

# Biome Blog Project

## Overview

Throughout this course, you have learned about the interconnectedness of our planet and how changes in the environment can impact an ecosystem and all of the organisms within it. As a culminating project, you will be creating a blog which discusses the abiotic and biotic components of various biomes throughout the world, how energy moves through each due to interactions between organisms, and the possible impacts humans have on the environment in the area. You will also be incorporating different types of web tools that you have learned to use throughout this year or may incorporate those you choose. While we will not devote all of our class time to the blog, you will be assigned specific times in class to work on your blog at the student work stations. Please use this time wisely!

## Standards

### Environmental Science

SEV1. Students will investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.

- b. Relate energy changes to food chains, food webs, and to trophic levels in a generalized ecosystem, recognizing that entropy is a primary factor in the loss of usable food energy during movement up the trophic levels.
- e. Distinguish between abiotic and biotic factors in an ecosystem and describe how matter and energy move between these.

SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.

- a. Describe how the abiotic components (water, air, and energy) affect the biosphere.
- b. Recognize and give examples of the hierarchy of the biological entities of the biosphere (organisms, populations, communities, ecosystems, and biosphere).
- c. Characterize the components that define a Biome.
  - Abiotic Factors – to include precipitation, temperature and soils.
  - Biotic Factors – plant and animal adaptations that create success in that biome.
- d. Characterize the components that define fresh-water and marine systems.
  - Abiotic Factors – to include light, dissolved oxygen, phosphorus, nitrogen, pH and substrate.
  - Biotic Factors – plant and animal adaptations characteristic to that system.

SEV3. Students will describe stability and change in ecosystems.

- a. Describe interconnections between abiotic and biotic factors, including normal cyclic fluctuations and changes associated with climatic change (i.e. ice ages).
- d. Explain how biotic and abiotic factors influence populations.
- e. Describe interactions between individuals (i.e. mutualism, commensalism, parasitism, predation, and competition).

SEV5. Students will recognize that human beings are part of the global ecosystem and will evaluate the effects of human activities and technology on ecosystems.

d. Describe the actual and potential effects of habitat destruction, erosion, and depletion of soil fertility associated with human activities.

e. Describe the effects and potential implications of pollution and resource depletion on the environment at the local and global levels (e.g. air and water pollution, solid waste disposal, depletion of the stratospheric ozone, global warming, and land uses).

## Technology Standards

### 1. Creativity and innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

b. Create original works as a means of personal or group expression

### 2. Communication and collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats

### 3. Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media

c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks

### 4. Critical thinking, problem solving, and decision making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

b. Plan and manage activities to develop a solution or complete a project

### 5. Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

a. Advocate and practice safe, legal, and responsible use of information and technology

b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity

### 6. Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

a. Understand and use technology systems

- b. Select and use applications effectively and productively
- c. Troubleshoot systems and applications
- d. Transfer current knowledge to learning of new technologies

## Blog Creation

You will be using [Kidblog](#) for your blogs so that comments made on your blog can be moderated. The code and link for each class period will be shared with you via Edmodo. Please choose a display name in which you are identifiable to me and your classmates but not to others (in other words, your display name should be your first name and last initial only, not your full name). Create a password that you will remember and record it somewhere that you can find it. I anticipate collaborating with students and teachers from around the country and world and have them visit and possibly comment on the your blogs. Keep that in mind as you write - take pride in your work and be sure it's something you want attributed to you.

## Blog Topics

You will be analyzing **each** of the following terrestrial and aquatic biomes:

- Savanna (in which you will also analyze the components found in your Lion King analysis)
- Tundra
- Rainforest
- Taiga
- Temperate Forest
- Temperate Grassland
- Chaparral
- Desert
- Freshwater wetlands
- Coral Reef
- Estuaries

## Blog Instructions

You will do research on each of the biomes listed above. There are three types of blogs that you may choose to do:

- Tier 1 (Basic Blog)
- Tier 2 (Multimedia Blog)
  - You must do one Tier 2 Blog
- Tier 3 (Web Project Blog)
  - You must do one Tier 3 Blog

You may choose which biomes are which types of blogs (most of them will be basic blogs). When you are done you should have a total of 11 blogs (most likely 9 of them basic blogs, 1 Tier 2 blog, and 1 Tier 3 blog).

