

## in forming our understanding of stars and the craziness of stars' deaths

1. Specific stars have held significance throughout human history and mythology. Briefly describe one example of the usefulness or legends assigned to the bright, blue-white "Pleiades."

2. Repeat Cannon's Christmas card explanation to her friends and family about how and what she could determine about stars with her work as one of "The Harvard Computers" (hint: you know this from chemistry when you held a device to your eye to view glowing tubes of gaseous elements).



Pickering and his "Computers"

3. When Payne became a collaborator of the "Computers," her further analysis of Cannon's classification system revealed 1) what trend in the system and 2) what important conclusion about the composition of stars?

4. Although connected by human eyes and imagination, most stars in \_\_\_\_\_ are completely unrelated. Most stars have partners but the \_\_\_\_\_ ones can't be seen by the naked eye.

5. As our sun's main fuel hydrogen gets consumed, the star's \_\_\_\_\_ will shrink, weakening its force of \_\_\_\_\_ and allowing our sun to get bigger and \_\_\_\_\_ % brighter so that temperatures will get much warmer here about 4 billion years from now, long before the \_\_\_\_\_ stage expansion actually begins.

6. Listen to the story of Sirius and its white dwarf partner. What is a **nova** that will occur around the dwarf in the future?

7. In the case of supergiant Eta Carinae, an incredibly supermassive, unstable star at this very moment (according to the light we receive today that left it \_\_\_\_\_ years ago), we expect it to experience a \_\_\_\_\_ nova, an event that will make a supernova look like a " \_\_\_\_\_ " because it is 5-50 times more luminous. **Should we be worried about this violent ending to Eta Carinae? Explain.**

8. Why do we now know (thanks to Cannon, Payne and company) that the "Seven Sisters" (The Pleiades) will be safe from Orion's pursuit?