



# REACTIONS

FROM THE AMERICAN NUCLEAR SOCIETY TO TEACHERS INTERESTED IN THE NUCLEAR SCIENCES

## Observing National Nuclear Science Week

### Why is nuclear science important to you and your students?

- commercial nuclear power plants produce 20 percent of electricity in the US
- 18 million nuclear medicine procedures are performed each year in the US, positively impacting the lives and health of people both young and old
- nuclear science and technology plays an important role in basic research in a many fields including agriculture
- 53 new nuclear plants are under construction in 14 countries
- radiation can be used to sterilize medical materials

National  
Nuclear  
Science  
Week

*Get to Know Nuclear*

**January 23-27, 2012**

These are just a few reasons why nuclear science and technology are important to you and your students. There are many other ways you may experience the benefits of nuclear science in your everyday life. For some other examples of everyday applications of nuclear science, look for A Day With the Atom at [www.new.ans.org/pi/resources/brochures/docs/a-day-w-atom081030.pdf](http://www.new.ans.org/pi/resources/brochures/docs/a-day-w-atom081030.pdf)

### What is National Nuclear Science Week?

National Nuclear Science Week (NNSW) is designed to recognize the contributions of nuclear science and the people who work in it every day. The week's events are organized by The National Museum of Nuclear Science & History which is congressionally chartered museum and a Smithsonian affiliate. Observation of NNSW is supported by other nuclear organizations, including the American Nuclear Society.

### Where will I find resources related to NNSW?

A number of downloads are available to teachers from NNSW at

<http://www.nuclearscienceweek.org/for-teachers-students-parents/topics-and-downloads-for-curriculum/>

Be sure to scroll down that page, as there are even some materials in their archive from last year.

Useful brochures about nuclear science and technology are offered by the American Nuclear Society and can be found at

<http://www.new.ans.org/pi/resources/brochures/> ■

## Engineers Week is Coming

**National Engineers week will be observed February 19-25, 2012**

The week is set aside to give attention to the many ways in which engineers and engineering are crucial to maintain our modern world. Another purpose is to assure that students become aware of the career opportunities which exist for them in the engineering field.

Many engineering societies and corporations support the week and participate in outreach to school groups.

For background information about engineering, visit <http://www.eweek.org/AboutEngineering/AboutEngineering.aspx>

On that page, you will find links to additional information about engineering. ■

## Project #76 — Research & Group Activity

### Constructing a Time Line of Developments in Nuclear Science

**Objective:** Learn about the early development of atomic and nuclear science  
Develop Teamwork by sharing information

**Tools:** Use standard library resources such as an encyclopedia, specialized science encyclopedia, or other reference materials. A computer and internet access can also be helpful.

Go to [http://www.aboutnuclear.org/view.cgi?fC=History,Hall\\_of\\_Fame](http://www.aboutnuclear.org/view.cgi?fC=History,Hall_of_Fame) for information about many of the names on the list.

Information about a few nuclear pioneers may also be found at [ansnuclearcafe.org/category/nuclear-pioneers/](http://ansnuclearcafe.org/category/nuclear-pioneers/)

**Directions:** The people, places and things in the list below have played a role in the development of our understanding of the structure of matter or in the growth and application of nuclear science and technology.

Research the names listed, looking for:

- the time (range of years) during which the person lived or the event occurred
- the major contribution to nuclear science and technology (theory or application) made by the person or event
- the year in which the contribution or discovery was made (if available)
- what this discovery or contribution has done to improve health, quality of life, etc.

After everyone has completed the research, the class should share the information and arrange people and events on a time line.

Atoms For Peace Speech	Albert Einstein	Frederick Joliot	Wilhelm Roentgen
Antoine Henri Becquerel	Enrico Fermi	Irene Joliot-Curie	Ernest Rutherford
Herman Blumgart	Otto Frisch	Martin Klaproth	Glenn Seaborg
Niels Bohr	Hans Geiger	Lise Meitner	Shippingport
James Chadwick	Maria Goeppert-Mayer	Dmitri Mendeleev	Yankee Rowe
Marie & Pierre Curie	Otto Hahn	USS Nautilus	Nuclear Power Station
John Dalton	Werner K. Heisenberg	Ida Noddack	Fritz Strassman
Democritus	George de Hevesy	Uncertainty Principle	Dr. Rosalyn Yalow
Dresden-1	BORAX III	Theory of Relativity	

**This is a revised version of Project #60 which appeared in our November 1999 issue.**

Teachers may want to examine the time line offered at [http://www.aboutnuclear.org/view.cgi?fC=History,Time\\_Line](http://www.aboutnuclear.org/view.cgi?fC=History,Time_Line)

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The Future is in the Atom

February 19-25, 2012  
Engineers Week

January 23-27, 2012  
Nuclear Science Week

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