



The Life Cycle of Stars

Stellar Evolution

Classroom Activity

Material List:

- Paper
- Coloured pens/paper
- Ruler
- Activity 2 timeline information cards

Outline

When you look at the night sky you are probably going to see lots of stars. They might seem the same from Earth, but they can be very different.

In this lesson we will see how stars change across the course of their lifespan and what effect mass has on that.

Just like people, stars go through stages from birth, through life and finally death. You will compare the timeline of people with that of low and high mass stars.

Procedure:

1

Look at or read over the piece of the diagram or clue you have been given.

2

Study the incomplete diagram, where do you think your piece fits, or your clue will help?

3

Do you think people are putting their pieces into the right part of the diagram? Contribute your piece when you think it is necessary.

Online Observatory: onlineobservatory.eu

The online observatory collaboration consists of the following partners:

Baldone Observatory, Brorfelde Observatory, Cardiff University, Harestua Solar Observatory, Helsinki Observatory



4

Do some research and then double check the filled in diagram, move any pieces you think may be in the wrong place.

5

Compare your class diagram with the model answer.

6

Consider the lifecycle of humans and draw a timeline of our lives from birth to death. Try and show how long each section is, in terms of years spent at that stage.

7

Using the information sheet provided, create a timeline for a low mass and a high mass star.

8

Compare all three timelines.

Assessment:

- How many stages are there?
- Where do they spend the majority of their lifetime?
- Are there common factors?
- How would a higher mass stars timeline look?
- How would a lower mass stars timeline look?