



Nonrenewable Resources

Nuclear Power Plants Worldwide

- ❖ Create a map with all the nuclear power plants in the world
- ❖ make sure to be up to date
- ❖ Indicate on the map the NPP that were shut down by the governments
- ❖ Create a statistical analyses on:
 - ❖ Production of the energy by nuclear PP vs. other fossil fuels vs renewable energy for each country
 - ❖ Create a list of nuclear PP disasters since 1950's

Nuclear Power Plant Disasters

Here is the list of the NPP disasters:

1. Three Mile Island Accident
2. Fukushima
3. Chernobyl

- For each disaster provide the reason for the accident, the contamination of the environment, the containment of the area, future of the area, impact on civilians and ecology/nature
- Find a 2 min short video documenting the disaster

GROUP 1: Petroleum – Crude Oil

1. Define petroleum, or crude oil
 2. Explain how it is extracted, processed, and what are the final products, use diagrams, drawings, pictures
 3. Explain petrochemical industry
 4. Name the countries that are the major producers, consumers, as well as exporters and importers
 5. Explain the role of OPEC
 6. Point out the negative environmental impacts of the petroleum use (oil spills), and extraction
 7. CREATE MCQ exit ticket (5 questions, answer key)
 8. Find TedTalk to explain the crude oil production
- **PowerPoint –5 pages**
 - **Video clip about extracting, processing the oil (up to 2 min)**
 - **Total presentation 25 min**

GROUP 2: Coal

1. Define coal, types of coal, the efficiency
 2. Explain how it is extracted, processed, and used, use diagram, graphs, photos
 3. Name the countries that are the major producers, consumers, as well as exporters and importers
 4. Explain what is SNG
 5. Point out the negative environmental impacts of the coal mining and usage
 6. CREATE MCQ exit ticket (5 questions, answer key)
 7. Find TedTalk about the coal production
- **PowerPoint –5 pages**
 - **Video clip about extracting, processing the coal (2 min)**
 - **Total presentation 25 min**

GROUP 3: Natural Gas

1. Define natural gas
 2. Explain how it is extracted, processed, used, use diagram, graphs, photos
 3. Name the countries that are the major producers, consumers, as well as exporters and importers
 4. Explain what is LPG and LNG
 5. Point out the environmental impacts of the natural gas extractions and usage
 6. CREATE MCQ exit ticket (5 questions, answer key)
 7. Find TedTalk talking about natural gas production
- **PowerPoint –5 pages**
 - **Video clip about extracting, processing the natural gas (2 min)**
 - **Total presentation 25 min**

GROUP 4: Nuclear Power

1. Define nuclear power, where does the U235 come from
 2. Explain how it is produced and how is the energy extracted from it, use diagram, graphs, photos
 3. Name the countries that are the major producers/consumers
 4. Explain the nuclear fuel cycle
 5. Point out the environmental impacts of the nuclear power production/usage (radioactive waste, public safety)
 6. EXPLAIN how the radioactive material is stored
 7. CREATE MCQ exit ticket (5 questions, answer key)
 8. Find TedTalk—about nuclear power plant production
- **PowerPoint –5 pages**
 - **Video clip about production of nuclear power (up to 2 min)**
 - **Total presentation 25 min**