

School District of La Crosse

**Grade 3 Science
Curriculum**

1999-2000

Jim Bagniewski, K-12 Science Supervisor
Kathie Tyser, Associate Superintendent of Instruction
Jerry Kember, Superintendent

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**School District of La Crosse
Elementary Science Curriculum 2003-2004**

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade
Animals (L)	Organisms Plants & Animals (L) (New STC '96-'97)	Balancing & Weighing (P) (New STC '95-'96)	Rocks & Minerals (E) (New STC '97-'98)	Plant Growth & Development (L) (New STC '97-'98)	Ecosystems (E) (New STC '95-'96)
Plants (L)	Comparing & Measuring (P) (Pilot STC '98-'99)	Changes (P) (Pilot STC '98-'99)	Sound (P) (New STC '95-'96)	Motion & Design (P) (New STC '98-'99)	Color & Light
Weather & Clothing (E) Fabric (Optional) (Foss '98-'99)	Solids & Liquids (P) (New STC '98-'99)	Life Cycle of a Butterfly (L) (New STC '96-'97)	Animals, Habitats & Plants (L) (Delta '99-'00)	Astronomy (E) (Harcourt/Brace '99- '00)	Floating & Sinking (P) (New STC '96-'97)
Paper (P) (Foss '98-'99)	Weather & Me (E) (New STC '95-'96)	Soils (E) (New STC '97-'98)	Chemical Tests (P) (New STC '96-'97)	Electric Circuits (P) (New STC '95-'96)	Microworlds (L) (New STC '97-'98)

All STC Units emphasize scientific reasoning skills/process skills
 Observing Grades 1-5
 Measuring Grades 1-5

Identifying Properties 1-5
 Seeking Evidence 1-5

Recognizing Patterns & Cycles 2-5
 Identifying Cause and Effect 4-5

Extending the Senses 4-5

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 3

Topics/Skills: Earth and Space Science:
Rocks & Minerals

Time: 16 Lessons

Curriculum Subtopics:

- Surface Changes to the Earth
- Identify Earth Materials
- Physical and Chemical Properties of Rocks
- Physical and Chemical Properties of Minerals
- How Rocks and Minerals are Used

CURRICULUM

District Benchmarks/Students will learn?

- To predict, observe, describe and record results of experiments on rocks and minerals. Standards A and C.
- That surface earth changes are due to slow processes or a rapid process. Standard E.
- To identify properties of rocks and minerals. Standards D and E.
- Differentiate between sedimentary, igneous and metamorphic rocks. Standard E.
- Differentiate between rocks and minerals by conducting experiments. Standards C and E.

State Content Standard: A - Science Connections

State Performance Standards: A4.1, A.4.2, A.4.3, A.4.4, A.4.5

State Content Standard: B – Nature of Science

State Performance Standards: B.4.1, B.4.3

State Content Standard: C - Science Inquiry

State Performance Standards: C.4.1, C.4.2, C.4.3, C.4.4, C.4.5, C.4.6, C.4.7, C.4.8

State Content Standard: D – Physical Science

State Performance Standards: D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.8

State Content Standard: E – Earth and Science

State Performance Standards: E.4.1, E.4.2, E.4.7, E.4.8

State Content Standard: G – Science Applications
State Performance Standards: G.4.1

ASSESSMENT

Assessment/Proficiency

Examples of classroom assessments: Drawings, journals embedded products and activities, anecdotal notes and paper and pencil responses, identification, and presentations, identification, presentations

- _____ State/WSAS Test Concept
_____ District Assessment
 X Classroom Assessments

INSTRUCTION

Teaching/Learning Strategies

- KWL – Chart – What do you know? What do you want to know? What have you learned?
- Inquiry Based Learning (hands on/minds on)
- Concept Webs
- Scientific Method
- Venn Diagrams
- T - Charts

Resources

- STC Science Kit and T.E.
- Software _____
- Trade books: Bibliography in T.E. Manual
- Field Trip: Harmony, MN - Cave
Geology Department at UW-L
Local Rock Collector – Phil Oliver – WWTC
- Volcano's – Magic School Bus – Inside the Earth – Book and Video
- Bill Nye the Science Guy – Volcanoes
- Eye Witness Books
- Rocks and Minerals Chart – Learning Chart
- AIMS Book
- Web sites

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 3

Topics/Skills: Physical Science: Sound

Time: 16 Lessons

Curriculum Subtopics:

- Sound is Produced by Vibrating Objects
- Properties of Objects Change the Sound
- Behavior of Organisms Influenced by Sounds Around Them
- Sound Production Through the Use of Communication Tools

CURRICULUM

District Benchmarks/Students will learn?

