

Activity #1: Parts of Nuclear Reactor

Part One:

Describe the functions of the following parts of a nuclear reactor.

- a. Moderator
- b. Fuel Rods
- c. Control Rods
- d. Pressurizer
- e. Condenser
- f. Generator
- g. Turbine
- h. Pumps
- i. Reactor Vessel
- j. Steam Generator

Part Two:

Use the cutouts provided by the teacher to try to make a model of a typical nuclear reactor. Then, sketch a model of the complete nuclear reactor (including pipelines and pumps) once you feel that your cutout model is complete and correct.

Part Three:

Complete the 2x2 Note Chart showing the advantages and disadvantages of using nuclear energy.

Nuclear Energy	Cities	Submarines
Advantages		
Disadvantages		

Part Four:

Answer the following questions.

- a. Why is water used as a moderator in many nuclear reactors?

- b. In the pressurized nuclear reactor, there are two main cycles happening. Why are the cycles separated from one another?

- c. Could the nuclear fuel in the reactor likely be used to make a nuclear weapon? Why or why not?

- d. In cities, what is the point of the containment wall that would be found around the whole

reactor system? How would this be accomplished in a submarine?