Activity: Lise Meitner Video Questions

FOR THE TEACHER

Summary
In this activity, students will complete a short series of questions as they watch the *Founders of Chemistry* video about Lise Meitner. The video tells the story of Lise Meitner, a pioneering female scientist in the field of nuclear chemistry, who was denied a Nobel Prize but has an Element named in her honor.

Grade Level
High and Middle School

Objectives
By the end of this activity, students should be able to
- Describe Lise Meitner’s contribution to chemistry.
- Indicate that nuclear fission is a process that helped develop future nuclear developments, such as nuclear energy and weapons.
- Briefly describe how fission is related to Einstein's equation, $E=mc^2$.

Chemistry Topics
This activity supports students’ understanding of
- Nuclear Chemistry
- Radioactive Isotypes
- Atomic Structure
- Atomic Theory
- Subatomic Particles
- History of Chemistry

Time
Teacher Preparation: minimal
Lesson: 10 minutes

Materials
- Student Handout
- Projector with Volume
- Access to the Lise Meitner Video

Safety
- No specific safety precautions need to be observed for this activity.

Teacher Notes
- The Lise Meitner video was developed as part of the AACT original video series, *Founders of Chemistry*. The entire series can be found here.
- The running time of this video is 4 minutes and 50 seconds.
- This video is intended for students to watch, and for teachers to integrate into their curriculum.
- The student questions/answers are presented in sequential order in the video.
- An answer key has also been provided for teacher reference.
FOR THE STUDENT
Lesson

Lise Meitner Video Questions

Instructions

While watching the Founder of Chemistry Video about Lise Meitner, answer the following questions:

1. Lise Meitner helped discover the process of nuclear fission. What are the two nuclear developments made possible by her discovery?
2. Why did Meitner attend private school throughout her life?
3. What scientific development was Max Planck responsible for?
4. What element did Meitner and Hahn discover together?
5. Meitner and other scientists experimented with Uranium by bombarding the element with neutrons. What were the scientists hoping to discover?
6. The process of fission supports a famous equation, and scientist. What is the equation, and who is the scientist?
7. Is energy absorbed or released during an exothermic reaction?
8. What atomic number is Meitnerium, the element named after Meitner?