- To predict, observe, and record results of experiments. Standards A and C.
- That sound is caused by vibration. Standard D.
- How sound travels. Standard D.
- The difference between pitch and volume. Standard D.
- That length, tension, thickness, and the type of material used changes the sound. Standard D.
- How vocal chords produce sound and the ear receives it. Standard D.
- That organisms are interactive to the sounds around them. Standard F.
- To apply the concepts and skills they learned to designing new sound producing devices. Standard G.
- The history and development of communication tools. Standard B and H.

State Content Standard: A - Science Connections

State Performance Standards: A4.1, A.4.2, A.4.3, A.4.4, A.4.5

State Content Standard: B – Nature of Science

State Performance Standards: B.4.1, B.4.2, B.4.3

State Content Standard: C - Science Inquiry

State Performance Standards: C.4.1, C.4.2, C.4.3, C.4.4, C.4.5, C.4.6, C.4.7, C.4.8

State Content Standard: D – Physical Science

State Performance Standards: D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.6, D.4.8

State Content Standard: F – Life and Environmental Science

State Performance Standards: F.4.2

State Content Standard: G – Science Applications

State Performance Standards: G.4.1, G.4.2, G.4.3, G.4.4

State Content Standard: H – Science in Social and Personal Perspective

State Performance Standards: H.4.1, H.4.2, H.4.3, H.4.4

ASSESSMENT

Assessment/Proficiency

Examples of classroom assessments: Drawings, journals embedded products and activities, anecdotal notes and paper and pencil responses, presentations

_____ State/WSAS Test Concept

_____ District Assessment

 X Classroom Assessments

INSTRUCTION

Teaching/Learning Strategies

- KWL – Chart – What do you know? What do you want to know? What have you learned?
- Inquiry Based Learning (hands on/minds on)
- Concept Webs
- Venn Diagrams
- Building Models
- T - Charts

Resources

- STC Science Kit and T.E. - Sound
- Software _____
- Trade books: Bibliography in T.E. Manual
- Field Trips
- Music/Strings Teacher
- Speech Therapist

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 3

Topics/Skills: Life Science: Animal Studies

Time: 3 Weeks and/or integrated throughout the school year

Curriculum Subtopics:

- Classification of Vertebrates
- Interactions with Other Living Organisms
- Animal Habitats and Adaptation

CURRICULUM

District Benchmarks/Students will learn?

- That an organism is either a vertebrate or an invertebrate. Standard F.
- The characteristics of animals in the 5 kingdoms. Standards B and F.
- To differentiate between producers, composers, and decomposers within food webs. Standard F.
- The relationship between predator and prey within food chains. Standard F.
- Adaptations animals have to survive in their various habitats. Standards F and H.
- To observe and record information about animals and their habitat. Standards A and C.

State Content Standard: A - Science Connections

State Performance Standards: A4.1, A.4.2, A.4.3, A.4.4, A.4.5

State Content Standard: B – Nature of Science

State Performance Standards: B.4.1

State Content Standard: C - Science Inquiry

State Performance Standards: C.4.1, C.4.2, C.4.3, C.4.4, C.4.5

State Content Standard: F – Life and Environmental Science

State Performance Standards: F.4.1, F.4.2, F.4.3, F.4.4

State Content Standard: H – Science in Social and Personal Perspective

State Performance Standards: H.4.1, H.4.2, H.4.3, H.4.4

ASSESSMENT

Assessment/Proficiency

Examples of classroom assessments: Drawings, journals embedded products and activities, anecdotal notes and paper and pencil responses, labs, identification of mystery material

_____	State/WSAS Test Concept
_____	District Assessment
<u> X </u>	Classroom Assessments

INSTRUCTION

Teaching/Learning Strategies

- KWL – Chart – What do you know? What do you want to know? What have you learned?
- Inquiry Based Learning (hands on/minds on)
- Concept Webs
- Venn Diagrams
- Research Format
- T - Charts

Resources

- STC Science Kit and T.E.
- \$50.00 petty cash to purchase appropriate animal and habitat. Up to \$50.00 will be reimbursed from the district science budget for 3rd grade teachers to purchase a habitat, animal and food. Turn receipts in to Jim Bagniewski at Hamilton for reimbursement.
- 30 Owl Pellets, a video and charts – one set per school
- Field trips to Hixon – 3 per year
- Videos
- CD and Laser Disc from DMC – Wild Places, Volume 1, 2, and 3
- Suggested materials and workshops: Project Wild
Project Wet
Project Learning Tree

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 3

Topics/Skills: Life Science: Chemical Tests

Time: Minimum 16 Lessons

Curriculum Subtopics:

- Personal Health and Safety
- Physical and Chemical Properties of Earth Materials
- Chemical Reactions and Changes
- Using Scientific Inquiry to Identify Chemicals

CURRICULUM

District Benchmarks/Students will learn?

- To develop proper laboratory techniques to ensure safety and avoid contamination of lab experiments. Standards A, C, and H.
- To describe the physical properties of materials. Standards D and E.
- That chemical changes undergo changes in form, color, or texture when mixed together, separated, or heated. Standard D.
- That some chemicals can be identified by their interactions with certain substances. Standard C.
- To predict, observe, describe, record and draw conclusions as a result of their tests.

State Content Standard: A - Science Connections

State Performance Standards: A4.1, A.4.2, A.4.3, A.4.4

State Content Standard: C – Science Inquiry

State Performance Standards: C.4.1, C.4.2, C.4.4, C.4.5, C.4.6, C.4.7, C.4.8

State Content Standard: D – Physical Science

State Performance Standards: D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.8

State Content Standard: E – Earth and Space Science

State Performance Standards: E.4.2 (not including soils)

State Content Standard: H – Science in Social and Personal Perspective

State Performance Standards: H.4.3

ASSESSMENT

Assessment/Proficiency

Examples of classroom assessments: Drawings, journals embedded products and activities, anecdotal notes and paper and pencil responses, labs, identification of mystery material

- State/WSAS Test Concept
- District Assessment
- Classroom Assessments

INSTRUCTION

Teaching/Learning Strategies

- KWL – Chart – What do you know? What do you want to know? What have you learned?
- Inquiry Based Learning (hands on/minds on)
- Concept Webs
- Scientific Method
- Venn Diagrams
- Modeling
- T - Charts

Resources

- STC Chemical Test Kit and Teacher's Manual
- Trade Books – Bibliography in T.E. Manual

