1. **Lesson Author:** Barb Herman

2. **Lesson Title:** How do people use plants?

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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15-20 minutes</td>
</tr>
<tr>
<td>2</td>
<td>15-20 minutes</td>
</tr>
<tr>
<td></td>
<td>Experiment Daily for 15 to 30 days</td>
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</tbody>
</table>

6. **Short description of lesson** (write a brief, yet concise description of what occurs in this lesson):

The students know selected resources used by people for water, food, and shelter are limited and necessary for their survival. (Cummins, 2008. p.150) The students will begin to understand and use the scientific method.

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:

   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. 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))

Introduce the scientific method by using the **Near Transfer Visual**.


*Explore* Have children use the **Principals Visual** to assist them in setting up a scientific experiment.

*Explain* Ask groups to work together two complete steps 2, 3, 4, and begin step 5 (according to the **Near Transfer Visual**). Each student will use individual science journals to write down the groups agreed upon beginnings.

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 to listen as you read this chapter (Cummins, 2008. p.150). As they listen have them write in their science journals words they may not know and listen for how we use plants.

**Ask children the following scaffolded questions to assess understanding.**

*List* **What are some ways plants are important to us?** Plants provide us with shelter, clothing, paper, and food.

*Describe* **How does cotton look on a cotton plant?** Cotton looks like fluffy white balls along the stem of the plant.

*Evaluate* **Would we be able to live without plants? Why or why not?** Possible answer: No, we would not be able to live without plants because we eat some plant parts and we need plants for shelter (Cummins, 2008. p.151).

Extended Vocabulary: Tell children that the word *plant* has more than one meaning. It can be a noun that names a living thing, such as a tree. It can also be a noun that means “a building and machines used to make or produce articles.” (The power plant operates 24 hours a day.) The word *plant* can also be a verb that means “to put something in the ground to grow” (I will plant a tree.) and “to set something firmly in or on.” (I planted the candle on the cake.) Have children take turns creating oral or written sentences using the less familiar meanings of *plant* (Cummins, 2008. p.151).
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)

- 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. **Principals Visual** has videos that will assist the learners through plant experiment thus allowing all different learners to succeed in the project. The **Near Transfer Visual** uses clip art to reflect the scientific method so learners can easily reference the principals for the experiment.

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 and Intermediate** **Listing Plants**-Name all the plants pictured on pages 150–151. Ask children: *What else is made from cotton? What other trees can you name? What other foods come from plants? What other uses are there for paper* (Cummins, 2008, p.151)? Develop flash cards with pictures of products made from plants and related plants.

**Advanced** Ask the children use the Internet to locate other plants, not found in the book that we use in our daily life and share their finding with the class.

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.):

- 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 reading activity, preparation of experiment, and note taking.

*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: