Congruence with the NGSS

Unit Title: Peering into the Universe

Science and Engineering Practices (SEPs)

SEPS	Activities
Asking Questions and Defining Problems	• Measuring the Age of the Universe
Developing and Using Models	• The Expanding Universe • Star in a Box: High School • The Cosmic Calendar
Planning and Carrying Out Investigations	• The Expanding Universe • Measuring the Age of the Universe • Star in a Box: High School • Investigating Supernova Remnants
Analyzing and Interpreting Data	• The Expanding Universe • Measuring the Age of the Universe • Star in a Box: High School • Investigating Supernova Remnants
Using Mathematics and Computational Thinking	• The Expanding Universe • Measuring the Age of the Universe • Investigating Supernova Remnants • The Cosmic Calendar
Constructing Explanations and Designing Solutions	• The Expanding Universe • Star in a Box: High School • Investigating Supernova Remnants
Obtaining, Evaluating and Communicating Information	• The Expanding Universe • Measuring the Age of the Universe • Star in a Box: High School • Investigating Supernova Remnants
Scientific Knowledge is based on Empirical Evidence	• The Expanding Universe • Measuring the Age of the Universe • Investigating Supernova Remnants

Disciplinary Core Ideas (DCIs)

DCIs	Activities
ESS1A: The Universe and its Stars	• TEDEd: The Most Astounding Fact - Neil deGrasse Tyson • The Expanding Universe • Measuring the Age of the Universe • Star in a Box: High School • Stellar Factories • Investigating Supernova Remnants

Cross Cutting Concepts (CCCs)

CCCs	Activities
Patterns	• Cool Cosmos: Cosmic Reference Guide • The Expanding Universe • Measuring the Age of the Universe • Star in a Box: High School • Exotic Characteristics of Hot Jupiters • Investigating Supernova Remnants
Cause and Effect	• Cool Cosmos: Cosmic Reference Guide • Star in a Box: High School • Exotic Characteristics of Hot Jupiters
Scale, Proportion, and Quantity	• The Expanding Universe • Measuring the Age of the Universe • Investigating Supernova Remnants • The Cosmic Calendar
Systems and System Models	• The Expanding Universe • Star in a Box: High School
Energy and Matter	• Stellar Factories • Investigating Supernova Remnants
Stability and Change	• Measuring the Age of the Universe • Star in a Box: High School • Investigating Supernova Remnants
Interdependence of Science, Engineering and Technology	• Measuring the Age of the Universe • Investigating Supernova Remnants