## Tier 1 (Basic Blog)

### Tier 1 Blog Requirements

For each blog, you are required to include the following information:

- Location (written description)
- Climate (temperature and precipitation)
- Overall description of the vegetation and its relationship to the climate (For example, grasslands have shorter plants that are specifically adapted to survive with limited rainfall.)
- 3 specific examples of vegetation in the biome
- 3 specific animals that live in the biome
- At least one picture of the biome

Attached to this document, you have a worksheet for you to use to ensure that you have included all components in each blog.

**Tier 2 (Multimedia Blog)** An asterisk (\*) indicates that this tool is available on the app store.

(Choose one to add to one of your blogs)

[Voki](#) :Customize your own avatar

[Blabberize](#) :Animate your pictures

[Tagxedo](#) : Create unique word clouds using your written blog

\*[Be Funky](#) :Edit your photos, add effects and create photo collages

\*[Animoto](#) : Create a movie slideshow

-OR-

(Choose one to replace written information in one of your blogs)

[Powtoon](#) :Create a video presentation

[Google Slides](#) :Create a basic presentation

\*[Popplet](#) :Create a mindmap

[ToonDoo](#) : Create your own comic strip

[Story Jumper](#) :Write a story about your biome

[Fodey](#) :Create a newspaper article (please note that you will be responsible for your images in your blog)

### Tier 2 Blog Requirements

- Location (written description)
- Climate (temperature and precipitation)
- Overall description of the vegetation and its relationship to the climate (For example, grasslands have shorter plants that are specifically adapted to survive with limited rainfall.)
- 3 specific examples of vegetation in the biome (including at least one picture)
- 3 specific animals that live in the biome (including at least one picture)
- One type of species interaction in the biome (predation, parasitism, competition, mutualism, commensalism); be sure to describe both species and how they interact
- One neat fact about the biome

- At least one picture of the biome

Attached to this document, you have a worksheet for you to use to ensure that you have included all components for this blog.

### Tier 3 Web Project Blog

(Choose one biome in which you are interested to explore further and replace the written post with one of the following tools.)

\*[Prezi](#): Create a web-based presentation

[Google Slides](#) :Create a basic presentation

\*[Glogster](#) :Create an interactive poster

### Tier 3 Blog Requirements

- At least 3 pictures of the biome
- Location (written description and a map)
- Climate (temperature and precipitation)
- Climatograph for a particular city located in the biome
- Overall description of the vegetation and its relationship to the climate (For example, grasslands have shorter plants that are specifically adapted to survive with limited rainfall.)
- 5 specific examples of vegetation in the biome and pictures of each
- 5 specific examples of animals that live in the biome and pictures of each
- One type of species interaction in the biome (predation, parasitism, competition, mutualism, commensalism); be sure to describe both species and how they interact
- Food web from your biome that incorporates at least three trophic levels and at least 6 organisms
- One threat to the ecosystem and how it will impact the environment (Examples: deforestation, global warming, pollution, etc). Include a discussion about how it impacts both abiotic and biotic factors in the ecosystem.
- 3 neat facts about the biome
- YouTube video about your biome
  - This video can be about any of the following information above or about the biome in general. Please choose a video that is between three and seven minutes long.

Attached to this document, you have a worksheet for you to use to ensure that you have included all components in this blog.

### Giving Credit Where It's Due

At the end of each blog, you should provide a working link to all of your sources, including any pictures you find on the web. Remember that just because you find something online doesn't mean you can use it! You should also add your textbook and any other books you use as a source on each blog using MLA formatting. The easiest way to create proper formatting is to input the textbook information into [EasyBib](#), which will generate a reference for you to use.

## Collaboration

### Peer-to-peer

For three biomes, you must read a peer's blog and post a fact about that biome that is not included in their blog and a constructive critique in the comments section of their blog. You must choose a different blog each time and you must comment on a blog that does not already have a comment.

### Professional Critique

In addition to commenting on peers' blogs, you must also find an adult (teacher, parent, coach, etc) to critique one of your posts in the comments section of your blog. Please use the attached Blog Critique Request Form to give to your chosen adult so they understand the type of critique you need.

## Project Timeline

<b>Task</b>	<b>Due Date</b>
Blog Creation and Savanna Biome Analysis	Friday, April 11
Basic Blogs 2 - 5, Peer Comment 1	Friday, April 18
Multimedia Blog, Peer Comment 2	Friday, April 25
Basic Blogs 6 - 9, Peer Comment 3	Tuesday, April 29
Web Project Blog, Professional Critique	Wednesday, May 7



# Biome Multimedia Blog Worksheet

- Location (written description and a map)
  
- Climate (temperature and precipitation)
  
- Overall description of the vegetation and its relationship to the climate (For example, grasslands have shorter plants that are specifically adapted to survive with limited rainfall.)
  