Wisconsin Model Academic Standards		RM	S	A	CT
3 rd Grade Science Alignment					
A. Science Connections					
A.4.1	When conducting science investigations ask and answer questions that will help decide the general areas of science being addressed.	✓	✓	✓	✓
A.4.2	When faced with a science-related problem, decide what evidence, models, or explanations previously studied can be used to better understand what is happening now.	✓	✓	✓	✓
A.4.3	When investigating a science-related problem, decide what data can be collected to determine the most useful explanations.	✓	✓	✓	✓
A.4.4	When studying science-related problems, decide which of the science themes are important.	✓	✓	✓	✓
A.4.5	When studying science-related problems, decide what changes over time are occurring or have occurred.	✓	✓	✓	
B. Nature of Science					
B.4.1	Use encyclopedias, source books, texts, computers, teachers, parents, other adults, journals, popular press, and various other sources, to help answer science-related questions and plan investigations.	✓	✓	✓	
B.4.2	Acquire information about people who have contributed to the development of major ideas in the sciences and learn about the cultures in which these people lived and worked.		✓		
B.4.3	Show how the major developments of scientific knowledge in the earth and space, life and environmental and physical sciences have changed over time.	✓	✓		
C. Science Inquiry					
C.4.1	Use the vocabulary of the unifying themes to ask questions about objects, organisms, and events being studied.	✓	✓	✓	✓
C.4.2	Use the science content being learned to ask questions, plan investigations, make observations, make predictions, and offer explanations.	✓	✓	✓	✓
C.4.3	Select multiple sources of information to help answer questions selected for classroom investigations.	✓	✓	✓	
C.4.4	Use simple science equipment safely and effectively, including rulers, balances, graduated cylinders, hand lenses, thermometers, and computers, to collect data relevant to questions and investigations.	✓	✓	✓	✓
C.4.5	Use data they have collected to develop explanations and answer questions generated by investigations.	✓	✓	✓	✓
C.4.6	Communicate the results of their investigations in ways their audiences will understand by using charts, graphs, drawings, written descriptions, and various other means, to display their answers.	✓	✓	✓	✓
C.4.7	Support their conclusions with logical arguments.	✓	✓		✓
C.4.8	Ask additional questions that might help focus or further an investigation.	✓	✓		✓
D. Physical Science					
PROPERTIES OF EARTH MATERIALS					
D.4.1	Understand that objects are made of more than one substance, by observing, describing and measuring the properties of earth materials, including properties of size, weight, shape, color, temperature, and the ability to react with other substances.	✓	✓		✓
D.4.2	Group and/or classify objects and substances based on the properties of earth materials.	✓	✓		✓

Wisconsin Model Academic Standards		RM	S	A	CT
3 rd Grade Science Alignment					
D.4.3	Understand that substances can exist in different states – solid, liquid, gas	✓			✓
D.4.4	Observe and describe changes in form, temperature, color, speed, and direction of objects and construct explanations for the changes.	✓	✓		✓
D.4.5	Construct simple models of what is happening to materials and substances undergoing change, using simple instruments or tools to aid observations and collect data.	✓	✓		✓
POSITION AND MOTION OF OBJECTS					
D.4.6	Observe and describe physical events in objects at rest or in motion.		✓		
D.4.7	Observe and describe physical events involving objects and develop record-keeping systems to follow these events by measuring and describing changes in their properties, including position relative to another object, motion over time, and position due to forces.				
LIGHT, HEAT, ELECTRICITY, AND MAGNETISM					
D.4.8	Ask questions and make observations to discover the differences between substances that can be touched (matter) and substances that cannot be touched (forms of energy, light, heat, electricity, sound, and magnetism).	✓	✓		✓
E. Earth and Space Science					
PROPERTIES OF EARTH MATERIALS					
E.4.1	Investigate that earth materials are composed of rocks and soils and correctly use the vocabulary for rocks, minerals, and soils during these investigations.	✓			
E.4.2	Show that earth materials have different physical and chemical properties, including the properties of soils found in Wisconsin.	✓			✓
E.4.3	Develop descriptions of the land and water masses of the earth and of Wisconsin's rocks and minerals, using the common vocabulary of earth and space science.				
OBJECTS IN THE SKY					
E.4.4	Identify celestial objects (stars, sun, moon, planets) in the sky, noting changes in patterns of those objects over time.				
CHANGES IN THE EARTH AND SKY					
E.4.5	Describe the weather commonly found in Wisconsin in terms of clouds, temperature, humidity, and forms of precipitation, and the changes that occur over time, including seasonal changes.				
E.4.6	Using the science themes, find patterns and cycles in the earth's daily, yearly, and long-term changes				
E.4.7	Using the science themes, describe resources used in the home, community, and nation as a whole.	✓			
E.4.8	Illustrate human resources use in mining, forestry, farming, and manufacturing in Wisconsin and elsewhere in the world.	✓			
F. Life and Environmental Science					
THE CHARACTERISTICS OF ORGANISMS					
F.4.1	Discover how each organism meets its basic needs for water, nutrients, protection, and energy in order to survive.			✓	
F.4.2	Investigate how organisms, especially plants, respond to both internal cues (the need for water) and external cues (changes in the environment).		✓	✓	

