

“Our Earth, Our Resources”

Integrated Science and Social Studies Unit
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Part I: Unit Topic, Key Concepts and Standards

Section A: What Makes this a Good Unit Topic?

Introduction:

Our Earth, Our Resources is a good unit topic for several reasons. Through this unit, students will become familiar with the major landforms of the earth and explore the diversity of the earth's features. They will discover the interdependent relationship humans have with the earth, and our responsibility to take care of its resources. Students will become aware of how their small actions can have a large impact on the world. They will begin to understand aspects of community involvement by doing their part to protect the earth alongside others who share similar global convictions. They will have a chance to speak-out against those who are harming the earth and demonstrate their support for earth-friendly behaviors through peaceful, public means.

As a whole, this unit is designed to be interesting to first-graders and scaffold their emerging sense of the world around them as well as help them understand how their actions impact their immediate, and global, environment. They should begin to grasp a global-perspective of the earth, its major features, and relationships among its natural resources and the life that is supported and sustained by them.

I will now discuss the usefulness of this unit from the perspective of first-grade students, the content covered, opportunities for inquiry, and relevance in developing students who live in a larger community and society.

Worthwhile to First-Grade Students:

First graders will find this unit intrinsically interesting because they are naturally inquisitive about their environment. They want to know how and why things happen. They are fascinated with the world around them. They come to school with many naive conceptions about events in nature such as how rain falls or snow forms. They have a limited understanding of these events from their personal observations or what family members have told them. This unit will build upon their prior knowledge of experiences with weather in Michigan, and extend it to concepts of why weather is different in different parts of the country. This unit will also introduce them to why temperatures vary around the earth, comparing temperatures at the equator to those at the poles. Through this unit, students will also get the opportunity to do several hands-on activities to reinforce the concepts they are learning. They will build a model landscape out of clay, record daily weather observations in a weather journal, explore an interactive water-cycle on the computer, and design posters to convince people to help save the earth.

The culmination of this unit consists of students enacting skit featuring a business man who wants to expand his business and build an office complex where a forest is. Students will take a stand against this person and use the knowledge they gain about conservation through this unit to convince this man to cancel his plans. Students will present this skit and their posters to a fourth-grade class. This will give them a small-scale experience of taking community action and raising awareness about important global causes.

Worthwhile Content:

The content this unit covers is very broad, but with proper scaffolding, students will gain a wide perspective of the Earth and its resources through their inquiry into weather, landforms, natural resources, the water cycle, and endangered animals. The unit is designed to familiarize students with several major topics, which will serve as a foundation for their knowledge fund regarding these topics. It is expected that students will dig deeper into these topics later grades. The wide range of content that this unit covers lends itself to a great deal of expandability, based on the needs of your classroom and curriculum.

For a list of the specific benchmarks and standards this unit covers, see “Section B”, “Standards and Benchmarks.”

The unit helps disclose fundamental patterns of why temperature is different for different parts of the earth. Students will learn that those places that are closer to the equator are significantly warmer all year long than those places at the poles. They will learn that as you move either north or south of the equator it gets colder and colder, until you reach the poles; which are the coldest areas of the earth. They will also learn that the places in between the poles and the equator experience changing seasons. They will realize that Michigan has four seasons because of where it is located on the earth. The earth’s axis tilt, revolution time, and the specifics of seasonal change will not be covered in this unit.

Another pattern students will learn is that water on earth always travels down-stream, or from high to low places. They will experiment with water flow on various landforms and also discover that the steeper the slope of the land, the faster the water travels. They will compare the heights of mountains, hills, and plains relative to one another and observe how water travels on each.

Students will also learn the similarities and differences among a river, lake, and ocean. They will learn to characterize each and locate them on maps and globes.

Inquiry Included:

This unit does not embrace a complete inquiry-based approach to learning, but there are elements of inquiry woven into the fabric of the sequence of the lessons. Questions posed to students in this unit are not simple to answer with a yes or no. Questions that will be explored and answered over the course of the unit are: What is weather? How does the weather effect what we wear and do? Which places on earth are the warmest/coldest/in-between, and why? When it rains, where does a raindrop go? How does water travel? How can we distinguish and classify various features of the earth? What are the earth's natural resources, what do we use them for, and why is it important that we conserve them? How do our actions impact our environment? What could happen to our earth and its resources if we do not take care of them properly?

Community and Society:

Issues centering on conservation and preservation of the earth's resources promotes dialogue and the opportunity for different perspectives to be discussed. Imbedded into the unit is a short skit that intended to introduce students to the idea that businesses, and other human establishments, do not always have the best interest of the earth in mind. Students will have the opportunity to use means of dialogue and demonstration to persuade this community member to change his mind. Conservation is a very hot topic in today's society, and a major topic in this unit. Conservation of our earth's resources is an issue that has social, geographical, medicinal, ethical, and economical implications. This issue will not go away in our lifetime, so beginning to peer into this mammoth idea is very relevant to each student.

Part I: Section B: Standards and Benchmarks:

SOCIAL STUDIES

Strand II Geographic Perspective:

Content Standard 2: All students will describe, compare, and explain the locations and characteristics of ecosystems, resources, human adaptation, environmental impact, and the interrelationships among them.

II.2.e.1 Describe how people use the environment to meet human needs and wants

II.2.e.3. Suggest ways the people can help improve or save their environment

Strand IV - Economic Perspective:

Content Standard 1: All students will describe and demonstrate how the economic forces of scarcity and choice affect the management of personal financial resources, shape consumer decisions regarding the purchase, use, and disposal of goods and services and affect the economic well-being of individuals and society.

IV.1.e.2 List ways that individuals can conserve limited resources

Strand V – Inquiry:

Content Strand 1: All students will acquire information from books, maps, newspapers, datasets, and other sources, organize and present the information in maps, graphs, charts and timelines, interpret the meaning and significance of information, and use a variety of electronic technologies to assist in accessing and managing information.

V.1.e.2 Acquire information from observation of the local environment

V.1.e.3 Organize information to make and interpret simple maps of their local surroundings and simple graphs and tables of social data drawn from their experience.

Strand VI – Public Discourse and Decision Making:

Content Strand 1: All students will state an issue clearly as a question of public policy, trace the origins of the issues, analyze various perspectives people bring to the issue and evaluate possible ways to resolve the issue.

VI.1.e.1 Pose a question about a matter of public concern that they have encountered in school or in the local community.

VI.1.e.2 Compare their own viewpoint about the matter raised with that of another individual.

SCIENCE

Strand 1: Construct New Scientific Knowledge

Content Standard 1: All students will ask questions that help them learn about the world; design and conduct investigations using appropriate methodology and technology; learn from books and other sources of information; communicate findings of investigations using technology

CI.1.e.1 Generate questions about the world based on observation

CI.1.e.2 Develop solutions to problems through reasoning, observation and investigations.

CI.1.e.6 Construct charts, graphs, and prepare summaries of observations

Strand 2: Reflecting on Scientific Knowledge

Content Standard 1: All students will analyze claims for their scientific merit and explain how scientists decide what constitutes scientific knowledge; show how science is related to other ways of knowing; show how science and technology affect our society; show how people of diverse cultures have contributed to and influenced developments in science.

II.1.e.2 Show how science concepts can be illustrated through creative expression such as language arts and fine arts

Strand 3: Ecosystems

Content Standard 5: All students will explain how parts of an ecosystem are related and how they interact; explain how energy is distributed to living things in an ecosystem; investigate and explain how communities of living things change over a period of time; describe how materials cycle through an ecosystem and get reused in the environment; analyze how humans and the environment interact.

III.5.e.2 Describe the basic requirements for all living things to maintain their existence.

III.5.e.2 Describe positive and negative effects of humans on the environment

Strand 5: Geosphere

Content Standard 1: All students will describe the earth's surface; how the earth's features change over time; analyze effects of technology on the earth's surface and resources.

V.1.e.1 Describe major features of the earth's surface.

V.1.e.2 Recognize and describe different types of earth materials.

V.1.e.6 Demonstrate ways to conserve natural resources and reduce pollution through reduction, reuse, and recycling of manufactured materials.

Strand 5: Hydrosphere:

Content Standard 2: All students will describe the characteristics of water and demonstrate where water is found on earth; how water moves; analyze the interaction of human activities with the hydrosphere.

V.2.e.2 Trace the path that rainwater follows after it falls

V.2.e.3 Identify sources of water and its uses

Strand 5: Atmosphere and Weather:

Content Standard 3: All students will investigate and describe what makes up weather and how it changes from day to day, season to season, and over long periods of time; what causes different kinds of weather; analyze the relationships between human activities and the atmosphere.

Part I: Section C: Context

Part I: Section C1: Student Context and Features:

I am teaching in a first grade class at Sheridan Road Elementary located on the north side of Lansing. There are 22 students in my class: nine boys and 13 girls. Most of them as come from working-class families with low incomes. According to the Reading Recovery specialist at our school, 90% of the students qualify for free or reduced lunch. This is a very high number of students compared with the state average of 36% and the Lansing School District's average of 63% (MI Dept. of Education 2004-2005).

The ethnic make-up of our class is shown in the following table:

	White	Black	Hispanic	Asian	Native American
Mrs. Henry's and Miss Dunham's First Grade Class	60%	4%	4%	4%	4%
Lansing School District	36%	42%	16%	6%	1%

* Data taken from the Michigan Department of Education 2004 – 2005

The Black population in our classroom is under-represented and the white population is significantly higher than the district averages. There is a narrow margin of difference between the other ethnicities. These differences are due to the surrounding community from which the students come from. There are several trailer parks in the near vicinity which are composed predominately of lower-income white families.

The parents of the children in our classroom all want their children to do well and succeed, but they don't always give them proper support they need at home to have the best chance for success. Sometimes this is due to the fact that many children come from single-parent homes where the parent is working nights or holds several jobs and doesn't have the time to spend with the child. We send homework home once a week. In many instances, students receive help on homework from older siblings or a babysitter. Approximately 50% of the homework papers return to us signed by an adult. This is one indicator we have of parental support for our student's education. Another indicator is attendance to fall conferences. All but one parent came, which is good, but many of the parents who came did not show up at the time they had scheduled, so several conferences had to be rescheduled. Some parents also showed up spontaneously during a time that was not theirs without calling. As far as parental participation directly in the classroom, we had one mother volunteer to come in for a few days and help students paint Christmas ornaments. We've had one grandmother volunteer to come in and read with students one day a week for a few weeks. Several parents have brought in cupcakes and other treats for birthdays. Approximately 33% of parents have actively participated in a classroom activity so far this year, including parties and field trips. What this means to me is that most parents want to help their students if they can, but many of them rely heavily on the teacher for teaching their students the skills they need.

We have a diverse group in terms of students receiving special services. In our building, at the first grade level, no students are classified as needing special education. The school upholds an early-intervention philosophy to identify and target low readers and writers through standardized testing and individual instruction to give at-risk students the best chance to avoid special education. The four lowest students in first grade receive short-term intervention from the Reading Recovery teacher for 20 weeks. There are 43 first-grade students at Sheridan Road. To determine who gets in the program first, each student is given a comprehensive observation test at the beginning of the year. This test identifies each student's literacy strengths and weaknesses. All 43 tests are then scored and ranked, and the four lowest students in the entire first grade receive Reading Recovery services. Two students in our class qualified for this program. They are currently in their 17th week. One student in particular has drastically improved his reading and writing skills such as; text directionality and one-to-one sound to letter recognition. He is now very close to reading at a first grade level.

