

Space Review

• **Celestial Bodies**

- Define Astronomy
- What is the difference between luminous and non-luminous objects?
- Name and describe the various types of celestial bodies
 - Planets, Dwarf Planets, Moons, Asteroids, Comets, Stars
- What is the difference between a meteor, meteorite, and a meteoroid.
- What are the requirements for a celestial body to be considered a planet? How are they different from dwarf planets?
- Compare and contrast the rocky planets to the gas giants.

• **Motions of the Planets**

- Sketch a picture of Earth's rotation.
- What shape is Earth's orbit?
- Define orbital radius. Why is it important?
- What is the difference between the Earth's rotations and the Earth's revolution?
- Define gravitational force. How are mass and gravity related?
- Describe why we have different seasons.
- What is the difference between a solstice and an equinox?
- Describe the Moon's lunar cycle. Include a diagram.
- What is the difference between a solar and a lunar eclipse?
- How does the moon cause the tides?

• **Big Bang**

- What is meant by the term 'the universe is expanding'?
- Who first realized that the galaxies were expanding?
- How long ago was the Big Bang?
- Describe the events of the Big Bang.
- What are two pieces of evidence of the Big Bang Theory?

• **Stars**

- What are stars?
- What different colour do stars come in? How is star colour related to brightness or temperature?
- How are star size and luminosity related?
- Compare and contrast absolute magnitude and apparent magnitude.
- How do all stars begin?
- What is a protostar?
- Describe how a star gets its energy. What is this process called?
- What determines the life cycle of a star?
- What has a longer life, a large or a small star?
- What is a Hertzsprung-Russel Diagram, and what does it show?
- Describe the following:
 - Red Giant, Red Supergiant, White Dwarf, Supernova, Neutron Star, Black Hole
- Compare and contrast the life cycle of a medium, large, and very large star.

• **Constellations**

- Provide two reasons that the positions of the constellation are changing.

- Why is the Big Dipper considered to be a circumpolar asterism? How does this feature make it easy for the Big Dipper to be used for navigation?
- Name 3 constellations.
- **The Sun**
 - Describe the location of the core, the radiative zone, the convection zone and the photosphere.
 - How are the corona and the chromosphere different?
 - What is the internal temperature of the sun? How is it different than its surface temperature?
- **Galaxies**
 - What galaxy do we live in? What shape is it?
 - What is the closest galaxy to us?
 - What is a quasar and how much energy do they emit?
 - What famous telescope was launched in 1990?
 - What cluster or galaxies is the Milky Way located in?
 - Name and describe the 5 galaxy shapes.
- **Satellites**
 - What two categories of satellites are there?
 - Name 3 natural satellites.
 - Name one man-made satellite.
- **Orbits**
 - *What are the three types of orbits?*
- **Distances in Space**
 - *What are two different units in space? Which is larger?*
- **Models**
 - *What is meant by geocentric model?*
 - *What is meant by heliocentric model?*
 - *What two pieces of evidence support the heliocentric model?*