Wisconsin Model Academic Standards		3 rd Grade Science Alignment			
		RM	S	A	CT
LIFE CYCLES OF ORGANISMS					
F.4.3	Illustrate the different ways that organisms grow through life stages and survive to produce new members of their type.			✓	
ORGANISMS AND THEIR ENVIRONMENT					
F.4.4	Using the science themes, develop explanations for the connections among living and non-living things in various environments.			✓	
G. Science Applications					
G.4.1	Identify the technology used by someone employed in a job or position in Wisconsin and explain how the technology helps.	✓	✓		
G.4.2	Discover what changes in technology have occurred in a career chosen by a parent, grandparent, or an adult friend over a long period of time.		✓		
G. 4.3	Determine what science discoveries have led to changes in technologies that are being used in the workplace by someone employed locally.		✓		
G.4.4	Identify the combinations of simple machines in a device used in the home, the workplace, or elsewhere in the community, to make or repair things, or to move goods or people.		✓		
G.4.5	Ask questions to find answers about how devices and machines were invented and produced.				
H. Science in Social and Personal Perspectives					
H.4.1	Describe how science and technology have helped, and in some cases hindered, progress in providing better food, more rapid information, quicker and safer transportations, and more effective health care.		✓		
H.4.2	Using the science themes, identify local and state issues that are helped by science and technology and explain how science and technology can also cause a problem.		✓	✓	
H.4.3	Show how science has contributed to meeting personal needs, including hygiene, nutrition, exercise, safety, and health care.		✓		✓
H.4.4	Develop a list of issues that citizens must make decisions about and describe a strategy for becoming informed about the science behind these issues.		✓		

GLOSSARY OF TERMS

SCIENCE THEMES

Each of the following terms refers to a theme that connects and unifies the many disciplines of science. The themes are found particularly in Standard A and are mentioned consistently throughout the science standards. They are identified with an asterisk (*) each time they appear.

Change. A variance in the rate, scale, and pattern, including trends and cycles.

Constancy. The stability of a property, such as the speed of light.

Equilibrium. The physical state in which forces and changes occur in opposite and offsetting directions.

Evidence. Data and documentation that support inferences or conclusions.

Evolution. A series of changes, some gradual and some sporadic, that accounts for the present form and function* of objects.

Explanation. The skill of communication in which an interpretation of information is given and stated to others.

Form and Function. Complimentary aspects of objects, organisms, and systems in the natural world.

Measurement. The quantification of changes in systems, including mathematics.

Models. Tentative schemes or structures that correspond to real objects, events, or classes of events, and that have explanatory power.

Order. The behavior of units of matter, objects, organisms, or events in the universe.

Organization. Descriptions of systems based on complexity and/or order.

Systems. An organized group of related objects or components that form a whole.

TERMS UNIQUE TO SCIENCE

The following terms are used uniquely in science. They are used consistently throughout the standards and are identified by an asterisk (*) each time they appear. They represent the range of rigorous science skills and knowledge found in the standards.

Analyze. The skill of recognizing the underlying details of important facts or patterns that are not always readily visible.

Apply. The skill of selecting and using information in other situations or problems.

Construct. The skill of developing or creating.

Describe. The skill of developing a detailed picture or image.

Discover. The skill of learning through study or investigation.

Energy. The work that a physical system is capable of completing or doing.

Evaluate. The skill of collecting and examining data to make judgments and appraisals.

Group. The skill of identifying objects according to characteristics.

Identify. The skill of recognizing patterns, facts, or details.

Inference. The skill of using the results of an investigation based on a premise.

Illustrate. The skill of giving examples to describe something.

Interaction. The influence of objects, materials, or events on one another.

Investigate. Scientific methodology that systematically employs many inquiry skills.

Observation. The skill of describing scientific events.

Predict. The skill of explaining new events based on observations or information.

Relate. The skill of association.

Show. The skill of illustration.

Understand. The skill of having and applying well-organized bodies of knowledge.

**3rd Grade Explanatory Notes on
WI State Science Standards in Relation to School Curriculum
1999-2000**

Rocks and Minerals

A. Science Connections

Students in Wisconsin will understand that there are unifying themes: (systems, order, organization, and interactions); (evidence, models, and explanations); (constancy, change, and measurement); (evolution, equilibrium, and energy); (form and function) among the scientific disciplines.

- A.4.1 Students should understand that this is an Earth and Space Science area.
- A.4.2 Students should be assisting in their study of rocks and minerals by the Soils unit which was previously studied.
- A.4.3 Students will compare the physical characteristics of rocks and minerals using their senses (sight, touch, and smell) and other specialized tests.
- A.4.4 The themes of system, order, organization, and interactions are involved in the rock cycle. The theme of measurement is used to make comparisons, and the theme of form and function is involved with the formation and use of the minerals.
- A.4.5 The transformation of rocks and minerals through the rock cycle, volcanic action, etc.

B. Nature of Science

Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

- B.4.1 Students gain insights about rocks and minerals from parents, current events, jewelers, etc.
- B.4.3 The mining of materials.

C. Science Inquiry

Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

- C.4.1 The theme of form and function and the vocabulary of crystals, hardness, and streak color should be used.
- C.4.2 Self-explanatory
- C.4.3 Self-explanatory
- C.4.4 Students will use science tools in this unit.
- C.4.5 Self-explanatory

C.4.6 Self-explanatory

C.4.7 Students use the data they collect to support their conclusions.

C.4.8 Students can continue their investigations in the La Crosse area in many different ways.

D. Physical Science

Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

D.4.1 Self-explanatory

D.4.2 Self-explanatory

D.4.3 Self-explanatory

D.4.4 In the rock cycle the rocks change form.

D.4.5 In the rock cycle the rocks change properties.

D.4.8 Magnetism can't be touched.

E. Earth and Space Science

Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

E.4.1 Self-explanatory

E.4.2 Self-explanatory

E.4.7 Rocks and Minerals are used in homes and the community.

E.4.8 Self-explanatory

F. Life and Environmental Science

Students in Wisconsin will demonstrate and understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

Not covered in this unit.

G. Science Applications

Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

G.4.1 Self-explanatory

H. Science in Social and Personal Perspectives

Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

Not used in this unit.

Sound

A. Science Connections

Students in Wisconsin will understand that there are unifying themes: (systems, order, organization, and interactions); (evidence, models, and explanations); (constancy, change, and measurement); (evolution, equilibrium, and energy); (form and function) among the scientific disciplines.

A.4.1 Students should be aware that this is a Physical Science area.

A.4.2 Previous science investigation by students in 1st, 2nd, and 3rd grade have involved the use of scientific investigations to solve problems, and are being used to study sound.

A.4.3 Students will compare the physical characteristics of sound production using their senses of sight, hearing, and touch.

A.4.4 The theme of form and function is important in the production of sound.

A.4.5 The students should understand the improvement in musical devices and communication.

B. Nature of Science

Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

B.4.1 Music teachers, Speech/Language instructors along with a number of other resources can be used to enhance this unit.

B.4.2 The History of Music and Communication devices have been significant.

B.4.3 Communication across the world has had a significant impact on everyone.

C. Science Inquiry

Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

C.4.1 The theme of form and function (thickness), and measurement of sound (pitch, volume, and vibration) should be used.

C.4.2 Students should use science investigations (scientific method – observing, planning, predicting, and planning).

C.4.3 Self-explanatory

C.4.4 Students use different science tools including rulers in this unit.

C.4.5 Self-explanatory

C.4.6 Self-explanatory

C.4.7 Students use the data they collected to support their conclusion.

C.4.8 Students can investigate many additional ideas involving sound production.

D. Physical Science

Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

D.4.1, D.4.2, D.4.4, D.4.5, D.4.6, D.4.8 – Self-explanatory

E. Earth and Space Science

Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

Not involved in this unit.

F. Life and Environmental Science

Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

F.4.2 All organisms respond to the sounds around them.

G. Science Applications

Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

G.4.1 The advances in communication devices from the telephone to internet, email, etc.

G.4.2 Many new careers have been developed in the areas of music and communication.

G.4.3 Numerous examples

G.4.4 Numerous examples

H. Science in Social and Personal Perspectives

Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

H.4.1 through H.4.4 – Self-explanatory

Chemical Tests

A. Science Connections

Students in Wisconsin will understand that there are unifying themes: (systems, order, organization, and interactions); (evidence, models, and explanations); (constancy, change, and measurement); (evolution, equilibrium, and energy); (form and function) among the scientific disciplines.

A.4.1 Students should be aware that this is a Physical Science area.

A.4.2 Students should be assisted in this unit from their previous understanding of "Solids and Liquids."

A.4.3 Students should observe by sight and touch the physical characteristics of color, crystal, etc.

A.4.4 The themes of change and interactions are involved when the difference substances are combined.

B. Nature of Science

Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

Not involved in this unit.

C. Science Inquiry

Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

C.4.1 Themes of change involve the use of vocabulary words like dissolve, mixture, filter, etc. The theme of form and function involve the vocabulary of crystal, texture, and additional physical characteristic terminology.

D.4.2 Students should use science investigations (scientific method – observing, planning, predicting and planning).

C.4.4 Students use a number of different science tools including hand lenses.

C.4.5 Self-explanatory

C.4.6 Self-explanatory

C.4.7 Students should use the data they collect to support their conclusions.

C.4.8 Students can continue to perform chemical test on other substances at school.

D. Physical Science

Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

D.4.1, D.4.2, D.4.3, D.4.4, D.4.5, D.4.8 – Self-explanatory

E. Earth and Space Science

Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

E.4.2 Different substances are analyzed in this unit but they don't involve soils.

F. Life and Environmental Science

Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

Not involved in this unit.

G. Science Applications

Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

Not involved in this unit.

H. Science in Social and Personal Perspectives

Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

H.4.3 Self-explanatory

*****The chemical test unit involves certain degree of student safety.***

Animal Studies

A. Science Connections

Students in Wisconsin will understand that there are unifying themes: (systems, order, organization, and interactions); (evidence, models, and explanations); (constancy, change, and measurement); (evolution, equilibrium, and energy); (form and function) among the scientific disciplines.

A.4.1 Students should be aware that this is a Life Science area.

A.4.2 Students should be assisted in this unit by their previous understanding of the Organisms unit and the Life Cycle of a Butterfly unit.

A.4.3 Students will make observations through sight of the organism and its habitat.

A.4.4 The themes of systems, order, organization, and interactions (food chains and webs).

A.4.5 The food web cycle of life (plant – consumer, recycle back to plant).

B. Nature of Science

Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

B.4.1 Students can gain additional information through trips to Hixon Forest, LMC materials, etc.

C. Science Inquiry

Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understandings to accommodate knowledge, and communicate these understandings to others.

C.4.1 The themes of systems, order, organization, and interactions are involved with the vocabulary of food webs and chains.

C.4.2 through C.4.6 – Self-explanatory

D. Physical Science

Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

Not involved in this unit.

E. Earth and Space Science

Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

Not involved in this unit.

F. Life and Environmental Science

Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

F.4.1 through F.4.4 – Self-explanatory

G. Science Applications

Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

Not involved in this unit.

H. Science in Social and Personal Perspective

Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

H.4.2 The issues in the La Crosse area involving the Marsh and Hixon Forest, etc.

3rd Grade Animals and Their Habitats

Each 3rd grade teacher will have \$50 to spend on purchasing a pet of one kind or another for this unit. It is possible that you will need to buy a container, feeding materials, and supplies, etc. At the end of the year or the unit, the organism can be given to a student in the class.

Examples of pets could be a Chameleon, Gecko, Glass Lizard, or frog.

Your receipts should be sent to the science secretary at Hamilton Elementary School. Receipts will be submitted to the business office for your reimbursement.

Each teacher will receive an owl pellet kit to analyze with students this year. You can request these kits from Carol Guanella (789-7677). We have not accounted for the “split” classrooms. Please work this out with the other “split” teachers in your school when you are ready to teach this unit.

Each kit contains 16 owl pellets, 30 owl pellet bone charts, 30 rat skeleton sheets, 30 student activity sheets, 32 wooden problems, and a teacher’s guide. Each school should also have an owl pellet video that was previously purchased.