Very soon, the same observation test will be given to those students who are on our retention list and possibly several others to determine who the next set of four students to receive Reading Recovery help. The theory is that accelerated intervention of critical literacy skills to catch-up at risk students will reduce the need for special education for them in the later years.

Along with reading recovery students, we have three students who receive speech therapy twice a week. Two of the three are twins, a white male and female, the other, is a white male. They all have trouble annunciating full sounds, blending letters together, writing legibly, and pronouncing the "r" sound. The twins are easier to understand than the other student, who has a more severe speech need. The female is also a Reading Recovery student and takes medication for hyperactivity. If she is not on her medication she is very spacey and wild. Her twin brother is not on medication. He has a hard time focusing on paper-pencil work, but is very verbal and likes to share information about the things he is learning. It is very hard to understand the third student because he speaks softly and has very poor pronunciation. My collaborating teacher and I are accustomed to his speech patterns and can understand most things he says. We have a more difficult time deciphering what he has written, but we are working with him on those skills. This student is very bright and can quickly recall memorized information such as math facts. He also catches on to math very quickly.

Through the observation test, we have also identified the next ten lowest literate students in the class. They all receive small-group instruction several times a week from the literacy teacher. The literacy teacher works on phonemic awareness, sight-word recognition, fluency, comprehension, and writing skills.

The top ten students in our class do not receive any special type of literacy instruction beyond the skills and strategies taught in the regular education classroom. They are all performing at or above grade level in all subject areas. The highest reader in our class is a white male who is reading at early grade 2.

Generally speaking, I have a very social class. They love to talk to each other and to me and to anyone else who will listen. They love to read their writing aloud and they love to share the books they are reading with each other. They love to listen to me as I help other students proof-read their writing. They are curious and friendly. They remind me of a flock of flamingoes. They love to listen to stories and ask questions and respond to ideas. They love to draw and color. They like to move around. They like to do things that are hands-on. They like to play and they like to create. They like to be praised and noticed for the good job that they are doing. They also like to sing.

Many of the things my students like to do map well into the eight multiple intelligences. Knowing my students preferred methods of learning will help me choose and design activities that will involve their interests. I plan to use cooperative group-work (complex instruction), investigations, and many diverse avenues for creative expression. I am thinking of doing projects and hosting discussions. I will also have lesson segments that are no longer than 20 minutes in one area or on one task to help ease some of the restlessness my students demonstrate during some lessons. Currently, our classroom is structured in a more traditional way where the teacher instructs from the front of the room. All of our desks are in rows and any type of discussion is generally recitation style where students raise their hands, wait to be called on and answer questions the teacher poses. Ninety percent of the instruction is done whole-group, except during Guided Reading and centers.

Even though several of my students are performing below grade-level in literacy, there is nothing I will ask my students to do that any of them are completely incapable of doing. I expect that my students will all write at different levels, but none of them are incapable of writing. I have a few students that like very overly explicit instructions and like to double check their understanding of an assignment with me all the time to see if they are right. I have a few students who would rather listen than speak up in a group. They may get overlooked in group-work unless I set the expectation that everyone must participate and everyone must share ideas and then assign group roles to help ensure that good group-work takes place. I have a few students who would like to dominate materials and need to learn better social skills for working together. I have a few students who love to “take their time” on tasks and need constant encouragement to finish. Knowing these characteristics of my students will help me better monitor their progress during my lead teaching and inform my delivery style and content of the lessons. I am very curious to see how much more involved my students are in the learning process when given the opportunity to work more collaboratively, which is more congruent with their natural social tendencies, and should help all students achieve more than they would on their own.

Part I: Section C2: Teacher Knowledge and Interests:

As a teacher, I am very knowledgeable about what causes weather, how seasons change and why, how water travels through the water-cycle, and how species are dependent upon various environmental factors for survival. I have way more personal knowledge about these topics than we need to cover in first grade. I am a science major, and have studied these topics in depth at the college level. I not only know about the macro-processes that are visible, and in some cases, tangible, but I can also describe what is happening in many of these processes on the micro-level. The hardest part for me will be to keep the content narrow enough and simple enough for the time allotted to teach these concepts to first-graders. I have to be careful not to go over their heads. I will have to think hard about how to explain concepts and processes in simple terms that they will understand. I will have to re-think the normal vocabulary I use to describe these earth phenomenon and break down the concepts to be relevant to a first-graders understanding. Having hands-on activities and picture books are my greatest assets to help me develop an age-appropriate unit on these topics.

Part II: Prior Knowledge Lesson and Analysis

“Our Earth, Our Resources”

The purpose of the unit is to familiarize students with the basic weather, landforms, and natural resources of the earth and begin to understand the interdependent relationship between humans and the physical components of the earth.

An emphasis will be placed on water as a natural resource and an element of weather.

Objectives: The purpose of this lesson is to reveal my students prior knowledge, conceptions, misconceptions, and interests about the big ideas and key terms we will be learning about in the unit.

This lesson is aimed to reveal a lot about my students’ prior knowledge of snow, and a little about some key terms we will be covering such as, globe, natural resource, and recycling.

Materials: Teacher edition of Scholastic News
Student copies of Scholastic News articles
Student pencils
Books: “Boot Weather” by Judith Vigna
Globe
Map of U.S.

Lesson: Do You Know Snow?

Begin at “Carpet” area. Have students seated on their bottoms on the carpet with legs crossed and hands in their laps. Teacher is seated on chair by dry-erase board.

1. Ask: “What do we know about snow?” (Write list of brainstormed ideas on white board). Ask the following questions to stimulate discussion.
 - a. What is snow?
 - b. Where does it come from?
 - c. How is it made?
 - d. Why does it snow sometimes and rain other times?
 - e. When snow melts, where does it go? Why?
 - f. Will it ever make it back to the clouds

2. Move back to seats
 - a. Have paper passers pass out Scholastic News “Do You Know Snow?” to each student.
 - b. Have students put their names on front
 - c. Direct students to look at the cover and ask: “What are they making?” → Snowman.
 - d. What are snowmen made of? → Tiny snowflakes all stuck together.
 - e. Read through Scholastic News

- f. Ask if anyone has ever seen snow in the mountains, been to the Upper Peninsula where it snows a lot, or been to a winter carnival and seen an ice sculpture. (Text-to-world connection) Draw in Odessa (new student from Canada) by asking her about the snow she experienced in Canada. Show where Canada is on a big map.
3. Do backside of Scholastic News
 - a. Discuss the various types of snowflakes on chart
 - b. Answer questions about snowflakes – whole group
 - c. Pass out news print paper
 - d. Have students draw and label three snowflakes and write four sentences about what they know about snow.
 4. Take students back to carpet
 - a. Read the story, “Boot Weather”.
 - b. Talk about wearing boots in the snow.
 - c. Ask students to share similar experiences of wearing boots and playing in the snow.
 - d. Ask what boots are made of to protect your feet.
 5. Transition into other ideas covered in unit – Briefly ask each question and take a few student responses.
 - a. Why does snow fall?
 - b. Why is Florida generally warmer than Michigan?
 - c. Where does snow go when it melts?

Conclusions and Implications

Conclusion #1: Snow falls because of seasonal events.

When I asked, “Why does it snow?” I got answers like, “Because it is winter”, “Because it is Christmas”, and “Because it’s cold out.” It seems to me that their explanations stem from their association of snow with the events that typically happen in their lives. For example, it usually snows on, or around, Christmas in Michigan where they live. However, it rarely snows on, or around, Christmas in Florida. My students do not yet have a world-wide concept, or knowledge, of why it snows. They make conclusions based on what they observe in their immediate surroundings to make sense of the world.

One of the objectives in my unit is to help students understand that weather can vary from place to place and it is not dependent upon events, or holidays, in our lives. I can do this by drawing upon their prior knowledge of the weather in Florida. Most of them know that it is really hot in Florida and it rarely snows there. My next step is to find out if they think Christmas happens at the same time for people to who live in Florida as in Michigan. If they say yes, and we agree that it rarely snows in Florida, then I can ask if they think it will snow on Christmas in Florida. Most likely they will say no, and then I can say, “I thought you said it snows because it is Christmas. How can it be Christmas and not snow in Florida?” This question should really get them thinking because it challenges their misconception about why snow falls.

Snow falls because of the temperature of the moisture in the air. The air must be cold enough for water to freeze before it falls. In places like Florida where the temperature is generally above freezing, not much snow falls. This leads us to another question. Why is Florida generally warmer than Michigan?

Conclusion #2: Florida is hotter than Michigan because it's warmer down there.

My students had no good reasons as to why Florida is hotter than Michigan. Their explanation was basically, "It just is". I don't think they've ever stopped to question why some places are warmer than others.

To help them understand why Florida is warmer than Michigan, I will first introduce them to a globe. I will teach them what a globe is and then we will locate Michigan and Florida on it. I will ask the students if Florida is North or South of Michigan. They should be able to tell me this because they've studied cardinal directions. I will then teach a lesson using a globe and a flashlight to demonstrate that the earth and sun are in space. The sun always shines on the equator as the earth goes around the sun. I will show them how the sun is brighter, or shines more intensely on the equator than it does on places north or south of the equator. We will talk about how intensity of sunlight affects temperature. We will discover that Florida is warmer than Michigan because it is closer to the equator so it gets more direct sunlight. The more direct sunlight, the hotter it is!

Conclusion #3: When snow melts, it just disappears.

My students seem to think that snow is a magical thing that just disappears. They do not understand that snow is simply frozen water, so when it melts, it turns into water and either soaks into the ground, is carried away by run-off water, or evaporates back into the sky. This shows their lack of understanding of the physical changes water undergoes, as well as their unfamiliarity with the water cycle.

In my unit I want them to understand the basic components of the water cycle. I want them to know that water can travel over the land, under the land, and through the sky. To do this I will design several hands-on investigations to help them discover all the places water can go. This is a big topic. Some of the activities I will do include: an investigation to see if water can travel through soil. Students will first predict whether or not they think it can, and then in small-groups they will simulate the rain falling on the land and look to see if the water can travel through the soil in a Styrofoam cup that has a hole poked through the bottom. They will also make landforms out of clay and pour water over it to see how water flows over the land. They will also view an online animated version of the water cycle to see how water can soak into the soil, be used by plants, flow through bodies of water on the surface, be heated by the sun, and evaporate into the atmosphere to become part of a cloud again.

Part III: Annotated Bibliography of Resources

“Our Earth, Our Resources”

Bains, John. (1998). *Protecting Our Planet: Keeping the Air Clean*. Texas: Steck-Vaughn Co., Upper Elementary and Junior High (Grades 5-7). This non-fiction informational text discusses the causes and effects and some solutions for keeping our air clean. The book has many great photographs and graphs to help the reader gain scientific knowledge and data. The statistics come from the late 80's and early 90's, so the teacher should be sure to point out how the numbers have changed since then. The photos provide a great visual tool to show students the effects of pollution.

