

School District of La Crosse

**First Grade Science
Curriculum**

1999-2000

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Guiding Principles for Curriculum Development

School District of LaCrosse

Board of Education's ENDS Policies
Adopted 2001

E-1 District Mission

Students will discover their talents and abilities and will be prepared to pursue their dreams and aspirations while contributing effectively to their diverse communities.

E-2 Academic Achievement Goals

Students will demonstrate continuous improvement toward a high level of individual success in all required and elective academic/curricular areas using multiple measures of performance.

E-3 Involved Citizenship

Students will strive for mutual understanding as contributing citizens in a diverse world.

E-4 Responsible Life Choices

Students will acquire the knowledge and skills necessary to make effective and responsible life choices.

Wisconsin Academic Model Standards

All district curricula will be aligned to the Wisconsin Model Academic Standards available on the web at <http://www.dpi.state.wi.us/dpi/standards/matintro.html>

District Non-Discrimination Policy

It is the policy of the School District of La Crosse that no person may be denied admission to any public school in this district or be denied participation in, be denied the benefits of, or be discriminated against in any curricular, extracurricular, pupil service, recreation, or other program or activity because of the person's sex, race, religion, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability or handicap as required by s. 118.13 Wis. Stats., and/or section 504 of the Rehabilitation Act of 1973.

**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: 1

Topics/Skills: Life and Environmental Science

Time: Minimum 16 Lessons
Organisms and Their Environment

Curriculum Subtopics:

- Life Cycle of Organisms
- Characteristics of Organisms
- Organisms and Their Environment

CURRICULUM

District Benchmarks/Students will learn?

- To use their sense and tools to observe and record information about organisms. Standards A and C.
- That organisms have basic needs such as food, water, air, space, and shelter. Standard F.
- That organisms grow and change and die over time. Standard F.
- That plants and animals have similarities and differences – see concepts in Organisms Teacher’s Edition. Standard F.

State Content Standard: A - Science Connections

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

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.4.8

State Content Standard: F – Life and Environmental Science

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

ASSESSMENT

Assessment/Proficiency

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

Resources

- STC Science Kit and T.E. – Organisms
- Software _____
- Trade books: Bibliography in STC annual
- Field Trips: Possible: Hixon Forest
Perrot State Park
Myrick Park – Marsh
Beaver Creek – Caledonia Area

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 1

Topics/Skills: Physical Science:
Comparing and Measuring

Time: 16 Lessons

Curriculum Subtopics:

- Use of non-standard units for comparing and measuring
- Rankings by length and height

CURRICULUM

District Benchmarks/Students will learn?

- To use their senses and tools to observe and record information of the length and height of objects. Standards A and C.
- To use beginning and ending points, and that placing units end-to-end are important factors when measuring. Standard D.
- That different units and tools can be used to measure objects. Standard ?.
- That standard units (10-unifix cubes in this unit) produce more consistent results than non-standard units. Standard D.

State Content Standard: A - Science Connections

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

State Content Standard: B – Nature of Science

State Performance Standards: B.4.3

State Content Standard: C - Science Inquiry

State Performance Standards: C.4.1, C.4.2, C.4.4, C.4.6

State Content Standard: D – Physical Science

State Performance Standards: D.4.7

State Content Standard: G – Science Applications

State Performance Standards: G.4.5

ASSESSMENT

Assessment/Proficiency

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

<input type="checkbox"/>	State/WSAS Test Concept
<input type="checkbox"/>	District Assessment
<input checked="" type="checkbox"/>	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
- T - Charts

Resources

- STC Science Kit and T.E.
- Environmental trade books on pollution
- Bibliography from teacher edition

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 1

Topics/Skills: Physical Science:
Solids and Liquids

Time: 16 Lessons

Curriculum Subtopics:

- Properties of objects and materials
- Position and motion as related to their density and viscosity
- Magnetism
- Environmental impact

CURRICULUM

District Benchmarks/Students will learn?

- To use their senses and tools to observe and record information about liquids and solids. Standards A and C.
- That properties of solids are color, shape, ability to roll or stack, hardness, magnetic attraction, and whether they float or sink. Standard D.
- That properties of liquids are color, tendency to flow, degree of viscosity or fluidity, whether they are miscible with water, whether they float or sink in water. Standard D.
- That changes in environments are influenced by pollution. Standard H.

