



6th Grade – Science: Human Impact on Environment

Standard (subject, number, text):

Science MS-ESS3-3.

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*

MS-ETS1-1.

Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

Objective(s):

Students will make observations on where human impact might be greatest along a section of the trail and design a way to monitor and minimize this impact.

4Cs:

Collaboration, Critical Thinking

Materials:

Science notebooks and/or clipboard and paper, pencils

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

Human impact, minimize

Lesson Summary (5-7 sentences):

Students walk along trail in groups of three. As they 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 m² Area affected.



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Back in class, time should be given to identify the impact problem they noted, design a potential solution, and write about how they would monitor the effectiveness of the solution.

Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact.

Map of Trail (state if zone specific):

Additional Resources:

[Climate Change](#)

[Erosion](#)