Elsom, Derek. (1997). *Weather Explained*. New York: Henry Holt, Intermediate (Grades 3-5). This is a non-fiction book filled with diagrams, photographs, and charts to explain topics such as: how weather works; various extreme weather phenomena; how data regarding weather is collected; and how the Earth's climate has changed over time. Although a wide range of topics is covered, the language of the book keeps the ideas simple enough to be understood by a 4th – 5th grader. Although the book discusses weather around the *world*, many pictures of animals, places, and inanimate structures are of those that most people from the *United States* would be familiar with. This book can be used to boost a teacher's knowledge about weather and is great for additional visual representation of weather processes and phenomena of interest.

Flanagan, Alice K. (2000). *Simply Science Water*. Minnesota: Compass Point Books, Independent Readers (Grades 2-4). This book is a basic informational text that covers aspects of water such as the water cycle, the three states of water, how people get water, and how to keep our water clean and conserve it. The book is filled with helpful photographs to give a good visual representation of the text. The author of this book is from the mid-west and lives near the great lakes. She writes books for children and teachers. This book provides a good summary and overview of the topics of water that should be taught in elementary; especially first and second grades. I would use this book as a read-aloud after we have discussed and explored some of the topics in the book in other ways, to help students solidify their experiences and the information they have already learned about water.

Foresman, Scott. (2008). *Social Studies, All Together, Big Book*. Illinois: Scott Foresman, Independent Readers (Grades 2-4). This big book accompanies the curriculum teacher's guide and is provides good, large, visual representations for students to see while whole-group instruction occurs. There are ample photographs and illustrations to support the text.

Foresman, Scott. (2008). *Social Studies, All Together, Teacher's Edition*. Illinois: Scott Foresman, (Teacher's Guide). A variety of lesson ideas, objectives, activities, etc. for the unit. More Caucasian children are featured in this book than children of color. This curriculum resource is a good framework for weaving other book to supplement instruction.

Haslam, Andrew. (1996). *Make It Work! Rivers*. Chicago: World Book Inc., Intermediate (Grades 3-5). This non-fiction book explains and shows the parts, movement, and types of rivers found on earth. It is full of diagrams, photos, and ideas for hands-on activities to help students understand the content. Photos of children performing hands-on activities are white males and females of color.

This may sub-consciously perpetuate the stereotype that white males are more adept at science. This book is a great source to help students understand rivers more in-depth.

- Hillman, Priscilla. (1980). *A Merry-Mouse Book of Months*. New York: Doubleday and Company Inc., Primary (Grades K – 1). This book is narrative fiction. It describes natural phenomena from the perspective of two mice as they experience various weather and activities each month of the year. It is written in short pros. The weather corresponds to the weather encountered in Michigan during the four seasons. There are a few references to traditional American holidays that may not be practiced by all students. This book would be good to read to students before beginning the study of weather because it can be used to stoke student's prior knowledge about weather they experience during the different seasons in Michigan.
- Jennings, Terry. (1988). *Jr. Science Weather*. New York: Gloucester Press, Independent Readers (Grades 2-4). This book is a picture book that leads students through a process of discovery about weather. It has a series of simple investigations young children can do by themselves to observe and measure changes in weather. Teachers can use this book for easy ideas to have students try in the classroom as they learn about basic, common weather experienced typically experienced in the mid-west. There is a definite mid-western United States bias. This is seen in the types of weather depicted and the geography of the land in the illustrations.
- Kespert, Deborah. (1999). *World Book Encyclopedia Presents Weather*. Illinois: World Book Inc., Independent Readers (Grades 2-4). This is an informational text which helps students learn about the weather in different seasons. The text is structured like a family photo album and there are many helpful photographs and illustrations to enhance the text. The people in the book are primarily Caucasian. It would be nice if diversity was more evenly represented. This book is useful as a read-aloud to get students thinking about the weather they experience in different seasons and to relate what they wear and do in these seasons to the information presented in the text.
- Locker, Thomas. (1997). *Water Dance*. Florida: Hartcourt Inc., Independent Readers (Grades 2-4). This book is a collection of rhyming poems written as riddles about the various places and forms of water we find on the earth. The illustrations are beautiful canvas oil paintings, and give the reader a vivid sense of the beauty of water in nature. It is "a happy marriage of art and science" (School Library Journal). It makes a fabulous read-aloud after students have studied various weather and forms of water. The name of the feature being described in the riddle may be covered up for the students to guess after they hear the poem and see the accompanying artwork.
- McKinney, Barbary Shaw. (1988). *A Drop Around the World*. California: Dawn Publications, Intermediate (Grades 3-5). This is a story about a raindrop who travels through the water cycle all around the world. The cultural diversity within the book is magnificent. The author uses many scientific terms and has a helpful informational section at the back of the book that tells more about the properties and versatility of water. This story makes a good read-aloud, as it exposes children to interesting places around the world and the vastness of the global water cycle.
- Martin, Terry. (1996). *Why Does Lightning Strike?* New York: DK Publishing Co., Easy Reading (Grades 1-3). This is a non-fiction, informational text that address questions children ask about common weather phenomena such as: rain, wind, snow, and ice. The print is large and the photographs are vibrant and bold. The explanations offered are very simplistic and basic. The book seems to

address weather common to the eastern and mid-west United States. Some of the weather seen in the book may not be familiar to students in the southern part of the country or other parts of the world. This book is a good one to read to students curious about why certain weather happens.

Penny, Malcolm. (1988). *The Animal Kingdom: Endangered Animal*. New York: The Bookwright Press, Intermediate (Grades 3-5). This non-fiction book highlights several endangered animals and describes several causes for animals becoming endangered. It has helpful photographs and illustrations. It is written in a narrative form, which should be interesting for first-graders to listen to for a read-aloud over several sessions. Be mindful that the book focuses a lot on negative effects of pollution and habitat degradation and may convey to youngsters that all animals are dying at a rapid pace. This book will give students a good introduction and overview of endangered species. It is also a helpful informational book for teachers to gain knowledge about endangered species.

Powel, Jullian. (1999). *Wind and Us*. Minnesota: Smart Apple Media, Independent Readers (Grades 2-4). This is a simple informational text about wind. The book describes the basics of what wind is, ways wind can be harnessed by humans, how wind affects the land, and other related topics. It has meaningful and appropriate photographs and illustrations on every page to help the reader understand the text. This book is useful to stretch one's thinking about what wind is and why it is important to our lives.

Reading Rainbow, VHS. (1980). *My Little Island*. Public Broadcasting. This educational video exposes children to life and culture on a Caribbean island. There are many landforms shown in this video and this video can be a prompt for a discussion of natural resources. This video is good for broadening student's horizons of culture while making connections to the content covered in the unit.

Rylant, Cynthia. (1993). *Henry and Mudge and the Wild Wind*. New York: Bradbury Press, Primary (Grades K-1). This is a simple narrative of a little boy and his dog who experience a thunderstorm. The story exposes children's common fears and reactions to them. The boy ends up making a game and learning that storms are not so scary. This would be a good book for a read-aloud session at the beginning of a unit on weather to stimulate children's thoughts about their own experiences, and perhaps fears, of thunderstorms.

Vigna, Judith. (1989). *Boot Weather*. Illinois: Albert Whitman & Company, Easy Reading (Grades 1-3). This book is a fictional story about a girl who's imagination takes her interesting places when she puts on her boots to go play on the playground across from her house. When she climbs the steps of the slide she imagines that she is rock climbing. The only characters are white, so this book is not one that exemplifies diversity. It is very worthwhile to use when discussing weather and getting students to think about all the things they could do in certain kinds of weather and what they would wear. This book would also be good to use when discussing landforms and geometric shapes because of the content of the text and the uniqueness of the illustrations. This is a good read-aloud book and may be used to help students open their minds to the wonderful world of weather!

Waldman, Neil. (2003). *The Snowflake – A Water Cycle Story*. Minnesota: Millbrook Press, Intermediate (Grades 3-5). This is the story of the physical changes a snowflake goes through in a year's time. Each page depicts a particular month and the typical weather and water that is encountered during that month in a region of the northern-hemisphere where there are four seasons. This book makes

a great read-aloud and is a great way to show changes in weather over time while exploring the different places water goes, and the forms it can take while traveling.

Wallace, Nancy Elizabeth. (2003). *Recycle Everyday*. New York: Marshall Cavendish, Easy Reading (Grades 1-3). This book is a fictional narrative about a bunny family that does something different everyday to reduce or recycle. It teaches students the different ways families can help save the earth. This book centralizes on the traditional, western nuclear-family, which may not be the case for each student. There is diversity in the color of the bunnies in the classroom; which adds a nice multicultural connotation. This book would be good to use as a read-aloud prior to studying recycling in-depth.

www.epa.gov/OGWDW/kids/teachers_k-3.html This website helps children explore the water cycle through a fictional character named "Thirston", a glass of water. This site offers printable activities as well as an interactive online-water-cycle that reads a story to the children as they click on the various parts of the cycle. The interactive water-cycle uses terms such as transpiration and evaporation, which may need to be explained in greater detail by the teacher prior to, or after the investigation. The availability of technology at the school will determine how the teacher integrates this resource into the curriculum.

Other Resources Used:

- Globe
- Large flashlight
- Clay
- Meat-trays
- Sticky labels
- Markers
- Crayons
- Dry-erase board

Part IV: Curriculum

Part IV A) Narrative Overview

Purpose and Goals of Integrated Social Studies and Science Unit

Topic: Our Earth, Our Resources

Major Lesson Headings within Topic

1. Different Kinds of Weather
 - a. Weather can vary from day to day and from place to place
 - b. Weather affects what we wear and what we do
2. Looking at Our Land and Water
 - a. Earth has different kinds of land (mountains, hills, plains) and water (oceans, lakes, rivers)
 - b. A globe is a round model of the earth; like a map – it shows landforms and bodies of water
3. Our Earth's Resources
 - a. Among earth's natural resources are land, water, air, trees, oil, and gas. It is important to conserve natural resources
4. Caring for Our Resources
 - a. To conserve natural resources, people can observe 3 R's: reduce, reuse, recycle
 - b. When people care for the Earth, they also help endangered animals such as giant pandas and tigers

Initial ideas for major activities and projects:

- Keep a daily weather journal (3 weeks) – record sky and atmospheric conditions & temperature twice daily. Write a sentence in journal describing weather.
- Make landform relief sculpture of mountain, hill, plain, ocean, lake and river – label
- Make natural resource flip book: draw picture of each natural resource, label, and draw what it can be used for and label.
- "Save the Earth" posters featuring an animal or region and support plea with scientific facts or reasoning

Purpose and Rationale:

- The purpose of this unit is to familiarize students with the basic weather, landforms, and natural resources of the earth and begin to understand the interdependent relationship between humans and the earth's resources.
- This is important to study because we all need to use the earth's resources, but since resources are limited and do not replenish quickly, we need to take care of them so they will be there in the future and we need to protect them from becoming polluted so we do not harm ourselves, other people, or other wildlife.
- Through this unit children will become more aware of the features of the earth and its natural resources and learn several ways to take care of them.

