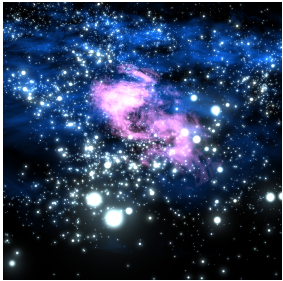


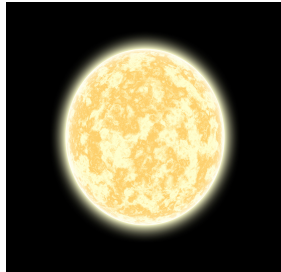
Make a class set out of card stock. Laminate or place in plastic sleeves for protection.

## Life Cycle of Star Pictures

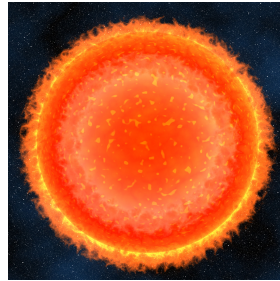
**NEBULA**



**AVERAGE  
STAR**



**RED GIANT**



**PLANETARY  
NEBULA**



CREDIT: NASA

**WHITE DWARF**

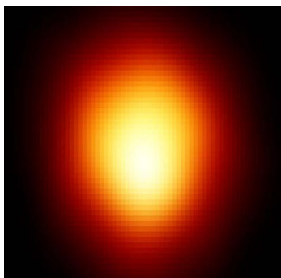


**MASSIVE  
STAR**



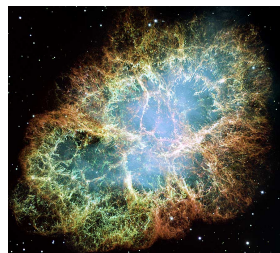
CREDIT: NASA

**RED  
SUPERGIANT**

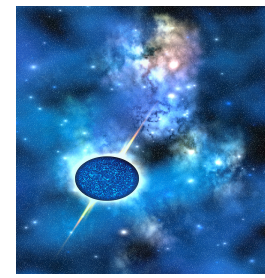


CREDIT: NASA

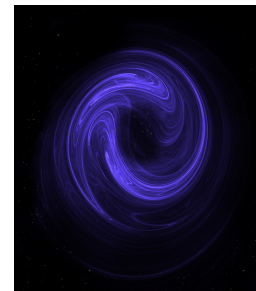
**SUPERNOVA**



**NEUTRON  
STAR**



**BLACK HOLE**



Make one copy for each student on plain paper.

## Life Cycle of a Star      Description Cards

### **Nebula**

A huge cloud of gas and dust that begins to shrink under the pull of its own gravity. This stellar nebula is the beginning of all star's lives.

### **Average Star**

Our Sun is an average star that formed from a nebula. It produces its own heat and light by nuclear reactions. They live for billions of years before becoming a red giant.

### **Red Giant**

Toward the end of life of an average star, it swells up into a red giant before losing its outer layers in an explosion that creates a planetary nebula.

### **Planetary Nebula**

Don't confuse a planetary nebula with a stellar nebula. A planetary nebula is near the end of an average star's life before it turns into a white dwarf.

### **White Dwarf**

These are small and hot and are the shrunk remains of an average size star. Their nuclear energy supplies have been used up and this is the last stage in the life cycle.

### **Massive Star**

These are the brightest stars that form from a nebula. They are white or blue in color. They have masses 100 times that of the Sun but they live for less than a million years.

### **Red Supergiant**

When a massive star has used up all its nuclear energy it swells up to 1000 times the diameter of the Sun.

### **Supernova**

When gravity overcomes the nuclear energy in a red supergiant, the star begins to collapse leading to a massive explosion that can remain visible for months.

### **Neutron Star**

These may be produced after a supernova explosion. They are small and have faint light, so they can't be seen with visible light.

### **Black Hole**

If an object 4 times the size of the sun is left after a supernova, it will become a black hole. The gravitational pull is so great, not even light can escape.