



Bring 'Em Back Opportunities for Student Assessment



Opportunities for ongoing formative assessment are embedded throughout the learning experience in questions that spark class discussions. Student worksheets, journal entries and class presentations also serve as formative assessments as the students work through the learning experience.

The summative assessment for *Bring 'Em Back* is a proposal for reintroduction of a now-rare or extirpated species (plant or animal) in the region of the students' school. The members of each team will complete the necessary research, write a proposal, and present the group's idea to the rest of the class. The rubric below (**specifying a species other than otter**) may be modified for evaluating this assignment.

Suggested Student Rubric for Student Projects for *Bring 'Em Back*

Criteria	N/A	Missing	Below Expectations	Meets Expectations	Exceeds Expectations
Evidence of research					
Detailed information about the otter's physical characteristics					
Detailed information about the otter's habitat					
Detailed information about the otter's niche and value					
Explanation of population loss					
Team suggestion for saving the otter					
Inclusion of all team members					
Creativity shown in presentation					



Student Science Journals

Journaling is an important part of a practicing scientist's day to day work. Student-scientists should reflect, write and draw in their journals or notebooks as they answer questions and plan next steps in the problem solving process. Entries should be labeled with names of team contributors, dates and where the team is in the planning process. An occasional look at journals provides an informal assessment of students' progress and their understanding of the content. Sharing the rubric with the students when you introduce the learning experience will help them meet your expectations for quality work.

Criteria	N/A	Missing	Below Expectations	Meets Expectations	Exceeds Expectations
Bring 'em Back Lesson Essential Question (LE#2)					
Research results, local rare/extirpated species					
Position statement- saving an endangered species					
Notes for presentation (request for external funding)					
Reflection/Conclusion					

Bring 'Em Back Cross Curricular Connections

Literacy Connections

Students use information learned from *Otters, Otters Everywhere* (LE#1) to write a persuasive article in favor of protecting a species of their choice. Students should be encouraged to choose another endangered species for research and a persuasive essay, especially one that is not as charismatic as the river otter. After completing research into a lost species in their own "backyards," students are asked to develop a plan for its reintroduction and a presentation for their classmates. An additional literacy assignment could be an essay about the ethics and responsibility of humans for promoting and protecting biodiversity in their home region.



Mathematics Connections

Female otters produce their first litter of two or three pups when they are three years old. Ask your students to calculate and graph the growth of a protected otter population in a nearby river. They should assume that the restocked population had three males and four females, that males are polygamous, and that each otter lives to be approximately 15 years old. Humans are the otter's primary predator.

What will have to be done in the future to manage this population of otters?

Social Studies Connections

Local, state and national governmental bodies have considered and, at times, passed legislation designed to limit or encourage hunting and trapping. Students could research and consider the ethics and personal freedom arguments put forth by supporters and opponents of these laws.
