



# Nuclear Energy

Put the following steps for producing electrical energy from nuclear fission on the correct order.

Steam produced by boiling water causes the blades of a turbine to rotate.

A neutron bombards a uranium-235 isotope.

Thermal energy released by the reaction is added to water.

Electricity from the generator is carried to the community through wires.

A uranium-235 atom splits, producing two atoms with smaller nuclei, three neutrons, and thermal energy.

The mechanical energy of the rotating turbine blades is transferred to an electric generator.

Superheated water passes through a heat exchanger, where the thermal energy released boils a separate system of water to produce steam.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

## Drag and Drop

better      hot      Nuclear waste      air pollution      Mining  
longer      Very dangerous nuclear waste that has to be stored pretty much forever.  
Helium and harmless noble gas, used in balloons

How does using nuclear energy harm the environment?

1.      the Uranium from the ground and storing the 2.

How is using nuclear energy less harmful to the environment than using fossil fuels?

It does not create any 3.

How does the half-life of a radioactive waste affect the type of container in which the waste will be stored?

The 4.      the half-life the longer it needs to be stored. The longer it  
need to be stored the 5.      the container needs to be.

Why is nuclear fusion not currently used as an energy source on Earth?

It gets too 6.      for us to contain/control and keep it going.

How do the products of a fusion reaction differ from the products of a fission reaction?