

PASSPORT

U.S. DEPARTMENT OF ENERGY

WHAT'S NEXT
FUTURE SCIENCE FOR FUTURE SCIENTISTS



Your Name: _____

Your School: _____

Chicago's Navy Pier

October 14, 2004

Dear “What’s Next” participant:

Thank you for joining us today for this exciting expo.

This expo is full of fascinating and creative ideas and prototypes. The technologies you will see today take time and money to create, but the most important ingredient in their success is IMAGINATION. You will see how yesterday’s daydreams have become today’s discoveries.



As you visit the different exhibits, make sure you speak with the scientists and ask questions about their ideas. Their life’s work in science and technology is the key to a more exciting future and a more secure world.

Who knows, maybe you have an idea that could be “What’s Next” in science or technology!

Whatever your dream, this is future science for you!

A handwritten signature in blue ink that reads "Spencer Abraham". The signature is written in a cursive, flowing style.

Spencer Abraham
Secretary of Energy

WHAT'S NEXT SCHEDULE

9:00-9:45 AM	Students Arrive, go to ballroom for pre-show activity
10:00 AM	Program begins in Ballroom
10:40 AM	Students are dismissed from ballroom in shifts based on group number
10:45 AM	Exhibits begin on Second floor in Lobby and Balcony
12:30 PM	Lunch begins according to the following schedule:
12:30	Group 1 goes to lunch
12:40	Group 2 goes to lunch
12:50	Group 3 goes to lunch
1:00	Group 4 goes to lunch
1:10	Group 5 goes to lunch
1:20	Group 6 goes to lunch
1:30	Group 7 goes to lunch
1:40	Group 8 goes to lunch
1:00	Students return to exhibits after eating lunch
1:30-2:00	Students assemble and head to their buses at predetermined times.
2:30 PM	Last buses depart.

Participating Exhibitors and Exhibits:

Ames Laboratory

www.ameslab.gov

- Chill Out with Magnetic Refrigeration
- Photonic Frenzy

Argonne National Laboratory

www.anl.gov

- Chemistry
- Driving the Future: Fuel Cells
- Glass Blowing
- Materials of Tomorrow
- Meteorology: Forecasting the Future Today
- NEWTON Online and Ask a Scientist
- Palentology: Uncovering the Past
- Science for All
- Science of Toys
- Sizing it up: Microscopes and Forensic Science

Brookhaven National Laboratory

www.bnl.gov

- Computer Modeling in Structural Biology
- Magnetic Levitation Trains

Chicago Web Connection

- Providing internet access to teachers and students in the metro area

DELL DOE Federal Team

- Visualization

Department of Energy - Office of Science

www.science.doe.gov

Department of Energy - Workforce Development

www.scied.science.doe.gov

Department of Energy - Joint Genome Institute www.jgi.doe.gov

- Fruitful DNA Extraction--The first step toward sequencing genomes.

Fermi National Accelerator Laboratory www.fnal.gov

- Can You Measure Something Without Seeing It?
- Can You Read Particle Tracks?
- Do Rules Matter?
- How Good is Your Aim? Knock Balls into One Another.
- Invisible Forces Here! What Can We Learn?
- Invisible Particles! What Can You Detect?
- It's Hiding! What Characteristics Can You Identify?
- Let's accelerate! Are you faster than the ball?
- Mr. Freeze

IBM www.ibm.com

- Think Outside the Box

Idaho National Engineering and Environmental Lab

www.inel.gov

- Hazmat Cam - Wireless Video System

Lawrence Berkeley National Laboratory www.lbl.gov

- Saving Energy by Solid State Lighting: Investigating Nanomaterials by Digital Image Processing in Microscopy
- Seeing the Light

- Lawrence Livermore National Laboratory** www.llnl.gov
- Rainbows of the Universe
 - Science of the Future: Biotechnology
- National Energy Technology Laboratory** www.netl.doe.gov
- NETL 3D Data Visualization
- National Renewable Energy Laboratory** www.nrel.gov
- Fuel Cells and the Hydrogen Economy of the Future
- Oak Ridge National Laboratory** www.ornl.gov
- Radiation in the Middle School Classroom
- Pacific Northwest National Laboratory** www.pnl.gov
- A Geologic Solution to Global Warming
 - Acoustic Inspections - Seeing with Sound
 - What is a Robot? Robotics in Education and Industry
- Princeton Plasma Physics Laboratory** www.pppl.gov
- Plasmas
- Stanford Linear Accelerator Center** www.sclac.stanford.edu
- High Speed data transfer will revolutionize your lives
- Thomas Jefferson National Accelerator Facility** www.jlab.gov
- Magnets, Electromagnets, and the World Around You
- Underwriters Laboratory** www.ul.com
- I am Safety Smart! ...A Lesson in Home Safety
- USC, ANL, LLNL, LANL, ORNL, SNL, NCSU, UCSC, Second Sight**
www.doemedicalsciences.org
- Artificial Retina - Doheny Eye Institute at USC

Getting Your Passport Stamped

When you are traveling around the learning stations today, you will find a lot of exciting science and technology from all over the country.

After learning from each station, you will want to have them stamp your passport with their stamp.

The stations are divided up into ten different groups, based on the different classifications of elements in the periodic table.

Each station has a stamp of an element from one of those groups. They will stamp your passport in the proper place for their element. For example, the Aluminum (Al) stamp can only go in the metals group.

Your mission is to get at least ten stamps during your travels today.

When you are done, you can take your passport to the inspector station located in the grand ballroom and receive a goodie bag to take with you.

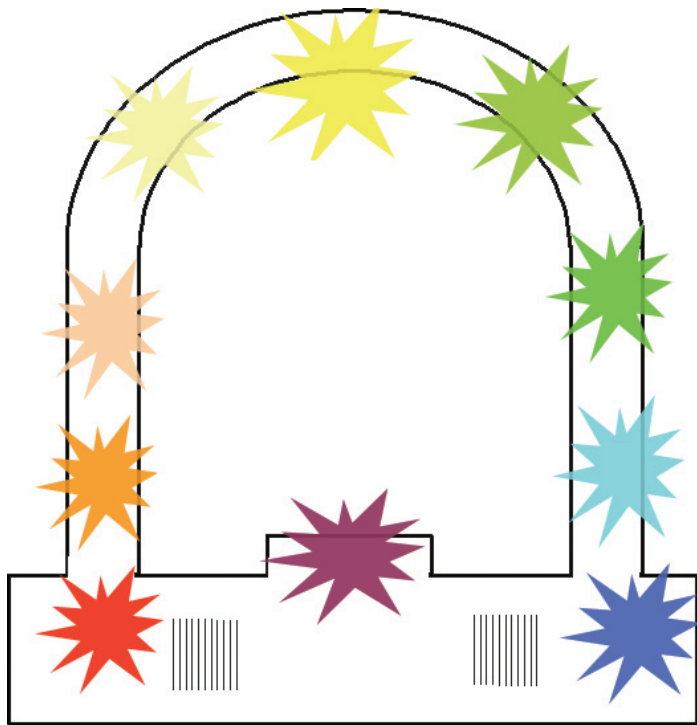
Most of all, have a good time and learn a lot!

The Periodic Table of the Elements

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra		Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Uub	Uut	Uuq	Uup	Uuh	Uus	Uuo

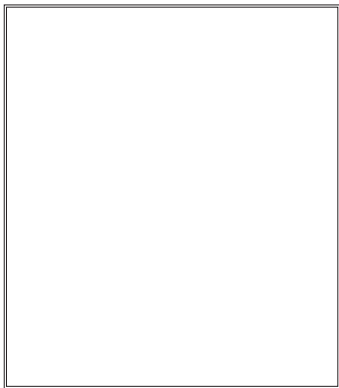
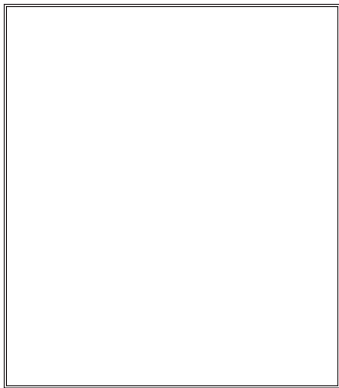
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Science Station Groupings

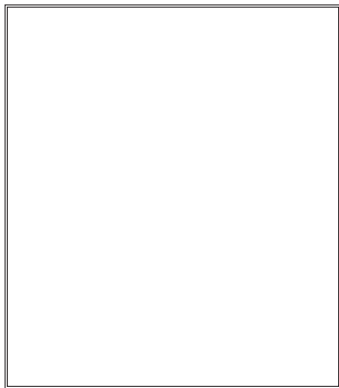
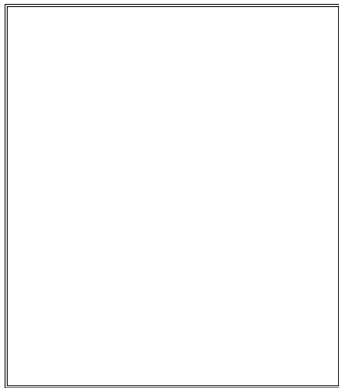


