

Star Life Planetarium Project

Our goal is to learn from each other what each stage is really like and where some examples of each stage are in the sky. You will choose one stage to research in depth and be given several objects that represent that stage in a star's life. Your job is to create a presentation in planetarium that shows us where that object is located and explains that object scientifically. There will be work days to give you time to complete your group work and individual work.

Due Date – Presentations will be May 18 & 20, 2016.

Group Presentation

1. Share the examples of your type of object.
 - a. What constellations are they in?
 - b. Where in the constellation are they located?
2. Find the constellation and location of objects in the planetarium.
3. Show what the objects look like.
4. Share about the science involved with that stage of a star's life. Is it burning Hydrogen or Helium for fuel? Is it collapsing or expanding? What is an average size of a star at this stage?
5. Explain where on the HR diagram this type of object would be.
6. Share the current questions astronomers are trying to answer about this type of object.
7. Create a study guide for fellow students about your type of object. Include where on the HR diagram you would find it and the major ideas related to your type of object. Keep it short!

Plan your presentation.

- a. Where is it in the planetarium?
- b. How will you show images of the object? Images? PowerPoint? Web pages?
- c. What science do you have to talk about?
- d. What kind of study guide can you come up with to help us understand the science?

Individual Activities – you are responsible to complete the following activities during your work days

1. HOU Supernova Classification – create a light curve to determine what kind of supernova exploded in 1994
2. Age of Star Clusters – determine the age of a star cluster using the HR diagram
3. Go through the *Star Life Cycle* website, completing the accompanying handout.

Use your Work Days wisely.

1. Group - Practice finding your objects in the planetarium
2. Group - Research your life cycle stage & create a presentation
3. Group - Create a study guide; make enough copies for all students. If you give it to Ms. Barge **by 5/16/16** she will make copies for your group.
4. Individual - Complete 3 Individual Activities. These must be done by **5/18/16**.

Resources

Books – check the crates at the front of the room. There are some very good references The Sky or Stellarium – use the computer program to help you find where your objects are located
Internet – there are many great sites, check class web site for a list of links to get started
Textbook *The Cosmos* – chp 12 (star birth, energy in stars, main sequence); chp 13 (death of stars); chp 14 (black holes)