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**I'm teaching a class on nuclear fission.
Create a lecture plan for a 60 min class
including 2 exercises for the students to
complete. Include details for each part of
the lecture plan.**

Lecture Plan for Nuclear Fission

Part 1: Introduction (10 Minutes)

- Introduce nuclear fission and explain why it is important to study.
- Describe basic components of fission including fissile isotopes, atoms, and energy.
- Provide a quick overview of the history of research on and development of nuclear fission.

Part 2: Theory (15 Minutes)

- Explain how atomic nucleus splits during fission and how that energy is released.
- Discuss the different types of energy generated by nuclear fission (thermal and kinetic).
- Explain the concepts of uranium enrichment and critical mass.

Part 3: Applications (15 Minutes)

- Outline the uses of nuclear fission in both civilian and military contexts.
- Describe how fission is used to generate electricity.
- Explain the potential risks involved with nuclear fission.

Part 4: Exercises (10 Minutes)

Exercise 1: Calculate the Energy Generated by Nuclear Fission (10 Minutes)

- Have students calculate the energy generated by nuclear fission using a given formula or determine how much uranium is needed to reach a given critical mass.

Exercise 2: Research a Civilian or Military Use of Nuclear Fission (10 Minutes)

- Have students use the internet to research a given civilian or military use of fission. They should be prepared to discuss their findings.

Part 5: Wrap-up (10 Minutes)

- Answer any remaining questions about nuclear fission.
- Recap the major points discussed during the lecture.
- Ask for feedback from students on the course.

