

## Land Biomes Project Lesson Plan

Students will work together in committees to discover one Earth's biomes. As a committee, the students will focus their research on the climate, typical flora and fauna, as well as the world distribution of their biome. The committee will present work to the class in a creative manner as if they are trying to persuade the producers of the hit television show "Survivor" to hold the next season in their biome. The biome that wins the production for the next season will receive financial support for their ecological conservation program. Students will also individually research a unique organism to their biome and discuss its specific adaptations.

### Primary Learning Outcomes

- Students will learn the different biomes
- Students will learn the major characteristics of the biomes
- Students will identify adaptations of organisms in various biomes

### Secondary Learning Outcomes

- Students will utilize the Internet and library resources to research their assigned topic
- Students will enhance their presentation skills

---

### Assessed Georgia Performance Standards

SCSh6. Students will communicate scientific investigations and information clearly.

SCSh9. Students will enhance reading in all curriculum areas

SB4. Students will assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.

---

### Background

Students will be able to use their creativity and develop scientific knowledge in this project. Some biomes you may choose to assign to your class include: desert, marine, tundra, savannah, grassland, tropical rain forest, deciduous forest, coniferous forest.

### Procedures/Activities

*Step: 1 Duration: 20 minutes*

Assign committees and biomes for research. Go over project expectations with the students and the expected timeline for completion of the project.

See Land Biomes Project student handout (2 pages)



*Step:2 Duration: 4-5 class periods*

You may choose to take students to the Media Center to perform research which will take more class time, but this also helps to watch and maintain the progress of the students.

On the final day of the project plan to have group presentations, each about 10 minutes long. During the presentations, students should complete the *Land Biomes Summary Sheet* as well as the *Organisms and Their Adaptations*. This provides all students in the class with a summary of the biomes and a study guide for the test.

See *Land Biomes Summary Sheet* student handout (2 pages) and *Organisms and Their Adaptations* student handout (2 pages).

The instructor should evaluate the groups based on their presentation content and skills as shown in the Rubric on the last page of this document.

---

### **Materials and Equipment**

Teacher may choose to provide materials for the presentations (*i.e.* posterboard, blank white paper, colored pencils, markers, rulers, etc.)

Access to technology and the media center resources (encyclopedias, books, etc.) is useful if this is to be completed as an in-class project.

### **Total Duration**

*1 week class time (60 or 90 minute periods)*

Students may have to complete some work outside of class

### **Assessment**

Students are assessed as a group on their presentation and flyer for the biome. Students are assessed individually based on their flyer for their organism and their completion of the summary sheets.



## Land Biomes Project

Due: \_\_\_\_\_

Biome: \_\_\_\_\_

Committee Members: \_\_\_\_\_

### INTRODUCTION

As a committed conservationist, you are concerned about the state of your biome. To ensure the survival of your biome, you need to acquire money for your conservation projects. Since your biome is the best place in the world, you have decided that perhaps you could make some money by hosting “*Survivor*” in your biome. If the television show is produced in your biome, your ecological conservation program will receive financial benefits.

### TASKS

Your objective is to convince the producers of “*Survivor*” that your biome should be chosen for the show. Your task will consist of several parts. You and your committee are assigned the following responsibilities:

1. Produce a flyer describing your biome (e.g. average temperature & precipitation), outlining what ecological concerns in your biome merit funding
2. Individually produce a flyer on an organism in your biome & its adaptations
3. Design a reward challenge unique to your biome
4. Make a presentation to the producers of the “*Survivor*” series
5. Evaluate the suitability of each biome for “*Survivor*”

Guidelines set by the producers of “*Survivor*” are as follows:

- ❖ There will be 4-5 committee members.
- ❖ The flyer will contain the following information –
  - ❑ name of the biome
  - ❑ world distribution of the biome (you may include a map)
  - ❑ location within the biome you want “*Survivor*” to be filmed (i.e. city, island, etc.)
  - ❑ climate of the biome (i.e. average temperature & precipitation)
  - ❑ typical flora (plants)
  - ❑ typical fauna (animals)
  - ❑ ecological concerns, current & future conservation efforts
  - ❑ visuals (pictures, diagrams) to enhance the appeal of the flyer
- ❖ Each committee member will choose one plant or animal that lives in their biome and make a separate flyer that describes the organism and its adaptations. Pictures should be included if at all possible.
- ❖ As a committee, design a reward challenge unique to your biome. (Look at the *Survivor* web site, <http://www.cbs.com/primetime/survivor>, for an outline of some of the past reward challenges – click on “show”, then “challenges”.) Your reward challenge must be presented on a poster using the following format:

Picture of challenge	Challenge Name
	Challenge Location
Reward	Description

←

\*\*\*A *complete* bibliography for the *entire* project should be attached to the back of the poster.\*\*\*

NOTE: Description of Challenge should be approximately 5 sentences.

### PRESENTATION:

- ❖ Each committee has approximately 10-15 minutes to make their presentation (description of biome, individual organism & adaptations, reward challenge)
- ❖ All members must speak.



## EVALUATION:

❖ All committees, when not making presentations, are acting members of the “*Survivor*” production team and are responsible for completing the summary sheet on the biomes and the organism and adaptation summary.

❖ Grading: (project)

- |  |                  |
|--|------------------|
| <input type="checkbox"/> Research info sheet: (individual)     | 5 points         |
| <input type="checkbox"/> Biome flyer: (group)                  | 25 points        |
| <input type="checkbox"/> Organism flyer: (individual)          | 25 points        |
| <input type="checkbox"/> Reward challenge: (group)             | 20 points        |
| <input type="checkbox"/> Complete bibliography: (group)        | 10 points        |
| <input type="checkbox"/> Complete summary sheets: (individual) | <u>15 points</u> |

100 points total

❖ Grading: (presentation)

- |  |                  |
|--|------------------|
| <input type="checkbox"/> Group (biome, reward challenge)     | 50 points        |
| <input type="checkbox"/> Individual (organism & adaptations) | <u>50 points</u> |

100 points total

## RESOURCES:

- Books & Encyclopedias: The Media Center has a large collection of books and science encyclopedias that you may find helpful. There is a set of encyclopedias on biomes.
- Online Resources: Be sure to establish the authority of any site that you visit.
  - General search: Search “biomes” or your assigned biome in Yahoo or Google.
  - [http://www.blueplanetbiomes.org/world\\_biomes.htm](http://www.blueplanetbiomes.org/world_biomes.htm)
  - <http://www.runet.edu/~swoodwar/CLASSES/GEOG235/biomes/main.html>
  - <http://www.cotf.edu/ete/modules/mseese/earthsysflr/biomes.html>
  - <http://www.ucmp.berkeley.edu/glossary/gloss5/biome/index.html>
  - <http://earthobservatory.nasa.gov/Laboratory/Biome/>

Name \_\_\_\_\_

### LAND BIOMES SUMMARY SHEET

Biome	World Distribution	Average Temperature	Average Precipitation	Typical Flora	Typical Fauna	Ecological Concerns	Conservation Efforts

Biome	World Distribution	Average Temperature	Average Precipitation	Typical Flora	Typical Fauna	Ecological Concerns	Conservation Efforts

**Questions:**

Which biome do you think has the greatest ecological concerns? Why?

Which biome do you think is the most challenging for humans to live in? Why?









Name \_\_\_\_\_

## LAND BIOMES PROJECT Research Information Sheet

Biome: \_\_\_\_\_

Committee Members: \_\_\_\_\_

Biome:

World Distribution	
Location of filming	
Average temperature	
Average precipitation	
Typical flora (plants)	
Typical fauna (animals)	
Ecological concerns	
Current conservation efforts	
Future conservation efforts	

Organism: \_\_\_\_\_

General physical description	
Habitat description	
Distribution (world or within biome)	
Adaptations	
Interesting fact(s)	



## BIBLIOGRAPHY

NOTE: You **must** list all resources you use. Also, **do not plagiarize** – it is a *crime*.

## LAND BIOMES PROJECT PRESENTATION RUBRIC

Biome \_\_\_\_\_ Members \_\_\_\_\_

	<b>EXCELLENT (4)</b>	<b>GOOD (3)</b>	<b>FAIR (2)</b>	<b>POOR (1)</b>
<b>CONTENT</b> _____	All required information is presented.	Most of the required information is presented.	Some of the required information is presented.	Hardly any required information is presented.
<b>ORGANIZATION</b> _____	Presentation is well organized and easy to follow. Transition between topics is smooth.	Presentation is organized and easy to follow but transition between topics is not smooth.	Presentation is somewhat organized but hard to follow.	Presentation is very unorganized and difficult to follow.
<b>EYE CONTACT</b> _____	Eye contact is made throughout the entire presentation. No part of the presentation is read.	Eye contact is made throughout most of the presentation. Some of the presentation is read.	Eye contact is made only during some of the presentation. Most of the presentation is read.	No eye contact is made throughout the entire presentation and all of it is read.
<b>VISUAL AID</b> _____	Visual aid is creative, colorful, easy to read, and used effectively.	Visual aid is colorful, readable and used somewhat effectively.	Visual aid is lacking color, difficult to read, and not used effectively.	Visual aid is not used at all in the presentation.
<b>VOICE</b> _____	Presentation is loud and given at a slow pace that's easy to follow.	Presentation is audible and given at a good pace.	Presentation is barely audible and given at a fast pace.	Presentation is inaudible and given at a pace too fast to follow.

TOTAL POINTS = \_\_\_\_\_ X 2.5 = \_\_\_\_\_

COMMENTS: