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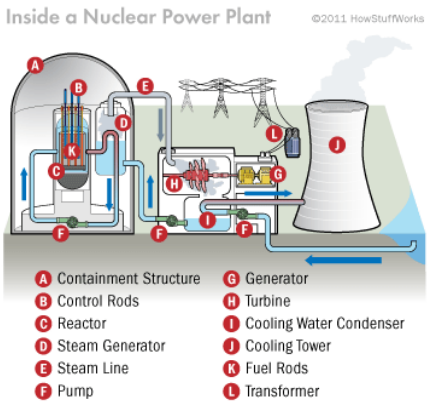
Thinking Like a hi**STORY**an:

http://www.she-philosopher.com/home/technical/graphicsformats.html



Navigating Primary Sources

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Thinking Like a hiSTORYan: Navigating Primary Sources

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Grade Level: 7 World Geography Eastern Hemisphere: The Why of Where-Places, Patterns of Settlement, and Global Interactions

Purpose/Overview: Students will gain a deeper understanding of our history and geography by analyzing and interpreting primary sources.

National Geography Standards from *Geography for Life*

Essential Element IV. HUMAN ENVIRONMENT INTERACTIONS
The Processes, Patterns, and Functions of Human Settlement

OKLAHOMA ACADEMIC STANDARDS FOR SOCIAL STUDIES

OAS 2012	OAS 2019
Process and Literacy Skills Standard 1 The student will develop and demonstrate Common Core Social Studies reading literacy skills.	Read Critically and Interpret Informational Sources: Students will engage in critical, active reading of grade-level appropriate primary and secondary sources related to key social studies concepts, including frequent analysis and interpretation of informational sources.
Process and Literacy Skills Standard 2 The student will develop and demonstrate Common Core Social Studies writing skills.	Engage in Evidence-Based Writing: Students will apply effective communication skills by developing a variety of evidence-based written products designed for multiple purposes and tasks, in order to demonstrate their understandings of social studies concepts, ideas, and content.
Content Standard 5 The student will analyze the interactions of humans and their environment in the Eastern Hemisphere.	**7.4** The student will analyze the interactions of humans and their environment in the Eastern Hemisphere.
5.1 Cite specific textual and visual evidence to describe the relationship between the distribution of major renewable and nonrenewable resources and evaluate how the three levels of economic activity (primary, secondary and tertiary) contribute to the development of a country or region including the **E.** Benefits and dangers of nuclear power generation as exemplified by the environmental disaster at Chernobyl.	**7.2.2** Describe the distribution of major renewable and nonrenewable resources of each region. **7.3.6** Describe the distribution of resources and evaluate how the three levels of economic activities (primary, secondary, tertiary) contribute to the development of a country or region.

Geographic Themes: Environment and Society and the Uses of Geography

Objectives:
The students will be able to…

1. Read, analyze and interpret primary sources to include photographs, maps and documents.
2. Make inferences and draw geographical conclusions about historic events.
3. Compare and contrast geographical and historical information.

Materials:

- Primary Sources Power Point
- Primary Source documents
- Graphic organizers
- Internet Access
- Computer
- LCD Projector or Smart Board

Time Frame: 2 class periods

Procedures:

Day 1: Anticipatory Set

1) Ask the students the following questions:
    - How many of you use your phone to take photos?
    - How are the photographs on your phone considered a primary source?

Teach

2) Show Power Point "Primary Sources" slides 1-5.
3) Tell students that we are going to analyze an event in history by looking at primary source documents. They are going to take on the role of geographers and historians to build a story of a significant event in history. The first primary source is a photograph. Show Power Point slides 6 & 7 to give them tips for analyzing photographs.
4) Group students in groups of 4. Distribute the two photographs in folders-one to each group. Ask students to discuss the photographs and complete the Reading Photographs graphic organizer based on their interpretation of the photo.
5) Allow students about 15 min. to analyze the photographs and have each group share the inferences they made about the photographs.
6) Discuss the strengths and weaknesses of using photographs as a primary source. What could we all agree on? What questions do we have? Show slide 8.
7) Show slides 9 & 10 about using primary source maps. Distribute maps, "3 Radioactive Fall-out from the Chernobyl Accident, 1986 to each group. Give students about 15 min. to analyze the map, complete graphic organizer, Reading Maps, and then present information gained from the addition of a second primary source.
8) Discuss the information presented from the study of maps. What were the strengths of using a map to help tell the story of what happened at Chernobyl? What is still missing? Show slide 11.
9) Show slides 12-16. Distribute the eyewitness account by Soviet Fireman Leonid Telyatnikov. Ask students to complete the Reading Documents graphic organizer.

