After watching the video segment, write down key points, main ideas, and big questions.

Objective(s):
- Describe the conditions under which nuclear fusion reactions occur.
- Understand and calculate the amount of energy that is released in a nuclear fusion reaction.

Notes:
During the video segment, use words, phrases, or drawings to take notes.

Summary:
After watching the video segment, write at least three sentences explaining what you learned. You may ask yourself, “If I was going to explain this to someone else, what would I say?”
Unit 7C
Nuclear Fusion

Note-Taking Guide and Questions to Consider

Name: ____________________________ Date: ____________________________

Answer the following.

1. Define nuclear fusion in your own words.

__________________________________________________________________________

2. Why must nuclear fusion reactions take place at very high temperatures?

__________________________________________________________________________

3. What is the difference in mass between the smaller nuclei that fuse together and the newly formed heavier nucleus called?

__________________________________________________________________________

4. What equation relates the mass defect with the amount of energy that is released in a nuclear fusion reaction?

__________________________________________________________________________

5. Write the total equation for the proton-proton chain reaction that takes place in stars.

__________________________________________________________________________

6. In what part of a star does nuclear fusion take place?

__________________________________________________________________________

__________________________________________________________________________
Answer the following.

7. Why do stars emit mostly infrared and visible light and not gamma rays?

8. What does it mean that we are all “made of stardust”?