

Text Set: Science-Forest Biomes






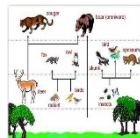

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GLE Range: 9–12

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For more information, see [About Text Sets](#) (on SABES website).

Resource Set & Sequence		
Resource:	Rationale for including it:	Where to find it:
 Glossary	Discuss vocabulary definitions of words used in material and resources.	Science Forest Biomes Glossary (see end of this text set)
Text 1: What is a Biome? (video) 	Brief (3 minute) visual introduction to Biomes types and locations.	https://www.youtube.com/watch?v=hIy0ZlyPPDg OR YouTube: search for “science\Introduction to Biomes”
Text 2: What’s a Biome? 	Read the first 6 paragraphs, describing the basics of a biome environment, the different types, and locations.	https://askbiologist.asu.edu/expl ore/biomes OR Search for “Ask a Biologist” and then for “Biomes” to get “Boundless Biomes”
Text 3: Forest Biomes (video) 	Brief (3 minute) video that describe specifically the types of forest biomes and their locations, as well as plant diversity.	https://www.youtube.com/watch?v=vXf7jTPWsv0 OR YouTube: search for “Forest Biomes and Forest Types” by Jim Hamilton
Text 4: Forest Facts 	View specific forest habitats and characteristics (shows climate, vegetation, and animals). <i>Note: Even though the heading is kid-like, the grade level readability is more appropriate than other sites on the same topic, and the word “kids” would not bother my adult students.</i>	https://kids.kiddle.co/Forest OR Search for “kiddle forest facts”
Text 5: Food Web 	Use a diagram to discuss consumers and producers that live in the forest biomes.	http://home.adelphi.edu/~ca17518/ForestBiomesrev.html OR search for “Adelphi forest biomes”
Text 6: Why We Need Forest Biomes 	Read an article about what is happening to forest biomes and why they are important. <i>Note: This text is last, with a readability level of ~ 11th grade to college.</i>	https://www.worldwildlife.org/habitats/forest-habitat OR search for “World Wildlife forest habitat”

Glossary for Text Set: Biomes

Not understanding these words might stop you from understanding each text. They are *not* necessarily the most important words, just the ones that will block comprehension.

Resource Title 1: **What is a Biome?** (video)

Word	Student-Friendly Definition
biome (noun)	Area of the planet which can be classified according to the plant and animal life in it.
coniferous or taiga forest (noun)	Climate is subarctic, trees or shrubs that bear cones and have needle-like or scale-like evergreen leaves that are not generally shed seasonally.
deciduous/temperate (adj)	Climate has mild summers, cold winters, type of plant that sheds its leaves once a year.
tropical rainforest (noun)	Climate is hot and wet, area of tall, mostly evergreen trees and a high amount of rainfall.

Resource Title 2: **What's a Biome?** (article)

Word	Student-Friendly Definition
categorize (verb)	to decide which group or category something belongs in
environment (noun)	Everything that is around us, living and non-living; can be categorized into different types of environments
organisms (noun)	Living things, life forms (ex. humans, trees, bacteria)

Resource Title 3: **Forest Biomes** (video)

Word	Student-Friendly Definition
biome (noun)	an area of the planet that can be classified according to the plants and animals that live in it
species diversity	The number of different types of species, organisms that can breed with each other and reproduce, in a given area or community

Resource Title 4: **Forest Facts**

Word	Student-Friendly Definition
coniferous (adj)	Relating to plants that produce seeds in cones (like pine trees)
deciduous (adj)	“tending to fall off”: deciduous trees lose their leaves every year
factor (noun)	Something that has an influence on the issue or happening

fertile (adj)	Land that is fertile is capable of producing a lot of plant growth
metabolism (n)	The chemical reactions happening in our cells that keep us alive
muggy (adj)	When the air is full of water but not yet raining—it feels warm and heavy
tropical (adj)	Relating to the tropics, regions that never freeze and have enough water to support plant growth through the whole year

Resource Title 5: **Food Web**

Word	Student-Friendly Definition
carnivore (noun)	An animal that feeds on flesh.
consumer (noun)	Ecology, an organism, usually an animal, that feeds on plants or other animals.
insectivore (noun)	A more specific type of carnivore that feeds on insects.
predator (noun)	An animal that hunts and kills other animals for food.
producer (noun)	Ecology, an organism, as a plant, that is able to produce its own food from inorganic substances.
tertiary (adjective)	Third in order or level.

