Video Guided Viewing

*Crude: The Incredible Journey of Oil*

**Name:**

Where does oil come from? What is the *basic material* that makes up this vital substance?

What role does *carbon* play in the creation of crude oil? *What is unique about this essential element?*

How does *phytoplankton and bacteria* in nutrient-rich water contribute to the *formation of oil beneath the ocean floor? Explain.*

How does the energy in *carbon-rich shale transfer into crude? Where* does this process take place?

Why is oil so incredibly valuable as an energy source? *What is exceptional about its energy density?*

How much oil does the average American *use each day? How is this consumption broken down?*

*What is the largest oil field on earth? Where is it located? How did the discovery of the Gwar Reservoir affect the global demand for oil?*

*When* did the U.S. oil supply peak? *When* is the global oil supply predicted to peak? *What does this mean for the cost of oil?*
What do fossilized ginkgo plants tell us about the carbon dioxide levels of the **Jurassic period**? *What did this super-greenhouse world look like?*

What are the global repercussions of our oil use? What does this mean for our climate in the future? *What are the signs that this climate change has already begun?*

Crude oil is derived over millions of years from a long and complex process. Based on what you've learned from watching *Crude,*

**WRITE** a concise, **step-by-step timeline or flow chart** for the evolution of crude, beginning with a description of the prehistoric atmospheric and oceanic conditions, and ending with a modern use of this vital energy source. **Be sure to include the materials and processes that shape the production of crude oil. (15 points)**
Crude followed the incredible journey of a single carbon atom from the Jurassic period through the modern day. Use your imagination and draw an 8-box comic strip about a different carbon atom’s journey, beginning in prehistoric times and ending in the present day. Describe the form carbon takes at 8-10 stages throughout these miraculous transformations and make sure to include its time spent bound up as an essential component of crude, and ultimately the form it takes in an oil by-product today. (20 Points)