



# Space Exploration

## Section 1.0 Human understanding of both Earth and space has changed over time

### Unit E - Section 1

Name \_\_\_\_\_

Class \_\_\_\_\_

#### 1.1 Early Views About The Cosmos

1. Many dates in the celestial calendar are marked by the amount of daylight. In the Northern Hemisphere the longest day occurs on June 21 and is called ...
  - A. Vernal equinox
  - B. Autumnal equinox
  - C. Summer solstice
  - D. Winter solstice
2. The Mayans of Central America built an enormous cylinder-shaped tower at **Chichén Itzá** to celebrate the occurrence of the ...
  - A. solstices
  - B. equinoxes
  - C. Solar eclipse
  - D. Lunar eclipse
3. The width of a mitt was used by the **Inuit** peoples in the high Arctic to gauge the height of the Sun above the horizon. When it rose to one mitt-width high it meant ...
  - A. The days would get longer and warmer
  - B. The nights would get colder and shorter
  - C. Seal pups would be born in two lunar cycles
  - D. The Northern Lights would shine their brightest
4. Aristotle's proposed model of the solar system to explain planetary motion was the Geocentric Model. At the center was the Earth and ...
  - A. water
  - B. wind
  - C. fire
  - D. gas
5. Copernicus proposed a different model to explain planetary motion. His model, called the Heliocentric model. Galileo Galilei later confirmed his model, in his observations with one of the first telescope. But it was this Johannes Kepler, who put in place what was missing from Copernicus' model. He realized that the orbits of the planets were ...
  - A. circular
  - B. geocentric
  - C. intersecting
  - D. ellipses

#### 1.2 Discovery Through Technology

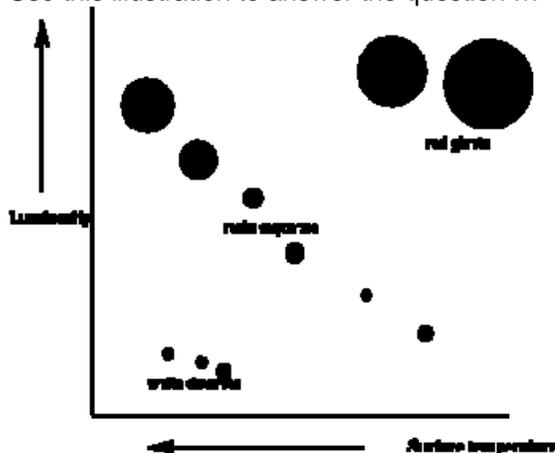
6. The unit used to measure 'local distances' in space (inside our solar system) is called an **astronomical unit**. One astronomical unit is equal to the average distance from the center of the Earth to the center of the Sun. The largest planet, Jupiter, is approximately ...
  - A. 5 AU's from the Sun
  - B. 10 AU's from the Sun
  - C. 19 AU's from the Sun
  - D. 30 AU's from the Sun



7. In the 2<sup>nd</sup> Century A.D. Egyptian astronomers used an instrument, called a **quadrant** to ...
- A. measure the angle between the Moon and any given star
  - B. identify details in the far reaches of the night sky
  - C. chart astronomical position and predict the movement of stars
  - D. measure a star's height above the horizon
8. Arabian Astronomers used an instrument, called an **astrolabe** to ...
- A. measure the angle between the Moon and any given star
  - B. identify details in the far reaches of the night sky
  - C. Make accurate charts of star positions predict the movement of stars
  - D. measure a star's height above the horizon
9. The light from our sun takes about 8 minutes to reach the Earth. Light from Pluto takes...
- A. 5 hours
  - B. 5 days
  - C. 5 weeks
  - D. 5 months
10. When measuring the diameter of the sun, we use an indirect method, so that we can determine the diameter without actually measuring it directly. To calculate the accuracy of your measured value, this is calculated to show how far from the real value your measured value is ...
- A. actual error
  - B. estimated error
  - C. percent error
  - D. adjusted error

### 1.3 The Distribution Of Matter In Space

11. In the 1920's two scientists began comparing the surface temperature of stars with the star's luminosity. They graphed their results in what is referred to as the ...
- A. Solar Shift Model
  - B. Hertzsprung-Russell Diagram
  - C. Wegener-Darwin Illustration
  - D. Helio-Solar Diagram
12. Use this illustration to answer the question ...



What they discovered when plotting their data was that ...

- A. star temperature and brightness was not random
- B. star temperature and size were related
- C. star brightness and size were related
- D. star size and shape were related to brightness



13. A star has a definite life cycle. The first stage in the star's formation is called ...
  - A. nebulae
  - B. dwarf
  - C. massive
  - D. protostar
14. At the end of the life cycle of a star it explodes in a catastrophic event called a ...
  - A. massive
  - B. supergiant
  - C. black hole
  - D. supernova
15. Astronomers are discovering these are more common than first thought. Although they are invisible to observers, using even the most powerful telescopes, Astronomers know of their existence because of how matter near it becomes very hot and bright. Because these bodies are so dense, even light cannot escape. They are called ...
  - A. Neutron Stars
  - B. Supernovas
  - C. Black Dwarfs
  - D. Black Holes

#### 1.4 Our Solar Neighborhood

16. Constellations are groupings of stars that we see as patterns. The International Astronomical Union recognizes 88 officially. There are other patterns that are unofficially recognized, such as The Big Dipper, and are known as ...
  - A. anomalies
  - B. asterisms
  - C. asteroids
  - D. aspergummies
17. Solar winds pass the Earth at an average speed of 400 km/s. This protects us from the devastating effects of the solar winds ...
  - A. Earth's atmosphere
  - B. Earth's gravity
  - C. Earth's magnetic field
  - D. Earth's ozone
18. Small pieces of rock that travel through space with no predictable or recognizable path are called ...
  - A. comets
  - B. asteroids
  - C. meteoroids
  - D. fragments
19. During a solar eclipse this is visible ...
  - A. the sun's core
  - B. the sun's electromagnetic shield
  - C. the sun's atmosphere
  - D. the sun's corona
20. The first spacecraft to successfully orbit and then land on an asteroid was
  - A. EUSA Beagle
  - B. NASA Opportunity
  - C. NEAR Shoemaker
  - D. FAR Eros



1.5 Describing The position of Objects In Space

21. The direction directly overhead is called ...
  - A. azimuth
  - B. altitude
  - C. zenith
  - D. astroplane
  
22. To locate an object in the sky, two questions must be solved. How high is it in the sky? and in what direction is it? The term that identifies the **compass direction** is ...
  - A. azimuth
  - B. altitude
  - C. zenith
  - D. astroplane
  
23. When constructing an astrolabe to locate the position of a star in the night sky, the **protractor** is used to determine the ...
  - A. azimuth
  - B. altitude
  - C. zenith
  - D. astroplane
  
24. The ancient Greeks studied the stars and the celestial bodies. They had a word that meant '**wanderer**' to describe a celestial body that changed its position in the sky. 'Wanderer' is the origin for the word
  - A. Comet
  - B. **Asteroid**
  - C. **Star**
  - D. Planet
  
25. The imaginary '**sphere of sky**' showing the ecliptic (apparent path of the Sun through the sky during the year) that surrounds the Earth is identified as the ...
  - A. Equinox sphere
  - B. Celestial sphere
  - C. Heavenly sphere
  - D. Solstice sphere