

*Cut out each statement below. Then reorder the statements into the correct order, starting with the title. Glue these into your notebook.*

## TITLE: BIRTH AND DEATH OF LARGE STARS

### NEUTRON STAR

- ❖ If the mass is less than 3 times the size of our sun, it becomes a neutron star

### BLACK HOLE

- ❖ If the mass is more than 3 times the size of our sun, it becomes a black hole

### SUPERNOVA

- ❖ The outer layers are blown off in a large violent explosion
- ❖ The core material contracts
- ❖ The remnants are more than 1.44 times the size of our sun

### PROTOSTAR

- ❖ Contraction of the gases causes the temperature to reach  $10000^{\circ}\text{K}$
- ❖ Hydrogen undergoes nuclear fusion to form helium and the star begins to shine

### A VERY LARGE STAR

- ❖ If the star is a very large star, then the hydrogen will be used up quickly by nuclear fusion
- ❖ The core contracts while the outer layers expand
- ❖ The surface temperature decreases
- ❖ This process occurs quickly

### NEBULA

- ❖ A ball of gas whose gravitational attraction causes it to contract

### PULSAR

- ❖ Material contracts due to gravity and emits X-rays

### SUPERGIANT

- ❖ Helium and carbon are consumed by nuclear fusion

