



## 7<sup>th</sup> Grade – Consequences of Ecosystem Management Decisions

### Standard:

Science [MS-LS2-5](#)

Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

### Objective(s):

Students will explore the complexities involved in making management decisions and discover the far-reaching consequences of management decisions.

### 4Cs:

Critical Thinking, Communication

### Materials:

Science Notebooks and/or clipboard and paper. Pencils,

### Prerequisite Knowledge (Vocabulary, part of trail, technology, etc):

Ecosystems, Impact, Resources, Competition, Preservation

### Lesson Summary (5-7 sentences):

Pick a small section of the trail with a distinctive ecosystem (i.e. marsh, grassland, stream, woodland). How do humans use this part of the trail? What is their impact? What evidence do you see of this impact? As the walk they observe places where the trail is being impacted by human use. They should draw and make notes of what they observe, what is causing it, and the effects they are seeing on the plants and animals. Notes should include m<sup>2</sup> Area affected.

Back in class, time should be given to discuss the impacts noticed. How do we balance preservation with use? Use the activity "[Dueling Mandates](#)"



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(<https://www.nps.gov/yell/learn/education/classrooms/duelingmandates.htm>)  
about Yellowstone National Park to involve students in a deep discussion of this. Afterwards, apply concepts to the Vine Trail? What dilemmas does it face? Have small groups of students brainstorm and decide on a solution to their dilemma. Then a spokesperson from each group will present the group's dilemma and its solution. Facilitate a class discussion about the issues. What key factors/reasons influenced decisions? What additional information did they need to make an informed decision? What would be the long-term consequences of their suggested solutions?

Map of Trail (state if zone specific):

Additional Resources:

[Turtle power](#)

<http://ngss.nsta.org/Resource.aspx?ResourceID=408>

[Soil erosion](#)

<http://sciencenetlinks.com/lessons/soil-erosion/>