

Activity One
astronomer: *scientist who specializes in the study of the universe beyond the Earth*
telescope: *device used to detect and observe distant objects through lenses/mirrors that gather visible light, radiation, etc. The first record of a true telescope was a patent application of 1608 by a Dutch lens maker.*
planet: *celestial body that does not emit light but receives it indirectly from the star around which it revolves*
constellation: *named group of stars*
Aristotle: *(384–322 BCE) one of the most important of the ancient Greek philosophers. Here: known for his work "On the Heavens" in which he notes that the earth is a sphere because of the circular shadows made during an eclipse. Because he believed heavenly bodies were perfect, their orbits would also be a perfect shape—e.g., a circle (see Copernicus)*
sphere: *three-dimensional surface in which all points are equidistant from a fixed point; a celestial body (planet/star)*
eclipse: *partial or complete obscuring of one celestial body by another*
Ptolemy/Ptolemaic Model: *(c. 90–168 CE) ancient Greco-Roman astronomer who devised an astronomical system with the Earth at the center of the universe and the moon, planets, and stars revolving around it*
Tycho Brahe: *(1546–1601) last major astronomer to work without the help of a telescope; he believed in rigorous, systematic observation and built new, sophisticated instruments to measure his celestial observations. He developed an earth-centered model of the universe that combined the Ptolemaic and Copernican systems*
Nicholas Copernicus: *(1473–1543)Renaissance astronomer and mathematician who developed the heliocentric model of the universe in which the planets orbited the Sun in perfect circles*
Galileo Galilei: *(1564–1642) called the "father of the modern science," he embraced the heliocentric model of the universe developed by Copernicus. Galileo was an early adopter and developer of the telescope and proved its value for observational astronomy with his discovery of the 4 largest moons of Jupiter, which seriously challenged the Ptolemaic Model.*
Sidereus Nuncius: (1610) first published work on the scientific use of the telescope. It contains Galileo's discovery of the moons of Jupiter; his observations on the surface of the Moon; as well as observations on the stars and constellations that could not be seen by the naked eye
Activity Two
compass: *instrument for showing direction*
disc (disk): *here: the body of the star seen through a telescope (see fringe)*
erratic: *having no regular or fixed path of movement*
fixed stars: *referring to celestial bodies that do not seem to move relative to other stars in the night sky. A carryover term from Aristotelian cosmology*
fringe: *here: relating to the diffraction of light observed around a celestial body*

globular: *spherical; shaped like a globe*
interval: *here: distance*
magnitude: *measurement of apparent brightness of a celestial body; the brighter the star, the smaller the magnitude*
Orion: *prominent constellation located on the celestial equator. Orion's belt of three prominent stars serves as popular navigational aid. Sirius lies to its southeast; Taurus to the north*
Pleiades: *open star cluster located in the northeast quadrant of the constellation Taurus*
precinct: *enclosed or otherwise demarcated area*
Sirius: *the "dog star," part of the constellation Canis Major; largest of the fixed stars and brightest in the night sky*
Taurus: *constellation and host to the Pleiades nebula*
Activity 3 (Optional)
clarity: *clearness; lucidity*
scale: *progressive classification as in size, brightness, etc.*