

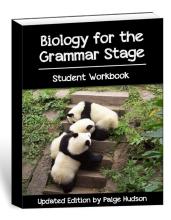
Biology for the Grammar Stage Sample Packet

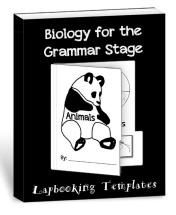
The following sample packet includes the first two weeks of the *Biology for the Grammar Stage* materials. You will see:

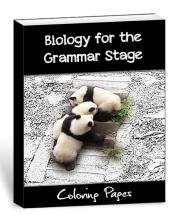
- ✓ The Teacher Guide (beginning on pg. 3)
- ✓ The Student Workbook (beginning on pg. 25)
- ✓ The Lapbooking Templates (beginning on pg. 39)
- ✓ The Coloring Pages (beginning on pg. 51)

You do not need all of these to successfully complete this program. You can get more information and make your purchase here:

https://elementalscience.com/collections/biology-for-the-grammar-stage







elementalscience.com

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Biology for the Grammar Stage Introduction to the Updated Edition

Since writing the first edition of *Biology for the Grammar Stage*, I have co-authored *Success in Science: A Manual for Excellence in Science Education* with Bradley Hudson. The purpose of this updated edition was to re-align this program with our research. It now reflects the components of the Classic Method of elementary science instruction suggested in the book. This method is loosely based on the ideas for classical science education that are laid out in *The Well-trained Mind: A Guide to Classical Education at Home* by Jessie Wise and Susan Wise Bauer.

In *Success in Science*, we compare the elementary student to an empty bucket that is waiting to be filled with meaningful information. My goal in writing this curriculum was to provide you with tools to give your elementary student exposure to the topics of animals, the human body and plants, thus building a knowledge base for future studies. For this reason, I have included weekly scientific demonstrations, reading suggestions, notebooking assignments, and additional activities.

This program is designed to be used during the elementary years, specifically 1st through 4th grade. It includes a buffet of options that can be completed in either two days or five days each. Alternatively, if you desire, you could set aside an hour a week to be your science day in which you do all the readings, narrations, and activities planned for the week. Please feel free to act as the student's scribe as you complete the narration pages and lab reports.

Student Workbook (SW)

This teacher's guide is designed to work in conjunction with the *Biology for the Grammar Stage Student Workbook*. This workbook is sold separately, but it is critical to the success of this program. It contains all the pages you will need to complete the narrations, lab reports, and multiweek projects. The student workbook gives the students the ability to create a lasting memory of their first journey through biology.

Scientific Demonstrations

The scientific demonstrations scheduled in the guide generally use easy to find materials and tie into what is being studied. Each one has a corresponding lab report in the student workbook. At this age, you will be the driving force behind these demonstrations, meaning that you will be the one in control and the student will be watching and participating when necessary. These demonstrations are designed to give them a beginners' look at the scientific method and how scientific tests work. It is not necessary to ask them to predict the outcome of the demonstration as they have no knowledge base to determine what the answer should be. However, if the students enjoy predicting or they are able to tell you what will happen, please feel free to let them do so.

Each lab report includes four sections:

1. The "Our Tools" section is for the materials that were used during the demonstration.

- 2. The "Our Method" section is for a brief description of what was done during the scientific demonstration. This should be in the students words.
- 3. The "Our Outcome" section is for what the students observed during the demonstration.
- 4. The "Our Insight" section is for what the students learned from the scientific demonstration.

Any time you see a box for a picture on the lab report you can have the students draw what happened or you can take a picture of the demonstration and glue it in the box. For younger students, I recommend that you do most (if not all) the writing for them on the lab reports.

Science-oriented Books

The science-oriented books section includes reading assignments from encyclopedias, discussion questions, and additional books for every lesson. Each of the reading assignments should be read with the students or, if they are capable, have them read the assignments on their own. After the reading assignment is completed, discuss the topic with the students using the provided discussion questions. These questions are meant to help them begin to gather their thoughts in preparation for giving a narration.

In this edition of *Biology for the Grammar Stage*, I have also included a list of additional books for you to choose from each week. These are meant to be checked out from the library, and are not necessary to the success of this program. It is there in case you decide that you would like to dig a little deeper into the topics. I have done my best to choose in-print, widely available books, but since every library is different, the books listed may not be available in your area. If that is the case, simply look up the topic in your local card catalog.

Notebooking

For the notebooking component, you will ask the students to narrate what they have learned from the science-oriented books. They should add their narration to their student workbook. For younger students I recommend that you have them dictate what they have learned to you and then you write this into their student workbook. You can also have the students copy their narration into the workbook. You only need to expect one to two sentences from a first or second grade student.

Next, have the students color the provided picture on the narration page. All the pages and pictures you need are included in the student workbook. I suggest that you read over these pages monthly so that the students get a review of what they have been learning. I have also included optional lapbook assignments in the case that your students prefer to use lapbooks over notebooking.