State Content Standard: A - Science Connections

State Performance Standards: A4.1, 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.4.4, C.4.6, C.4.7

State Content Standard: D – Physical Science

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

State Content Standard: F – Life and Environmental Science

State Performance Standards: F.4.4

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

State Performance Standards: H.4.2, H.4.4

ASSESSMENT

Assessment/Proficiency

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

- 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
- Venn Diagrams
- T - Charts

Resources

- STC Science Kit and T.E.
- Environmental trade books on pollution
- Bibliography from teacher edition

La Crosse School District Science

Subject/Course: Elementary Science

Grade: 1

Topics/Skills: Earth and Space Science: Weather **Time:** Minimum 16 Lessons

Curriculum Subtopics:

- Properties of objects and materials
- Objects in the sky
- Changes in the Earth and sky
- Personal health and safety

CURRICULUM

District Benchmarks/Students will learn?

- To use their senses to observe and record information about the weather. Standards A and C.
- That materials can exist in different states – solid, liquid or gas. Standard D.
- That weather changes daily, weekly, and seasonally. Standard E.
- That features of weather include cloud cover, precipitation, wind, and temperature. Standard E.
- Familiarity with tools Meteorologists use including wind scales, thermometers, and rain gauges. Standards E and G.
- To make healthy decisions about weather-related clothing. Standard H.
- To recognize dangerous weather situations. Standard 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.4.2

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.4.3, D.4.4

State Content Standard: E – Earth & Space Science

State Performance Standards: E.4.4, E.4.5, E.4.6

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

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, identification, and presentations.

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

INSTRUCTION

Teaching/Learning Strategies

- KWL
- Inquiry Based Learning (hands on/minds on)
- Concept Webs
- Venn Diagrams
- T - Charts

Resources

- STC Science Kit and T.E. - Weather
- Local Meteorologist
- Software: _____
- Trade Books: Bibliography in STC Manual
- Field Trips: Possible – Weather Station
Hixon Forest
Marsh

Wisconsin Model Academic Standards					
1st Grade Science Alignment		O	CM	SL	W
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					

Wisconsin Model Academic Standards		1st Grade Science Alignment			
		O	CM	SL	W
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.			✓	
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.				

Wisconsin Model Academic Standards					
1st Grade Science Alignment		O	CM	SL	W
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).	✓			

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.

NATIONAL SCIENCE STANDARDS

(1996). *National Science Education Standards*. Washington, DC: National Academy Press.

**1st Grade Explanatory Notes on
WI State Science Standards in Relation to School Curriculum
1999-2000**

Comparing and Measuring

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 This unit should be emphasized as a Physical Science area.

A.4.3 The students will understand that in ranking/comparing objects, measurements of height, width or length may need to be considered.

A.4.4 The science theme of measurement is involved.

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.4.3 Measurement units are now standard throughout the world.

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 vocabulary of measurement including height, width, or length should be used.

C.4.2 Students should ask questions, plan, observe, and predict the outcome of investigations involving measurements.

C.4.4 Students will use measurement tools to collect data, in this case unifix cubes.

C.4.6 Students graph, chart, and discuss results of their measurement investigations.

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.4.7 Students will observe and describe the position of objects relative to each other.

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.

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.

G.4.5 Students become aware of standard measuring devices being used.

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 involved in this unit.

Solids and Liquids

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 This unit should be emphasized as a Physical Science area.

A.4.3 Students would decide on appropriate testing information to make decisions about properties (i.e. water is necessary for testing for floating, magnets are necessary to test for magnetism, etc.).

A.4.4 The Students should understand the theme of form and function; round things roll, cubic objects stack.

A.4.5 Students should understand how the human impact on our water sources has influenced the quality of water over time.

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 Field trips, guest speakers, and LMC materials could be used as sources of information (environmental impact).

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 measurement uses the vocabulary of fluidity, viscosity, etc., form and function used the vocabulary of shape, hardness, buoyancy, etc.

C.4.2 Students should understand the steps involved in science investigations (scientific method: asking questions, observing, and making predictions).

C.4.4 Students must use equipment safely and some simple measuring tools (i.e. cups and spoons).

C.4.6 Students communicate through Venn Diagrams the results of their investigations.

