

# The Biome Zoo Proposal: A Lesson Plan

Submitted by Rob Wall & Jennifer Climenhaga

**Grade:** 11

**Subject:** Biology 20

**School:** North Battleford Comprehensive High School

**Description:** This research lesson was taught with the idea that "research" units do not have to be boring, and in fact, the students seemed to have fun during this assignment.

## Objectives:

- Explain how the interactions among the soil, climate, and living organisms produce the ecosystems which can be observed. (Foundational Objective 1)
- Review several examples of biomes by discussing some of their major kinds of plants, animals and abiotic factors (adapted from Biology 20 Curriculum Foundational Objective 6.2 Review several examples of biomes by discussing some of their major kinds of plants.)
- Identify the biotic and abiotic components and interactions in the ecosystems observed. (Biology 20 Curriculum Foundational Objective 2.2)

## Materials:

Access to the library, computers, and Internet access.

Required documents are available online:

Assignment - available at <http://urltea.com/2cvh>

Rubric - available at <http://urltea.com/2cvi>

Web evaluation checklist (see following sheet)

## Procedures:

Preparation: The objectives of the lesson were discussed by the Biology teacher and the Teacher Librarian. The student handout, as well as the rubrics were developed collaboratively. The Web evaluation checklist was found on-line at: <http://urltea.com/2pgg>

Day One: The handout was given to students and discussed as a class. The assignment deliverables - the written proposal and the zoo model - were emphasized. Students were divided into groups of two (self-selected) for working on the project.

Day Two: The class came to the library computer lab to discuss resources available and research techniques.

Days Three and Four: The class was given time for research. The class time available for research was deliberately kept to a minimum to encourage students to be focused in their

research.

Out of class work time: Students were given a week to work on their projects out of class. The expectation of a high quality project was given.

### **Assessment:**

The projects were marked collaboratively by the Biology teacher and the Teacher Librarian.

### **Lesson Analysis:**

What did we learn? Whenever a new assignment is created and taught for the first time, there is always a learning curve in which possible problems arise. This assignment was no different, and by identifying and dealing with these issues, the strength of the assignment increases.

First of all, the time given was not sufficient for the quality of work that we expected. We believe that more in-class time would help, as well as a class at the beginning for the students to spend brainstorming and planning. After this class we would expect the students to produce an outline of what they want to do with their in-class time, as well as an idea for the assignment. For example, are they going to create a poster of the biome, or tackle one of the other options? We would also suggest having a checklist for the students to follow for elements of the assignment. Many students missed one or two requirements.

Another glitch was that we did not have any examples to show the students of previous work. Many of them wanted to see an example, but as the assignment was new, this was not an option. To alleviate this in the future, a visit to a zoo website, or even a printed pamphlet of a real zoo would help.

Our rubric needs editing! After marking the assignment, we realized that certain aspects of the assignment should weigh more than others. For example, having quality information was important, but having the students provide the information in their own words was more important. This should also help with students who choose to "copy and paste" information from the Internet. We also decided that a portion of one of the first days on the assignment should be spent going over on-line, print, and electronic resources.

We also believe that the students should use their creativity to present the information about their biome, and not be limited to a diagram/poster etc. For example, they could use technology to give a "virtual tour" of the biome zoo. Using green screen technology, students could film themselves as a tour guide and create promotional videos for their zoo. They could also do an in-class presentation of their information, both using slide shows and posters. In order to encourage students in future iterations of this lesson, a sample video or virtual tour created by the teacher and/or teacher-librarian might be useful.



## WORKS CITED INFORMATION

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**Note:** Dates should be typed in the following format: 12 November 2002

#### Web Evaluation Checklist

Sites scoring less than 16 points are unacceptable – find a better web site!

Criteria	Evaluation Techniques	Low Quality	Medium Quality	High Quality
Is the information helpful and important?	How much information is there? Is most of the information important & relevant to your topic?	1 page or less (1pt)	2 pages (3pts)	3 page or more (5pts)
Who is the author of the page?	Is the author's name listed? Can you figure out what makes the author an expert? (Look for an <u>about me</u> link)	Not Qualified (0pt)	Somewhat Qualified (3pts)	Highly Qualified (5pts)
Is the sponsoring organization reliable? *	Is the organization's name prominent? Is there an <u>about us</u> link on the home page? What is the organization's reputation? Are there links to the site?	Not Reliable (0pt)	Somewhat Reliable (3pts)	Highly Reliable (5 pts)
When was the information written & last updated?	Is there an update date listed at the top or bottom of the page? Is there a copyright date at the bottom?	3 yrs or more (1pt)	3-5 years old (3pts)	2 yrs old or less (5 pts)

\* Hint: If you can't find the home page, erase the end of the url back to the part that ends with .com, or .gov etc.

**Total Score:**