



Family Fun Activities and Investigations

Visit the following places to experience
hands-on science:

Maryland Science Center

601 Light Street

Baltimore, MD 21230

410-685-2370

Port Discovery

35 Market Place

Baltimore, MD 21202

410-727-84120

BMI Assembly Line trip

1415 Key Highway

Baltimore, MD 21230

410-727-4808

Herr's Food Factory

20 Herr Drive

Nottingham, PA 19362

1-800-637-6225



Career Connections

Take a few minutes to discuss
these different career opportunities
in Chemistry and Physics with your
child.

Assembly Line Worker

A person who puts together a part of a
product

Electrician

A person who installs wiring in a building

Architect

A person who plans and designs buildings

Artist

A person who creates art, such as a
painting or sculpture

Bricklayer

A person who builds brick walls or houses

Chef

A person who cooks food

Prepared by
Office Of Science, Pre K–12
George A. Newberry, Director

A Parent's Informational Guide to the Science Unit



An Elementary COPS STEM Unit

Grade 2



If...Then

An Elementary COPS STEM Unit

This is a second grade unit designed to help students learn more about chemistry concepts such as the structure of matter, conservation of matter, physical properties, and physical and chemical changes. The unit also investigates physics concepts of energy and electricity. In this unit, students use content knowledge learned in hands-on, minds-on investigations to contribute pages and ideas into a class made book.

The Maryland Voluntary State Curriculum Indicators addressed in this unit are listed below:

4.0 Chemistry- Students will use scientific skills and processes to explain the composition, structure, and interactions of matter in order to support the predictability of structure and energy transformations.

- A. Structure of Matter
- B. Conservation of Matter
- C. Physical and Chemical Changes

5.0 Physics- Students will use scientific skills and process to explain the interactions of matter and energy and the energy transformations that occur.

- B. Thermodynamics
- C. Electricity and Magnetism



Unit Vocabulary

Encourage your child to use the vocabulary listed below when telling you about what they are learning during this science unit.

bending	becoming or making curved
cooling	removing heat from an object
decrease	to make or become smaller
electrical appliance	a device that uses electricity for a specific purpose
electricity	a form of energy produced by the movement of electrons
estimate	the process of finding a number close to an exact amount
friction	a force that acts between two things that touch as they move
fuel	something that uses energy to make heat
heating	adding heat to an object
increase	to make or become greater
investigation	the observation or study of something
physical change	a change of matter from one form to another without becoming a new substance
physical properties	properties that can be observed, measure, or changed without changing the substance itself
temperature	a measure of how hot or cold something is



Books to Read



Take some time to read books about chemistry and physics with your child. Books on this topic can be found in the non-fiction section of the library with the call numbers 540. You can also find books on this topic in the children's section of your school and public library.

The Magic School Bus and the Electric Field Trip by Joanna Col

Shaping Materials by Chris Oxalade

Matter by Sally Walker

Heating by Patricia Whitehouse

Internet Sites



http://nlvm.usu.edu/en/nav/frames_asid_268_g_1_t_3.html?open=activities

Interactive tangram puzzle

<http://bubbles.org/>

Everything about bubbles

<http://www.eia.doe.gov/kids/energyfacts/sources/electricity.html>

Everything you need to know about electricity

<http://www.southerncompany.com/learningpower/howplants.aspx>

All about how power plants work