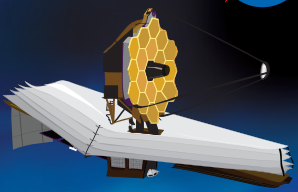
National Aeronautics and Space Administration



LIFE CYCLE

of a massive star

(more massive than the Sun!)

Green

A cloud of gas and dust collapses due to gravity, creating a protostar.

Blue

Gravitational energy powers the young star until...

Yellow

Nuclear fusion occurs. The main sequence star may live millions or billions of years.

Red

The star expands into a red giant when the star's hydrogen level drops.

Orange

Different fusion processes occur. The star expands, cools, and loses mass each time.

White

Fusion stops and a supernova explosion occurs. Most of the star is blown away.

Black

Depending on the original star's mass, either a black hole or neutron star remains.

Green

The material shed during the star's life joins new gas clouds, and new stars are formed.

james webb space telescope

www.nasa.gov