NEBULA

A cloud of gas and dust.
Fuse hydrogen atoms into helium atoms at their cores. These stars can range from about 1/10 of the mass of the Sun to up to 200 times as massive.
RED GIANT STAR

Fuse helium atoms into carbon atoms at their cores. Average temperature is colder than that of a main sequence star.
A ring-shaped nebula formed by an expanding shell of gas around an aging star.
WHITE DWARF

Stellar core remnant that is very dense: mass comparable to Sun, volume comparable to Earth.