# Astronomy Vocabulary Cheat Sheet

by sayuri_3 via cheatography.com/125176/cs/27838/

## 6.2 Galaxies - Vocabulary

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| Star | A giant ball of hot, glowing gases (usually hydrogen & helium) |
| Nuclear Fusion | A process where the nuclei of atoms join and emit energy as light, heat and other electromagnetic radiation. |
| Apparent Magnitude Scale | A measurement of a celestial object's brightness when viewed from Earth (the more positive the number the dimmer the star). |
| Absolute Magnitude Scale | A measurement of a celestial object's brightness if viewed from the same distance; a measure of a celestial object's *actual* brightness or **luminosity**. |
| Hertzs-prung--Russel Diagram (HR) | A graph that plots a star's temperature on the x-axis and absolute magnitude on the y-axis. |

## 6.2 Galaxies - Vocabulary (cont)

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| Main Sequence | A diagonal band most stars fall into when plotted on the HR Diagram.. |
| Speed of Light | Light travels at 300,000 km/s. |
| Light-Year | The distance that light travels in a year (9,500,000,0-00,000 km). |
| Parsec | Approx. 3.26 light--years. |
| Parallax | The effect where an object appears to move when viewed from two different positions. |
| Galaxy | A group of stars held together by their gravity, galaxies form three shapes, elliptical, spiral and irregular. |
| Conste-llation | An imaginary picture in the night sky made up of stars. |

## 6.3 Life Cycle of a Star - Vocabulary

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| Nebula(e) | A cloud of gas and dust held together by the gravity of the hydrogen atoms within it. |
| Protostar | When the center of a nebula heats up and pressure increases. |

## 6.3 Life Cycle of a Star - Vocabulary (cont)

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| Hydros-tatic Equili-brium | The balance of the forces of a star's gravity and energy output. |
| Red giant | Hydrogen decreases, gravity is stronger than energy output, a new type of nuclear fusion begins, releasing more energy, reaching a new hydrostatic equili-brium and cooling to red. |
| Planetary Nebula | Helium supply decreases in a red giant and the outer region fades to a shell. |
| White Dwarf | The core of a planetary nebula continues nuclear fusion, increases energy rate and temperature to get a small, white hot star. |
| Black Dwarf | The result of a white dwarf cooling and fading away. |
| Red Supergiant | A continuation of the red giant until iron is formed, resulting in a much larger, red star. |

## 6.3 Life Cycle of a Star - Vocabulary (cont)

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| Supernova | The event where a red supergiant runs out of energy and collapses, resulting in a large explosive death. |
| Neutron Star | The aftermath of a supernova with a mass of less than 3 solar masses, an incredibly dense star with a diameter of only tens of kilometers. |
| Black Hole | The result of a supernova with a mass greater than 3 solar masses, a region of space with an extrao-rdinary gravit-ational pull and density that even light cannot escape. |

## 6.4 Moving Galaxies

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| Absorbtion Spectrum | A spectrum with lines missing from the pattern due to elements of the star absorbing their light wavelengths, therefore removing them from the spectrum. |

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## 6.4 Moving Galaxies (cont)

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| Emission Spectrum | The pattern of wavelengths (or frequencies) that appear as coloured lines on a spectroscope; the light wavelengths that are emitted from certain gases when they return to a stable state. |
| Doppler Effect | The effect that occurs when an object is moving slower than the speed of sound; waves in front of the object compress while waves behind disperse. |
| Red Shift | An increase in wavelength of radiation emitted by a celestial body which shifts the absorption spectra in the red direction of the spectrum, indicating that the object is moving away from the Earth. |
| Blue Shift | A decrease in wavelength of radiation emitted by a celestial bosy which shifts the absorption spectra in the red direction of the spectrum, indicating that the object is moving towards the Earth. |

## 6.4 Moving Galaxies (cont)

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| Huibble's Law | The further the galaxy, the higher the tendency to have a more red-shifted spectra; the ffurther the galaxy, the faster it was moving away. |
| Big Bang Theory | the theory that the universe began from a hot dense state which has continued to expand and will continue to do so. |

## 6.5 The Big Bang Theory

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| Singularity | A single, dense, hot point. |
| Cosmic Microwave Background Radiation | A form of electromagnetic radiation in the microwave spectrum left over from the formation of the Universe; evidence of the Bug Bang theory. |