**Life Cycles of Stars Video Guided Notes**

Stars are \_\_\_\_\_\_\_\_\_\_\_\_\_\_, grow old, and eventually \_\_\_\_\_\_\_\_\_\_\_. This general process is referred to as a star’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Stars begin their lives as part of a collection of dust and gas called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Over time, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pulls the dust and gas together. As it contracts, it gets very \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Eventually, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ begins and a \_\_\_\_\_\_\_\_\_\_\_\_ is born.

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the earliest part of a star’s life. Depending on their mass, stars can live a few billion years to as long as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ years. When a star nears the end of its life, it often \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to form a giant or even a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. When a star runs out of \_\_\_\_\_\_\_\_\_\_\_\_\_\_, it can take a variety of forms, including a white dwarf, a neutron star, or a black hole.

White dwarfs are \_\_\_\_\_\_\_\_\_\_\_, small to medium size stars which glow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Neutron stars are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ stars which have exploded in a massive, sudden explosion called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The remaining matter then forms a dense \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ star.

When the most massive stars die, they collapse into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. While the interior of black holes cannot be seen, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of matter outside them can be detected. The gravitational forces inside black holes are so \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that nothing can escape, not even \_\_\_\_\_\_\_\_\_\_\_\_\_\_.