What I want the students to Know: (facts, information, processes, skills)

- **Lesson 1: Different Kinds of Weather**

- What weather is (temperature, precipitation, and wind)
- Different weather conditions (rainy, snowy, sunny, windy, hail, sleet)
- Temperature is how hot or cold the air is
- Temperature can be measured on a thermometer – we use a scale called Fahrenheit
- The earth is a sphere
- The equator divides the earth in half
- Ideas of what we wear in summer verses winter
- Ideas of what we do in the summer and in the winter

- **Lesson 2: Looking at Our Land and Water**

- We call a map of the earth a globe – it shows land and water features
- The major earth features are mountains, hills, plains, oceans, lakes, and rivers
- What a mountain is (the highest kind of land)
- What a hill is (land that is higher than the land around it, round top, not as tall as a mountain)
- What a plain is (large area of flat land – good for growing crops)
- What an ocean is (large body of salt water that covers most of the earth)
- What a lake is (large body of fresh water, smaller than an ocean, have land totally or almost totally around it)
- What a river is (a long body of freshwater that usually moves down-hill toward a lake or ocean)
- How water runs/flows across different landforms

- **Lesson 3: Our Earth's Resources**

- What a natural resource is (a useful thing that comes from nature)
- Examples of natural resources (water, air, tress, soil, land, oil, gas – perhaps metal –)
- Things we use that come from natural resources – match a thing with a resource (paper/trees, gas/oil,)
- Uses for natural resources (drinking water, swimming, animal habitats, oxygen/air comes from tress, farming, build houses)

- **Lesson 4: Caring for Our Resources**

- What it means to reduce, reuse, and recycle natural resources
- What items can be recycled
- How you know something can be recycled
- What is an endangered animal?
- How does an animal become endangered?

What I want the students to understand: (big ideas, concepts, principles, generalizations)

• **Lesson 1: Different Kinds of Weather:**

- Weather can be different everyday
- Weather is different in different places – general regions of the earth that are cold all the time (poles), hot all the time (equator), places where the weather is in between and seasons change.
- Weather depends on where you are on the globe (how far north or south of the equator you are)
- The sun shines directly on the equator – that’s why the equator is the hottest
- Weather affects what we wear and do

• **Lesson 2: Looking at Our Land and Water:**

- How to describe and differentiate between major land/water features (difference between mountain and hill – ocean, lake, & river)
- Earth is made up of two things: land and water
- Land can be high or low
- Water can be fresh or salty
- Water in rivers moves downstream into either lakes or oceans and travels to different places around the world
- Water moves faster down steeper slopes like mountains → hills → plains

• **Lesson 3: Our Earth’s Resources**

- It is important to conserve our natural resources
- People and animals depend on natural resources (clean water and air – a home in nature) to live (eat, drink, shelter)

• **Lesson 4: Caring for Our Resources**

- To conserve our natural resources people reduce, reuse, and recycle
- If everyone tries to conserve and preserve our natural resources our resources will last longer and stay cleaner. When we conserve and preserve our natural resources we can help save the earth by not destroying habitats for animals.

Part IV B) Parent Letter

Sheridan Rd. Elementary
3701 N. Cedar St.
Lansing, MI 48906
(517) 325-6871

February 17, 2007

Dear Families,

This letter is to inform you of the topics we will be learning about in social studies and science for the next six weeks. We want you to be informed so you can extend the content of our classroom to your daily lives. We encourage you to have conversations with you student about these topics, and point out real-world examples as you encounter them.

The unit we are beginning is entitled, "Our Earth, Our Resources." In this unit, we will explore topics such as weather, water, land and water forms, natural resources, and ways to preserve the earth. We will explore various types of weather we encounter in Michigan, and express how weather impacts what we wear and do in different seasons.

"Water", is the unifying theme of our unit. We will discover how water cycles through our earth and back into the sky; how it travels over various landforms; why it is an important natural resource; and how and why we should conserve it.

Below is a list of ways you could explore these topics further at home:

- Weather – watch or listen to weather reports together. Discuss the next day's weather and choose appropriate clothing the night before.
- Water – Discuss where your family gets its water. Visit water tower or drive by Board of Water and Light. List and discuss things your family uses water for each day.
- Landforms – Look for landforms in movies or television programs. Discuss landforms seen on family trips.
- Conserving and Preserving Natural Resources – Set-up or discuss current family-recycling-plan. Visit pop-can recycling center at local supermarket.

Talking with your student about ways subject matter in school directly connects to their personal lives will make learning in, and out, of the classroom more meaningful and memorable.

I hope you will contact me with any questions you may have.

As always, thank you for your support!

Sincerely,
Miss Dunham

Part IV C: 10 Lesson Plans

LACP 1: "What About the Weather?"

Date: Thursday, February 15, 2007

Overall lesson topic/title: "What About the Weather?"

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The Social Studies Curriculum for first grade students in the Lansing School District states that students need to learn the following about weather:

- Weather can vary from day to day
- Weather can vary from place to place
- Weather affects what we wear and do

This lesson also addresses the State of Michigan Content Standards and Benchmarks for Science:

Science - Strand 5: Atmosphere and Weather:

Content Standard 3: All students will investigate and describe what makes up weather and how it changes from day to day, season to season, and over long periods of time; what causes different kinds of weather; analyze the relationships between human activities and the atmosphere.

(EAW) V.3.e.1 Describe weather conditions

(EAW) V.3.e.2 Describe seasonal changes in Michigan's weather

This introductory lesson is designed to elicit students' prior knowledge and experience with various types of weather and lay a foundation for understanding what weather is, and how it affects our lives every day.

Goals/Objectives for today's lesson: (What do I want students to learn and what will they do to learn this?)

- Students will brainstorm the types of weather they are familiar with
- Students will learn that weather can be characterized by three things:
 1. What the sky looks like.
 2. What the air feels like.
 3. What the clouds are doing.
- Students will learn to identify a thermometer, describe its usefulness, give a general description of how it works, and be able to read it with the help of an adult.

Materials & supplies needed:

- “Social Studies: All Together” Teacher guide pages 135 – 149
- Thermometer
- Dry-erase board, markers, eraser

Procedures and approximate time allocated for each event

- **Introduction to the lesson** (What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (10 minutes)

**** Students seated at carpet****

For the next few weeks in Social Studies we are going to talk about weather.

“Weather is how it is outside at a certain place and time”

We experience different kinds of weather every day.

We talk about the weather each morning at calendar.

What are the kinds of weather do you know about?

****Brainstorm – take student ideas, write collection on dry-erase board**

****Allow students to share personal experiences with weather as they are brainstorming types of weather.**

Transition out of brainstorm:

Look at all the kinds of weather we know about! Today we are going to explore what weather is a little more, and learn *what* we are describing when we tell someone what the weather is like.

- **OUTLINE of key events during the lesson** (Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (30 minutes)

When we describe the weather, we are describing three different things:

- What the **sky looks** like (cloudy, sunny)
- What the **air feels** like (warm, cold, windy)
- What the **clouds are doing** (raining, snowing, hail, sleet)

Let’s describe the weather we see right now:

Academic, Social and Linguistic Support during each event:

**** Give positive oral feedback to students as they respond to encourage other students to share what they know**

****Remind students that right now there are no right or wrong answers and everyone knows something about weather**

****These three features of weather will be emphasized each day for the next three weeks as the students record their observations in their weather journals. This repetition is aimed to reinforce this basic knowledge that students are introduced to in this lesson.**

****Write on dry erase board****

Today is Thursday, February 15, 2007. Right now we are in Lansing, Michigan and the time is _____.

Outside, the sky is _____, the air feels _____, and the clouds are _____.

We just wrote a description of the weather. In order to write this description we had to look outside and make an observation about what we saw.

Next week we will begin keeping a weather journal where we will look at the weather two times each day for three weeks and draw a picture of what we see and then write a description of it. We will also chart how hot or cold it is each day by reading a thermometer.

****Introduce thermometer****

Has anyone ever seen a thermometer before? ****See show of hands****
****Allow time for students to share experiences****

Does anyone know what we use a thermometer for?

****Take student responses****

Sometimes we want to measure exactly how hot or cold the air is. To do this we use a **thermometer**.

Describe thermometer: liquid mercury, it goes up and down, has ticks, numbers, relationship of up to hotter and down to colder temperatures

Measure the air temperature of room: _____

What will happen to the red mercury if I stick the thermometer in a cold refrigerator or freezer?

Mini-Assessment of Thermometer:

****Students raise hands, verbal response**

- What does a thermometer tell us? (how hot or cold the air around it is)
- How does it show the temperature? (Mercury line and tick marks)
- What happens to the mercury when the air gets warmer? (it goes up)
- What happens to the mercury when the air gets colder? (it goes down)
- What is that thermometer measuring? (the temperature of the

***This is the first modeling that the students will see about how to make an observation and write a description. Students will be making observations and descriptions of the weather each day for three weeks. They will be guided each day in how to do this until they can do it successfully on their own, and the process becomes internalized.*

***Students will be allowed to touch this thermometer and see a real visual-aide to help shape their understanding of what a thermometer is and how it works. There is also a picture of a thermometer in the teachers guide – this may be utilized if more examples are needed.*

*** Seeing an example of a thermometer should trigger students' memory of experiences they've had with thermometers. This will promote sharing of experiences as they connect the object with their own lives.*

***This is a check to see if students are getting the concept that the mercury goes up when the air gets warmer, and down when the air gets cooler.*

<p>air around it.)</p> <p>Open Question and Answer about Thermometer:</p> <ul style="list-style-type: none"> • Take student questions or comments about a thermometer. <p>Extend Thermometer discussion to other places in student's lives:</p> <ul style="list-style-type: none"> • Where have you seen them? • Has your mom or someone ever used a thermometer to take your temperature? • What was that thermometer measuring? (temperature inside your body) <p>• <u>Closing summary for the lesson</u> <i>(How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (10 minutes)</i></p> <p>Review Weather:</p> <p>What is weather?</p> <p>“Weather is how it is outside at a certain place and time”</p> <p>What three things do we tell about when we are describing weather?</p> <ul style="list-style-type: none"> • What the sky looks like (cloudy, sunny) • What the air feels like (warm, cold, windy) • What the clouds are doing (raining, snowing, hail, sleet) <p>We can tell exactly how warm or how cold the air outside is by using a thermometer. A thermometer is a tool we use when we want to describe the weather.</p> <p>• <u>Transition to next learning activity</u></p> <p>Next week we will be starting to keep track of the weather in our weather journals. We will be drawing a picture of what the sky looks like and what the clouds are doing and we will be recording the temperature and the time. We will keep track of our weather and see how it is changing from day to day.</p>	
<p>Assessment <i>(How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</i></p> <p><i>I will look at student's weather journals after the first week to see if they are writing and drawing: what the sky looks like, what the air feels like, and what the clouds are doing.</i></p>	<p>Academic, Social, and Linguistic Support during assessment</p> <p><i>**I will circulate through classroom as students are completing weather journals. I will stop and help students formulate better articulated responses if it is apparent that they are not being descriptive enough.</i></p>

LACP 2: "Weather Journals"

Date: Tuesday, February 20, 2007

Overall lesson topic/title: "Weather Journals"

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The Social Studies Curriculum for first grade students in the Lansing School District states that students need to learn the following about weather:

- Weather can vary from day to day
- Weather can vary from place to place
- Weather affects what we wear and do

This lesson also addresses the State of Michigan Content Standards and Benchmarks for Science:

Science - Strand 5: Atmosphere and Weather:

Content Standard 3: All students will investigate and describe what makes up weather and how it changes from day to day, season to season, and over long periods of time; what causes different kinds of weather; analyze the relationships between human activities and the atmosphere.

