

Personal Statement

A short essay does not provide adequate space for me to detail all the facets of inspiration that have resulted from my Isle Royale experience. However, limiting the details to revitalization in the classroom makes the construction of such an essay more manageable and achievable.

The first aspect of my experience is lost in the expansive language evidenced in the initial paragraph. Isle Royale showed me that simple is better. Simple was better in every aspect of the experience from what to put in my backpack, to what to fix for a meal, to what kind of memories to bring home. I hope to bring this aspect into my classroom. While I can generate great lesson plans and methods of instruction, sometimes, no most of the time, simple and direct is best. I believe that a simple assessment of student work will be better than long detailed lab reports and lengthy homework assignments. The lesson plans I created as part of this assignment are simple; make a poster, give a presentation, complete a chart. The biggest concept I hope to carry over into my classroom is just to keep things simple for both the students and myself.

Isle Royale also returned my sense of awe and wonder at the creations and creatures of nature. Because of my experience, I have set up more and varied habitats in my room. I will keep the rabbit because the students truly enjoy Sampson and every one is comfortable with the typical hamsters and gerbils. Additionally, guppies mysteriously showed up in my classroom prior to my departure for the summer so they now have an aquarium complete with various sized rocks and a variety of plants. I have set up another aquarium to house small reptiles and have “customized” the tank that holds the hermit crabs. However, each habitat will now have information detailing facts about the inhabitants and factors that are changing in a natural setting. I also look forward to adding more habitats as my knowledge of care increases.

The Island also reinforced my need to be able to rely on others, even strangers turned friends. I know that experience of living (closely) with other people for six days caused me to truly value their contributions. I want to continue to explore ways to practice this in my classroom. The first portion of each semester I do many group-building activities and have the reputation of being the “resident expert” in group building. However, Isle Royale reminded me that group building does not stop after the first night, the first seven-mile hike, nor after the first moose encounter. Group building continued throughout the six days. I want to include group building and interdependence throughout a student’s experience in my classroom.

Leave no trace is amazing! I will use the applicable principles to improve my classroom climate and lesson design. My students already do an adequate job of recycling. However, “dispose of waste properly” can become a phrase which includes recycling and then the removal of trash and other student debris that gets left on the desks and on the floor. I think saying to a student “Leave no trace” will help them maintain their surroundings much more effectively than my current statement of “Hey, clean up your mess.”

I believe “respect wildlife” and “be considerate of other visitors” is just a given in any life science classroom. However, I will use “respect wildlife” to reinforce that principle by posting that phrase near each habitat. I think the same phrase can playfully be used to defuse hostile student interactions and to discuss school based examples of human-to-human disrespect.

Obviously, I could go on and on but I need to keep this essay short. Isle Royale was truly an amazing experience for me. I thank my peers for all the insight and information they provided. I thank Brian for an outstanding job as our group leader. And I thank Michigan Tech.

Lance Goodlock
Classroom Outcome
Ecology of Isle Royale - Summer 2006

Lesson Plan 1 – Making a Show while Leaving No Trace

a) Goal statement: Students will demonstrate an understanding of the seven principles of Leave No Trace.

b) Objective: Students will design and present to the class a skit, poster, song, multimedia, or other type of presentation that addresses at least 4 of the 7 principles of Leave No Trace.

c) Application details: Grade level – 9 to 12

Site requirements – classroom area where students can work on a variety of small group projects, student access to resource materials (internet, media center, etc.)

risk management - none

materials – reference materials, poster construction materials, possible access to multimedia resources, student provided musical instruments

d) Content background: This lesson will serve as part of a culminating activity in a Basic Biology Class after a unit on Natural Resources. This lesson will assist the students in understanding how even short-term human activity can have a long-term impact on the environment. The lesson can also be used in College Bound Biology Class as an activity to increase students' awareness of man's impact on the environment.

e) Methods: Students will research the principles of Leave No Trace; design a classroom presentation; and make classroom presentations.

f) Procedure:

- 1) Divide the class into small groups and have each group research the principles of Leave No Trace.
- 2) Have each group design a skit, poster, song, multimedia, or other type of presentation that addresses at least 4 of the 7 principles of Leave No Trace. Encourage the students to use their talents and to be creative. Challenge each group to assume the role of a subject in the wilderness and present from that point of view as opposed to a more traditional lecture format.
- 3) Allow each group to present.

g) Assessment: Design a rubric that measures each student's:

- i) use of time and effectiveness of research,
- ii) active participation in the presentation,
- iii) accuracy of each principle discussed,
- iv) evidence that at least four principles were covered,
- v) creative or artistic appeal.

h) Extension: Live presentations can be made to other classes (same level or lower) or to outside groups. Posters can be displayed around the school or in the community.