10) Discuss the dangers of nuclear power plants as seen at Chernobyl. Also, discuss how primary sources allow historians to gradually piece together information that becomes our hiSTORY.
11) Distribute the world map of current nuclear power plants. Study the map and read "Why Use Nuclear Power?" Hold a discussion on the dangers and benefits of nuclear energy. Ask students the following questions: If nuclear power plants are so dangerous? Why do we have them? What are the benefits?

Assessment

12) Students will complete the chart Benefits and Dangers of Nuclear Power Generation.

Assessment Options:

Students can be evaluated on the following:

- Graphic organizers
- Accuracy of information presented

Extension and Enrichment:

Students can find other primary sources to share or research the nuclear disaster in Japan.

Simplification:

Student assignments can be shortened or modified. Low achieving students can be partnered with higher achieving students during hands-on simulations and activities.

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Connections:

National standards in reading, writing, science and social studies are addressed in this lesson.

Bibliography

Websites

Binker, A.J.A. "Critical Thinking and Social Studies." http://www.criticalthinking.org/data/pages/61/f6701746fbccc0f33588bdccc63338d6513674632a7fa.pdf.

Chernobyl Then and Now: 28 Haunting Images From Nuclear Disaster. April 26, 2014. http://www.rt.com/news/155072-chernobyl-images-now-then/.

Grogan, David. "An Eyewitness To Soviet Disaster, Soviet Fireman Leonid Telyatnikov Recounts the Horror of Chernobyl." People, Oct. 5, 1987. http://www.people.com/people/archive/article/0,,20097264,00.html.

"Image: Radioactive Fall-out from the Chernobyl Accident. Times Books, 2007. http://qed.princeton.edu/main/Image:Radioactive_fall-out_from_the_Chernobyl_accident.jpg.

"Why Use Nuclear Power?" The Virtual Nuclear Tourist, 1996-2011.
http://www.nucleartourist.com/basics/reasons1.htm.

Using Primary Sources to Tell our hiSTORY

Reading Photographs

1. What are your first impressions of the photograph?

   _____

   _____

2. Are there any people in the photo? If so, what are they doing?

   _____

   _____

3. What appears to have happened in the photograph?

   _____

   _____

4. What objects do you see? Make a list.

_____

_____

5. What inferences can you make?

_____

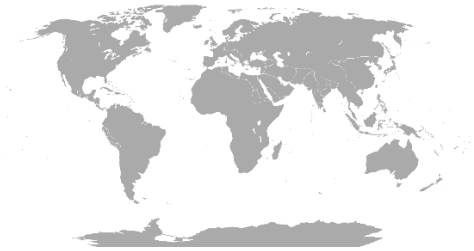
_____

_____

_____

Using Primary Sources to Tell our hiSTORY

Reading Maps



Where and when did the significant event happen?

Why do you think this map was drawn? What evidence suggests why it was drawn? What information does the map add to your story of what happened during this significant world event? Write a question that is still left unanswered.

Using Primary Sources to Tell our hiSTORY

Reading Documents

Type of Document	Date of Document	Author or Creator

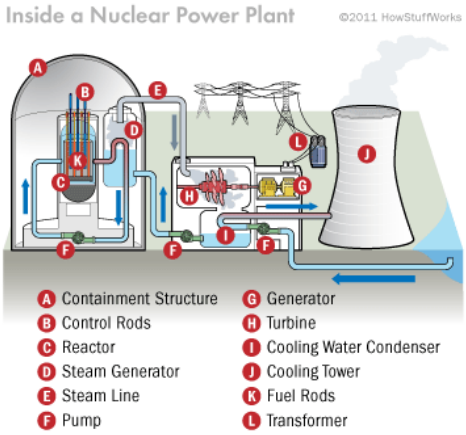
Document Information

1. **List three things the author said that you think are importan2.**

2. **Why do you think this document was written? What evidence helps you know why it was written? Include quotes**