- 3 specific examples of vegetation in the biome (including at least one picture)
  - 1
  - 2
  - 3
  
- 3 specific animals that live in the biome (including at least one picture)
  - 1
  - 2
  - 3
  
- One type of species interaction in the biome (predation, parasitism, competition, mutualism, commensalism); be sure to describe both species and how they interact
  
  
- One neat fact about the biome
  
  
- At least one picture of the biome



# Web Project Blog Worksheet

- At least 3 pictures of the biome**
  - 1
  - 2
  - 3
- Location**
  - Description**
  
  - Map**
- Climate**
  - Temperature**
  
  - Precipitation**
  
  - Climatograph for a particular city located in the biome**
- Overall description of the vegetation and its relationship to the climate**
  
  
- 5 specific examples of vegetation in the biome and pictures of each**
  - 1
  - 2
  - 3
  - 4
  - 5
- 5 specific examples of animals that live in the biome and pictures of each**
  - 1
  - 2
  - 3
  - 4
  - 5
- One type of species interaction in the biome (predation, parasitism, competition, mutualism, commensalism); be sure to describe both species and how they interact**

- Food web from your biome that incorporates at least three trophic levels and at least 6 organisms**
- One threat to the ecosystem and how it will impact the environment (Examples: deforestation, global warming, pollution, etc). Include a discussion about how it impacts both abiotic and biotic factors in the ecosystem.**

- 3 neat facts about the biome**

- 1**

- 2**

- 3**

- YouTube video about your biome**

- This video can be about any of the following information above or about the biome in general. Please choose a video that is between three and seven minutes long.**

# Project Rubric

Your project grade will actually be divided into different parts: your basic blogs will count as daily grades, your multimedia blog (Tier 2) will count as a quiz grade, your peer comments and professional critique will count as quiz grades, and your web project blog (Tier 3) will count as a test/project grade. You will also be given a second overall test/project grade for your blog as a whole.

## Tier 1 Basic Blog Rubric

Criteria	Unacceptable (1 pt)	Acceptable (3 pt)	Target (5 pt)
<b>Content (x4)</b>	Missing two or more required elements; Provides limited insight or understanding of the topic; Does not use supporting facts	Includes all required elements; Provides some thoughtful insight, understanding, and/or reflection of topics; Uses little facts from outside sources to support argument	Includes all required elements; Provides comprehensive insight, understanding, and reflection of topic; Uses facts from various sources to support argument
<b>Use of graphics (x2)</b>	Image(s) selected do not relate to the content of the blog; sources of the images are not acknowledged with captions	Image(s) selected enhances the content of the blog; sources of the images are not acknowledged with captions	Image(s) selected enhances the content of the blog; sources of the images are acknowledged with captions
<b>Construction (x3)</b>	Grammar, spelling issues, and/or formatting make the blog difficult for the reader to read	Some grammar and spelling errors; some formatting issues may make it difficult for the reader to read	No grammar and spelling errors; formatting allows for simple reading
<b>Citations and Links (x1)</b>	Citations are not used correctly and/or most links do not work	Most citations and links to outside sources are used correctly and function properly	All citations and links to outside sources are used correctly and function properly; A wide variety of links were used

## Tier 2 Multimedia Blog Rubric

Be sure to provide a working link to your multimedia or embed it directly into your blog.

<b>Criteria</b>	<b>Unacceptable (1 pt)</b>	<b>Acceptable (3 pt)</b>	<b>Target (5 pt)</b>
<b>Content (x5)</b>	Missing two or more required elements; Provides limited insight or understanding of the topic; Does not use supporting facts	Includes all required elements; Provides some thoughtful insight, understanding, and/or reflection of topics; Uses little facts from outside sources to support argument	Includes all required elements; Provides comprehensive insight, understanding, and reflection of topic; Uses facts from various sources to support argument
<b>Use of multimedia (x4)</b>	Multimedia chosen does not enhance the content of the blog	Multimedia chosen enhances the content of the blog	Multimedia chosen adds a new information or perspective to the content of the blog
<b>Construction (x3)</b>	Grammar, spelling issues, and/or formatting make it difficult for the reader to read	Some grammar and spelling errors; some formatting issues may make it difficult for the reader to read	No grammar and spelling errors; formatting allows for simple reading
<b>Citations and Links (x2)</b>	Citations are not used correctly and/or most links do not work; sources of any images are not acknowledged with captions	Most citations and links to outside sources are used correctly and function properly; sources of any images are acknowledged with captions	All citations and links to outside sources are used correctly and function properly; A wide variety of links were used; sources of any images are acknowledged with captions

## Tier 3 Web Project Rubric

Be sure to provide a working link to your multimedia or embed it directly into your blog.

Category	Unacceptable (1 pt)	Acceptable (3 pt)	Target (5 pt)
<b>Content (x6)</b>	Missing two or more required elements; Provides limited insight or understanding of the topic; Does not use supporting facts	Includes all required elements; Provides some thoughtful insight, understanding, and/or reflection of topics; Uses little facts from outside sources to support argument	Includes all required elements; Provides comprehensive insight, understanding, and reflection of topic; Uses facts from various sources to support argument
<b>Graphics (x4)</b>	Image(s) selected do not relate to the content of the project; sources of the images are not acknowledged with captions	Image(s) selected enhances the content of the project; sources of the images are not acknowledged with captions	Image(s) selected enhances the content of the project; sources of the images are acknowledged with captions
<b>Video (x4)</b>	Video(s) selected do not relate to the content of the project; sources of the images are not acknowledged with captions	Video(s) selected enhances the content of the project; sources of the images are not acknowledged with captions	Video(s) selected enhances the content of the project; sources of the images are acknowledged with captions
<b>Attractiveness (x2)</b>	Project is cluttered or too empty and looks unbalanced; pictures, fonts, colors and other graphic elements make the project difficult to navigate in many places.	Project is neat; pictures, fonts, colors and other graphic elements are appropriately used.	Project is neat, attractive, and interesting; pictures, fonts, and other graphic elements in the project enhance the message and purpose; colors are easy to see and are consistently used.
<b>Construction (x2)</b>	Grammar, spelling issues, and/or formatting make it difficult for the reader to read	Some grammar and spelling errors; some formatting issues may make it difficult for the reader to read	No grammar and spelling errors; formatting allows for simple reading
<b>Citations and Links (x2)</b>	Citations are not used correctly and/or most links do not work; sources of any images are not acknowledged with captions	Most citations and links to outside sources are used correctly and function properly; sources of any images are acknowledged with captions	All citations and links to outside sources are used correctly and function properly; A wide variety of links were used; sources of any images are acknowledged with captions

## Biome Blog Analysis Request

Dear \_\_\_\_\_,

I am currently working on a blog assignment on various biomes for my environmental science class. As part of my blog grade, I need to have an adult critique my blog. Would you be willing to read my blog on the \_\_\_\_\_ biome and provide a critique in the comments section? The link to my blog is \_\_\_\_\_ . Below is the rubric my teacher will be using. Please refer to it when doing your critique. Thank you so much for your support!

<b>Criteria</b>	<b>Unacceptable (1 pt)</b>	<b>Acceptable (3 pt)</b>	<b>Target (5 pt)</b>
<b>Content (x4)</b>	Missing two or more required elements; Provides limited insight or understanding of the topic; Does not use supporting facts	Includes all required elements; Provides some thoughtful insight, understanding, and/or reflection of topics; Uses little facts from outside sources to support argument	Includes all required elements; Provides comprehensive insight, understanding, and reflection of topic; Uses facts from various sources to support argument
<b>Use of graphics (x2)</b>	Image(s) selected do not relate to the content of the blog; sources of the images are not acknowledged with captions	Image(s) selected enhances the content of the blog; sources of the images are not acknowledged with captions	Image(s) selected enhances the content of the blog; sources of the images are acknowledged with captions
<b>Construction (x3)</b>	Grammar, spelling issues, and/or formatting make the blog difficult for the reader to read	Some grammar and spelling errors; some formatting issues may make it difficult for the reader to read	No grammar and spelling errors; formatting allows for simple reading
<b>Citations and Links (x1)</b>	Citations are not used correctly and/or most links do not work	Most citations and links to outside sources are used correctly and function properly	All citations and links to outside sources are used correctly and function properly; A wide variety of links were used

Sincerely,