

Uranium: War, Energy, and the Rock That Shaped the World

Study Questions for Extra Credit: Answer the questions and resubmit this document to jwalker@ccc.edu with your name added to the file name and email subject line: Chem121:Uranium Intro, Ch.1&2

Introduction

1. What is an ore?
2. Otto Frisch describes the Uranium-235 nucleus as a "wobbling, unstable drop ready to divide itself at the slightest provocation." What does he mean?
3. What percentage does an ore of Uranium have to be in U-235 to be capable of a spontaneous chain reaction?
4. What was Uranium used for in Fiesta Ware?

Chapter One: Scalding Fruit

1. Using Google Earth visit Shinkolobwe. Describe what you see.
2. What is coltan?
3. What is the significance of the last paragraph in this chapter? Does it surprise you?

Chapter Two: Beginnings

1. What is pitchblende? What does this word mean?
2. How did Uranium get its name?
3. What role did the book [The World Set Free](#) play in the story of Uranium?
4. The [Monadnock Building](#) in Chicago is used to make a point - what point?
5. Who received the Nobel Prize in 1903 and for what achievement?
6. What is the paradox of Alfred Nobel?
7. Describe Rutherford's experiment.
8. "If an atom were the size of a rugby field, its nucleus would be about the size of _____"
9. Why and when did Chadwick receive the Nobel prize?
10. What was the main point of Einstein's letter?