

Curriculum Unit Title: A Study of the Stars: How Everything in Sight Came from the Stars

Author: Allison Diodati

KEY LEARNING, ENDURING UNDERSTANDING, ETC.

NGSS Standard HS-ESS1-3: Communicate scientific ideas about the way stars, over their life cycle, produce elements.

ESSENTIAL QUESTION(S) for the UNIT

How do stars produce elements throughout their life cycle?

CONCEPT A

Fission vs. Fusion

CONCEPT B

Star Life Cycles

CONCEPT C

Star Composition

ESSENTIAL QUESTIONS A

What are the similarities and differences of fusion and fission?
How is nuclear fusion involved with keeping a star alive?

ESSENTIAL QUESTIONS B

How does mass of a star impact the elements produced?

ESSENTIAL QUESTIONS C

How can star composition be determined?

VOCABULARY A

Fission
Fusion
Nucleus

VOCABULARY B

Main Sequence White Dwarf
Supernova
Supergiant
Neutron Star

VOCABULARY C

Spectra
Wavelength

ADDITIONAL INFORMATION/MATERIAL/TEXT/FILM/RESOURCES

Students will utilize www.explorelarning.com to complete the online Gizmo computer simulation titled “Star Spectra”
Additional, optional websites/resources include: www.schoolology.com, www.peardeck.com, and Google Docs