Edtech 506 Lesson Plan Template*

1. **Lesson Author:** Barb Herman

2. **Lesson Title:** What are Natural Resources?

3. **Grade Level:** 2

4. **Subject Area:** Earth Science

5. **Time allotted for the lesson** (express in number of class meetings and/or number of hours):

<table>
<thead>
<tr>
<th>Day</th>
<th>Meet</th>
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<tbody>
<tr>
<td>1</td>
<td>15-20 minutes</td>
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<tr>
<td>2</td>
<td>15-20 minutes</td>
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<tr>
<td>3</td>
<td>15-20 minutes</td>
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6. **Short description of lesson** (write a brief, yet concise description of what occurs in this lesson):
   The students will learn about some of Earth’s natural resources, including land, air, and water; and identify renewable and nonrenewable resources (Cummins, 2008. p.142).

7. **State Curriculum Standards met in this lesson:**
   - **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.

8. **National Educational Technology Standards for Students (NETS-S) met in this lesson:** Go to NETS-S standards and select the appropriate grade level profile (K-2, 3-5, 6-8, 9-12), indicators and standards that are being met in this lesson.

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

4. 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.

9. Instructional Objectives (Each instructional objective [learning outcome] for this lesson):

   a) The student identifies words and constructs meaning from text, illustrations, graphics, and charts using the strategies of phonics, word structure, and context clues.
   b) 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.
   c) 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).
   d) 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.
   e) The student knows selected resources used by people for water, food, and shelter, are limited and necessary for their survival.
   f) The student understands the processes of weathering and erosion.
   g) 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.
h) The student keeps science records.
i) The student displays solutions to problems by generating, collecting, organizing, and analyzing data using simple graphs and charts.

10. Instructional Procedures
a. 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))

Before we begin the Earth unit the class will review cooperative group skills using the Educational Activity Visual because the students will be working in groups throughout this unit.

Engage Ask children: What is soil and why is it important? Accept all logical responses.
Explore Have children compare the soils.
Explain Ask groups to use individual science journals to write down their finds and their finds by comparing similarities and differences in the two types of soil.
Extend Have children examine soil samples from their schoolyards, home yards, or gardens.
Evaluate Discuss how soil differences and water absorption from soil activity.

b. 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.)

Setting Purpose:
Tell children they are going to read about Earth’s natural resources (Cummins, 2008. p.141). Use the Concept Visual to help students understand more about natural resources and help them set a purpose for reading, such as to discover how important natural resources are to living things. Have them look at the pictures in the text book. In small groups the students will read the text book, write down unknown words, and complete the worksheet. Have students write new word in Science Journal.

Ask children the following scaffolded questions to assess understanding.
Define What is a natural resource? A useful material that comes from Earth
List List some natural resources. Sunlight, water, air, oil, coal, forests
Classify Which of the following natural resources can be replaced and which can never be used up: sunlight, trees, water? Trees can be replaced. Sunlight and water can never be used up. (Cummins, 2008. p.143)
Extended Vocabulary: Write the words *nature* and *natural* on the board. Circle the *-al* ending. Explain that *nature* names something; it is a noun. When the ending *-al* is added, the new word *natural* describes something; it is an adjective. Tell children that the two words are closely related. Write the term natural resource on the board and explain that a natural resource is a resource from nature. (Cummins, 2008. p.143)

c. **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)

Presentation of discovery activity findings
Worksheet activity before and after reading
Review worksheet activity after lesson is complete

11. **Adaptations for special learners** (How will you adapt the learning/equipment for students with special needs?)

All students are grouped using Kagan sitting recommendations so not to single out different levels of academic ability. Picture flash cards will be used for students with severe mental impairment or limited English language. **Procedure Visual** has a video that walks the learners through discovery activity to allow for different learning abilities to succeed in the project. **Concept Visual** uses pictures to reflect the words if student is a low level reader.

12. **Supplemental Activities: Extension and remediation** (Extensions are additional activities to expand learning on the lesson content. Remediation activities include methods to re-teach the learning for students who need more instruction/practice.)

**Beginning** Show children a picture of a human-made thing (such as a car) and a picture of a natural thing (such as a tree). Say, for example: *People make cars. People do not make trees. Trees are found in nature. They are natural.* Ask volunteers to say whether other pictured items are natural or made by people. (Cummins, 2008. p.143)

**Intermediate** Build on the above. Make a two-column chart on the board with the headings *Made by People* and *Natural*. Ask volunteers: **What other things are made by people? What other things are natural?** Record children’s answers on the chart. (Cummins, 2008. p.143)

**Advanced** Ask children: **What is a resource?** Guide children to understand that a resource is something that we use to meet a need. For example, money is a resource. Then say: *A natural resource is a resource that is not made by people. For example, trees are natural resources.* Write Natural Resources on the board and ask volunteers to give other examples of resources that are not made by people. (Possible answers may include air, water, sunlight, plants, space.) (Cummins, 2008. p.143)

13. **Assessment/Evaluation** (How will you measure the student’s success? Formally or informally? Formal evaluation of student work requires that a grade is taken while informal might be monitoring of work, or class discussion. This section should contain a description of the assessment process, the criteria for achievement, and performance levels. The criteria should directly align to objectives and instruction. Describe your plan for providing feedback to your students.):
Groups will practice working together, using encouraging words, listening skills, taking turns, etc.
Use Activity Rubric for Discovery Corner Activity – Individual Grade
Use Activity Rubric for Discovery Corner Activity Presentation – Group Grade
Vocabulary Journal Rubric – Individual Grade
Self Assessment of group activity
Review worksheet activity after lesson is complete

14. **Student Products** (What artifact(s) or products will result from the lesson? (such as a report, newsletter, diagram, slideshow, drawing, etc.)

  Science journal write up on discovery activity, presentation of discovery activity findings and reading notes.

* Note for students: This lesson plan template is adapted from the model that is recommended in the book Preparing to Use Technology: A Practical Guide for Technology Integration.

Adopted from: