Stars and Galaxies Study Guide

Define:

parallax - measures the distances between stars
- the apparent shift in the position of an object when viewed from 2 locations

main sequence star
- 90% of stars are main sequence
- Our Sun

Big Bang Theory - the universe formed as a result of a giant explosion
- supported by the red shift

black hole - a region so dense that nothing, not even light, can escape

Clouds of Magellan - 2 irregular galaxies orbiting the Milky Way

galaxy - a group of stars, gas, & dust held together by gravity

absolute magnitude - a measure of the amount of light given off by a star

apparent magnitude - a measure of the amount of light received on Earth

nebula - A large cloud of gas & dust

red shift - a shift in the spectrum of light that indicates a star is moving away from Earth

light-year - a unit of distance

H-R diagram - a graph that shows the relationship of a star's temperature & absolute magnitude

white dwarf - formed as the core of a main sequence star uses up its helium & outer layers escape into space

elliptical - the largest known galaxies

barred spiral galaxy - recent evidence suggests the Milky Way is this type of galaxy
irregular galaxy - galaxy without a definite shape

local group - Andromeda & Milky Way are members of the local group

Doppler Shift - light changes as it moves toward or away from an object

steady state theory - theory that the universe has always existed just as it is now

oscillating model - theory that the universe expands & contracts repeatedly over time

cluster - group of galaxies

Arrange the following stages of a star's life cycle in the order in which a star develops.

1) Nebula
2) Main Sequence
3) Red Giant
4) Neutron Star
5) White Dwarf

Study your H-R diagram sheet. Make sure you can answer questions about this diagram.

What color are the hottest stars? Coolest? Arrange the following sequence of star colors from hottest to coolest: red-orange, yellow, blue, white, red.

Blue, White, Yellow, Red-Orange, Red

What causes different constellations to be visible at different times of the year? Earth's orbit

List 4 facts about the Milky Way Galaxy.
1) Barred Spiral Galaxy
2) Member of the Local Group
3) 100,000 light years across
4) 200 billion stars
5) Our Galaxy