3. **How does this document help you piece the story together?**

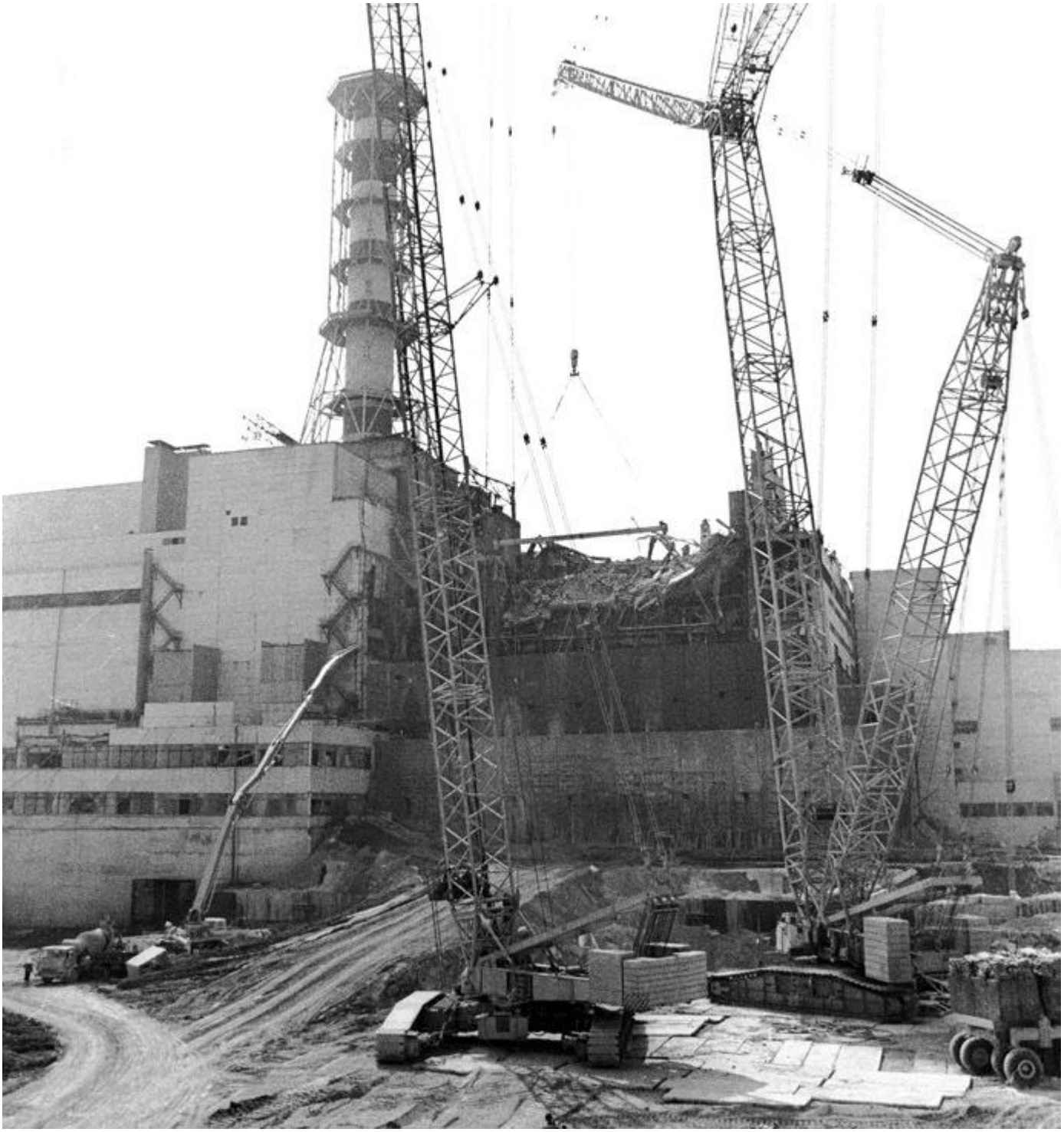
Nuclear Power Generation



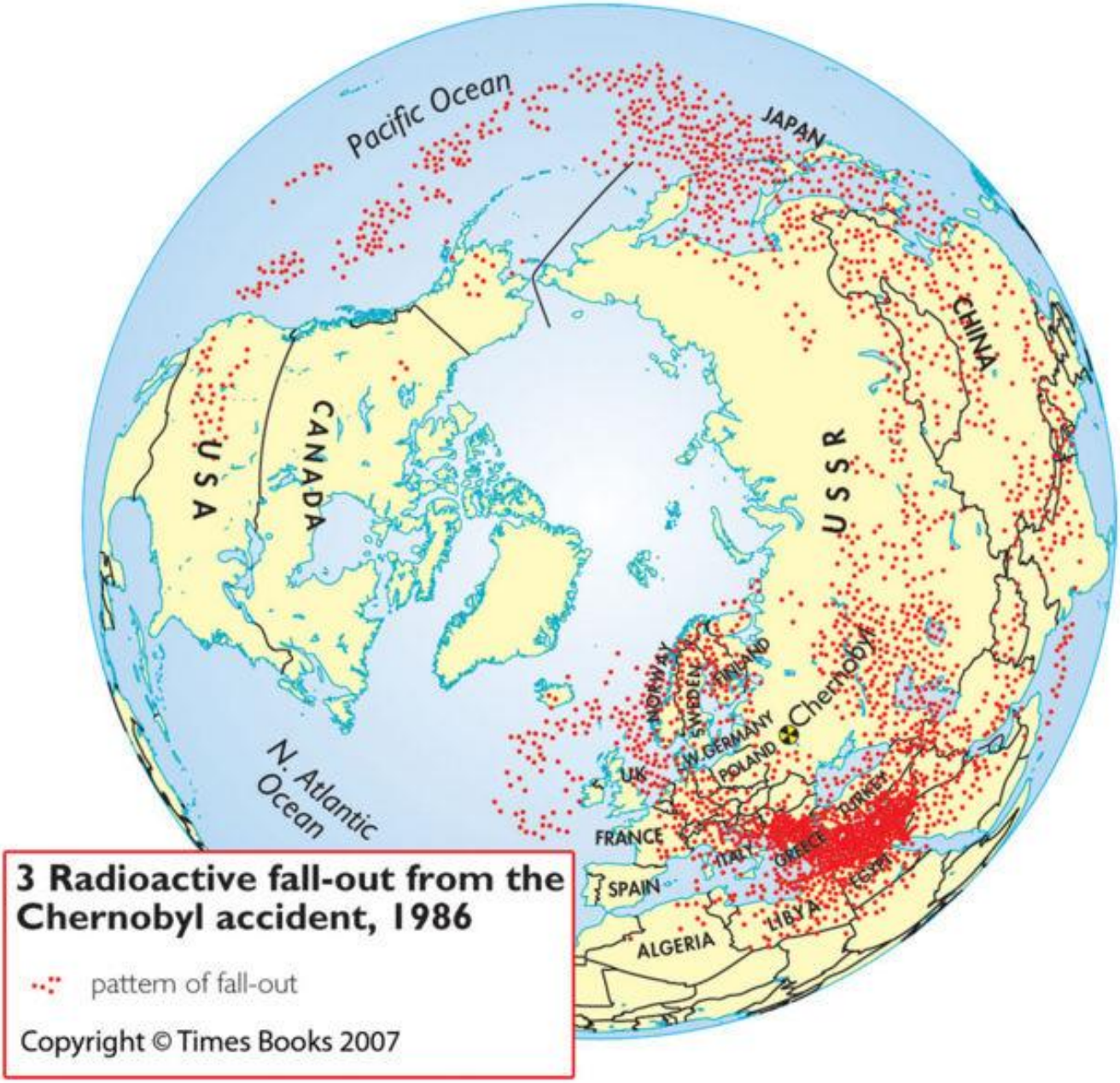
http://s.hswstatic.com/gif/nuclear-power-3-with-fuel-rods.gif

Benefits	Dangers

http://www.rt.com/news/155072-chernobyl-images-now-then/



http://www.rt.com/news/155072-chernobyl-images-now-then/



http://qed.princeton.edu/main/Image:Radioactive_fall-out_from_the_Chernobyl_accident.jpg

An Eyewitness to Disaster, Soviet Fireman Leonid Telyatnikov Recounts the Horror of Chernobyl
By David Grogan

Soviet fire fighter Lieut. Col. Leonid Telyatnikov had been enjoying a few days off when he received a telephone call at 1:32 a.m. on the night of April 26, 1986 summoning him to a fire at the Chernobyl nuclear plant. Not knowing what to expect, Telyatnikov hopped into a car and set out immediately. "It was a clear night with lots of stars," he recalls. "I had no idea what had happened, but as I approached the plant I could see debris on fire all around, like sparklers. Then I noticed a bluish glow above the wreckage of Reactor Four and pockets of fire on surrounding buildings. It was absolutely silent and eerie."