Lesson Plan 2 - Pesky Life Cycles

a) Goal statement: Students will demonstrate an understanding of life cycles of a pest organism and organisms that cause human diseases.

b) Objectives: Students will make a poster of the life cycle of an organism associated with human disease, a poster of the life cycle of a pest organism found on Isle Royale, and compare different life cycles.

c) Application details: Grade level – 9 to 12

Site requirements - area for students to research life cycles create posters

risk management – none except to assure students that they will not be working with live disease causing organisms

materials - student access to resource material and poster board and poster making materials

d) Content background: This lesson can be incorporated into an immunity unit or serve as a stand-alone unit. It might be helpful to review with students the general concepts behind life cycles. Students should also be made aware of the effect parvovirus had on the wolf population between 1980 and 1982.

e) Methods: Students will research various life cycles, create posters showing the life cycles and other information, and compare and contrast different life cycles.

f) Procedure:

- 1) Provide a brief introduction to the concept of life cycles.
- 2) Discuss organisms that cause diseases in humans.
- 3) Divide the class into small groups and have each group research the life cycle of selected organisms (Lyme disease, malaria, rabies, Eastern Equine Encephalitis)
- 4) Have each group design a poster that shows the life cycle of the organism and also include other information such as symptoms of infection, treatment of the disease, methods of disease prevention.
- 5) Have each group research the life cycle of selected pest of disease organism found on Isle Royale. (hydatid tapeworm, parvovirus, Giardiasis)
- 6) Have each group design a poster that shows the life cycle of the organism and also include other information such as symptoms of infection, treatment of the disease, methods of disease prevention.
- 7) Have the students compare and contrast the life cycles of disease causing organisms and an organism found on Isle Royale.

g) Assessment: Design a rubric that measures each student's:

- vi) use of time and effectiveness of research,
- vii) accuracy of each life cycle drawn
- viii) completeness of additional information gathered.

Lesson Plan 3 - Plants have Hormones!?

a) Goal statement: Students will demonstrate an understanding of plant hormones and how they control plant processes.

b) Objective: Students will use reference materials to gather information about different plant hormones and their effects.

c) Application details: Grade level – 9 to 12

Site requirements – student access to reference materials

risk management - none

materials – reference materials (internet access, textbooks, encyclopedias) and informational chart to complete

d) Content background: This lesson will be used in the College Bound Biology Class. It will be included as part of a unit on systems in living organisms. Students will already have the knowledge that hormones are proteins and that hormones function as chemical messengers. Student should have recently learned some of the effects of hormones in humans and will now explore hormone function in plants.

e) Methods: Students will research plant hormones and complete an informational chart showing the hormones, effects, and tissues that secrete each hormone.

f) Procedure:

- 1) Provide each student with a chart that has columns for Name, Effect, and Location of plant hormones. The chart should have enough rows to include auxins, cytokinins, gibberellins, ethylene, and abscisic acid.
- 2) Allow time for each student to complete the chart and check for completeness.
- 3) Review as a class.

g) Assessment: Students should receive credit for completing the chart and not on the correctness of information gathered. Students will be assessed on correctness of information through a quiz and a unit test over the information.

h) Extension: Students design and carry out experiments to demonstrate the effects of various hormones on plant functions.

C. Michigan Benchmarks

All lessons plans will address:

- Constructing New Scientific Knowledge (C) I.1.4 (High School)

Gather and synthesize information from books and other sources of information.

- Constructing New Scientific Knowledge (C) I.1.5 (High School)

Discuss topics in groups by making clear presentations, restating or summarizing what others have said, asking for clarification or elaboration, taking alternative perspectives, and defending a position.

- Reflecting on Scientific Knowledge (R) II.1.6 (High School)

Develop an awareness of and sensitivity to the natural world.

Making a Show while Leaving No Trace

- Ecosystems (LEC) III.5.6 (High School)

Explain the effects of agriculture and urban development on selected ecosystems.

Pesky Life Cycles

- Organization of Living Things (LO) II.2.2 (High School)

Describe the life cycle of an organism associated with human disease.

- Organization of Living Things (LO) II.2. 5 (High School)

Describe technology used in the prevention, diagnosis, and treatment of diseases and explain its function in terms of human body processes.

Plants have hormones?!

- Organization of Living Things (LO) II.2. 4 (High School)

Explain how living things maintain a stable internal environment.

Part D - Bibliography

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