The rate of evolution and the ultimate fate of a star depends on its mass.

Cloud of Stellar Dust and Gas

- Brown Dwarf: Much smaller than the Sun
- Protostar: Same size as the Sun
- Sun-Like Star: Much larger than the Sun
- Red Dwarf: Somewhat smaller than the Sun

Nuclear fusion consumes all the hydrogen

- Red Giant: Material is ejected, creating a Planetary shell surrounding a hot small star
- Blue Supergiant: A Star more massive than - 10 Suns
- Red Supergiant: A Star with the mass about 100 times the mass of the Sun
- Blue Giant: Nuclear fuel is used up

- Planetary Nebula: The central star collapses
- Type II Supernova: Outer layers of the star are ejected

Core Collapses

- White Dwarf: A Star with the mass about 100 times the mass of the Sun
- Neutron Star: A Star more massive than ~10 Suns
- Black Hole: IF it is pushed over a limit of about 1.4 times the mass of the Sun, it explodes

The central star collapses

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