Honored as a national hero in the Soviet Union for commanding the first fire-fighting team at the scene of the Chernobyl nuclear disaster, Telyatnikov was a special guest at the annual Great American Firehouse Exposition and Muster in Baltimore. A boyish 36-year-old, Telyatnikov was named an honorary battalion chief of the Baltimore Fire Department and inspected an impressive array of new hook and ladder trucks at the convention. Later he gave PEOPLE a rare eyewitness account of the nuclear accident that killed 31 people, including six firemen, and left thousands of others at risk of cancer because of the long-term effects of radiation poisoning.

Speaking softly, Telyatnikov chainsmoked as he recounted the tragedy through an interpreter. "I realized it was not an ordinary situation the moment I passed through the plant gate," he says. "There was just the noise of machines and the fire crackling. The fire fighters knew what they had to do and proceeded quietly, on the run."

Though meters measuring radiation in the plant had frozen at the highest level, Telyatnikov and his crew of 28 used only water hoses to fight the blaze and no protection other than conventional fire-fighting uniforms and gas masks. "Thoughts of my family would flash through my mind and be gone," he says. No one openly discussed the radiation risk. "The most frightening thought we all had was that we wouldn't have enough strength to hold out until reserves came and prevent the fire from getting out of control. About an hour after the fire began, a group of fire fighters with symptoms of radiation exposure were taken down from a rooftop close to the damaged reactor. When I approached five men to take up the position, they rushed to the rooftop almost before I could get the words out of my mouth."

By 3 a.m. the fires were still burning but did not pose a danger of spreading beyond the plant. "We had fulfilled our immediate task of localizing the blaze," says Telyatnikov. A half hour later he started vomiting. "I thought I was just tired from rushing around so much," he says. "I was somehow sure I wouldn't get ill because I still had things to do." By 5 a.m. reinforcements were on hand and Telyatnikov and many of his crew were ordered to go to a hospital in the nearby town of Pripyat.

"At the hospital we were walking around, talking and smoking, and at first we felt quite well," he remembers. "We didn't think of death. We thought we were just in for a checkup. But within a week we developed burns on the hands, feet and face from radiation." Six of the rooftop fire fighters, including one man whose wife had given birth to a baby girl less than a month before the accident, never recovered. "They died," Telyatnikov said at that time, "but they have not left me." Meanwhile Telyatnikov and other members of his crew were

transferred to a Moscow hospital. "In a way I felt like an AIDS patient," he says. "My immune system had been weakened, so I had to be kept in a sterile unit." On May 11, Telyatnikov's 13th wedding anniversary, his wife, Larisa, was allowed to visit him briefly. But he did not see his sons, Oleg, 13, and Michael, 11, until August.

While he was undergoing treatment for the radiation, Telyatnikov's hair began to fall out in clumps; he decided to shave his head. By September his scalp was healthy again, but he soon developed liver problems and discovered he had contracted hepatitis B during his convalescence. Finally released from the hospital last December, he was awarded a medal for heroism and named deputy chief for regional fire fighters in Kiev. But his encounter with tragedy and the threat of long-term illness have left him a changed man. "Before, I was a tough guy, but now I am more emotional, more vulnerable," he says. "I spend more time with my family, and I try to pay more attention to the needs of my children. I am trying not to be too authoritarian with them."