Finally, go over the vocabulary with the students and enter it into their glossary at the rear of the student workbook. You can write this for them, have them copy the definition, or dictate the definition to the students. If you choose to have the students look up the definitions, I have included a glossary of the terms in this program in the Appendix on pp. 202-204.

Multi-week Projects and Activities

This guide includes ideas for multi-week projects and additional activities that coordinate with each lesson. The pages and pictures needed for the multi-week projects are included in the student workbook, while the directions for creating them are found in this guide. The additional activities include crafts and other activities that can enhance the students' learning time. There are no sheets to record these additional activities in the student workbook. However, I have included a project record sheet template on pg. 206 of the Appendix of this guide.

Memorization

The elementary student is very capable of receiving and memorizing information. With this in mind, I recommend that you capitalize on this fact by having your students memorize the included vocabulary and basic facts related to biology. A list of simple poems that you can use to help them memorize the characteristics of animals, plants, and the body systems is included on the unit overview sheet of each unit. Remember that these poems are included as a resource for you to augment students' learning experience and they are not required to use this program successfully.

Possible Schedules

I have written this updated edition to contain a buffet of activities that you can choose from when guiding the students through their first look at biolgy. This gives you, the teacher, complete freedom in what you would like to utilize to present and explore the concepts each week. However, I have also included two potential schedules for you to give an idea of how you could schedule each week. You can choose to use these as your guide or create your own. I have included two schedule templates on pp. 207-208 of the Appendix of this guide for you to use.

Quizzes

We have also created a set of weekly quizzes to use with this program, which can be found at the back of the student workbook. Although these quizzes are not essential, they are helpful in assessing how much the students are retaining. You can also use the quizzes as a review of what the students have studied by giving the quiz orally or by having the students fill each quiz out with the assistance of their workbooks. The correct answers for the quizzes are included at the end of each week in this guide.

Coordinating Products

The following products by Elemental Science coordinate with this program. These two eBooks are available separately through our website.

▶ Biology for the Grammar Stage Lapbooking Templates — We have created templates for four lapbooks to coordinate with Biology for the Grammar Stage. You can use these lapbooks as a means of review or in place of the student workbook. The directions for using these templates are found in this guide under the notebooking section.

Biology for the Grammar Stage Teacher Guide ~ Introduction

▶ Biology for the Grammar Stage Coloring Pages — We have also created a set of coloring pages to use with this program. Although they are not essential, they are helpful for adding in younger students or for reinforcing key concepts for artistic students.

Helpful Articles

Our goal as a company is to provide you with the information you need to be successful in your quest to educate your student in the sciences at home. This is the main reason we share tips and tools for homeschool science education at our blogs. As you prepare to guide your students through this program, you may find the following articles helpful:

- Classical Science Curriculum for the Grammar Stage Student This article explains the goals of grammar stage science and demonstrates how the classical educator can utilize the tools they have at their disposal to reach these goals.
 - http://elementalblogging.com/classical-science-curriculum-grammar/
- Scientific Demonstrations vs. Experiments This article shares about these two types of scientific tests and points out how to employ scientific demonstrations or experiments in your homeschool.
 - http://elementalscience.com/blogs/news/89905795-scientific-demonstrations-or-experiments
- The Basics of Notebooking This article clarifies what notebooking is and describes how this method can be a beneficial addition to your homeschool.
 - http://elementalblogging.com/the-basics-of-notebooking/

Additional Resources

The following page contains quick links to the activities suggested in this guide along with several helpful downloads:

https://elementalscience.com/blogs/resources/bgs

Final Thoughts

As the author and publisher of this curriculum I encourage you to contact me with any questions or problems that you might have concerning *Biology for the Grammar Stage* at support@ elementalscience.com. I will be more than happy to answer them as soon as I am able. You may also get additional help at our yahoo group (http://groups.yahoo.com/group/elemental_science/). I hope that you will enjoy *Biology for the Grammar Stage*!

Required Book List

The following books are scheduled for use in this guide. You will need to purchase them or find a suitable substitute to complete this program.

Encyclopedias

Animals Unit (Choose one age-appropriate option.)

- △ Kingfisher First Encyclopedia of Animals (best for K through 2nd grade) **OR**
- △ DK Encyclopedia of Animals (best for 2nd through 4th grade)

Human Body Unit (Choose one age-appropriate option.)

- ⇒ DK First Human Body Encyclopedia (best for 1st through 3rd grade) **OR**
- *≡* Kingfisher Science Encyclopedia (best for 4th through 6th grade)

Plants Unit (Choose one age-appropriate option.)

- Basher Science: Biology Life as we know it! (best for 1st through 4th grade) **OR**
- *Usborne Science Encyclopedia (best for 3rd through 5th grade)*

Scientific Demonstration Books

You will need both of these books to complete the scientific demonstrations in this program.

