

Study Guide: Cumulative Astronomy Test Name _____ Class _____

Study Resources: Science Composition Notebook, Old Quizzes, Note Cards

Section I: Astronomers

A. Draw a picture of a Heliocentric & Geocentric model of the Universe (you will need to label the two pictures) and name the astronomers who supported each.

B. What theory did Galileo overturn? _____
What instrument did he use and what did he observe to overturn this theory? _____

Section II: Organization/Formation of the Universe

A. The Big Bang explains the formation of what? _____

B. Explain what the Big Bang theory states. Write at least 4 sentences.

C. Sequence these objects in order from BIGGEST TO SMALLEST:

Moon, sun, Universe, Milky Way, Solar System, Earth

D. Sequence the following events in order from the oldest to the most recent.
nebula, Big Bang, formation of the solar system, formation of the sun, formation of the galaxies

E. What Unit will you use to measure each of the following?

- a. diameter of the Milky Way_____
- b. distance from the sun to Earth_____
- c. distance from Earth to Neptune_____
- d. distance from the sun to the nearest star_____
- e. distance from the Milky Way to the closest galaxy?_____
- f. distance from the center of the Milky Way to the solar system?_____

F. How many kilometers are in one light year? _____

How many kilometers are in.....

- a. 2.3 light years_____
- b. 4.2 light years_____
- c. 1.5 light years_____
- d. 2.6 light years_____

F. The average distance from the Sun to Earth is 150,000,000 km. If a space probe could travel 40,000 km/h, how many days would it take to make this trip?

Section III: The Solar System

A. List all 8 planets in order starting from the closest to the sun.

B. List the planets in order from the SMALLEST to the LARGEST.

C. Write two unique facts about each of the planets (a fact that makes it stand out from the rest).

Mercury_____

Venus_____

Earth_____

Mars_____

Jupiter_____

Saturn_____

Uranus_____

Neptune_____

D. Fill in the blank.

The surface of the four inner planets is _____. The four inner planets are _____, _____, _____, _____. However, the surface of the four outer planet is _____. The four outer planets are _____, _____, _____, _____. The inner and outer planet are separated by _____.

Section IV: Gravity

A. If you weigh 30 kg on Earth how much will you weigh on each of the other planets?

Mercury_____

Venus_____

Mars_____

Jupiter_____

Saturn_____

Uranus_____

Neptune_____

B. What is the definition of gravity?

C. What two factors affect the gravitational pull between two objects?

D. Draw a diagram of the Sun and Earth that describes what they would occur if the gravity between them decreased.

Section V: Objects' Motion in the Sky

A. Draw a picture of revolution using something other than the Earth (what else might "revolve")?

B. Draw a picture of rotation using something other than the Earth (what else might "rotate")?

C. Draw a picture of a comet revolving around the Sun. Be sure to include the direction that the comet's tail will always face.

D. Draw and label a rock falling from space all the way to Earth's surface.

Section VI: Observations of the Sun, Earth and Moon

A. Draw and label all eight phases of the moon.

B. Draw and label the positions of the Earth, Moon, and Sun during a:
Solar Eclipse Lunar Eclipse

Section VII: Seasons

A. What three factors cause the seasons?

B. What is the primary misconception that people have about the cause of the seasons?

C. Describe what happens during an equinox and a solstice.