

Geologic Time Scale Unit Guide

Chapter: 6

Approximate Length: 4 Weeks

High School Earth Science Objectives

- **E5.3B** Explain the process of radioactive decay and explain how radioactive elements are used to date the rocks that contain them.
- **E5.3C** Relate major events in the history of the Earth to the geologic time scale, including formation of the Earth, formation of an oxygen atmosphere, rise of life, Cretaceous-Tertiary (K-T) and Permian extinctions, and Pleistocene ice age.
- **E5.3D** Describe how index fossils can be used to determine time sequence.
- **E5.3e** Determine the approximate age of a sample, when given the half-life of a radioactive substance (in graph or tabular form) along with the ratio of daughter to parent substances present in the sample.
- **E5.3f** Explain why C-14 can be used to date a 40,000 year old tree but U-Pb cannot.
- **E5.3g** Identify a sequence of geologic events using relative-age dating principles.

Key Vocabulary

Absolute Age Dating	Half-Life	Cretaceous-Tertiary (K-T)	Cross Cutting
Decay Rates	Evolution of Life	Geologic Dating	Geologic Event
Geologic Time	Geologic Time Scale	Original Horizontality	Index Fossils
Law of Superposition	Permian Extinctions	Pleistocene Ice Age	C-14
Radioactive Decay	Radioactive Elements	Radioactive Isotopes	U-Pb
Radioactive Substance	Radiometric Dating	Daughter/Parent Ratio	Unconformities
Relative Age Dating	Petrification	Permineralization	Trilobites
Brachiopods	Crinoids		

General Homework

Week 1: Study 6-1 and 6-2 and complete all homework assigned in class.

Week 2: Study 6-3 and 6-4, study for quiz, and complete all homework assigned in class.

Week 3: Study 6-4 and 6-5 and complete all homework assigned in class.

Week 4: Study key points throughout entire chapter and prepare for test.

Study Tips

Terms to Learn & What You'll Do (located at beginning of every section), Section review questions at the end of each section, Chapter Highlights at the end of each chapter, chapter review questions, study packet (collection of work and notes), design flash cards, quiz a partner.