- △ Janice VanCleave's Biology for Every Kid AND
- △ Janice VanCleave's Science Around the World

Additional Books Listed by Week

The books listed below are completely optional! They are not required to complete this program. Instead, this list is merely a suggestion of the additional books that are available to enhance your studies. This list is by no means exhaustive.

Animals Unit

Animals Week 1

- A Desert Habitat (Introducing Habitats) by Kelley Macaulay and Bobbie Kalman
- About Habitats: Deserts by Cathryn P. Sill
- ⇒ Life in the Desert (Pebble Plus: Habitats Around the World) by Alison Auch
- A Grassland Habitat (Introducing Habitats) by Kelley Macaulay and Bobbie Kalman
- Grasslands (About Habitats) by Cathryn P. Sill
- A Savanna Habitat (Introducing Habitats) by Bobbie Kalman
- ← A Rainforest Habitat (Introducing Habitats) by Molly Aloian

Animals Week 2

- A Forest Habitat (Introducing Habitats) by Bobbie Kalman
- Northern Refuge: A Story of a Canadian Boreal Forest by Audrey Fraggalosch
- The Arctic Habitat (Introducing Habitats) by Molly Aloian and Bobbie Kalman

Supplies Needed by Week

Animals Unit

Week	Supplies needed		
1	Shoe-box, Construction paper, Glue, Markers		
2	Newspaper, Plain paper, Black and green construction paper		
3	2 Toilet paper tubes, Piece of foil, Piece of black construction paper, 2 Rubber bands, Flashlight		
4	A pack of colored pipe cleaners, 4 Wooden stakes (or pencils), String (about 80 ft.), Ruler		
5	4x4 Piece of cardboard, 1 Cup sand or salt, Dime, Large jar lid		
6	2 Small cans, Washcloth, Rubber band		
7	Paper cups, Ticking watch, Ruler		
8	Two thermometers, 2 Glasses, One large bowl		
9	Rubber bands		
10	2 Glass jars, Box at least 2 inches wider and taller than the jars, Cotton balls, 2 Thermometers		
11	Plastic soda bottle, Wood dowel, Seeds		
12	1 Clear glass bowl, Measuring cup, Liquid oil, Powdered detergent, Measuring spoon		
13	Scissors, Notebook paper, Ruler		
14	1 Raw egg, 1 Jar with lid, White vinegar, Measuring tape		
15	2 Thermometers, Trowel, White towel		
16	No supplies needed.		
17	Salt, Measuring spoon, 2 Shallow bowls, 1 Small cucumber, Masking tape, Marker		
18	Suction cup, Rock		
19	String		
20	Paper clip, Printout from Science Around the World, Paint for butterfly, Construction paper		

Human Body Unit

Week	Supplies needed	
1	Typing paper, Pencil, Clear tape, Magnifying glass	

Week	Supplies needed		
2	1 Raw chicken bone, 1 Jar with lid, White vinegar		
3	Items of various weights, such as a paper clip, toothbrush, glass, a can, a book		
4	A large book or something else that will make a loud noise, Cotton balls (or rolled-up paper towels), See-through barrier (a wire screen, plastic or glass window)		
5	Mirror, Toothpicks, Blindfold, Clothespin, Apple, Onion, Pencils, Masking tape		
6	Modeling clay, Paper, Match		
7	Plastic dishpan, 2 Feet of aquarium tubing, 1 Gallon milk jug, Masking tape, Pens		
8	8 Paper towels, Slender glass jar, Masking tape, Marking pen		
9	Family pictures		
10	Milk, Measuring cup, 2 Pint Jars		

Plants Unit

Week	Supplies needed		
1	Alcohol, Green leaf, Coffee filter, Pencil, Baby food jar, Ruler		
2	Measuring cup, 2 Glasses, 1 White carnation with long stem, Red and blue food coloring		
3	10 or 12 Dry pinto beans, Jar, Paper towels		
4	Pine cone (tightly closed), Magnifying glass		
5	1 Glass, A piece of wilted celery, Blue food coloring		
6	Paper towels, 4 Pinto beans, Masking tape, Drinking glass, Marking pen		

Biology for the Grammar Stage

Animals Unit

Animals Unit Overview

(20 weeks)

Books Scheduled

Encyclopedias

Kingfisher First Encyclopedia of Animals
OR

□ DK Encyclopedia of Animals

Scientific Demonstration Books

- △ Janice VanCleave's Biology for Every Kid
- ☐ Janice VanCleave's Science Around the World