C.4.7 Students will use their data to support their conclusions.

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 through D.4.3 Self explanatory

D.4.4 Students observe the mixing of liquids with water which sometimes changes its form.

D.4.6 Some of the objects observed in this unit roll and some don't. Some of the objects float and some sink.

D.4.7 Students observe the viscosity and fluidity of liquids.

D.4.8 Students observe that substances that can be touched and some cannot be touched, i.e. magnetism.

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.4.4 The affects of (non-living) pollutants on living organisms (i.e. oil spills)

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 covered 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.4.2 Students will learn how the transportation of oil and its problems on occasion affect the environment.

H.4.4 Issues of water pollution in the La Crosse area.

Organisms

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 and Environmental Science area.

A.4.3 Students must learn to use their observation skills to recognize and collect information about organisms.

A.4.4 The theme of systems, order, organization and interactions (plants, animals and their interactions etc.); constancy, change and measurement (life cycles of the organisms).

A.4.5 Students should understand how humans' dependency on other organisms has changed over time.

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 covered 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 The theme of systems, order, organization and interactions involves the vocabulary of plants and animals cycles, and their interactions.

C.4.2 Students should understand the steps involved in science investigations, (scientific method – questioning, observing, and predicting).

C.4.4 Students will use hand lenses to observe the organisms.

C.4.5 Students will use collected data to make comparisons between organisms.

C.4.6 Students will communicate through their drawings the results of their investigations.

C.4.8 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 covered 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, F.4.2, F.4.3 – Self explanatory

F.4.4 Plants require light, water, and nutrients; animals require plants, etc. Plants and animals recycle into the soil.

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 covered 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.

Not covered in this unit.

Weather and Me

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 previous knowledge of the seasons in Kindergarten will assist their understanding of weather.

A.4.3 Students decide what data determines daily weather conditions.

A.4.4 Students should understand the themes of constancy, change, and interactions (the cycle of the seasons).

A.4.5 Students should recognize the annual cycle of the seasons.

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.4.2 Students are introduced to the Fahrenheit scale and Celsius scale which are both named after their inventors.

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 Students use the theme of constancy, change and measurement and the vocabulary of the different weather conditions to assist student learning.

C.4.2 Students should understand the steps involved in a science investigation, scientific method, planning, observing, predicting and explaining (i.e. the thermometer bag experiment).

C.4.3 Students should personally observe different weather information input from other sources.

C.4.4 Self-explanatory

C.4.5 Students will use collected data to make inferences (Thermometer Bag).

C.4.6 Self-explanatory

C.4.7 Students will support their conclusions from life experiences (wearing black versus white clothing).

C.4.8 Students can investigate other Thermometer Bag colors.

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.4.3 Precipitation comes in different forms.

D.4.4 Changes in the form and types of precipitation are based on temperature or changes in the temperature of objects is based on colors, both are observed by students.

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.4.4, E.4.5 – Self-explanatory

E.4.6 The system, order, organization and interactions theme is illustrated by the sun, earth and seasons. The constancy, change and measurement theme is illustrated by Earth's daily weather patterns.

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 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 Local meteorologist and the tools they use.

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 Students will learn how better weather predictions have assisted with our personal safety.

1st Grade Organism Plant and Animal Unit

Items That Need to be Ordered

- 1 pack of 9 Elodea
- 1 pack of 7 Cabomba
- 9 female Guppies
- 9 male Guppies
- 18 Ramshorn Snails

All these items will be ordered by Carol from Marineland.

- 1 pack of 4 Moss Mats
- 1 pack of 7 Conifer Gymnosperm Tree Seedlings
- 1 pack of 16 Pill Bugs
- 1 pack of 8 Bess Beetles

Carol will order all of these items from Carolina Biological since Marineland does not carry them.

Give Carol your name, school, and the date you would like these items delivered. Carol will mail your order to Carolina Biological once she receives it. Please allow at least 10 working days for delivery.

Carol's Hogan Phone Number – 789-7677

Some of you commented last year that the Beetles were not Bess Beetles and that the Tree Seedlings in some cases were too big. We, therefore have gone back to Carolina Biological for our order.

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/nse>

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.oms.edu/sln/www/background/inquiry>

<http://webfoot2.oms.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/tnf/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