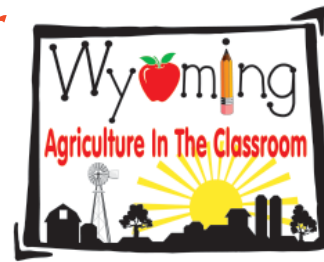


Is The Grass Always Greener Where the Cows Graze

Wyoming Science



Materials

- Grass Seed
- A small milk carton or small clear cup for each student
- Bedding plant tray (without holes)

Time: 45 Minutes

Activity Procedure

Does cattle grazing effect plant growth? Is there a benefit to cattle grazing or does cattle grazing harm plant growth? This experiment/activity can help to answer these questions.

1. Obtain a grass seed mixture from your local garden center or farm supply store. Students can individually plant seeds in a milk carton or a small cup. You may also want to plant seeds in larger containers to get a larger perspective. A bedding plant tray (without holes), a paper egg carton, or a turkey pan is a good size for classroom demonstrations. (To experience using different soils, have the students bring soil from their back yard to plant the grass seeds).
2. Once the seeds germinate, water the cartons equally, and allow the grass to grow until it has reached 3-6 inches tall for grass seeds.
3. Talk to the class about cattle grazing on the land (cattle will graze on grass, but will not pull the grass out of the ground as they do not have any top teeth. Grazing cattle or sheep can be compared to mowing grass in a yard).
4. Have some of the students cut their grass short (one inch above the soil to stimulate a cow grazing on the grass more than one time or intense grazing), have some of the students cut the grass back half way (slightly grazed stimulating a cow grazing on the grass only once), and the other students should not cut their grass.
5. Some of the students that cut their grass back should prune it every 3 to 4 days to simulate intense grazing. The remaining students should cut their grass back when it reaches the length it was when they made their first cut. After about one month, comparisons and results of the intense grazed, slightly grazed, and non-grazed grasses should be recorded and some conclusions made.

Grade:

2nd - 6th Grade

Standards:

Science:

Life Systems: 1.3,

Earth, Space, and Physical Systems: 1.4

Science As Inquiry: 2.1, 2.2A, 2.2C, 2.2D, 2.2E

History and Nature of Science in Personal and Social Decisions: 3.2A, 3.2B

Questions for Evaluation and Assessment

1. What did the groups of grasses look like?
2. What groups of grasses looked healthier?
3. What groups of grasses had more of a root system?
4. Did some grass samples die? For a holistic approach have students measure and chart the growth of their seeds on a weekly basis.
5. Students could also write about the uses of grass, its growth patterns, its requirements for growth, or the effects of grazing on the environment.

Conclude the lesson by talking about the final results and what conclusions the students made based on the this exercise.