(EAW) V.3.e.1 Describe weather conditions

(EAW) V.3.e.2 Describe seasonal changes in Michigan's weather

Goals/Objectives for today's lesson: (What do I want students to learn and what will they do to learn this?)

Students will begin to make and record observations of weather in their own weather journal. They will learn how to make a detailed observation which will include a drawing of what they see and a written description as well as other vital information such as the date, time, and temperature. They will create a journal entry twice daily for three weeks in order to notice that weather changes from day to day.

Materials & supplies needed:

- Pencils
- Personalized pre-made weather journal
- Access to view out a window or time to take a walk outside to make observations
- Large chart paper
- Clock
- Thermometer
- Weather Word Wall
- Large black marker

Procedures and approximate time allocated for each event	Academic, Social and Linguistic Support during each event):
<p>• <u>Introduction to the lesson</u> <i>(What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (2 minutes)</i></p> <p>Introduce during morning writing</p> <p>(Have students clear desks except for a pencil)</p> <ul style="list-style-type: none"> • For the next three weeks we are going to be keeping a weather journal. It will be a way for us to keep track of the weather each day • Today we are going to start this together during Morning Writing. Tomorrow you will do this right when you get to your seat instead of taking a book out to read or paper to draw on. • Each day we are going to record what the sky looks like, what the air feels like, and what the clouds are doing in the morning when we get to school and after lunch. • The student of the day will help us make our observations and give us a weather report each day. I'm going to give you each a journal and explain to you how we will write in it. <p>• <u>OUTLINE of key events during the lesson</u> <i>(Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (30 minutes)</i></p> <ul style="list-style-type: none"> • Pass out weather journals: note- your name is on the front. When you get your book please turn to the first YELLOW page • The first thing that we are going to do is write the date. Use capital letters for days of week and month. • Then we are going to look at the time and write that in the blank • Then the person of the day is going to tell us the temperature. He/she is going to go over to the window and read the thermometer. • Then, you are going to think back and remember what you saw and felt as you came to school. You are going to draw a picture of the weather in the first box and then finish the sentence at the bottom that says, "Outside the weather was..." 	<p><i>**Color-coded pages provide support for visual learners</i></p> <p><i>**My modeling the procedure helps all students get proper practice completing the journal the correct way</i></p> <p><i>**This reinforces concepts of time we have been learning all year</i></p> <p><i>**Utilizing person of the day gives each student an individual chance to learn how to read a thermometer and helps me see who needs more help telling time. It also makes them feel special and more engaged in the assignment.</i></p>

If we had some unusual weather or you want to write more about the weather when you are done you may turn the paper over and write on the back of your yellow page.

- You may not use crayons to color these because we don't have enough time
- You will keep your weather journal in your desk and take it out during rest time.
- You will fill in the left side of the paper in the morning and the right side of the paper in the afternoon. They are the same statements but the information we put will change.
- During calendar and story times, the person of the day will read their weather report to us. They will be like the weather forecaster we see on the news. He or she will tell us our morning temperature and our afternoon temperature and we will record that on a classroom graph
- We will do this for three weeks and then look for patterns in our daily weather.
- Any questions?
- Model through first journal entry with students

- Introduce Weather Word Wall. Explain that there are many weather words listed on movable Weather Word Wall. These words will be helpful to them when they write about the weather. If they don't know how to spell a word, they should check the Weather Word Wall first to see if it is there. If the word is not there, they can raise their hand and I will write the word on chart paper at the front of the room, and then later I will add the word to the wall. Only common weather-related words will go on the wall. All other words should be spelled using their best inventive spelling.
- Review words that are on the wall orally with students. Show them how the words on each row are categorized (types of weather – snowy, foggy, rainy, etc. first row)

***The layout of the recording paper makes it easy for students to see changes from morning to afternoon.*

***This is an authentic experience. Students are sharing their personal observations. This builds upon the science learning community we are establishing. It gives everyone a chance to participate. Introduces them to public speaking.*

***When a student in class who is speech impaired shares. I will model good listening skills so other students will pay attention.*

***Each journal has enough pages for students to make observations for four weeks. Each week is printed on a different color paper so students can find their place easily (especially if they are absent) and for visual organizational support so students can see the weather in one week and so that I can ask them to turn to certain pages easier.*

***During this instruction, I am writing on large chart paper what they are writing in their journals.*

***I read the temperature with the person of the day. I don't expect them to read this on their own, but each student gets individual instruction for reading a thermometer as they learn how it works.*

• **Closing summary for the lesson** (How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (7 minutes)

We will be making weather observations twice each day. Once in the morning after we get to school, and once after lunch. We will record the temperature twice each day as well on a Weather Chart. We will look for patterns in the weather and temperature. We will make predictions for afternoon temperature based on morning temperatures and other trends.

• **Transition to next learning activity**

When you are finished with recording observations, put your journal in your desk. The person of the day can keep theirs out. Once your materials are all put away, put your head down to let me know that you are ready and I will call quite groups back to carpet.

***I know many students like to color, but they would get too involved in coloring that they may miss the point of the observation*

***Use several methods to make sure each student is keeping up with the pace of the class. Circulate occasionally, ask students to put a "thumbs up when they're caught up", Re-read what they should have written aloud so they can check their work.*

***Every time students write in their weather journals, the word wall is brought to the front of the classroom for visual support in their writing. This will hopefully encourage them to use words they otherwise wouldn't think of, or may not use because they didn't know how to spell it right.*

***The Weather Word Wall will also be integrated into the daily calendar routine. The student of the day will pick a word from the word wall and use it to create a sentence, which I will write on the board and use for instruction on proper mechanics of sentence writing.*

Assessment (How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)

Each week I will check weather journals for accurate spelling of days of the week, date, proper format for recording time and temperature, accurate picture and description of weather. I will be looking for detailed observations and use of weather words.

Academic, Social, and Linguistic Support during assessment

LACP 3: "Seasonal Weather in Michigan"

Date: Tuesday, February 20, 2007

Overall lesson topic/title: "Seasonal Weather in Michigan"

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The Social Studies Curriculum for first grade students in the Lansing School District states that students need to learn the following about weather:

- Weather can vary from day to day
- Weather can vary from place to place
- Weather affects what we wear and do

This lesson also addresses the State of Michigan Content Standards and Benchmarks for Science:

Science - Strand 5: Atmosphere and Weather:

Content Standard 3: All students will investigate and describe what makes up weather and how it changes from day to day, season to season, and over long periods of time; what causes different kinds of weather; analyze the relationships between human activities and the atmosphere.

(EAW) V.3.e.1 Describe weather conditions

(EAW) V.3.e.2 Describe seasonal changes in Michigan's weather

This lesson will guide students in characterizing predominate weather patterns of each of the four seasons encountered by those who live in Michigan. Students will then apply their knowledge about weather conditions to their everyday live by showing how the weather impacts what we wear.

Goals/Objectives for today's lesson: (What do I want students to learn and what will they do to learn this?)

Students will think about how weather changes over the course of a year in Michigan, and be able to draw themselves in each season doing and wearing something appropriate for the weather that predominates in each season. We will draw upon readings and personal experience to construct knowledge.

Materials & supplies needed:

- Dry-erase board/markers
- Pencils
- Crayons
- Copies of Season Wheel worksheet
- *World Book Encyclopedia Presents Weather*. Kespert, Deborah. (1999).

Procedures and approximate time allocated for each event	Academic, Social and Linguistic Support during each event):
<p>• <u>Introduction to the lesson</u> <i>(What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (4 minutes)</i></p> <p>For the past few weeks we have been studying weather in Social Studies. We have been talking about different kinds of weather such as: rainy, snowy, sunny, and windy. We've also been charting the weather daily in our weather journals.</p> <p>Today, we are going to think about the kind of weather we experience most in each season in Michigan. We are also going to think about the kinds of things we can do in certain weather, and what kinds of thing we would wear in that weather.</p> <p>At the end of the lesson, you are going to get a chance to draw yourself doing something you like to do in each season wearing what you would wear to do it. Let's begin.</p> <p>• <u>OUTLINE of key events during the lesson</u> <i>(Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (25 minutes)</i></p> <p>Review Prior Knowledge of Seasonal Names and Order:</p> <ul style="list-style-type: none"> • Who knows what season we are in right now? (winter) • What month is it? (February) • What season will we have next? (spring) • Spring will come in about a month, March 21. • What season comes after spring? (summer) • Are we in school during the summer? (no, not for long) • What comes after summer? (fall) • And what comes after fall? (winter) • Good. We're back to winter <p>Review Prior knowledge of Temperature and Typical Weather in Each Season:</p> <ul style="list-style-type: none"> • What kind of weather do we normally have in the winter? • What is the temperature like? Hot or Cold? • What happens when we change from winter to spring? • What kind of weather do we normally have in the spring? • What happens when we change from spring to summer? • What kind of weather do we usually have in the summer? • What happens when we change from summer to fall? 	<p><i>**Call on a variety of students to answer these questions. Vary between boys and girls and those who are raising their hands and those who are not</i></p>

- What kind of weather do we normally have in the fall?
- What happens when we change from fall to winter?

If we look at our weather journals or our weather chart, we can see that the weather changes from day to day. We also know that the weather changes from season to season. It is cold and snowy in the winter, and hot and mostly dry in the summer.

Draw Weather Wheel on Board. Explain how the weather wheel works. Begin by placing months on outer edge. Have students help decide which season goes with which set of months. Briefly mention the months that are in the middle, between seasons. They share two seasons. Use March as an example. Half winter, half summer.

Ask students what the weather is like in each season, something they like to do in each season, and what they wear to do the thing they like to do. Model how to fill in season wheel. Stress the importance of showing the appropriate weather (snow, sun, rain), as well as the environment.

Show students pages from the World Book Encyclopedia of Weather. Direct their attention to the pages that show photos of families doing things in each season. Ask students if they like to do any of these things. Have students identify the type of weather they see and describe what the people are wearing and why.

• **Closing summary for the lesson** (How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (25 minutes)

Direct students attention back to the weather wheel drawn on the board. Show students the sheet they will get with a weather wheel printed on it. Instruct them on where to put their name on the paper. Explain that they are going to draw a picture of themselves in each season doing something they like to do. They may use pencil and crayons and they must show the kind of weather they are experiencing as well as what they are wearing.

Take student questions.

Distribute paper to students. Send them back to their seats to work. Be available to answer any questions as they work. Circulate.

• **Transition to next learning activity**

When students are finished with their work they will clean up materials, turn their paper in, and get ready to go home for the day.

***Weather wheel provides organizational support for visual and special learners*

***Allows students to connect weather to personal lives*

***creative expression, artistic ability*

<p>Assessment <i>(How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</i></p> <p>Completeness in weather wheel. Accurate drawing of typical weather displayed in each season. Appropriate activity and apparel for student in each season.</p>	<p>Academic, Social, and Linguistic Support during assessment</p> <p><i>**Circulation. Positive feedback on student drawings.</i></p> <p><i>**Verbal reminders to stay on track & keep working</i></p>
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LACP 4: Why is it Hot? Weather and Geography

Date: Tuesday, February 27, 2007

Overall lesson topic/title: Why is it Hot? Weather and Geography

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The Social Studies Curriculum for first grade students in the Lansing School District states that students need to learn the following about weather:

- Weather can vary from day to day
- Weather can vary from place to place
- Weather affects what we wear and do

This lesson also addresses the State of Michigan Content Standards and Benchmarks for Science and Social Studies:

Describe weather conditions	Science	EAW.V.3.e.1
Describe seasonal weather changes in Michigan	Science	EAW.V.3.e.2
Compare their community and regions with others	Social Studies	II.4.ee.2

Goals/Objectives for today's lesson: (What do I want students to learn and what will they do to learn this?)

- Students will learn why temperature (one aspect of weather) varies from place to place.
- Students will be able to accurately recall information about seasons in MI
- Students will use prior knowledge to compare and contrast the weather conditions in Florida and Michigan in summer and winter
- Students will predict why these weather conditions differ
- Students will learn the names for basic globe features
- Students will learn the term "equator" and understand why places closer to the equator are warmer than places near the poles
- Students will be able to apply their knowledge of temperature differences between the equator and poles to predict the relative temperature of other places on earth

Materials & supplies needed:

- Dry erase board & markers
- Globe
- Lables: Michigan, Florida, Equator, North Pole, South Pole
- Large flashlight
- 2 different colored clay balls

Procedures and approximate time allocated for each event

- **Introduction to the lesson** (What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (10 minutes)

Students are seated at carpet area

1. Review rules for behavior at carpet and Michigan weather in four seasons – Use season wheel on dry erase board
 - a. Have students give one example of weather in that season; what a person in Michigan might be doing; what a person in Michigan might be wearing to do that
 - b. Show some of the students season wheels and have them share what they are doing and wearing in their favorite season.

Today we are going to compare some of the seasons in Michigan with some of the seasons in Florida. First we are going to discover what we know about the weather in each state by filling out this chart together.

- **OUTLINE of key events during the lesson** (Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (30 minutes)

2. Discuss summer and winter weather in Florida and compare to summer and winter in Michigan
 - a. Use student’s prior knowledge to talk about what the weather is like in Florida in the summer and winter. Use table on dry erase board to fill in student ideas
 - b. Fill in chart to include summer and winter conditions in Michigan
 - c. Compare and contrast summer in FL with summer in MI
 - d. Compare and contrast winter in FL with winter in MI
 - e. Make a T-Chart to record similarities and differences

	Florida	Michigan
Summer Conditions		
Winter Conditions		

3. Predict causes for differences in summer and winter conditions in Florida and Michigan
 - a. What do you think makes the summer in Florida hotter than the summer in Michigan?
 - b. Why does it snow in Michigan in the winter but not in Florida?
4. Use globe to develop understanding to why it is generally hotter in Florida all year-round than it is in Michigan

Academic, Social and Linguistic Support during each event):

***Allows students with personal experience with Florida to share*

***Visual representation of state locations on globe allows all students to identify with the state.*

- a. Introduce globe
 - i. A globe is a small model of the earth. It shows where the land and water are. Show examples of land and water on globe. Explain color differences. Water is blue, land is pink, orange, green, yellow, etc.
- b. Show North America. It's the land that Michigan and Florida is on.
- c. Locate Michigan and Florida. Put a sticky label on each state.
- d. Introduce North and South poles – briefly mention familiar weather (very cold, snowy – all the time). Put a sticky label on each pole.
- e. Introduce equator – briefly describe weather – (very hot, muggy, all the time -rainforest) Put a sticky note on the equator.
- f. Point out how Michigan and Florida are both between the North Pole and the Equator
 - i. So why is Florida usually hotter than MI – take student response
- g. Now, turn off lights in classroom and shine flashlight on globe to show that sunlight shines directly on the equator making it very hot.
- h. Show how sun shines on the poles too, but not as much – so they are colder
- i. Talk about how places closer to the equator are warmer than places that are further from it, or closer to the poles. .
- j. Re-ask questions: Lead students to understanding.
 - i. What do you think makes the summer in Florida hotter than the summer in Michigan?
 - ii. Why does it snow in Michigan in the winter but not in Florida?
- k. Michigan and Florida are both between the poles, but Florida is closer to the equator, so it is warmer and does not ever get cold enough to get much snow

***Labels provide linguistic and visual support*

• Closing summary for the lesson *(How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (10 minutes)*

Play Hotter/Colder Game & Review why Florida is generally hotter than Michigan, especially in the summer.

- l. For the Hotter/Colder game, place two different colored balls on different parts of the earth. Ask if you were standing on one of those clay balls on the earth, which ball would be warmer/colder? Why?
- m. Move clay balls to different parts of globe and ask same question

***Call on many students for this game, good for visual and spatial learners*

• Transition to next learning activity

Assessment (How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)

I will listen for student responses to the hotter/colder questions. I will probe for reasoning for their answers. Any place closer to the equator should be hotter because the sun's rays fall in a direct angle on the equator

Academic, Social, and Linguistic Support during assessment

LACP 5: Introduction to Land and Water Forms

Date: Tuesday, March 6, 2007

Overall lesson topic/title: "Introduction to Land and Water Forms"

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The Lansing District Social Studies Curriculum states that students in first-grade should learn the meaning of the terms: Ocean, Lake, River, Mountain, Hill, and Plain and identify land and water on a globe.

The Michigan Standards and Benchmarks also has a similar goal for elementary students:

- Describe major features of the earth's surface EG.V.1.e.1

Goals/Objectives for today's lesson: (What do I want students to learn and what will they do to learn this?)

- Students will identify and describe the physical characteristics of places such as landforms and bodies of water (mountain, hill, plain, ocean, lake, river)
- Students will order landforms from highest to lowest
- Students will order bodies of water from largest to smallest
- Students will compare and contrast salt-water to freshwater and identify which bodies of water contain each type of water
- Students will identify land and water on a globe

Materials & supplies needed:

- Globe
- Clay balls
- Flashlight
- Big book
- Dry-erase board/marker

Procedures and approximate time allocated for each event

- **Introduction to the lesson** (What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (10 minutes)

(Students seated at carpet area)

1. Last time in Social Studies we learned why some places on earth are hotter than others. Who remembers why this is?
2. Review Hotter/Colder concepts on globe, which places are hotter and why. Redo demonstration with flashlight and globe.
 - a. Why is Florida hotter than Michigan?

Academic, Social and Linguistic Support during each event):

***Call on students I did not call on from last session.*

3. Show globe – What two things cover the earth? Land & water. Point to some land point to some water.
4. Show big book p. 150. It has several kinds of landforms
5. *Just like the earth has different kinds of weather, it has different kinds of land and water too.*
6. Today we are going to talk about three forms of land and three forms of water found on earth.

• **OUTLINE of key events during the lesson** *(Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (35 minutes)*

7. The three kinds of land we are going to discuss are mountains, hills, and plains.
8. Draw picture of each on board.
9. Read description of each in big book and point to the corresponding pictures.
10. Discuss relative heights. Draw High, mid & low.
11. Briefly mention weather typically found with each type (mountains = snow, Hills & Plains = dry, grassy, wet)
12. Locate several mountain ranges, hills, and plains in United States on globe. Let students feel the difference in elevation through the relief surface.
13. Introduce three kinds of water: discuss descriptions of oceans, lakes, and rivers. Show pictures in big book.
14. Locate ocean on globe. Oceans have salty water. Oceans account for 97% of all the water on the earth.
15. Find Great Lakes. Note that they are freshwater.
16. Compare sizes of three types of water. Order from biggest to smallest.
17. Discuss that oceans have salt water and lakes and rivers have freshwater that is not salty. Some animals can live in salt water and other animals cannot. Humans cannot drink salt water. We only drink fresh water. List some animals that can live in the ocean. List some animals that can live in lakes and rivers.
18. Mention that water always flows down hill rivers can flow into lakes or oceans. Rivers can flow down mountains.
19. Ask students to tell of experiences they've had with any of the 6 land and water forms.

***for visual learners*

***for spatial learners*

***for tactile learners*

***for audio learners*

***for conceptual learners*

***connecting content to personal lives*

• **Closing summary for the lesson** *(How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (10 minutes)*

20. To review land and water forms, have students do hand motions for each. Teacher says the land or water form and students assume a position that represents that form.

***for kinesthetic learners*

<p>21. Next time in Social Studies each of you are going to have the opportunity to make four of these six land and water forms we learned about today. We are going to make clay models. I will bring one in next week for you to see.</p> <p>• <u>Transition to next learning activity</u></p>	
<p>Assessment <i>(How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</i></p>	<p>Academic, Social, and Linguistic Support during assessment</p>

<p>LACP 6: Creating Land and Water Form Clay Models</p> <p>Date: Tuesday, March 13, 2007</p> <p>Overall lesson topic/title: "Creating Land and Water Form Clay Models"</p> <p>Rationale: <i>(How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)</i></p> <p>The Lansing District Social Studies Curriculum states that students in first-grade should learn the meaning of the terms: Ocean, Lake, River, Mountain, Hill, and Plain and identify land and water on a globe.</p> <p>The Michigan Standards and Benchmarks also has a similar goal for elementary students:</p> <ul style="list-style-type: none"> • Describe major features of the earth's surface EG.V.1.e.1 <p>Goals/Objectives for today's lesson: <i>(What do I want students to learn and what will they do to learn this?)</i></p> <p>Students will build four of the six land and water forms we our studying out of clay and label them appropriately.</p> <p>Materials & supplies needed:</p> <ul style="list-style-type: none"> • Globe • Big book • Clay • Meat trays – Pre-labeled "Student's Land and Water Forms" • Landform labels (one sticker-strip for each student with the words: mountain, hill, plain, ocean, lake, and river) pre-printed on them. • Scissors • Paper • crayons 	
<p>Procedures and approximate time allocated for each event</p>	<p>Academic, Social and Linguistic Support during each event):</p>

- **Introduction to the lesson** *(What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (10 minutes)*

Last week we learned about six different land and water forms found on the earth. Can anyone tell me the name of one that we learned about?

Make list on board as students suggest names. Write names of land forms on one side, water forms on the other. Purposefully order them from biggest to smallest from top to bottom. After write word, draw a picture and discuss description of each feature.

***visual learners*

***spatial learners*

Ask the class if they can discover why I wrote them in that order on the board.

Review the relative heights and sizes of land and water forms in comparison to each other.

- **OUTLINE of key events during the lesson** *(Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (40 minutes)*

Explain Activity:

Today, each of you is going to choose four of these six land and water forms to make out of clay.

I brought the model I made (hold up clay model on meat tray)

Let's look at the ones I chose: mountain, river, lake, plain, and hill.

Each of you will get a meat-tray with your name on it and a bag of clay with four colors in it. You will choose four of the six land and water forms to make. You will make one form out of each color. Once you have made your four forms, you will take this sticker strip with all the land and water forms written on them. You will peel the back of the sticker off (if you need help raise your hand), and then you will cut the words you need and you will stick them on the land or water form they name.

***for visual, spatial, and kinesthetic learners*

When you are done, raise your hand and I will come and look at your model. Then you will set it on the center table, clean up your materials, and then you may get out crayons and a piece of paper and draw a picture that has some land and water forms in it.

