The Life Cycle of a Star

The Hubble telescope has discovered a new star that behaves in a similar way to our Sun. As one of the scientists at the space centre you need to explain to the public how this star has changed over its history and how it might change in the future. You need to include the timescale of these changes.

Explain how the star might change over its life cycle and the timescales involved. You need to include diagrams and detailed scientific information. The different stages have names that you need to find out from a text book or the internet. Include scientific details such as the gases and densities involved if you can find this information. You could compare the life cycle of our own sun to that of other stars. Take care to provide a detailed explanation of why and how the star changes from one stage to the next.

Grade	You might include:
E	Showed some knowledge and understanding of the life cycle of our sun. Described simply why the sun will not last forever. Used simple labelled diagrams to explain one of the stages in the life cycle of the sun. Suggested the timescale for this cycle. Identified one of the names of the stages in the sun's life cycle. Used correct units for energy, distance, temperature (with help). Used simple key words correctly. Written your ideas in simple sentences. Used one source of information to find out about the life cycle of our sun.
C	Showed good knowledge and understanding of the life cycle of our sun. Used labelled diagrams to describe the stages in the life cycle of our sun. Used simple chemical symbols. Described how new evidence changed our understanding of stars. Used correct units where appropriate. Used most key words correctly. Written your ideas in all your own words, using proper sentences. Used at least two sources of information to find out about the life cycle of a star.
A	Showed detailed knowledge and understanding of the life cycle of our sun, including detailed labelled diagrams of each stage. Used chemical symbols and equations where appropriate. Described in detail how new evidence changed our understanding of stars. Used correct units where appropriate (routinely). Used all key words correctly. Written your ideas in all your own words, using proper sentences and paragraphs. Used at least two sources of information to find out about the life cycle of a star.

Key words:

black hole, cool, density, dust, energy, gas, gravitational attraction, heat, helium, hydrogen, nebula, neutron star, nuclear reactions, red giant, rock, star, supernova, white dwarf

My Target grade is ☐