

Nuclear Energy

Created By: Alana Eclavea, Camille Camacho, Haven Aguon

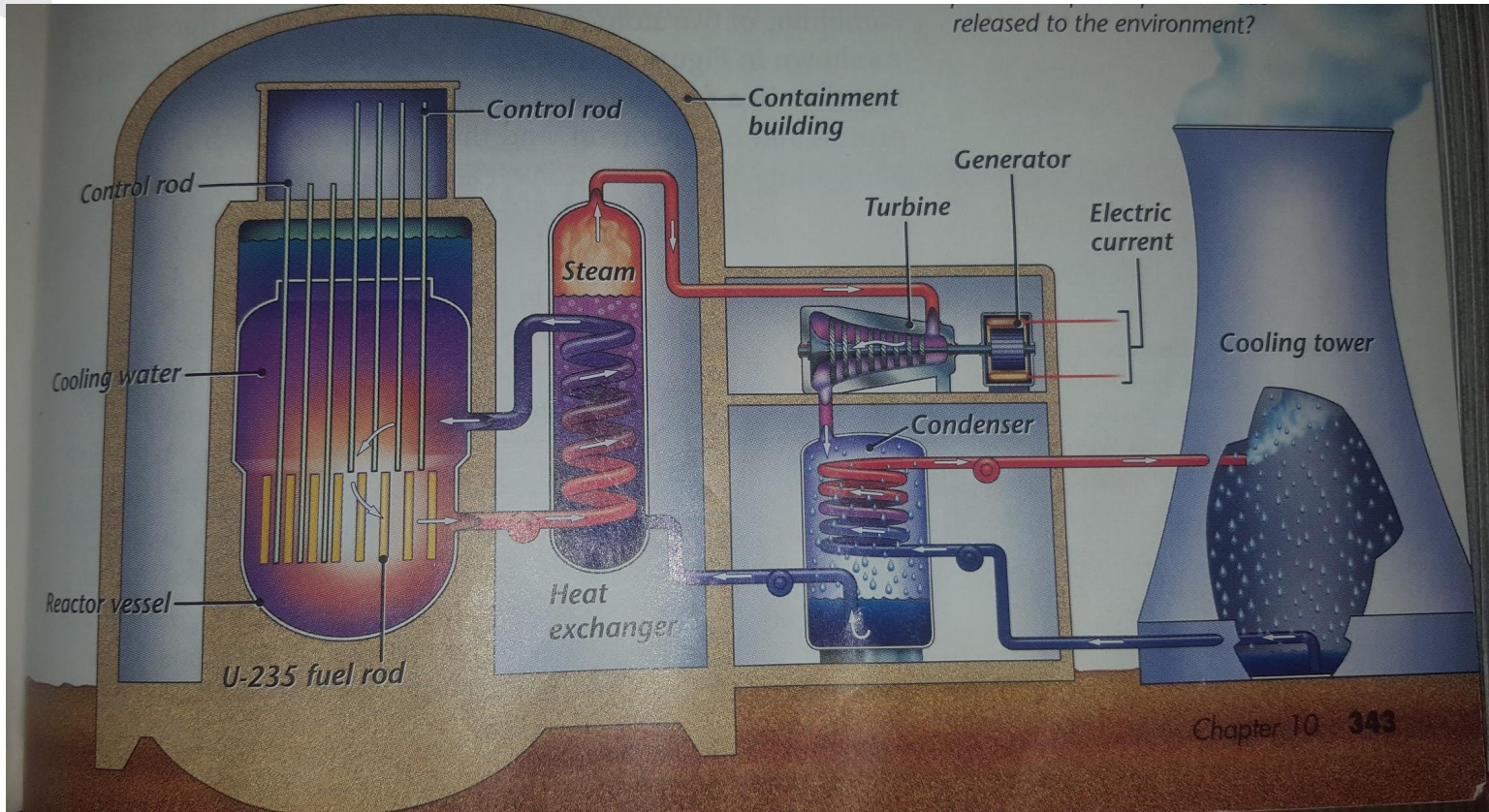




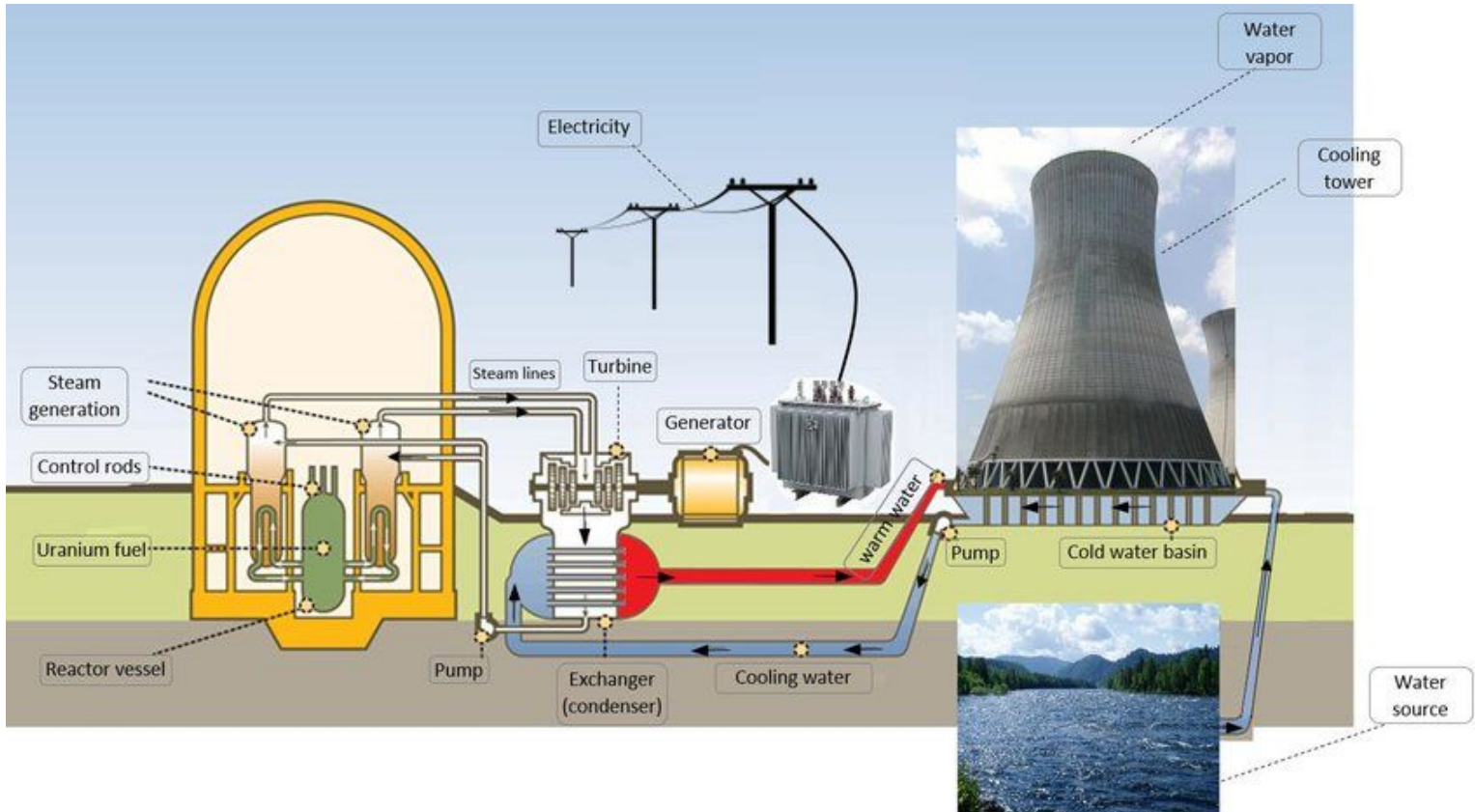
Key Terms

1. Nuclear Fission- the splitting of an atom's nucleus into two smaller nuclei.
2. Reactor Vessel- the section of a nuclear reactor where nuclear fission occurs.
3. Meltdown- a dangerous condition caused by overheating inside a nuclear reactor.
4. Fuel Rods- Uranium rod that undergoes fission in a nuclear reactor.
5. Control Rods- Cadmium rod used in a nuclear reactor to absorb neutrons from fission.
6. Nuclear Fusion- the combining of two atomic nuclei to produce a single larger nucleus

Diagram



Diagram





Pro and Cons

Pros

- Low greenhouse gas emissions
- High power output
- Inexpensive electricity
- Doesn't rely on fossil fuels
- Positive economic impacts
- Takes up a small geographical footprint

Cons

- Not a renewable fuel source
- Past history of Nuclear accidents
- Expensive to build



Best location to build plant

<https://www.ucsusa.org/resources/nuclear-power-plant-cooling-water-needs>

Nuclear plants are built on the shores of lakes, rivers, and oceans because these bodies provide the large quantities of cooling water needed to handle the waste heat discharge.



Mini Quiz (5)

- 1.) What is nuclear fission?
- 2.) What do nuclear power plants use as fuel?
- 3.) What does a control rod do to prevent a meltdown?
- 4.) List two pros and two cons
- 5.) Why are nuclear power plants built on the shores/banks of these bodies of water?



Answers

- 1.) Nuclear Fission- the splitting of an atom's nucleus into two smaller nuclei.
- 2.) Uranium
- 3.) Control rods absorb neutrons so th
- 4.) (Any answer listed/mentioned before)
- 5.) Nuclear plants are built on the shores/banks of large bodies of water because these bodies provide the large quantities of cooling water needed to handle the waste heat discharge.