Oregon Agriculture in the Classroom Foundation

Summer Ag Institute Lesson Plans

Developed By:
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Title of Lesson: **What is Growing in that Field?**

Academic Subject: **Life Science, Art, Reading, Writing, Speaking, Math**

Theme: **Grass and legume forage, and their importance in our lives**

Grade Level: **2/3**

CIM/CAM Standards:

1. Locate information using illustrations, tables of contents, Glossaries, indexes, headings, graphs, charts, and/or tables. (Reading/Benchmark 1)

2. Increase word knowledge through systematic vocabulary development. (Reading/Benchmark 1)

3. Convey main ideas with some details. Structure writing by developing a beginning, middle, and end supported by some transitions. Demonstrate some control of correct spelling, grammar, punctuation, and capitalization. (Writing/Benchmark 1)

4. Convey main ideas with some supporting details appropriate to audience and purpose. Demonstrate organization by developing a beginning, middle, and end with some transitions. Demonstrate some control of eye contact and speak at an appropriate rate and volume. (Speaking/Benchmark 1)

5. Collect, organize, display, and describe simple data using charts, tables, number lines, bar graphs, and line graphs. (Math/Benchmark 1)

6. Recognize characteristics that are similar and different between organisms. (Life Science/Benchmark 1)

Learner Objective: (The student will)

1. Recognize grass and legume plants that are grown in our country.
2. Understand the importance of forage crops.
3. Become familiar with the "field to the world" process for grass seed.
4. Identify products in our daily lives that come from animals.

Vocabulary:

1. forage
2. grass
3. legume
4. clover
5. alfalfa
6. erosion
7. consumer

Anticipatory Set:

When you ride from Lebanon to Albany, do you ever wonder what is planted in all of those fields? Did someone actually plant all that "green stuff" or did it just grow by itself? It doesn't look like anything people would eat, so why would someone go to all that trouble to plant it?

Instructional Outline (Teaching Content)

1. Grasses, alfalfa, and red clover are grown near Lebanon. These plants provide forage for animals, and grass seed to people around the world.
2. Using a Venn diagram, record student responses to observations about the plants.
3. Forage (grass and legumes) are important because they provide food for animals, clean our water and air, hold the soil in place, and add beauty to our surroundings.
4. It is easy to understand how farmers can harvest alfalfa and clover, and feed it to their animals, but

Strategies (What to do, explain or have students do)

1. Give each pair of students a stalk of grass (including roots), and a red clover or alfalfa plant. Give each student a hand lens.
2. After a few minutes, ask students to share things that are the same, and things that are different about the 2 plants.
3. Using trays, plant some grass seed, and some alfalfa or clover seed. Don't tell the students which seeds are which, and ask them to predict when they will be able to identify the plants. Record their predictions on chart paper. After plants are established, the trays of plants can be

getting the grass seed from the field to consumers around the world is a much longer story. Linn County is the "Grass Seed Capital of the World."

5. Healthy forage is needed for healthy animals. Dairy cows turn forage into milk. Beef cattle, who eat forages, become steak and hamburgers. Sheep and goats use forages to produce wool and milk. We can thank a farmer for the animal products that we use every day!

used to do an "erosion experiment" to demonstrate how plants hold the soil in place.

4. Give students a 9 x 12 inch piece of white drawing paper, instructing them to fold it the "hot dog" way and then the "hamburger" way, dividing it into quarters. As the teacher further explains the main reasons for the importance of forage plants, students will draw and color pictures, adding labels for clarification.

5. Show the DVD "Oregon Quality Grass Seed" by the Oregon Seed Council. (Be sure to preview the video and be prepared to pause as needed, to explain unfamiliar vocabulary.) This would be a good time to show any photos taken at local grass seed farms.

6. Give students time to color their "Oregon Grass Seed" booklet and pictures of farm machinery. Students can take turns making "Dirt Babies" while the other students are coloring.

7. Brainstorm a list of animal products that we use in our daily lives. Write the list on chart paper. Students will choose one product, research how it gets from the animal to us, and write a short written report, which will also be presented orally to the class.

8. Students will also use the products list to take a poll of their families and friends, to find out how many of these items are used daily and/or weekly. Then they will use the data to create a class graph.

Extensions:

1. Divide students into small groups to play "Forage, What a Game!" Students will color, cut, and assemble cubes. Each student takes a turn rolling the cube, and sharing a statement, using a complete sentence, about the topic shown on top of the cube.

2. Find out where local grass seed growers ship their seed and locate those places on map of the world.

Closure:

The next time you ride from Lebanon to Albany, look out the car window. What can you tell your family about the crops in those fields? Why did the farmer spend time and money to plant and care for all that greenery?

Resources:

1. "Oregon Grass Seed" booklets, Oregon Seed Council, 1193 Royvonne South, Suite 11, Salem, OR 97302

2. "Oregon Quality Grass Seed" DVD, Oregon Seed Council (Available from Oregon Ag in the Classroom)

3. Farm Equipment: How farmers get all that work done, by Ed McCarthy, Ed D. Bear Enterprises, PO Box 7510, Auburn, CA 95604-7510

4. Ag in the Classroom, **http://aitc.oregonstate.edu**

5. Internet access and/or encyclopedias for reports on animal products

Materials:

- 9 x 12 inch drawing paper
- crayons
- grass, red clover, and alfalfa plants
- hand lenses (magnifying glasses)
- chart paper and/or Venn diagram chart
- trays, seeds, and potting soil for planting grass and legumes
- materials to make "Dirt Babies" (see attaching instructions)
- coloring sheets—grass seed booklets and farm equipment

Evaluation:

- Evaluate student participation when examining and growing forage crops, and during "Dirt Baby" project.
- Evaluate student illustrations of the importance of forage—assess accuracy and neatness.
- Use scoring guide to evaluate the student's written report and oral presentation to the class.