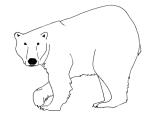
Sequence for Study

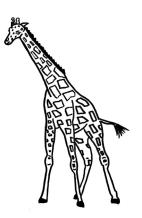
- J Week 1: Habitats and Animal Behavior, part 1 (Desert, Grasslands, Rainforest, Animal Diet)
- Week 2: Habitats and Animal Behavior part 2 (Woodlands, Arctic, Camouflage)
- Week 3: Mammals (Lion, Cheetah, Elephant)
- Week 4: Mammals, part 2 (Zebra, Hippo, Fox)
- Week 5: Mammals, part 3 (Giraffe, Camel, Deer)
- Week 6: Mammals, part 4 (Panda, Polar Bear, Chimpanzee)
- Week 7: Mammals, part 5 (Kangaroo, Koala, Beaver)
- Week 8: Mammals, part 6 (Armadillo, Skunk, Rabbit)
- Week 9: Mammals, part 7 (Walrus, Whale, Dolphin)
- Week 10: Mammals, part 8 (Goat, Cow, Pig)
- Week 11: Birds, part 1 (Eagle, Owl, Parrot)
- Week 12: Birds, part 2 (Penguin, Chicken, Duck)
- Week 13: Birds, part 3 (Swan, Swallow, Hummingbird)
- Week 14: Birds, part 4 (Flamingo, Peacock, Ostrich)
- Week 15: Reptiles and Amphibians, part 1 (Chameleon, Iguana, Rattlesnake)
- Week 16: Reptiles and Amphibians, part 2 (Alligator, Turtle, Frog)
- Week 17: Fish (Salmon, Seahorse, Shark)
- Week 18: Invertebrates, part 1 (Worm, Snail, Octopus)
- Week 19: Invertebrates, part 2 (Shrimp, Crab, Spider)
- Week 20: Invertebrates, part 3 (Ant, Butterfly, Grasshopper)

Animal Poems to Memorize

Characteristics of Mammals

Mammals love to breathe air They all have fur or hair Their blood is warm, almost hot Their babies drink milk a lot!







Characteristics of Birds

Birds have wings Most like to sing They make beautiful nests Where they lay eggs and rest

Characteristics of Reptiles

Reptiles like meat Their blood is cold - sweet! They have scaly, watertight skin And in their nests their eggs lay in



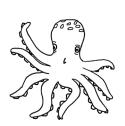


Characteristics of Amphibians

Amphibians can live on water or land They lay eggs and have cold blood - grand!

Characteristics of Fish

Fish swim in the sea with the otter
Using their gills to breathe in the water
They lay eggs that float through the ocean
And their strong skeletons keep them in motion



Characteristics of Invertebrates

Invertebrates have no backbone
They live worldwide, in every zone
Ninety-seven percent of animals are in this group
Like the clams and shrimp that end up in your soup

Supplies Needed for the Unit

Week	Supplies needed		
1	Shoe-box, Construction paper, Glue, Markers		
2	Newspaper, Plain paper, Black and green construction paper		
3	2 Toilet paper tubes, Piece of foil, Piece of black construction paper, 2 Rubber bands, Flashlight		
4	A pack of colored pipe cleaners, 4 Wooden stakes (or pencils), String (about 80 ft.), Ruler		
5	4x4 Piece of cardboard, 1 Cup sand or salt, Dime, Large jar lid		

Week	Supplies needed		
6	2 Small cans, Washcloth, Rubber band		
7	Paper cups, Ticking watch, Ruler		
8	Two thermometers, 2 Glasses, One large bowl		
9	Rubber bands		
10	2 Glass jars, Box at least 2 inches wider and taller than the jars, Cotton balls, 2 Thermometers		
11	Plastic soda bottle, Wood dowel, Seeds		
12	1 Clear glass bowl, Measuring cup, Liquid oil, Powdered detergent, Measuring spoon		
13	Scissors, Notebook paper, Ruler		
14	1 Raw egg, 1 Jar with lid, White vinegar, Measuring tape		
15	2 Thermometers, Trowel, White towel		
16	No supplies needed.		
17	Salt, Measuring spoon, 2 Shallow bowls, 1 Small cucumber, Masking tape, Marker		
18	Suction cup, Rock		
19	String		
20	Paper clip, Printout from Science Around the World, Paint for butterfly, Construction paper		

Unit Vocabulary

- 1. **Herbivore** An animal that feeds on plants.
- 2. **Carnivore** An animal that feeds on other animals.
- 3. **Omnivore** An animal that feeds both on plants and animals.
- 4. **Habitat** The natural environment of a plant or animal; a place that is natural for the life and growth of an animal or plant.
- 5. **Mammals** Any warm-blooded vertebrate with skin that is more or less covered with hair; they give birth to live young that are nourished with milk at the beginning of their life.
- 6. Wild Animal An animal that is typically found only in the wild.
- 7. **Vertebrate** An animal with a backbone.
- 8. **Marine Mammal** An animal that has all the characteristics of a mammal, but that also lives in the water.
- 9. **Domesticated Animal** An animal that has been under human control for many generations.
- 10. **Bird** A warm-blooded, egg-laying, feathered vertebrate; it also has wings.

- 11. **Migration** A journey made by an animal to a new habitat.
- 12. **Egg** The reproductive structure of some animals.
- 13. **Reptile** A group of cold-blooded animals that usually have rough skin.
- 14. **Amphibian -** A cold-blooded, smooth-skinned vertebrate, such as a frog or salamander.
- 15. **Fish** A cold-blooded, aquatic vertebrate with gills and fins; it typically also has an elongated body covered with scales.
- 16. **Invertebrate** An animal without a backbone.
- 17. **Shellfish** An aquatic invertebrate animal with a shell.
- 18. **Insect** An invertebrate animal that has three body parts (head, thorax, and abdomen) and six legs.

