"White Dwarfs & Planetary Nebulae: Crash Course Astronomy #30"

1. The eventual fate of the sun is as a _____.
2. When helium fusion stops, the sun will have about _____ the mass it has today.
3. A white dwarf is roughly the size of _____.
4. The force of gravity at the surface of a white dwarf is _____ that of Earth.
5. A white dwarf surrounded by glowing remnants of gas is referred to as a _____.
6. The vast majority of planetary nebulae are spherical in shape. **TRUE** **FALSE**
7. Planetary nebulae may owe their existence to _____.
8. Oxygen glows **LESS** **MORE** brightly than hydrogen.
9. One day, the sun will be at the center of a planetary nebulae. **TRUE** **FALSE**
10. Stars that are _____ times the sun's mass explode spectacularly.

"Neutron Stars: Crash Course Astronomy #32"

1. When an 8-20 solar mass star ends its life, it does so in the form of a _____.
2. Quantum mechanics says that electrons do everything they can to not be squeezed together. If the core has a mass of more than about _____ times the mass of the sun, they fail to do this.
3. Under this immense pressure, protons and electrons get smashed together and form _____.
4. A neutron star has _____ of the mass of the sun, but is only about _____ across.
5. A single cm^3 of neutronium (the stuff neutron stars are made of) has a mass of _____.
6. A typical neutron star has a surface gravity _____ times that of the Earth's.
7. A pulsar is a _____ that is emitting beams of energy out into the universe. The spin of a neutron star is so stable that the pulse act like a very accurate _____.
8. Neutron stars with ridiculously strong magnetic fields are called _____.
9. A magnetar can give off as much energy as the sun does in _____ years.
10. Neutron stars are not the weirdest things in the sky...that is a _____.

"Black Holes: Crash Course Astronomy #33"

1. A star whose core is less than 1.4 times the mass of the sun becomes a _____ when it dies. Stars whose core is between 1.4 and 2.8 times the mass of the sun, it will collapse to become a _____. If the core's mass is greater than 2.8 times the mass of the sun, there is absolutely _____ that can stop it from continuing to collapse.

2. _____ is the velocity at which you need to fling something off the surface of an object to get it to escape. The sun's is _____.

3. In our universe, nothing can travel faster than _____.

4. The point at which the escape velocity equals the speed of light is called the _____.

5. The sun will become a black hole. **TRUE** **FALSE**

6. Black holes suck in whatever goes by. **TRUE** **FALSE**

7. Orbiting a 10 solar mass black hole is just like orbiting a 10 solar mass star. **TRUE** **FALSE**

8. It's believed that every major _____ has a black hole at its center.

9. If you fell into a black hole feet first, the tidal force created by a black hole would stretch you out in a noodle in a process called _____.

10. Einstein viewed space as a thing like a _____. What we perceive as gravity is just a _____ of this fabric.

11. The stronger the gravity of an object, the **FASTER** **SLOWER** time passes. The gravity of a black hole is so strong that at the event horizon time essentially _____.

12. There are some theories that hint that the event horizon doesn't exist. **TRUE** **FALSE**