Alkali Metals	Lanthanides	Transition Metals	Metalloids	Halogens
Alkaline Earth Metals	Actinides	Metals	Nonmetals	Noble Gases

**ALKALI
METALS**



**ALKALINE
EARTH METALS**



LANTHANIDES

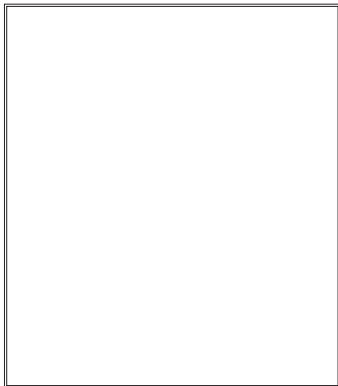
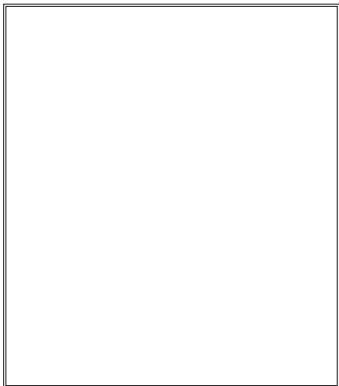
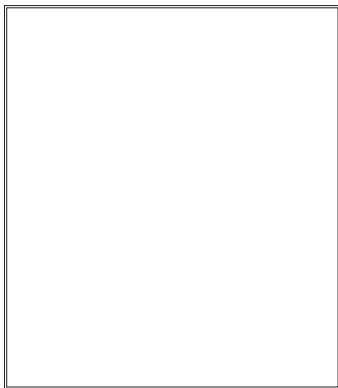
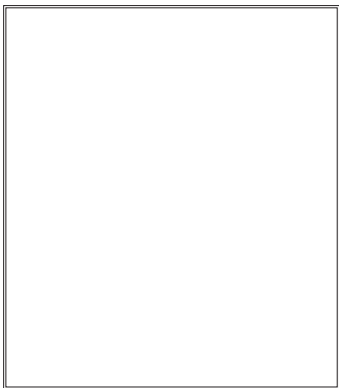
ACTINIDES

**TRANSITION
METALS**

METALS

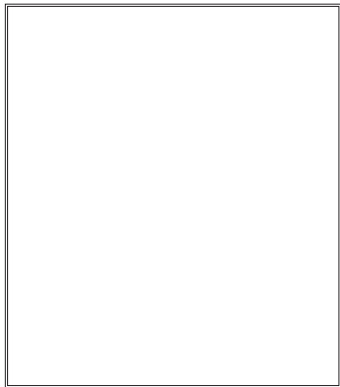
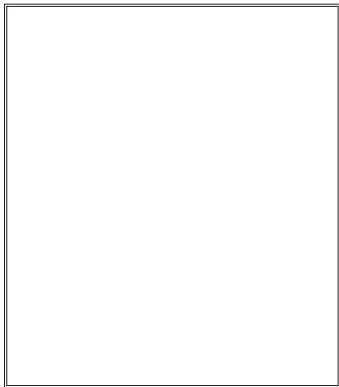
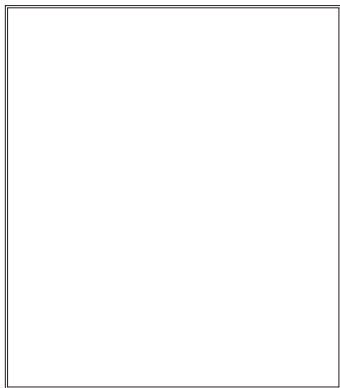
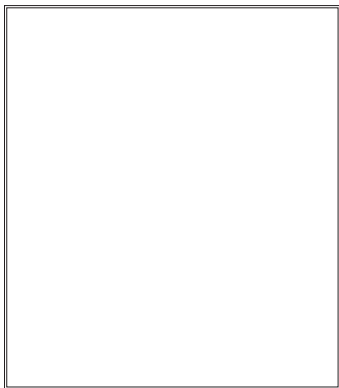
METALLOIDS

NONMETALS



HALOGENS

NOBLE GASES



Notes



[energy.gov](https://www.energy.gov)

[science.doe.gov](https://www.science.doe.gov)