Week 1: Habitats and Animal Behavior, Part 1 Lesson Plans

Scientific Demonstration: Habitat Diorama

Supplies Needed

- ✓ Shoe-box
- ✓ Construction paper
- ✓ Glue
- ✓ Markers

Purpose

This demonstration is meant to give the students a first hand look at their chosen habitat.

Instructions

- 1. Have the students choose which habitat they would like to create.
- 2. Then, have them create that environment inside of a shoe-box using construction paper and markers. (Note If you would like to add animals to the students' habitats, they can use the small animal pictures on SW pp. 107 and 109. I have also included a placement guide for these animals in the Appendix on pg. 179 of this guide.)
- 3. Have the students dictate, copy, or write one to four sentences on their finished habitat diorama on SW pg. 9.

Take it Further

Instead of making a habitat diorama, make a poster depicting one or more habitats. You could make one large poster with several habitats or several smaller ones, each with one habitat. I have included several single sheet habitats in the Appendix on pp. 180-186 of this guide that you can copy for personal use.

Science-Oriented Books

Reading Assignments

- Eingfisher Encyclopedia of Animals pg. 12 (Food) [Note You will need to read about the desert, grasslands, and rainforest habitats from one of the additional suggested books or from Janice VanCleave's Science Around the World pp. 70-71, 84-85 (Desert), pp. 49-50, 60-61 (Grassland), and pp. 5-6 (Rainforest)]
- DK Encyclopedia of Animals pp. 68-69 (Deserts), pp. 64-65 (Grasslands) pp. 62-63 (Rainforest), pp. 30-33 (Plant-Eaters and Meat-Eaters)

(Optional) Additional topic to explore this week: Communication

Discussion Questions

After reading the selected pages from the encyclopedias, ask the following questions in your discussion time:

Habitats (Ask these questions for each habitat.)

? What does the habitat look like?

- ? How much rain does it get?
- **?** What is the average temperature in the habitat?

Animal Diet (Note — There is no narration sheet for this topic.)

? What kinds of foods do carnivores eat? Herbivores? Omnivores?

(Optional) Additional Books

- A Desert Habitat (Introducing Habitats) by Kelley Macaulay and Bobbie Kalman
- About Habitats: Deserts by Cathryn P. Sill
- Life in the Desert (Pebble Plus: Habitats Around the World) by Alison Auch
- A Grassland Habitat (Introducing Habitats) by Kelley Macaulay and Bobbie Kalman
- Grasslands (About Habitats) by Cathryn P. Sill
- A Savanna Habitat (Introducing Habitats) by Bobbie Kalman
- △ A Rainforest Habitat (Introducing Habitats) by Molly Aloian

Notebooking

Writing Assignments

Narration Page - Have the students dictate, copy, or write one to four sentences for each of the habitats on SW pg. 8. They can include information on the amount of rainfall, the typical temperature, and the main characteristics of the habitat. For example, for this week the student could dictate, copy, or write the following for the grassland habitat:

The grasslands have an average amount of rain.

It can have hot summers and cooler winters.

The grasslands have lots of grass, very few trees, and lots of animals.

(Optional) Lapbook - Complete the Desert and Grassland Habitat Tab-book on pp. 7-10 from *Biology for the Grammar Stage Lapbooking Templates*. For each one, cut out the pages and color the cover. Then, have the students color on the map where the desert habitat is typically found on the "Locations" page. After that, have the students tell you what they have learned about the desert and write it for them on the "Characteristics" page. Next, have them color the animals that can be found in the habitat and label them on the "Animals" page. Lastly, staple the pages together and glue the habitat tab books into the lapbook.

Vocabulary

The following definitions are a guide. The students' definitions do not need to match word for word.

- J Herbivore An animal that feeds on plants. (SW pg. 93)
- Carnivore An animal that feeds on other animals. (SW pg. 91)
- → Omnivore An animal that feeds both on plants and animals. (SW pg. 96)

Multi-week Projects and Activities

Unit Project

➤ Animal Diet Chart - The Animal Diet Chart project will continue throughout this unit. For this week, have the students write down what the animals in each of the three categories (herbivore, omnivore, and carnivore) prefer to eat on SW pp. 6-7. Once the students begin to study the different animals, they will add each one to the chart as they learn about it. I have included a placement chart for this project on pg. 178.

Projects for this Week

- **Coloring Pages** You can have the students color the following pages from *Biology for the Grammar Stage Coloring Pages*: Desert pg. 7, Grasslands pg. 8, Rainforest pg. 9.
- ★ Animal Diet Have the students make the food mobile shown on page 12 of Kingfisher First Encyclopedia of Animals.
- **Rainforest** Have the students make a rainforest in a bottle. Please visit the following website for directions on this project:
 - http://earthobservatory.nasa.gov/Experiments/Biome/hobuildrainforest.php

Memorization

There is nothing to memorize this week.

