

Benchmark III – Drawing Some Conclusions

In Benchmarks I and II you learned about conventional and nuclear energy, their use in different countries, and the processes by which they are produced. You learned about the domestic and international controls that are intended to keep nuclear energy safe and secure. You also learned about some of the issues surrounding nuclear energy, both civilian and military, the risks and benefits of nuclear energy, waste storage problems, proliferation, and terrorism.

In Benchmark III you will synthesize and evaluate the information you have gained. You will create your own interpretations about world events and concerns. From your research you will make judgments and support those judgments with the knowledge you have gained.

Your task is to clearly demonstrate, in a carefully constructed project, an understanding of *one* of the challenges related to nuclear energy. Your project will address this challenge through *one* of the CIF domains of your choice. The project must be your own work with clear and correct citations from any work borrowed from others. All work not your own, including photos, graphics, multimedia, charts, and graphs must be credited within your text and in a bibliography.

The Scientific and Environmental Domain

Suggested Projects:

1. Prepare arguments to present to a local decision-making body advocating or rejecting the construction of a nuclear power plant based on the plant's environmental impact.
2. Argue: Current science and technology is sufficient for the safe construction, running, and maintenance of nuclear power plants, yes, or no?
3. There have been three major incidents regarding nuclear power plants: Three Mile Island Chernobyl, and Kashiwaszki-Kariwa. Argue: These incidents are well understood and unlikely to occur again, yes or no.

The Socio-Cultural Domain

1. Develop an argument why Middle Eastern countries are interested in nuclear energy to balance the efforts of Iran.

2. Argue: many countries are interested in nuclear energy as a way to bring their societies into a more technological world, yes or no.
3. Argue: the US/Russia need(s) to re-start the development of nuclear power to secure energy sources for their future, yes or no.

The Economic Domain

Suggested Projects:

1. Develop an argument for local decision-making bodies advocating or rejecting the construction of a nuclear power plant based on the plant's economic impact.
2. Argue: Countries with rapidly expanding economies, have no realistic alternative to fossil fuels except nuclear energy, yes or no.
3. Argue: Controlling the sale of nuclear technologies violates the premises of a free-market economy, yes or no.

The Political and Geopolitical Domain

Suggested Projects:

1. Evaluate the effectiveness of current international controls over the development of nuclear energy by individual countries.
2. Argue: Complete transparency in nuclear programs and their expansion undermines the autonomy and security of a nation, yes or no.
3. Argue: Any country is entitled to pursue the development of nuclear energy under current international agreements.