Celebrate Science!

A Newsletter of the
Windham Northeast Supervisory Union
District Science Committee

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Westminister Center School

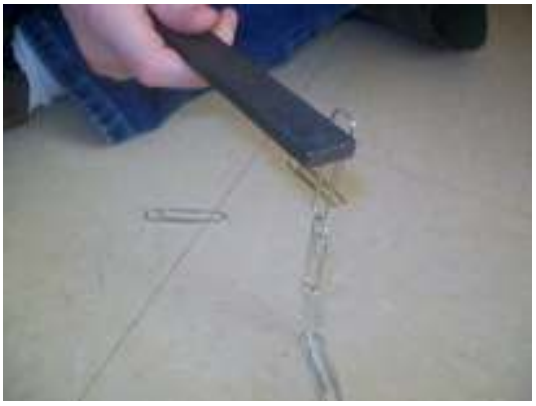
The third and fourth grade students in the East Wing at Westminster Center School recently discovered the excitement of electricity. Students began their study with a challenge, "See if you can make a light bulb light with just 2 wires, a bulb and a battery." After trying many different positions, the students were all successful at lighting the bulb!

Over the next few weeks, students explored the history of electricity uses, magnets, motors and electrical circuits. Among the many exciting discoveries made, a favorite was when student attached small strips of colored paper to the rotating motors to create some beautiful color designs. What a wonderful connection between science and art! Students are now enjoying further investigations of circuits using Snap Circuit kits on loan from the high school.

Third and Fourth graders at Westminster Center School working with electricity.

Fourth graders study magnetism and electricity. What is a magnet and how do magnets interact with each other and with other materials? These are just a couple of the questions students investigated in the study of magnetism at Rockingham Central Elementary School. Enthusiasm was high as students worked with several types of magnets, investigating their power to attract or repel through a variety of materials. Students generated questions for which we designed our own experiments. They found that the results were often quite different from what they predicted! What's next? Electricity!

Rockingham Central Elementary



5th graders at Grafton Elementary building models of Galileo's telescope.

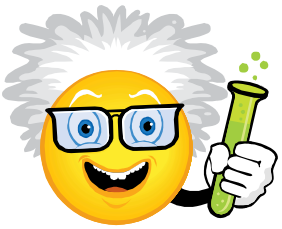
Grafton Elementary

5th graders at Grafton Elementary building models of Galileo's

Fifth grade students at Grafton Elementary studied the moon and other aspects of astronomy in their science class while they read about the history of astronomy in language arts class. As part of their work, they learned about Galileo's invention of the telescope, then worked with a local amateur astronomer to build a similar model.

Later, they worked in small groups to write procedural pieces describing how to make the telescopes. They then gave their descriptions to the sixth graders to see if they could assemble one based on their directions. The fifth graders observed the sixth graders during the process and then revised their procedures to make them more accurate and easier to follow. Through this integration of science and language arts, the fifth graders were inspired to read carefully, write clearly and accurately, and apply their knowledge of science in a meaningful way.

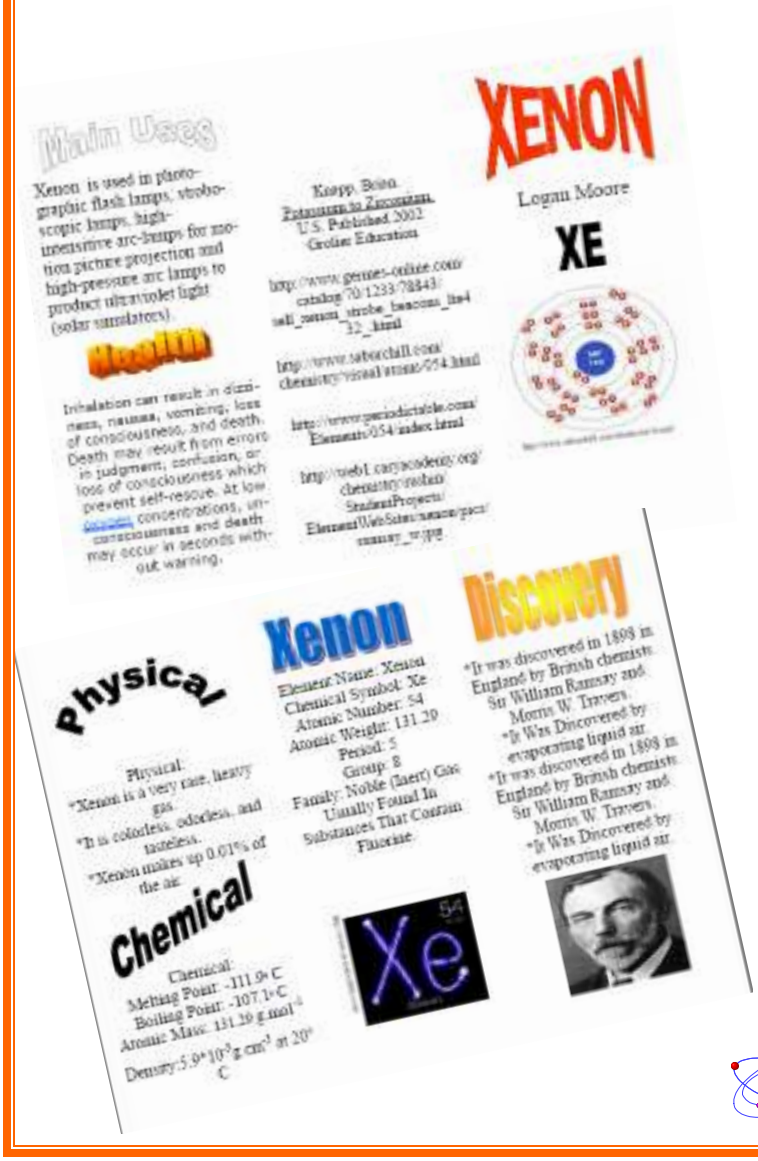
The Middle School



During the past few weeks the 7th and 8th grade students in the middle school have been studying the Periodic Table. They have been researching an element of their choice and then they produced a Brochure about their element. Their research will help them learn about the chemical and physical properties of the element as well as what role the element may have in our lives.

The creation of the brochure has a dual role in that students are also addressing technology standards with this project!

Student Brochures



The High School

The science of construction class spent two weeks recently learning how to make paper We were asking: what is paper; what makes one kind of paper have different properties than another kind; how is paper manufactured; how is paper recycled; how can it be used to construct things. Paper is made by taking vegetable fibers, mashing them into a pulp with water, spreading the mash out on a screen, and pressing out the water. Many kinds of plant fibers can be used. The word "paper" comes from the *papyrus* plant, which is a grass used by the Egyptians to make paper. We made paper out of corn husks.

It starts with modest materials.

Turning plant fiber (corn husks) into pulp.

Pouring the pulp into a mold.

Gently starting to extract the water.

Pressing the water out overnight.

Since the plant fibers are nearly indestructible, they can be reused over and over again, so paper is easy to recycle.

Dyes can be added to change the color of paper. Some paper, like newsprint, absorbs ink quickly so it is not good for writing paper. Starch can be added when making paper to make it better for writing. We also tried painting it with a solution of gelatin. As a final project we made several sheets of paper and used it to make the shade of a Japanese-style candle lantern.

Harvey Nystrom

Looking and handling like paper, but not quite finished.

Student work drying.

Assembling the lantern with wall paper paste.

A display of the finished projects.

The WNESU Science Committee

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