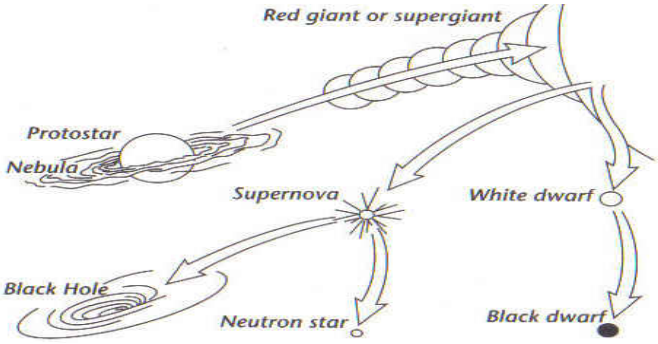
Student: _____Per: _____Date: _____

The Universe Test Review, Unit 6

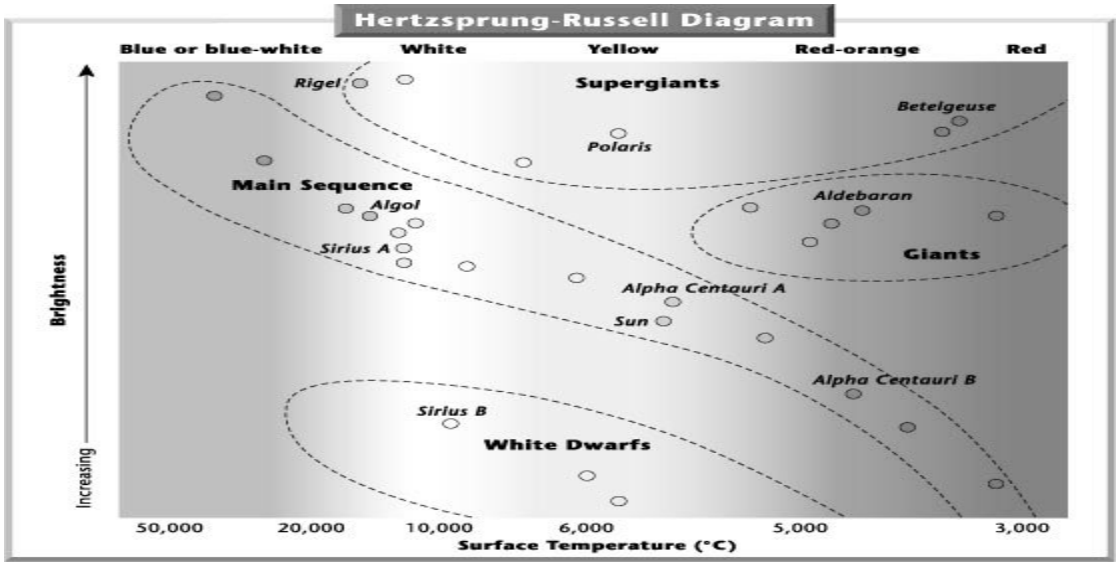
1. **Our star is a medium sized star called the sun.**
2. **How are stars classified? Brightness, Temperature, and Size.**
3. **Compare and contrast the three types of galaxies: Spiral, Irregular, Elliptical. Spiral Galaxies: Flat with a bulging center. Surrounded by spiral arms. Bulge-older stars; spiral arms-younger stars. The Milky Way is an example. Elliptical Galaxies: oval or egg shaped. Large galaxies with very little dust or gas left. Made up of old stars. Theses are the oldest galaxies in the Universe. Irregular Galaxies: Do not have a distinct shape due to gravitational pull of nearby galaxies. Younger galaxies.**
4. **What is a nebula? Large cloud of gas and dust where stars are born.**
5. **What is a light-year? What is it used for? The distance light travels in one year. A light-year measures distances between stars and galaxies.**
6. **What holds matter in the Universe together? Gravity.**
7. **At what point in the star's life cycle do we say that a star is born? When nuclear fusion begins: Protostar.**
8. **It takes 8.2 minutes for the sun's light to reach Earth. Therefore, the sun is less than or greater than one light year from Earth. (Circle one)**
9. **List the colors of stars from hottest to coolest: Blue, Blue-White, White, Yellow, Orange. Red.**
10. **What are red giants and red super giants? They are dying stars.**
11. **What is a supernova? The explosion of a dying large or huge mass star.**
12. **What is the support for the Big Bang Theory? Red Shift and Cosmic Background or Microwave Radiation.**
13. **How are reflecting and refracting telescopes alike? They both collect and focus visible light. How are they different? A reflecting telescope contains mirrors and a refracting telescope contains lenses. The Hubble Telescope is a reflecting telescope: HUGE Mirrors.**
14. **Compare and contrast a revolution and a rotation: A revolution is when one object goes around another and a rotation is when one object turns on its axis**
15. **High or low mass stars live longer? (Circle one). What determines the lifespan of stars? Mass of the star.**
16. **What is a Black Hole? The death of the most massive stars.**
17. **What is parallax? A method used to determine a nearby star's distance from Earth. Parallax can only be used for star's 100 ly or less from Earth.**
18. **Galaxies are made of large collections of stars held together by gravity.**
19. **Be able to recognize spiral, irregular, and elliptical galaxies.**
20. **How do Astronomer's detect a black hole? X-ray telescopes detect large amounts of X-ray being emitted from the area know as a Black Hole.**

