

Gravity, Light, & Stars

Name: _____

1. What is Mass?
2. Does Gravity attract or repel objects?
3. When objects are free to move under the effects of gravity, we say they are in _____.
4. The escape velocity of an object like a planet or star depends on how much _____ it has and how _____ it is.
5. Gravity gets weaker with _____.
6. Light is a form of _____.
7. The energy of light is tied to its _____.
8. Light with a shorter wavelength has _____ energy, and light with a longer wavelength has _____ energy.
9. Atoms have a nucleus with positively charged _____, protons, and negatively charged outer layer of _____.

10. When an electron jumps up or down on their “electron ladder” it absorbs or emits a very specific _____ of light.
11. The Doppler Effect: If an object is headed towards you, the wavelength of light from the source gets compressed, shorter. We say the light is _____-shifted.
- If it heads away, the wavelength gets longer, and it's _____-shifted.
12. A _____ spectrum is one in which light is emitted at all wavelengths.
13. Different elements absorb different _____.
14. Annie Jump _____, a spectroscopist, dropped and merged a few of the old classifications, and then rearranged them into one that classified stars by the strengths and appearances of many different absorption lines in their spectra
15. Stars on the lower left are hot, blue-white, but very faint and therefore must be small. We call them _____.
16. Stars on the upper right are luminous but cool. They must therefore be huge.

These are called _____ .