Fill in the blanks. Some words will not be used. Some will be used more than once.

Pluto electromagnetic Mars meteoroid Big Bang stars fourth

third magnitude asteroid(s) Kuiper water oxygen solar

moons Venus exploration meteor convection neap outer

seasons axis solar nebula galaxies lunar spring mass

solstices inner fission fusion eclipses tides temperature

irregular corona Milky Way comets light-year dust hydrogen

The solar system consists of many types of celestial bodies. Earth is the 1) third\_ planet from the sun and is located between the sun and the 2) \_asteroid\_ belt. It has one natural satellite, the moon. 3) Water\_ occurs on Earth as a solid (ice), a liquid, or a gas (water vapor) due to Earth’s position in the solar system.

Earth revolves around the sun tilted on its 4) axis\_. The axial tilt is responsible for the incidence and duration of sunlight striking a given hemisphere that varies during the Earth’s revolution around the Sun, thus causing 5) seasons. Equinoxes and 6) solstices\_ represent four distinct quarterly points signaling the cyclic change of seasons.

The moon revolves around Earth creating moon phases and 7) \_eclipses\_. 8) \_Solar\_ eclipses occur when the moon blocks sunlight from Earth’s surface, while 9) \_Lunar\_ eclipses occur when Earth blocks sunlight from reaching the moon’s surface.

The 10) \_tides\_ are the periodic rise and fall of water level caused by the gravitational pull of the sun and moon. 11) \_Neap\_ tides occur during the quarter moons when the sun and moon are pulling in different directions creating moderate high and low tides. 12) Spring\_ tides occur during the full or new moon when the sun, moon and earth are aligned creating extreme high and low tides.

The sun consists largely of 13) hydrogen\_ gas. Its energy comes from nuclear 14) \_fusion\_ of hydrogen to helium. Within the sun, there are three main layers: the core, the radiation zone, and the

15) \_convection\_ zone. The sun’s atmosphere also has three layers: the photosphere, the chromosphere, and the 16) \_corona\_.

There are essentially two types of planets in our solar system. The four 17) \_inner\_\_ (terrestrial) planets consist mostly of solid rock. The four 18) outer\_ planets are gas giants, consisting of thick outer layers of gaseous materials, perhaps with small rocky cores. The dwarf planet, 19) \_Pluto\_, has an unknown composition but appears to be solid. It is part of the 20) \_Kuiper\_ Belt. The atmosphere of 21) \_Venus\_ is mostly carbon dioxide and very dense. The atmosphere of 22) \_\_Mars\_\_ is very thin and mostly carbon dioxide.

23) \_Moons\_ are natural satellites of planets and vary widely in composition. 24) Comets\_ orbit the sun and consist mostly of frozen gases. A 25) \_meteoroid\_\_ is debris located outside Earth’s atmosphere; a 26) \_meteor\_ is debris located within Earth’s atmosphere; and a meteorite is debris that has broken apart into smaller pieces before reaching Earth’s surface. 27) \_Asteroids\_\_ are usually leftover debris of the formation of the solar system, or creations of the collisions of other asteroids.

Much of our knowledge about the solar system is a result of space 28) exploration\_ efforts. These efforts continue to improve our understanding of the solar system.

The universe is vast in size and very old. The 29) Big Bang\_ theory is our best current model for the origin of the universe. The Big Bang theory states that the universe began in a very hot, dense state that expanded and eventually condensed into galaxies. The 30) Solar Nebula\_ theory is our current model for the origin of the solar system. The solar nebula theory explains that the planets formed through the condensing of the solar nebula.

31) Stars\_ have a finite lifetime and evolve over time. The 32) mass\_\_ of a star controls its evolution, lifespan, and ultimate fate. Stars form by condensation and gravitational compression of interstellar gas and 33) \_dust\_. The Hertzsprung-Russell diagram illustrates the relationship between the absolute 34) \_\_magnitude\_\_ and the surface 35) \_temperature\_ of stars. As stars evolve, their position on the Hertzsprung-Russell diagram moves.

36) \_Galaxies\_\_ are collections of billions of stars. The basic types of galaxies are spiral, elliptical, and 37) irregular\_\_. The solar system is located in the 38) \_Milky Way\_ galaxy.

A 39) light-year\_ is the distance light travels in one year and is the most commonly used measurement for distance in astronomy.

Much of our information about our galaxy and the universe comes from ground-based observations across the 40) electromagnetic\_ spectrum. Much information about other planets comes from ground-based observations from Earth, but also from landers and orbiting spacecraft.