# Nuclear Energy
# Nuclear Power: Risks and Benefits
## Comprehension Questions

Watch the video carefully. As you view it, complete the following comprehension questions and tasks.

1. Nuclear waste can remain radioactive for:
   - ◯ a) several decades.
   - ◯ b) 6 to 12 months.
   - ◯ c) hundreds of millennia.
   - ◯ d) less than a few centuries.

2. Why does nuclear fuel need replacing every year or two?
   - ◯ a) The risk of meltdown increases with time.
   - ◯ b) Fissile isotopes break down into nonfissile ones.
   - ◯ c) Uranium-235 turns into neutrons.
   - ◯ d) New nuclear technology becomes available every few years.

3. The percentage of uranium-235 in a spent pellet of nuclear reactor fuel is:
   - ◯ a) just over 50 percent.
   - ◯ b) less than 0.5 percent.
   - ◯ c) about 5 percent.
   - ◯ d) about 1 percent.

4. Of all the materials a nuclear facility needs to dispose of, the most radioactive is the:
   - ◯ a) coolant.
   - ◯ b) spent fuel.
   - ◯ c) surrounding equipment.
   - ◯ d) control rods.

5. Provide an example of low-level radioactive waste.

   _____

6. Materials used to house nuclear core components are an example of intermediate waste.
   - ◯ True ◯ False

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7. Even when cooling in a storage pond, high-level radioactive waste can fragment and leak into the water table or atmosphere. How is this prevented?

_____

_____

8. What is the name of a product developed by Australia's Nuclear Science and Technology Organisation for mixing with radioactive waste?

_____

9. Use numbers to fill in the blanks: Only about _____ percent of spent fuel is waste that interferes with a chain reaction. Reprocessing can reduce this waste by _____ percent.

10. Why don't all countries reprocess nuclear waste?

_____

11. What is an advantage of reprocessing nuclear waste?

_____

12. A famous nuclear meltdown occurred in 1986 at a plant in the Soviet Ukraine. The name of the plant was _____.

13. Building a single nuclear fission power plant is generally _____ expensive than building a fossil fuel-powered facility. Running a single nuclear fission power plant is generally _____ expensive than running a fossil fuel-powered facility.

14. Use numbers to fill in the blanks: Fuel for a nuclear fission power facility is typically around _____ percent of its running costs. Fuel for a fossil fuel power facility is typically around _____ percent of its running costs.