Call students names one-by-one. Give them their meat tray, a bag

<p>of clay, and a sticker strip. Direct them to their seat to start working.</p> <p>• Closing summary for the lesson (How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (5 minutes)</p> <p>Your land and water forms really turned out nice. On your way out the door make sure you stop at the table to see what everyone's looks like. You should be able to read the label to tell what it is.</p> <p>• Transition to next learning activity</p>	
<p>Assessment (How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</p> <p>I will look at shape and size of clay objects created and labeled. For mountains I will be looking for pointy tops; hills – rounded tops; plains –flat surface; rivers – windy; lakes large; oceans –larger.</p> <p>I will look for correct labeling and logical placement of landforms (ie: lakes not on the points of mountains)</p>	<p>Academic, Social, and Linguistic Support during assessment</p>

LACP 7: Introduction to Natural Resources

Date: Tuesday, March 20, 2007

Overall lesson topic/title: "Introduction to Natural Resources"

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The Lansing School District Social Studies Curriculum states that first-grade students should learn what a natural resource is; be able to identify and describe six of them: land, water, air, trees, oil, animals, and gas; tell what they are used for; and where they come from.

The State of Michigan Benchmarks and Content Standards also reflect this goal for elementary students:

SOCIAL STUDIES

Strand II Geographic Perspective:

Content Standard 2: All students will describe, compare, and explain the locations and characteristics of ecosystems, resources, human adaptation, environmental impact, and the interrelationships among them.

II.2.e.1 Describe how people use the environment to meet human needs and wants

Goals/Objectives for today's lesson: *(What do I want students to learn and what will they do to learn this?)*

Students will learn what a natural resource is and become familiar with six common ones and describe their usefulness to human life.

Materials & supplies needed:

- Big Book, pages 156-159
- Dry Erase Board & Marker

Procedures and approximate time allocated for each event

- **Introduction to the lesson** *(What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (15 minutes)*

Today in Social Studies we are going to learn something else about the earth. We are going to learn about "Natural Resources"

Does anyone want to make a guess at what a natural resource might be? Prompt: think of the word natural and think of the word resource, can you tell me something that is natural or that you find in nature? (take student responses). Does anyone know what a resource is? What if I told you that this marker is a resource, the paper towel is a resource, this chair is a resource. What do all of these things have in common? (take student responses). We use them all for something.

- **OUTLINE of key events during the lesson** *(Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (25 minutes)*

A natural resource is something that comes from nature that we can use.

Can anyone think of anything they know that comes from nature?
(Make list of student ideas on dry-erase board)

Can anyone tell us what they might use some of these things for?
(Make adjacent list on dry-erase board)

We've come up with some pretty good ideas on our own. Let's read together from our social studies book to see their ideas

- a. Read big book pages 156 – 159
- b. Discuss definition of natural resource again

Academic, Social and Linguistic Support during each event:

**Linguistic learners – breakdown of word

**Visual learners –written word

<p>c. Show examples of 6 natural resources in book d. Discuss what we could use each resource to make e. Relate natural resources and uses to student’s lives. Encourage them to make personal connections.</p> <p>• <u>Closing summary for the lesson</u> <i>(How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (10 minutes)</i></p> <p><i>Check student understanding and review what a natural resource is.</i></p> <p>Name different items in the room and ask if it is a natural resource. If students say no, ask if it is made from a natural resource. Use this as a way to find student misconceptions and to solidify idea of what a natural resource is and is not.</p> <p>Next week in Social Studies we are going to make a natural resource flip book to help us remember what the 6 natural resources are that we learned about today and what they can be used for.</p> <p>When you are at home this week, I want you to be looking for things that are natural resources, and things that can be made from natural resources. We’ll talk about what you have found next week.</p> <p>• <u>Transition to next learning activity</u></p>	
<p>Assessment <i>(How will I gauge the students’ learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</i></p>	<p>Academic, Social, and Linguistic Support during assessment</p>

LACP 8: Extension of Natural Resources

Date: *Wednesday, March 21, 2007*

Overall lesson topic/title: *“Extension of Natural Resources”*

Rationale: *(How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)*

The Lansing School District Social Studies Curriculum states that first-grade students should learn what a natural resource is; be able to identify and describe six of them: land, water, air, trees, oil, animals, and gas; tell what they are used for; and where they come from.

The State of Michigan Benchmarks and Content Standards also reflect this goal for elementary students:

SOCIAL STUDIES

Strand II Geographic Perspective:

Content Standard 2: All students will describe, compare, and explain the locations and characteristics of ecosystems, resources, human adaptation, environmental impact, and the interrelationships among them.

II.2.e.1 Describe how people use the environment to meet human needs and wants

The State of Michigan Benchmarks and Content Standards for Science state that:

Strand 3: Ecosystems

Content Standard 5: All students will explain how parts of an ecosystem are related and how they interact; explain how energy is distributed to living things in an ecosystem; investigate and explain how communities of living things change over a period of time; describe how materials cycle through an ecosystem and get reused in the environment; analyze how humans and the environment interact.

III.5.e.2 Describe the basic requirements for all living things to maintain their existence.

Goals/Objectives for today's lesson: *(What do I want students to learn and what will they do to learn this?)*

Students will

- Recall knowledge of what a natural resource is
- List the six natural resources discussed in a previous lesson
- State examples of natural resources found in their neighborhoods
- Suggest various uses for natural resources
- Create a devise represent their knowledge of the six natural resources and their uses

- Use labeling as a means to communicate meaning of a picture

The goal of this lesson is to help students remember what a natural resource is and what one can be used for.

Materials & supplies needed:

- Scissors
- Large sheet of grey construction paper for each student
- Pencils
- Crayons
- erasers

Procedures and approximate time allocated for each event

- **Introduction to the lesson** *(What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (7 minutes)*

Raise your hand if you found some natural resources at your house this week. (Call on students to share what they found. Help students see distinctions between the natural resources, and things made from natural resources.)

**Make two lists on the board. “Natural Resources” & “Things made from Natural Resources.”

- **OUTLINE of key events during the lesson** *(Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (45-60 minutes)*

Today in class each of you is going to make your own natural resource flip book. I already made one. It looks like this:

**Show example

I took this big piece of paper and folded in half the long way, so it looks like a hotdog bun. Then I took my scissors and cut five times from the bottom open end about an inch from the top folded end.

I left my paper folded, and at the top I wrote the definition of a natural resource. (Read definition aloud) This is the same definition that was in our social studies book.

Then on each flap on the front, I wrote the name of one of the six natural resources we learned about and drew a picture of it. (Go

Academic, Social and Linguistic Support during each event):

**connecting home and school

**connecting real-world to classroom content

**supports visual learners

**visual learners

through each resource and explain picture).

Next, I drew a picture on the inside flap of something I could make with that natural resource. (Show each picture and talk about it). I also wrote a word at the bottom of my picture to tell you what my picture is about. You should do this too. This is called "labeling". You need to label your pictures.

You don't have to draw the same picture as I did on the inside.

What else could you draw? Tell me what resource it comes from when you give your answer.

You do need to use all six natural resources that I did on the front, but what you would use that natural resource for may be different than my example.

You will need to color each of your pictures with crayons and go over your writing with a marker so it stands out.

Let's go back to our seats. Get out a pencil, crayons and scissors and the paper passers will come around with a grey sheet of construction paper for you. The first thing you will do when you get your paper is fold it in half the long way. If you need help, raise your hand.

Next, you will make your five cuts. Make them evenly spaced. You will end up with 6 spaces when you are done.

Copy the definition from the board of a natural resource. Write it in the space at the top of your flip book.

Turn your paper over and write your name on the back.

Next, write the names of one natural resource in each space on the front and draw a picture of that resource and color it. Then open each flap and draw a picture of what it could be used for. Color it and go over your labels with a dark skinny-tipped marker.

If you have any questions, raise your hand. If you accidentally cut your paper wrong, you may get a new one and start over.

Are there any questions? You may begin.

Allow time for student work. If students finish early they may read a book from their desk or read a book from the book center at the

<p>back carpet.</p> <p>• Closing summary for the lesson <i>(How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (10 minutes)</i></p> <p>Collect flip books when students are finished. Clean up materials. Return to seats.</p> <p>• Transition to next learning activity</p>	
<p>Assessment <i>(How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</i></p> <p>Look for six natural resources, correct spelling of name, appropriate drawing. Correct use drawn and labeled for each resource. Correct definition of natural resource at top of paper.</p>	<p>Academic, Social, and Linguistic Support during assessment</p>

LACP 9: Negative Effects of Exploiting Our Natural Resources

Date: Tuesday, March 27, 2007

Overall lesson topic/title: “Negative Effects of Exploiting Our Natural Resources”

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

The State of Michigan Benchmarks and Content Standards for Science state that:

Strand 3: Ecosystems

Content Standard 5: All students will explain how parts of an ecosystem are related and how they interact; explain how energy is distributed to living things in an ecosystem; investigate and explain how communities of living things change over a period of time; describe how materials cycle through an ecosystem and get reused in the environment; analyze how humans and the environment interact.

III.5.e.2 Describe the basic requirements for all living things to maintain their existence.

III.5.e.2 Describe positive and negative effects of humans on the environment

Goals/Objectives for today’s lesson: (What do I want students to learn and what will they do to learn this?)

- Students will make text-to-world connections with activities and attitudes presented in the book, “The Lorax”
- Students will identify the negative effects of using too many natural resources
- Students will develop empathy for the earth and animals negatively affected by the Onceler’s decision to exploit a natural resource and pollute others

Materials & supplies needed:

- Completed natural resource flip books
- Dry erase board/marker
- Children’s book: “The Lorax” by Dr. Suess

Procedures and approximate time allocated for each event

- **Introduction to the lesson** (What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (_ minutes)

For the past two weeks we have been talking about Natural Resources in Social Studies. Who can tell us what a natural resource is?

Who can give us an example of a natural resource and what it is

Academic, Social and Linguistic Support during each event):

used for?

You all did a very nice job on your natural resource flip books. I was able to look them over. I wanted to share some with you. (Show a few students examples.)

You will get these books to take home today. Be sure to show them to an adult and tell them what you know about natural resources. Ask them if they can think of anything else that you might use some of the natural resources for.

Today we are going to talk about what could happen if we do not take care of our natural resources.

• ***OUTLINE of key events during the lesson*** (Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (40 minutes)

Today I am going to read you a Dr. Seuss story called "The Lorax". Raise your hand if you've ever read this story before.

When I read this story, I want you to be looking for natural resources; things that come from nature that characters in the story are using.

I want you to see what happens to the water and animals when the factory starts polluting it. I also want you to pay attention to the attitudes of the characters toward what is happening to the earth.

We'll talk about it when we're all done.

**Read Aloud, "The Lorax".

After Reading Discussion Questions:

- What are some of the natural resources you found as we were reading?
- Can someone describe what the earth was like before the "Onceler" came to town?
- At the beginning of the story, did you think it was so bad that he cut down one tree?
- Why did the Lorax speak to the "Onceler"?
- How did the "Onceler" respond to the Lorax?
- Do you think the Onceler cared about how he was hurting the earth and animals? What makes you think so?
- Was there a way for the Onceler and the Lorax to be happy? What could the Onceler have done differently?

