Lesson Title: The Earth
Lesson Author: Barbara Herman
Grade Level: 2
Subject Area: Science

Time Allotted for the Lesson: 10 class periods broken out as follows: 3 Days a week:

<table>
<thead>
<tr>
<th>Day</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>40</td>
</tr>
<tr>
<td>8</td>
<td>35</td>
</tr>
<tr>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>40</td>
</tr>
</tbody>
</table>

Short Description of Lesson: Write a brief, yet concise, description of what occurs in this lesson (50 words).

The students will use a variety of resources to develop an understanding of the earth’s surface, earth’s natural resources and human interaction with the earth. The resources the students will use to build knowledge are their text book, leveled readers, the Internet, computer programs and group interaction.

Classroom Layout and Grouping of Students:
Learning will be taking place in a verity of location, classroom, computer lab, and outside. To provide students with the most successful learning environment they will be grouped into small corporative groups based on Kagan group recommendations of achievement levels: High, High medium, Low medium and low.

State Curriculum Standards met in this lesson:
Illinois Learning Standards:

STATE GOAL 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.
STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.
STATE GOAL 13: Understand the relationships among science, technology and society in historical and contemporary contexts.

National Education Technology Standards for Students (NETS•S) met in this lesson:

1. Creativity and Innovation
   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:
a. apply existing knowledge to generate new ideas, products, or processes.
b. create original works as a means of personal or group expression.
c. use models and simulations to explore complex systems and issues.
d. identify trends and forecast possibilities.

2. Communication and Collaboration
Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency
Students apply digital tools to gather, evaluate, and use information. Students:

a. plan strategies to guide inquiry.
b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making
Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

a. identify and define authentic problems and significant questions for investigation.
b. plan and manage activities to develop a solution or complete a project.
c. collect and analyze data to identify solutions and/or make informed decisions.
d. use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a. advocate and practice safe, legal, and responsible use of information and technology.
b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
c. demonstrate personal responsibility for lifelong learning.
d. exhibit leadership for digital citizenship.

6. Technology Operations and Concepts
Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:
a. understand and use technology systems.
b. select and use applications effectively and productively.
d. transfer current knowledge to learning of new technologies.

Instructional Objective(s): Each instructional objective [learning outcome] for this lesson should identify the A, B, C and D. (Activities are NOT learning outcomes).
1. The student identifies words and constructs meaning from text, illustrations, graphics, and charts using the strategies of phonics, word structure, and context clues.
2. The student knows that scientists and technologists use a variety of tools (e.g., thermometers, magnifiers, rulers, and scales) to obtain information in more detail and to make work easier. The student uses a variety of context clues (for example, illustrations, diagrams, information in the story, titles and readings, sequence) to construct meaning (meaning cues).
3. The student knows selected resources used by people for water, food, and shelter, are limited and necessary for their survival.
4. The student extends and refines knowledge that the surface of the Earth is composed of different types of solid materials that come in all sizes.
5. The student knows selected resources used by people for water, food, and shelter, are limited and necessary for their survival.
6. The student understands the processes of weathering and erosion.
7. The student knows that human beings cause changes in their environment, and these changes can be positive or negative. The student knows ways that human activity affects the environment.
8. The student keeps science records.
9. The student displays solutions to problems by generating, collecting, organizing, and analyzing data using simple graphs and charts.

Materials, Resources and Technology:
List all materials (textbook, other books, maps, crayons, research guides) technology resources (computers, printer, scanner, internet connection, cameras, etc) and web addresses that are needed for this lesson. If you are using copyrighted materials, you must include, title, author, date, city and publisher.
Materials and resources needed for this lesson:
3. Song *Natural Resources* Original lyrics by Gerri Brioso and Richard Freitas. Produced by The Dovetail Group, Inc.

4. Books located in the school and/or local libraries

5. Individual student science journal

**Technology resources needed for this lesson:**

1. Computers
2. Internet Access
3. Digital Cameras
4. Kidspiration Software
5. Kid Pix Deluxe 4 drawing software
6. Printer

**Web Addresses needed for this lesson:** Website name (e.g. Yahoo), followed by the site’s complete web address http://www.yahoo.com,

1. http://www.bbc.co.uk/schools/ks2bitesize/science/materials/ (Rock and Soil)

**Student’s Present level of Performance and Knowledge:** Do the students have the adequate knowledge to complete the lesson successfully? What pre-requisite skills must the students have to complete the lesson content? Include technology skills.

The purpose of this lesson is to develop prior knowledge that the students can refer back to as they progress in school. They may have some knowledge of the scientific progress, plant growth, and recycling. Technology skills are basic and any additional skills will be taught by the computer technology teacher as needed.

**Instructional Procedures**

**Lesson Set:**

*How will you open the lesson to motivate the students? How will you relate this lesson to previous learning & to real life experiences, to explain the importance of the learning to the students? (requires student involvement)*

The students will be in their Kagan groups and in the center of the table will be a guess me bag. Inside the bags will be a verity of rocks. The students will guess what the materials are by writing in their science journals.
After 5 minutes the students will be asked to empty the contents of the bag on to the table. See who guessed right and pose the question: Why do we need to learn about rocks?

Write various answers on the board, if not on board right in science journal: Did you ever wonder what the land is made of (watch video *Rocks: The Solid earth materials part 1*).

The unit Visual “The Earth” will be displayed on the SMART board at the beginning of each lesson for the students to see the connections between each topic and the earth.

**Techniques and Activities:**
List the step-by-step activities in sequential order as they occur in the lesson. They clearly identify what is to take place in the lesson. Within the procedures a variety of classroom teaching strategies (methods) are identified. Student centered activities are included as well as guided practice of the learning is included.

Follow teaching lesson lay out in teacher edition of Scoot Foresman Second Grade Science Diamond Edition, unit B chapter five. Or, refer to Lesson 1 to 5 on the teacher resource link located on the Earth Unit Home Page via the Internet.

**Lesson Closure:**
*How will the lesson come to a close? The content should be summarized and related to future lessons, and actively involve the students*).

In their Kagan groups the students will produce a slide show using Kid Pix to demonstrate how they answered the essential questions from the chapter.

What are natural resources?
What are rocks and soil like?
How do people use plants?
How does Earth change?
How can people help protect Earth?

Each student will add additional categories to their Kidspiration web showing what they learned.

Check science journal entries.

Students will take a unit quiz.