Science Education WEB Sites

Science Education (Index heading from Todd Wehr Memorial Library, Viterbo College
<http://www.viterbo.edu/academic/as/library/mainpag.htm>)

Science Education Standards and References (Sub Heading 1)

National Science Standards <http://www.nap.edu/readingroom/books/nses>

National Academy Press <http://www.nap.edu>

Project-Based Science (PBS) <http://www.umich.edu/~pbsgroup/index.html>

NSTA Pathways Reference Sites

Science as Inquiry <http://www.omsi.edu/sln/www/background/inquiry>

<http://webfoot2.omsi.edu>

Physical Science http://www.gene.com/ae/AE/AEC/AEF/1996/thompson_jell-0.html

http://www.etc.bc.ca/apase/scitech/p_sci.html

Life Science <http://www.gene.com/ae/AE>

<http://www.gene.com/atg-bin/pphtml/ae/atg/index.pphtml>

Earth and Space Science <http://athena.wednet.edu/curric/space/index.html>

<http://vulcan.wr.usgs.gov/Photo/framework.html>

The Learning WEB <http://www.usgs.gov/education>

Science and Technology <http://sln.fi.edu/tfi/activity/act-summ.html>

<http://ofcn.org/cyber.serv/academy/ace/sci/cecsci/cecsci017.html>

Mini Lessons <http://ofcn.org/cyber.serv/academy/ace/sci/elem.html>

Personal & Social Perspec. <http://www.gene.com/ae/AE/AEC/AEF/1996drake.html>

<http://www.zpg.org/zpg/popquiz.html>

History of Science <http://weber.u.washington.edu/~mudrock/HISTORY/science.html>

<http://www.minnetonka.k12.mn.us/support/science/good.html>

Science Education Groups (Sub-Heading 2)

NSTA	http://www.nsta.org
NAS	http://www.nas.edu
NSRC/STC	http://www.si.edu/nsrc
TERC	http://www.terc.edu
AIMS	http://www.aimsedu.org
ACS	http://www.acs.org
FOSS	http://www.ebec.com/ebechp.htm

Children's Sites (Sub-Heading 3)

KIDS WEB Digital Library	http://www.npac.syr.edu/textbook/kidsweb
Project DRAGONFLY	http://www.muohio.edu/Dragonfly
Cool Sites from NAP	http://www.nap.edu/fresh/hot/links.html
Cool Sites for La Crosse Schools	http://www.viterbo.edu/personalpages/faculty/Rruppel/emerson/emerson.html
Nine Planets Exploration Site	http://seds.lpl.arizona.edu/nineplanets/nineplanets.html
The Thinking Fountain	http://www.sci.mus.mn.us/sln/tf/nav/thinkingfountain.html

Teacher Enhancement Sites (Sub-Heading 4)

NAS/NAE/NRC Publications	http://www2.nas.edu/wwwcat/Education.html
NSTA Online Resources	http://www.nsta.org/onlineresources
ACS Science Education	http://www.acs.org/edugen2/education/aboutedu.htm
U. of Michigan Virtual Library	http://ipl.sils.umich.edu
U. of Michigan Digital Library	http://http2/sils.umich.edu/UMDL/HomePage.html
Galaxy Professional Resource	http://www.einet.net/galaxy/Science.html
Penn State	http://jek113.rh.psu.edu

**School District of La Crosse
Science Department
Hands-On Science Kit Request Form**

Please fill out request form to order science kits. Return to Carol Guanella at Hogan. A copy will be sent back to you for confirmation.

School Name _____

Teacher Name(s) _____

Unit/Kit _____

Grade _____

Number of Kits _____

Desired Dates 1) From: _____ To: _____

(3 CHOICES) 2) From: _____ To: _____

 3) From: _____ To: _____

.....
DATE REQUEST RECEIVED _____

CONFIRMED _____

KIT NUMBER(S) _____

APPROXIMATE DATE AVAILABLE _____

SUBMIT KIT REQUEST TO CAROL GUANELLA – HOGAN ADMIN. CENTER
PHONE NUMBER – 789-7677

ALLOW AT LEAST ONE WEEK BEFORE REQUESTED DELIVERY DATE

RETURN KIT TO YOUR DESIGNATED AREA FOR PICK-UP WHEN COMPLETED

PLEASE INDICATE THE MATERIALS WHICH MUST BE REPLENISHED

THANKS FOR YOUR COOPERATION