

PREHISTORIC ROAD TRIP GUIDING QUESTIONS

Episode 1: Welcome to Fossil Country	Essential Question: How has Earth changed over time? How do we know?	Essential Question: How has life evolved on Earth? How do we know?	Essential Question: What is the nature of science? How does science happen? Who can contribute to science?
Chapters	Guiding Question(s):	Guiding Question(s):	Guiding Question(s):
Introduction 00:00 - 02:27			
Welcome to Fossil Country 02:27 - 05:35	In what ways is the story of Earth recorded in the rocks?		Why is it important to examine many different areas of science, such as geology, paleontology, and biology, in order to understand Earth's past?
Early Hints of Life 05:35 - 11:51	Cyanobacteria are also called blue green algae. What type of environment does algae live in? What does this make you think the area of the Medicine Bow Mountains was like millions of years ago?	In what ways did cyanobacteria change the environment to allow for other forms of life to evolve? How might life on Earth look very different today if cyanobacteria did not exist millions of years ago?	
Something's Fishy in Central Montana 11:51 - 29:29	At Bear Gulch, common fossil discoveries include sharks, fish, and invertebrates. Based on the types of organisms that lived here millions of years ago, what do you think the environment looked like then? Why do some layers of the fossil record have more specimens than others? What factors contribute to making some places on Earth more fossil-rich than others? What environmental factors of the past do you think contribute to fossil-rich areas?		How do processes and tools help researchers study fossils in the field? What do you think keeps scientists searching for more fossils even in sites that have been excavated for years? In what ways does each new discovery yield unique information about the past? How does new technology allow scientists to build on the research of past generations of scientists? What unanswered questions might new technology help answer in the future?
The Bone Wars 29:29 - 39:45	What types of fossilized animal remains are commonly discovered at the Morrison Formation? Based on these animals, what do you think this environment looked like millions of years ago?		Is science competitive or collaborative? How did scientists who studied the Morrison Formation interact in the past? How do they interact today? Why do you think this has shifted? How have people who are not formally trained scientists contributed to our collective understanding of the past? How might you contribute?

PREHISTORIC ROAD TRIP GUIDING QUESTIONS

Episode 1: Welcome to Fossil Country, continued	Essential Question: How has Earth changed over time? How do we know?	Essential Question: How has life evolved on Earth? How do we know?	Essential Question: What is the nature of science? How does science happen? Who can contribute to science?
Chapters	Guiding Question(s):	Guiding Question(s):	Guiding Question(s):
Time of the Titans 39:45 - 46:56		Why do you think there were so many different species of sauropods that existed millions of years ago? Why do you think they existed for such a long time? What specific adaptations do you think made this type of dinosaur so successful?	Why is science always a work in progress? How does new technology allow scientists to build on the research of past generations of scientists? What unanswered questions might new technology help answer in the future?
Traces of Discovery 46:56 - 52:52	Think about a time you left footprints behind when you walked. What conditions or terrain features lead to imprints being made? What do you think the environment was like millions of years ago in places where fossilized tracks have been discovered?	How can fossilized tracks (and other trace fossils) tell us about how an organism of the past behaved? What can trace fossils reveal that fossilized bone cannot?	How have people who are not formally trained scientists contributed to our collective understanding of the past? How might you contribute? In what ways does current research continue to change what we understand about the past? What different types of people make up the scientific community?