21. **Be able to look at the spectral data of an element and determine if a star contains that element.**
22. **What type galaxy is the Milky Way? A Normal Spiral Galaxy.**
23. **Where is the Hubble Space Telescope located? It is found circling the Earth in low Earth orbit at the edge of the Earth's atmosphere. How can it see so clearly? It collects visible light from above Earth's atmosphere. There is no atmosphere to block its view of space.**
24. **If a star is 10.5 light years away, how long will it take a ray of light from that star to reach Earth? 10.5 years.**
25. **Name 5 sizes of stars from smallest to largest. Neutron Star, White Dwarf star, Medium-Size Star, Red Giant Star, Red Super Giant Star.**
26. **Be able to read and interpret data tables, graphs, and charts such as the ones below. Be able to use the data to answer questions.**

PLANET	DISTANCE FROM SUN (millions of km)	PERIOD OF REVOLUTION	PERIOD OF ROTATION	SURFACE GRAVITY (compared to Earth)	ORBITAL VELOCITY (km/sec)
Mercury	7.9	88 days	59 days	0.38	47.8
Venus	108.2	224.7 days	243 days	0.91	35.0
Earth	149.2	365.24 days	24 hours	1.00	29.8
Mars	227.9	687 days	25 hours	0.38	24.2
Jupiter	778.3	11.86 years	10 hours	2.53	13.1
Saturn	1,427.0	29.46 years	12 hours	1.07	9.7
Uranus	2,871.0	84 years	17 hours	0.92	6.8
Neptune	4,497.0	165 years	16 hours	1.18	5.4
Pluto	5,914.0	248 years	7 days	0.09	4.7



27. **What does the above diagram illustrate? The Life-Cycle of Stars. Be able to trace the life cycle of a low/medium mass star and a high mass star. Low/Medium Mass Star: Nebula, Protostar, Red Giant, White Dwarf, Black Dwarf. High Mass Star: Nebula, Protostar, Red Giant or Supergiant, Supernova, Neutron Star or a Black Hole.**



28. What is the relationship between surface temperature and brightness of Main Sequence stars. As the temperature increases, the brightness increases.

29. The pictures below show groups of stars (constellations) in the night sky at 6:00 P.M., 8:00 P.M., and 10:00 P.M. Which of these is most responsible for these apparent changes?

A. Expansion of the Universe
B. Light bending as it enters the atmosphere
C. Earth rotating on its axis
D. Earth orbiting around the sun