

Name: _____

Class: _____

Due Date: _____

E.4 Fission

Understandings

- Energy is released in spontaneous and neutron-induced fission.
- The role of chain reactions in nuclear fission reactions.
- The role of control rods, moderators, heat exchangers, and shielding in a nuclear power plant.
- The properties of the products of nuclear fission and their management.

The solutions can be found on the YouTube channel Go Physics Go:

<https://www.youtube.com/@gophysicsgo/playlists>

1. Define *nuclear fission*.
2. Give two examples of *nuclear fission*:
3. Define *chain reaction*.
4. Define *critical mass*. Units?

5. Define *induced process*.

6. What are the uses of the following objects in a nuclear reactor?

a. *control rod*

b. *moderator*

c. *heat exchanger*

d. *fuel rod*

7. State two benefits and two drawbacks to using *nuclear power*.