

Kissing the Range

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Grade Level: 5-8

Duration: 1-2 class periods

Subject(s): Science, Technology

Note: Teacher should have previous knowledge using GPS units.

Standards:

Science:

Content Standard 1—Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate results and reasonable conclusions of scientific investigations.

Content Standard 3—Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.

Technology:

Content Standard 5—Students develop the skills, knowledge and abilities to apply a variety of technologies to conduct research, manage information, and solve problems.

Content Standard 6—Students apply technological abilities and knowledge to construct new personal understanding.

Objectives:

- The students will be able to waypoint (survey) identified plants and grasses using a GPS unit.
- The students will be able to navigate a given course using a GPS unit.

Prior Knowledge: Students have already studied and identified local native and non-native plants and grasses. Students know the basic functions to operate a GPS unit.

Materials:

- GPS Unit for each pair of students
- Plant Identification Key (student prior knowledge)
- Local Rangeland (permission may be needed for private land)
- Different colored Hershey Kisses (1 color for each group, total of 8)
- This is an outdoor activity in uneven rocky terrain therefore students should dress appropriately.

Assessment:

1. The teacher will informally assess students' ability to operate a GPS unit during the activity.
2. The teacher will check student coordinates (plant and grasses) after students turn in the GPS units. Assessment will be given on the students' ability to change coordinate numbers to plant/grass names.
3. The teacher will check the GPS for the following: two forbs, two plants/grasses, two native plants/grasses, and two non-native plants/grasses.
4. Assessment will be drawn on students' ability to display discovered colored candies (specific for each group).

Lesson:

1. Explain to students that they will be waypointing (surveying) local plants and grasses previously taught in class.
2. Each student will work with a partner in order to identify two forbs, two plants/grasses, two native plants/grasses, and two non-native plants/grasses.
3. Review plant key previously taught in another lesson.
4. Review steps to change coordinate name on the GPS unit. *For example:* 001 can be changed to June Grass. Students will do this for each plant and grass identified.
5. Review steps to navigate a course with a GPS unit.
6. During the handing out of the GPS units, students will receive 8 Hershey Kisses of the same color. Remind students that they will be turning in their Hershey Kisses at the end of their navigation which will be part of their assessment.
7. The teacher should give students a time constraint in order to complete the activity in a timely manner.
8. At each identified plant and grass, students will place 1 Hershey Kiss.
9. Using the previously marked plants and grasses, student groups will trade GPS units with another group and navigate the other students' course.
10. At each discovered site, students will pick-up the left Hershey Kiss.
11. Students will show they have completed the course by displaying the discovered Hershey Kisses.