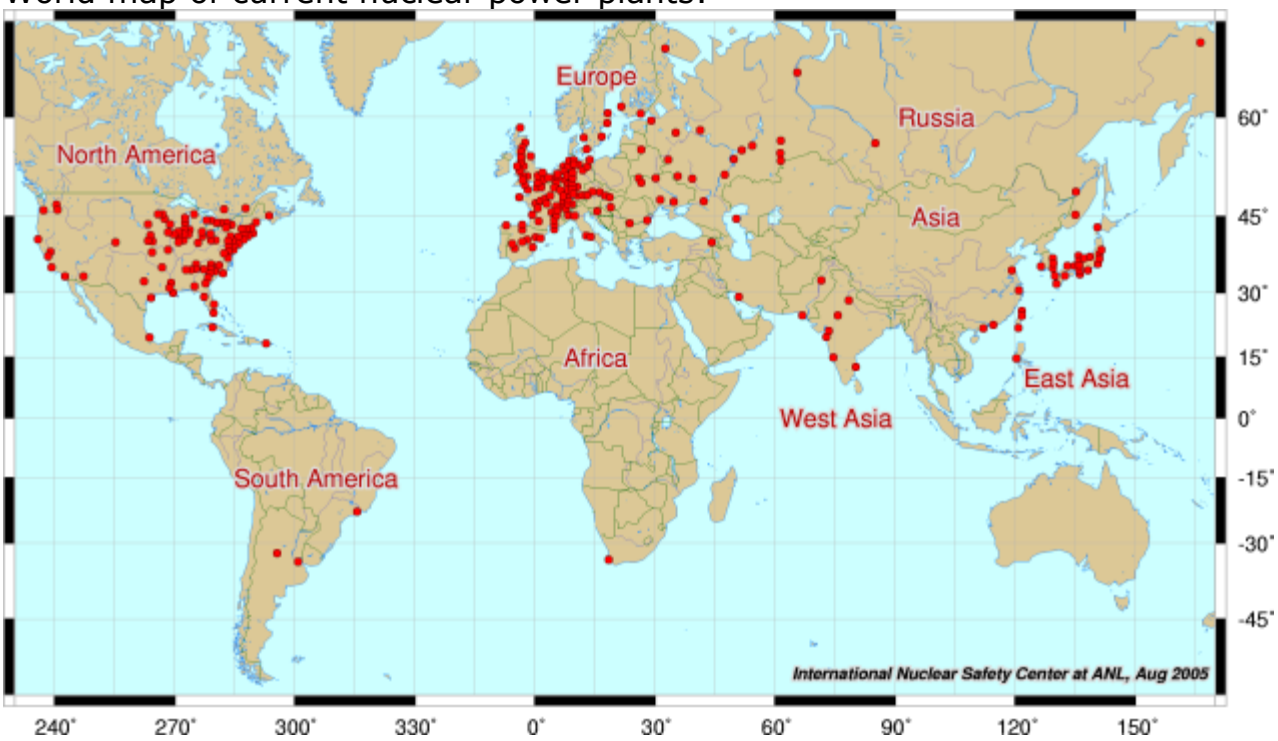
A good soldier to the end, Telyatnikov does not fault his government's handling of the disaster, but he does criticize Chernobyl plant management, which has been blamed for negligence resulting in the explosion and fire. "Chernobyl showed us that some people are not as conscientious and upright as they should be," he says. "Otherwise the accident would not have happened." At the same time, he is modest about his own brave actions and those of his men. "We did what we had to do," he says, "and that is all."

Contributors:Linda Kramer.

http://www.people.com/people/archive/article/0,,20097264,00.html

Current Nuclear Reactors

World map of current nuclear power plants:



http://nuclearinfo.net/Nuclearpower/CurrentReactors

Why use Nuclear Power?

Several major reasons that people working in the field still remain optimistic about nuclear power are:

- the energy produced per amount of material consumed is the highest available
- costs are competitive with coal, the major source used in the world
- uranium, the source material, is abundant
- plutonium, a by-product of commercial nuclear plant operation, can also be used as a fuel
- the amount of waste produced is the least of any major energy production process
- nuclear energy provides benefits other than electricity generation.

Energy Production Rates

Uranium-235 is the isotope of uranium that is used in nuclear reactors. Uranium-235 can produce 3.7 million times as much energy as the same amount of coal. As an example, 7 trucks, each carrying 6 cases of 2-12 foot high fuel assemblies, can fuel a 1000 Megawatt-electrical (MWe) reactor for 1.5 years. During this period, ~ 2 metric tons of Uranium-235 (of the 100 metric tons of fuel - uranium dioxide) would be consumed. To operate a coal plant of the same output would require 1 train of 89-100 ton coal cars each **EVERY** day. Over 350,000 tons of ash would be produced AND over 4 million tons of carbon dioxide, carbon monoxide, nitrogen oxides and sulfur oxides would be released to the environment.

http://www.nucleartourist.com/basics/reasons1.htm