

# LIFE CYCLE OF A STAR



WHEN STARS ARE BORN, THEY BEING AS NEBULAE, A CLOUD OF GAS AND DUST IN SPACE



THE SECOND STAGE ARE WHEN THEY TURN INTO STARS.

A STAR IS A LUMINOUS GLOBE OF GAS PROUCING ITS OWN LIGHT AND HEAR BY NUCLEAR REACTIONS. THEY CONSIST MOSTLY HYDROGEN AND HELIUM GAS. TEMPERATURES RANGE FROM 2000-30,000 C.



Red Giants a large bright star with a cool surface. formed during later stages of a star, like the sun. They are very bright because there so large.



These are very cool, faint and small stars, approximately one tenth the mass and diameter of the Sun. They burn very slowly and have estimated lifetimes of 100 billion years.

This is a very small, hot star. The last stage in the life cycle of a star like the sun.



White dwarfs have same mass as the Sun, but 1% diameter.

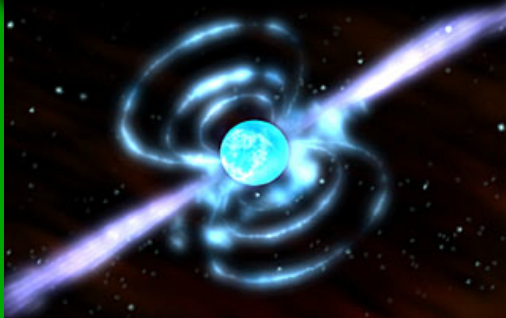
The SuperNOVA is the explosive death of a star, and often results in the star obtaining the brightness of 100 million suns for a short time.



SUPERNOVAS CAN TURN INTO BLACK HOLES, NEUTRON STARS, OR GET RECYCLED.

Type 1: These occur in binary star systems in which gas from one star falls on to a white dwarf, resulting in explosion  
Type 2: These occur in stars 10X or more as massive as the sun. internal Nuclear reactions ending their lives.

NEUTRON STARS ARE COMPOSED MAINLY OF NEUTRONS AND ARE PRODUCED WHEN A SUPERNOVA EXPLODES, FORCING PROTONS AND ELECTRONS TO PRODUCE A NEUTRON STAR. NEUTRON STARS ARE VERY DENSE



Black Holes are believed to form massive stars at the end of their life times. The gravitational pull is so great for nothing to escape it, not even light. The density of matter can't be measured. Black Holes distort the space around them, and can



# Lifecycle of a Low Mass Star

Low Mass Stars start as Nebulae like other stars.

THE 2ND STAGE IS WHEN THEY TURN INTO PROTOSTARS. IT IS A LARGE MASS FORMED OUT OF THE GAS FROM A NEBULA. STARS LIVE QUITE A BIT OF THEIR LIFE AS A PROTOSTAR

THE MAIN SEQUENCE IS A PERIOD IN THE STARS LIFE WHEN A STAR STARTS CONVERTING HYDROGEN INTO ENERGY. THE LONGEST SEQUENCE OF A STARS LIFE.



These Stars also go through the Phase as a Red Giant

A Helium Flash happens when the core of a star is in the 'Degenerate state



A PLANETARY NEBULA IS AN EMISSION NEBULA OF AN EXPANDING GLOWING SHELL OF IONIZED GAS.

THE FINAL PRODUCT TURNS INTO A DWARF STAR. LIKE SO..