<ul style="list-style-type: none"> • Who was right, the Onceler or the Lorax? Why? • Do you think that we do things like the Onceler did in America? • What might happen to our world if we are not careful to protect our natural resources? <p>• Closing summary for the lesson (How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (2 minutes)</p> <p>We can learn a lot from the story of “The Lorax”. He was concerned about the environment and the other animals that lived in their community. Not everyone is as kind to the earth as they should be. It is our job to think about how we can use the natural resources from the earth, without hurting other plants and animals. We don’t want our world to end up ugly like the town in the story.</p> <p>Next week we are going to learn some ways we can protect our natural resources so that we can make the world a better place for us and everyone else who lives here.</p>	
<p>Assessment (How will I gauge the students’ learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</p> <p>I will listen to responses to discussion questions for passion and logical reasoning in their answers toward the lesson’s objectives</p>	<p>Academic, Social, and Linguistic Support during assessment</p>

LACP 10: Ways to Conserve Our Natural Resources

Date: Wednesday, March 28, 2007

Overall lesson topic/title: “Ways to Conserve Our Natural Resources”

Rationale: (How does lesson address district or state standards? What function(s) of an inquiry instructional model is met?)

This lesson is aligned to several State of Michigan Benchmarks and Content Standards for Social Studies and Science:

SOCIAL STUDIES

Strand II Geographic Perspective:

Content Standard 2: All students will describe, compare, and explain the locations and characteristics of ecosystems, resources, human adaptation, environmental impact, and the

interrelationships among them.

II.2.e.3. Suggest ways the people can help improve or save their environment

Strand IV - Economic Perspective:

Content Standard 1: All students will describe and demonstrate how the economic forces of scarcity and choice affect the management of personal financial resources, shape consumer decisions regarding the purchase, use, and disposal of goods and services and affect the economic well-being of individuals and society.

IV.1.e.2 List ways that individuals can conserve limited resources

SCIENCE

Strand 5: Geosphere

Content Standard 1: All students will describe the earth's surface; how the earth's features change over time; analyze effects of technology on the earth's surface and resources.

V.1.e.6 Demonstrate ways to conserve natural resources and reduce pollution through reduction, reuse, and recycling of manufactured materials.

Goals/Objectives for today's lesson: *(What do I want students to learn and what will they do to learn this?)*

Students should be able to

- Give examples of ways they can reduce waste, reuse materials, and recycle goods and materials.
- Tell why it is important that we take care of our resources
- Make text-to-self connections with the ideas described in the book, "Recycle Everyday" by Nancy Elizabeth Wallace

Materials & supplies needed:

- Children's book: "Recycle Everyday" by Nancy Elizabeth Wallace
- Dry-erase board/marker

Procedures and approximate time allocated for each event

- **Introduction to the lesson** *(What will I say to help children understand the purpose of the lesson? How will I help them make connections to prior lessons or experiences? How will I motivate them to become engaged in the lesson?) (2 minutes)*

For the past few weeks in Social Studies, we have been talking about natural resources: what they are and how we can use them. Last week we learned that if we over-use, or do not take care of our natural resources that we can hurt plants and animals and even make some types disappear forever.

Academic, Social and Linguistic Support during each event):

This week we are going to learn some ways that we can help protect our earth and the people, plants, and animals that live on it.

- **OUTLINE of key events during the lesson** (Include details about how I will begin and end activities; what discussion questions I will use; how I will help children understand behavior expectations during the lesson; when/how I will distribute supplies and materials) (30 minutes)

To do this, I am going to read a story aloud to you. It is called, "Recycle Everyday!" Does anyone know what it means to recycle?

(take student responses)

Sum it up: To recycle means to make something new out of something old. To turn something into something else.

How many people have every taken a pop can to the store to be recycled? What do you think they made from your pop can? Why do we need to recycle pop cans? What would happen if we didn't.

Explain to students that the metal (aluminum) that pop cans are made from is very hard to get out of the earth. We recycle them so that we don't always have to get more from the earth. There is only so much of it that is available, that we have to reuse what we have by recycling it.

When we read this story, I want you to think about all the ways that the main character is saving the earth by what she does. Think about the natural resources she is protecting, and think about if you've ever done some similar things in your life.

****Read story****

After Story Discussion:


- Who can tell me something Mina did to protect the earth?
- What natural resource did that save?
- Have you ever done that same type of thing?
- What other ways can you think of to reduce, reuse, or recycle materials?
- What is something that you read about in the book that you think your family could start doing to help protect the earth?
- Why should we care about protecting the earth and its resources?

- **Closing summary for the lesson** (How will I bring closure to the lesson and help children reflect on their experiences? How will I help them make connections to prior lessons or prepare for future experiences? What kind of feedback do I want from them at this time?) (___ minutes)

We live in a beautiful world full of plants and animals and other people.

<p>Our earth has been around for a long time and it has many natural resources that people need in order to have things that they want and need. The problem is that if we do not make good choices about how much of the natural resources to take, and we do not try to save our resources, there could come a day when re run out. We could also hurt other plants and animals if we dump dirty chemicals or waste into our rivers. We have learned some ways that we can use less of our natural resources and reuse the ones we've already used. If everyone does their part, we can keep the world beautiful. Let's all think about our resources when we make decisions about throwing something out. Let's try to always make the decision that will make our earth happy!</p> <p>• <i>Transition to next learning activity</i></p>	
<p>Assessment <i>(How will I gauge the students' learning as I implement the lesson plan and once the lesson is completed? Specifically, what will I look for? How will I use what I am learning to inform my next steps?)</i></p> <p>Have students write about a natural resource that humans use to survive. Tell what would happen if that resource was used up. Tell how people could prevent that resource from disappearing.</p> <p>Check for responses that use a natural resource described in class and for answers that indicate an understanding of human interdependence on the resource and a way that implies reducing use, reusing material, or recycling material for conservation purposes.</p>	<p>Academic, Social, and Linguistic Support during assessment</p>

LACP		Grouping Patterns				Bloom's Taxonomy						Multiple Intelligence						Standards Addressed							
		Whole Class	Small Group	Individualized	Student-Teacher One on One	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Linguistic	Musical	Logical - mathematical	Spatial	Bodily - kinesthetic	Interpersonal	Intrapersonal	Naturalist	Art Education	Career and Employability Skills	English Language Arts	Mathematics	Science	Social Studies
Unit Introduction	LACP 1: "What About the Weather?"	X				X																	X	X	
	LACP 2: "Weather Journals"	X		X	X	X	X	X	X			X		X				X					X	X	
Unit Development	LACP 3: "Seasonal Weather in Michigan"	X		X		X	X	X			X			X				X					X	X	
	LACP 4: "Why is it Hot? Weather and Geography"	X				X		X	X	X	X		X	X				X					X	X	
	LACP 5: "Introduction to Land and Water Forms"	X		X		X		X						X	X									X	
	LACP 6: "Creating Land and Water Form Clay Models"	X		X		X		X						X	X	X							X	X	
	LACP 7: "Introduction to Natural Resources"	X				X					X			X				X					X	X	
	LACP 8: "Extension of Natural Resources"	X		X		X	X	X			X			X				X					X	X	
	LACP 9: "Negative Effects of Exploiting Our Natural Resources"	X				X	X	X	X	X	X	X		X	X		X	X					X	X	
Conclusion	LACP 10: "Ways to Conserve Our Natural Resources"	X				X	X	X	X	X	X		X	X				X					X	X	

Type	Assessment Technique	Description of Assessment						
More formative 	Prior Knowledge Assessment	<i>Students will answer a series of discussion questions to reveal prior knowledge over several key vocabulary spaced across the entire unit. Teacher will receive oral feedback from select students in the group</i>						
	Lesson Topic	<i>LACP1: What About the Weather</i>	<i>LACP2: Weather Journals</i>	<i>LACP3: Seasonal Weather in Michigan</i>	<i>LACP4: Why is it Hot? Weather and Geography</i>	<i>LACP5: Introduction to Land and Water Forms</i>	<i>LACP6: Creating Clay Models of Land and Water Forms</i>	<i>LACP7: Introduction to Natural Resources</i>
	Informal Observation	<i>Checking to see if students seemed engaged in instruction and activities. Watching how students manipulate materials and converse with others.</i>						
	Oral Questioning	<i>Calling on various students during whole group discussion to check understanding of concepts and abilities to connect content to prior knowledge and come up with logical reasoning to support answers.</i>						
	Quizzes / Tests	<i>Q1: Short answer questions testing basic vocabulary</i>	<i>Q2: Short answer questions with some data such as diagrams, charts, graphs, etc.</i>	<i>Q3: A performance activity to be sure each student can use with accuracy the necessary tools and instruments</i>	<i>Q4: For monitoring if each students can interpret organized data such as diagrams, charts, and graphs, and can organize the given isolated data.</i>			
	Conforming Writing (aims for single right answer , i.e. worksheet)	<i>Weather Journals Seasonal Weather Wheel</i>						
	Diverging Writing (aims for individual, open, creative responses, i.e. essays)	<i>Morning Writing Freewrites to check comprehension</i>						

More summative	Performance Assessment (Project Based Assessment)	<i>Creating Poster Project to demonstrate knowledge of interdependence among humans and environment Building accurate land and water form models</i>
	End of Unit Assessment	<i>Drawing pictures of objects to go with a label, stating a natural resource and its use. Suggest one way to conserve a natural resource. State one reason to preserve natural resources.</i>

Part V: Unit Reflection

What I Know My Students Know, and What I Learned About Assessment

The first pre-assessment I administered to my students asked them to respond to this question: "What can you do to take care of the earth?" I got responses such as: mow the grass, pick up trash, clean the house, water the plants, and don't cut down trees. My students now know a host of other ways they can take care of the earth like: recycle pop cans, recycle paper, plant trees, and don't pour oil in the water. I gathered this information through informal oral assessments at the end of my series of lessons about natural resources. This method of assessment does not allow me to know if each student knows this, but I assume that most of them have this concept because we talked about it so frequently. At least I feel that many of them have a broader knowledge of what it means to take care of the earth at the end of my unit than at the beginning.

All of my students made accurate models of four of the six land and water forms we studied. This tells me that they understand the basic shapes and relative heights of the objects they chose to create. They could identify the features properly with labels. This tells me that they know the names of those objects.

All of my students can identify land, water, and islands on a globe. I know this because I had them all sit in a circle one day and I went around to each of them and asked them to point to each.

I know that all my students know the basic weather that occurs in each season in Michigan and they can draw themselves doing and wearing something appropriate for that type of weather. I know this from analyzing the "Season Wheel" I had them fill in with this information.

At least some of my students can explain why it is hotter in Florida in the summer than in Michigan. I know this because I called on several students to answer this question when I played the "Hotter/Colder Game" with clay balls on the globe.

I am unsure how each of my students made sense of all the material as a whole. I never performed a summative assessment or formal assessments that elicited them to explain their thinking in writing. Most of my complex assessments of their understanding were done orally in a whole group setting. This allowed me to only "test" a few students each time. From what I gather from these forms of assessment, I am lead to think that most of my students understand the concepts I taught, but I would be naïve to think they all understand it to the same degree.

If I ever teach all or part of this unit again, I would spend more time creating a summative assessment with various activities to test each student's overall knowledge of the unit. I feel that I was very "spotty" with my assessments. Most were verbal and so it is difficult to predict students understanding and knowledge of the concepts. I realize now that more thoughtful planning on my part would have benefited me as a teacher. I see that I got caught up in the rush to plan activities and "teach" concepts and forgot to plan concrete assessments. While I was teaching it didn't occur to me that I didn't really know as much about what my students knew as I thought I did. But now as I'm trying to provide examples as to how I know my students know something, and it's hard to say if each of them met my objectives, I realize the value of backward design, and having assessments in place before you teach!