Astronomy Unit Teams Games Tournament

Questions

1. Which type of telescope is best located on Earth; i.e. it doesn't need to be outside the atmosphere?
2. All types of electromagnetic radiation have what in common?
3. What is the unified term for: quasar, blazar, radio-lobe galaxy, and seyfert galaxy?
4. What two elements is the universe mostly composed of?
5. What are the four Jovian planets?
6. Why does Mercury have two extreme temperatures? (2 reasons)
7. Which two planets have no moons?
8. Stand up and demonstrate "rotation."
9. Describe the life cycle of a medium mass star.
10. How can you find the composition of a star?
11. Define parallax.
12. How far away is Alpha Centauri, the nearest star to our sun?
13. On the HR diagram, which stars are nearest to the end of their life cycles?
14. Why does the moon rise and set each day?
15. Why is the weather warm in the Northern Hemisphere on June 21? (two reasons)
16. What constellation looks like a W?
17. What shapes the surface of the Moon?
18. What is the order of objects in a lunar eclipse?
19. What causes the tides?
20. Which direction does a comet's tail always point relative to the sun?

Astronomy Unit Teams Games Tournament

Answers

1. Radio telescopes
2. All travel the speed of light
3. An active galaxy (with the jets that shoot out)
4. Hydrogen and Helium
5. Jupiter, Saturn, Uranus, Neptune
6. No atmosphere and slow rotation on its axis
7. Mercury and Venus
8. Stand up and turn around on the spot
9. 1. Nebula of rotating dust and gas starts to contract, friction heats up, fusion begins as becomes a star, 2. Red giant phase where envelope of hydrogen expands outwards, 3. Star explodes as a supernova, 4. Half mass flies away and remaining mass becomes a neutron star
10. Compare star's spectrum to element's lab spectrum – if the lines match up then that element is in the star
11. A shift in the background due to a change in the observer's viewpoint
12. 4.3 light years
13. White Dwarfs
14. Because the Earth rotates on it's axis!
15. A) the sun's rays are hitting us more directly and B) longer daylight hours permit more heating
16. Cassiopeia
17. Meteorite impact
18. Sun, Earth, Moon
19. The moon's (and sun's) gravitational pull
20. Away from the sun

Q

A