Resource Title 6: **Why We Need Forest Biomes**

Word	Student-Friendly Definition
biodiversity (noun)	the variety of life on Earth, all the forms and their interactions with each other
emissions (noun)	Substances, usually gasses or radiation, being released into the surrounding space: for example, car exhaust, burps, radio broadcasts
essential (adj)	Absolutely necessary, extremely important
latitude (noun)	Set distances north or south of the equator
mitigating (adj)	making something less harmful, unpleasant, or bad
terrestrial (adj)	relating to the earth (as opposed to the air or water)

Student Accountability: Learning Worth Remembering

ONE of the following activities should be completed and updated after reading *each* resource in the set: *Rolling Knowledge* OR *Rolling Vocabulary*.

The purpose of these activities is to capture knowledge that builds from one resource to the next, and to provide a holistic snapshot of central ideas of the content covered in the text set.

Both activities are shown here, with sample answers; as the teacher who will use this, choose one option for students to complete. Note that your students may end up choosing different words and learnings. Blank templates are included.

In an effective *Rolling Knowledge* journal:

- Knowledge collected demonstrates new knowledge about the text
 - Knowledge is not randomly selected – it makes sense and shows developing thoughts about the topic
 - Connections to previous readings are logical and not haphazard
 - Knowledge is paraphrased, not copied from the text
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In an effective *Rolling Vocabulary* journal:

- Words selected exemplify the gist and big ideas of the text
- Definitions adhere to the word’s meaning in context (not just looking it up in the dictionary)
- Sentences are about the reading topic, not random

Rolling Knowledge Journal

1. Read each selection in the set, one at a time.
2. After you read each resource, stop and think what the big learning was. What did you learn that was new and important about the topic from this resource? Write, draw, or list what you learned from the text about the topic.
3. Write how this new resource added to what you learned from the last resource(s).

Title	New/important learning about the topic	How does this resource add to what I learned already?
Text 1: What is a biome? (video)	Different environments are called biomes! Climate and elevation make the difference in biomes.	I knew there were different environments, but did not know they were called biomes.
Text 2: What's a biome? (article)	The grouping of organisms and how they adapt to each other is a biome. Biomes exist everywhere in the world. There is somewhere between 5 to 20 different types of biomes.	Little pockets of specific life are everywhere. There are a lot of varieties of plant and animal life dependent on each other. A mountain, due to elevation, has a different biome than a desert.
Text 3: Forest Biomes (video)	Forest is a type of biome, and there are a few different kinds of forest, I just thought about tropical and northern forest... One country can have multiple forest biomes.	I thought North America had the largest forest, but Russia's is bigger!
Text 4: Forest Facts	There are no desert forests. There has to be enough rainfall for a forest to exist. Temperature also makes a difference, but forests do exist in both hot and cold climates. The leaves that fall from trees in a deciduous forest decay on the ground and make rich soil full of nutrients. Animal life exists on and is different on each level of a tropical rainforest.	The pictures show such different types of forest! The "spiny forest" with baobab trees looks fascinating. I have coniferous and deciduous trees in my yard. Bears, eagles, beavers, and elk have been seen around my house, because I live in a pine forest. How can people survive without killing a forest?

Title	New/important learning about the topic	How does this resource add to what I learned already?
Text 5: Food Web	<p>Everything that exist in these environments produces and consumes something, whether it is an animal or plant.</p> <p>There are different levels of producers and consumers.</p>	<p>Even animals and plants are made up of different levels, just like human beings have different levels.</p> <p>Removal of one thing can affect many things.</p>
Text 6: Why We Need Forest Biomes	<p>We depend on forest for jobs and timber for housing and fuel.</p> <p>They provide shelter for animals, fungi, bacteria and plants.</p> <p>Oxygen is produced by trees.</p> <p>Watersheds are protected by them.</p> <p>They soak up carbon dioxide.</p> <p>They are destroyed by many ways: agriculture, deforestation, fires, ranching, development.</p>	<p>Removal of a forest affects humans in important ways.</p> <p>Humans have a variety of ways of destroying forest. The loss of a forest affects everyone!</p>

Rolling Vocabulary example—Fabulous Four

1. For each resource, read and select four words that exemplify the central idea of that information source.
2. Next, use your four words to write about the most important idea of that information source, one sentence for each word.

Title	Vocabulary Words and Sentences
Text 1: Video, What is a biome?	<p>Words: environments, climate, elevation, biomes.</p> <ol style="list-style-type: none"> 1. The world has many kinds of environments. 2. A location’s climate can have a big impact on its plant life. 3. Elevation affects a biomes temperature. 4. There are many types of biomes in the world.
Text 2: Article, What’s a biome?	<p>Words: categorize, characteristics, adaptations, organisms</p> <ol style="list-style-type: none"> 1. It is important to categorize biomes by the plants and animals that make up its environment. 2. The characteristics of biome include its climate and elevation. 3. Every biome’s plant and animal adaptations make it unique. 4. All biomes include a variety of organisms.
Text 3: Video, Forest Biomes	<p>Words: coniferous, deciduous, taiga, temperate.</p> <ol style="list-style-type: none"> 1. A coniferous forest is made up of mostly pine trees. 2. We have a deciduous tree in our front yard, it is a maple. 3. A taiga forest is the same thing as a coniferous forest. 4. A temperate forest has deciduous trees.
Text 4: Forest Facts	<p>Words: deforestation, biome, canopy, rainfall.</p> <ol style="list-style-type: none"> 1. Deforestation is cutting down so many trees that the forest starts to disappear. It damages the habitats of the animals that live there. 2. There are three major forest biomes: coniferous, deciduous, tropical. 3. Forests have layers, such as the canopy in a tropical rainforest, the “umbrella of greenery” that blocks out much of the sunlight for everything below it. 4. Rainfall has to be enough for a forest to exist; there are no desert forests.

Title	Vocabulary Words and Sentences
Text 5: Food Web	<p>Words: producer, consumer, omnivores, insectivores.</p> <ol style="list-style-type: none"> 1. A primary producer is a tree, shrub, or flowering plant, and varies from biome to biome. 2. A primary consumer can be a small mammal, fish or deer. 3. Omnivores eat both animals and plants. 4. Insectivores eat insects.
Text 6: Why We Need Forest Biomes	<p>Words: oxygen, carbon dioxide, undermines, species.</p> <ol style="list-style-type: none"> 1. Forests produce oxygen, but as they shrink, they produce less and less. 2. Forests absorb carbon dioxide, which in turn reduces green house gasses. 3. Removing trees undermines a forest's ability to contain carbon dioxide. 4. The forest provides protection for many species that we use in medical cures.

1. After reading all the resource selections, go back and review the words.
2. Now select the four words that taught you the most from ALL the word lists, or choose one word from each source. These are the words that most exemplify this topic and display what you thought was the most valuable learning.
3. Use the final list of words to summarize the learning from all of the sources.

Final Words	biomes, organisms, coniferous, deforestation, producer, oxygen
Topic Summary	There are three types of forest biomes , including coniferous , all of which are all threatened by deforestation . Deforestation affects organisms everywhere, including the producers or plants in the forest, and the organisms elsewhere that will be affected by the changes in the earth's oxygen levels due to deforestation.

BIOMES—Rolling Knowledge Journal

1. Read each selection in the set, one at a time.
2. After you read each resource, stop and think what the big learning was. What did you learn that was new and important about the topic from this resource? Write, draw, or list what you learned from the text about the topic.
3. Write how this new resource added to what you learned from the last resource(s).

Title	New/important learning about the topic	How does this resource add to what I learned already?
Text 1: What is a biome? (video)		
Text 2: What's a biome? (article)		
Text 3: Forest Biomes (video)		

Title	New/important learning about the topic	How does this resource add to what I learned already?
Text 4: Forest Facts		
Text 5: Food Web		
Text 6: Why We Need Forest Biomes		

BIOMES Rolling Vocabulary—Fabulous Four

Directions:

1. For each resource, read and select four words that exemplify the central idea of that information source.
2. Next, use your four words to write about the most important idea of that information source, one sentence for each word.

Resource Title	Vocabulary Words & Sentences
Text 1: What is a biome? (video)	Words:
Text 2: What's a biome? (article)	Words:
Text 3: Forest Biomes (video)	Words:
Text 4: Forest Facts	Words:

Resource Title	Vocabulary Words & Sentences
Text 5: Food Web	Words:
Text 6: Why We Need Forest Biomes	Words:

1. Go back and review all of the words selected from the resources.
2. Now select the four words that taught you the most from ALL the word lists, **or** choose one word from each source. These are the words that most exemplify this topic and display what you thought was the most valuable learning.
3. Use the final list of words to summarize the learning from all of the sources.

Final Words	Topic Summary