Quiz

Weekly Quiz

Animals Unit Week 1 Quiz" on SW pg. Q-5.

Quiz Answers

- 1. Herbivore eats only plants; Carnivore eats only meat; Omnivore eats both plants and meat.
- 2. Grassland grass is the main plant; Desert typically very hot and dry; Rainforest has lots of rain.
- 3. Answers will vary

Notes

Possible Schedules for Week 1

Two Days a Week Schedule		
Day 1	Day 2	
☐ Read about the Desert, Grasslands, and Rainforest	☐ Read about Food (or Plant-eaters and Meateaters)	
☐ Complete the Narration Page for this week	☐ Add information to the Animal Diet Chart	
☐ Work on the Habitat Diorama Project	☐ Define herbivore, carnivore, and omnivore	
	☐ Take the Animal Week 1 quiz	

Five Days a Week Schedule				
Day 1	Day 2	Day 3	Day 4	Day 5
☐ Read about	☐ Read about the	☐ Read about	☐ Work on the	☐ Take the
the Desert and	Rainforest	Food (or Plant-	Habitat Diorama	Animal Week 1
Grasslands	☐ Complete the	eaters and Meat- eaters)	Project	quiz
□ Add	Narration Page	(atcis)	☐ Define	
information on	for this week	□ Add	herbivore,	
the Desert and Grasslands to the Narration Page	☐ Do the Rainforest Project	information to the Animal Diet Chart	carnivore, and omnivore	
		☐ Do the Animal		
		Diet project		

Week 2: Habitats & Animal Behavior, Part 2 Lesson Plans

Scientific Demonstration: Camouflage

Supplies Needed

- ✓ Newspaper
- ✓ Plain Paper
- ✓ Black and Green Construction Paper

Purpose

This demonstration is meant to help the students to see the benefit of camouflage and why animals use this method as a form of defense.

Instructions

- 1. Cut out several of the same shapes from each of the four types of paper, including the same newspaper that you will use in step 2.
- 2. Lay out a sheet of newspaper on the table and then lay the shapes on top of the paper.
- 3. Have the students come in and try to identify the number and types of shapes that are on the newspaper. (*The students should see that the newspaper blended the best, followed by the black construction paper, the white construction paper and the green construction paper.*)
- 4. Have the students complete the Lab Report on SW pg. 11.

Explanation

Your students noticed the green shapes first and the newspaper shapes last. This is because the newspaper is most like the background that it was on, while the green shapes are the most different. Animals use this same concept to hide themselves in their environment. In biology, we call this being camouflaged. The animal has similar colors to those found in its habitat, which can keep us from noticing it. It also helps the animal hide from predators, which increases its chance of survival.

Take it Further

Have the students move the shapes around; is there a better position or place that will camouflage the shapes more adequately? You can also have them design their own camouflage background for the green, black or white shapes.

Science-Oriented Books

Reading Assignments

- Kingfisher Encyclopedia of Animals pg. 11 (Camouflage) [Note: You will need to read about the forest and arctic habitats from one of the additional suggested books or from Janice VanCleave's Science Around the World pp. 22–23, 37–38 (Forest) and pp. 93–94, 106–107 (Arctic Tundra)]
- ⇒ DK Encyclopedia of Animals pp. 36-37 (Camouflage), pp. 60-61 (Woodlands), pp. 54-55

(Arctic), pp. 56-57 (Antarctic)

(Optional) Additional topic to explore this week: Defense

Discussion Questions

After reading the selected pages from the encyclopedias, ask the following questions in your discussion time:

Habitats (Ask these questions for each habitat.)

- ? What does the habitat look like?
- ? How much rain does it get?
- **?** What is the average temperature in the habitat?

Camouflage

- ? In what ways do animals use camouflage?
- ? Why do animals use camouflage?

(Optional) Additional Books

- A Forest Habitat (Introducing Habitats) by Bobbie Kalman
- Northern Refuge: A Story of a Canadian Boreal Forest by Audrey Fraggalosch
- The Arctic Habitat (Introducing Habitats) by Molly Aloian and Bobbie Kalman
- Arctic Tundra (Habitats) by Michael H. Forman
- Arctic Tundra by Donald M. Silver

Notebooking

Writing Assignments

Narration Page - Have the students dictate, copy, or write one to four sentences for
each of the habitats on SW pg. 10. They can include information on the amount of
rainfall, the typical temperature, and the main characteristics of the habitat. Also have
them dictate, copy, or write one to four sentences for camouflage on SW pg. 10.
(Optional) Lapbook - Complete the Forest and Arctic Habitat Tab Book on pp. 11-
from Riology for the Grammar Stage Laphophing Templates. For each one cut out the page

(Optional) Lapbook - Complete the Forest and Arctic Habitat Tab Book on pp. 11-14 from *Biology for the Grammar Stage Lapbooking Templates*. For each one, cut out the pages and color the cover. Then, have the students color on the map where the desert habitat is typically found on the "Locations" page. After that, have the students tell you what they have learned about the desert and write it for them on the "Characteristics" page. Next, have them color the animals that can be found in the habitat and label them on the "Animals" page. Lastly, staple the pages together and glue the habitat tab books into the lapbook.

Vocabulary

The following definition is a guide; the students' definitions do not need to match word for word.

J Habitat - The natural environment of a plant or animal; a place that is natural for the life and growth of an animal or plant. (SW pg. 93)

Multi-week Projects and Activities

Unit Project

> (Optional) Habitat Posters - Have the students color the habitat posters found in the Appendix on pp. 180-186. Then, mount them on the wall or in a notebook. Over the next eighteen weeks, you will add animals to these habitat posters. You will need to make a copy of the pictures on SW pp. 107 and 109 for this project.

Projects for this Week

- **Coloring Pages** You can have the students color the following pages from *Biology for the Grammar Stage Coloring Pages*: Woodlands pg. 10, Arctic pg. 11, Camouflage pg. 12.
- > Planet Earth DVD Series Watch the BBC Planet Earth series with the students. This series has stunning photography of the habitats around the world but it is also very realistic. It does not shy away from showing the natural predator/prey relationships. If you have sensitive children you may want to preview the movie to make sure that it won't scare them.

Memorization

● There is nothing to memorize this week.

Quiz

Weekly Quiz

4 "Animal Week 2 Quiz" on SW pg. Q-6.

Quiz Answers

- 1. True
- 2. Cold
- 3. True
- 4. Hide
- 5. Answers will vary

Notes

Possible Schedules for Week 2

Two Days a Week Schedule		
Day 1	Day 2	
☐ Read about Camouflage ☐ Add information on camouflage to the	☐ Read about the Woodlands, Arctic and Antarctica	
Narration Page	☐ Complete the Narration Page for this week	
☐ Do the Scientific Demonstration: Camouflage	☐ Finish working on the Habitat Diorama	
	☐ Define habitat	
	☐ Take the Animal Week 2 quiz	

Five Days a Week Schedule				
Day 1	Day 2	Day 3	Day 4	Day 5
☐ Read about the	☐ Read about	☐ Read about	☐ Do the	☐ Take the
Woodlands	the Arctic and	Camouflage	Scientific	Animal Week 2
□ Add	Antarctic	□ Add	Demonstration: Camouflage	quiz
information on	□ Add	information on	Camounage	☐ Watch part
the Woodlands	information on	camouflage to the	☐ Watch part of	of the BBC
to the Narration	the Arctic to the	Narration Page	the BBC Planet	Planet Earth
Page	Narration Page	☐ Watch part of	Earth Series	Series
☐ Define	☐ Watch part of	the BBC Planet		
habitat	the BBC Planet	Earth Series		
	Earth Series			

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Biology for the Grammar Stage

Animals Unit

Animal Diet Chart

Herbivore	Omnivore	Carnivore

Animal Diet Chart

Herbivore	Omnivore	Carnivore

	Desert
	-
Grassland	
	Manager and the second of the
	Rainforest

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nat I Learned		

Woodlands	
Man Strain Strai	
Arctic	
Camouflage	

Lab Report: Camouflage

Our Tools	
Our Method	
What it looked like	
Our Outcome	
Our Insight	

Biology for the Grammar Stage

Glossary

Fish—	
-	
Flower —	
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Habitat —	
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Herbivore —	
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Biology for the Grammar Stage

Quizzes

Animals Week 1 Quiz

1.	1. Match the following type of animal with what they eat.		
	Herbivore	eats both meat and plants	
	Carnivore	eats only plants	
	Omnivore	eats only meat	
2. Match the following habitat with their typical characteristic.			
	Grassland	has lots of rain	
	Desert	typically very hot and dry	
	Rainforest	grass is the main plant	
3. What is the most interesting thing you learned this week?		teresting thing you learned this week?	

Animals Week 2 Quiz

1.	True or False: A habitat is the natural environment of an animal.
2.	The arctic habitat is typically very (hot / cold).
3.	True or False: The forest habitat typically has a lot of trees.
4.	Camouflage helps animals to
	run faster hide sleep
5.	What is the most interesting thing you learned this week?
Ĺ	

Biology for the Grammar Stage Lapbooking Templates

Introduction

The lapbooking templates provided in this eBook are meant to coordinate with *Biology for the Grammar Stage*. The directions for completing each of the mini-books in this document are included in the *Biology for the Grammar Stage Teacher Guide*. You can use these lapbooks to review the concepts learned or you can have the student create each one in lieu of completing the *Biology for the Grammar Stage Student Workbook*.

There are templates for four lapbooks contained in this eBook, one for habitats, one for animals, one for the human body, and one for plants. You can have your students create four separate lapbooks or combine them to create one lapbook on biology. If you decide to create one complete lapbook, we have included a different cover page for you to use on pg. 58 of this document.

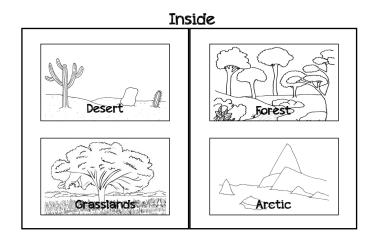
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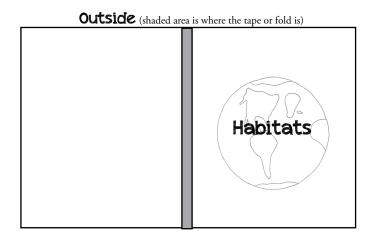
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Habitat Lapbook

You will need 2 sheets of card-stock or one file folder. Begin by taping the two sheets together on the longest edge, to look like this:

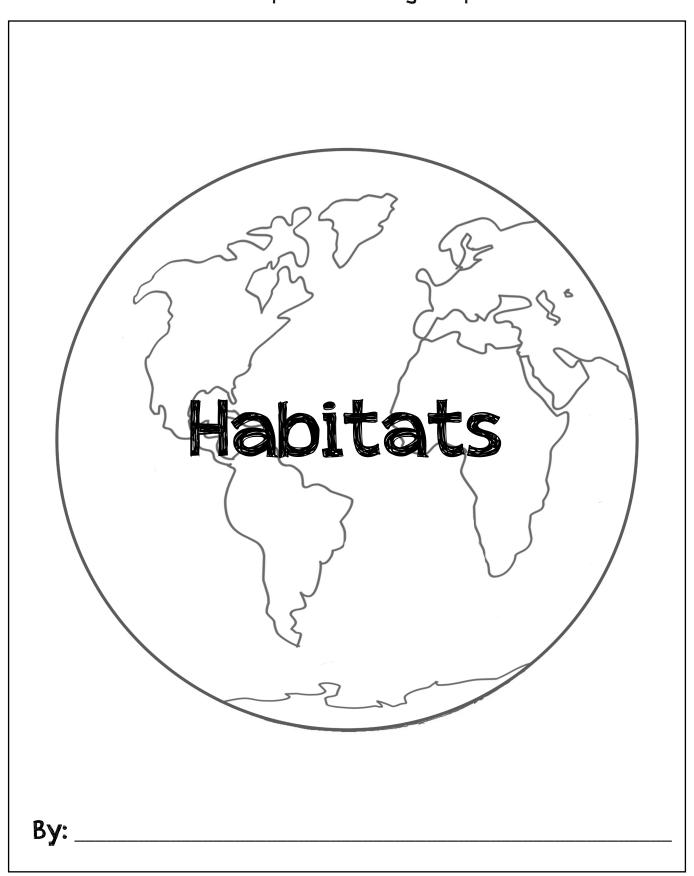




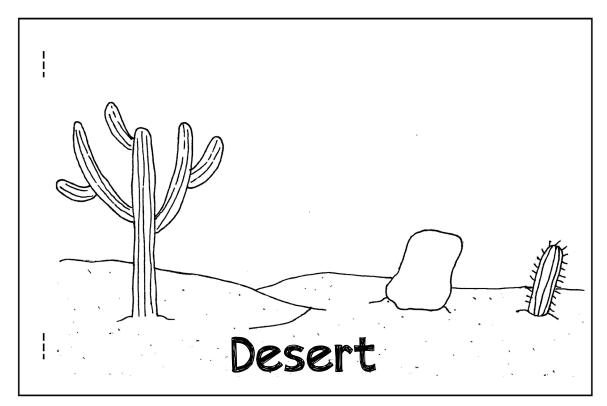
Overall Directions

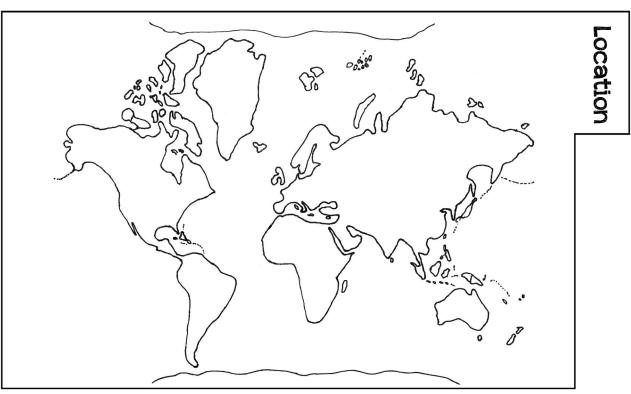
For each mini-book have the students color the pictures. Then, write the narration sentences for the student or have him copy the information into the inside of the mini-book. Finally, glue the mini-books and poems onto the lapbook. You can use the cover template provided or allow the students to decorate the cover as they choose.

Habitat Lapbook Cover Page Template

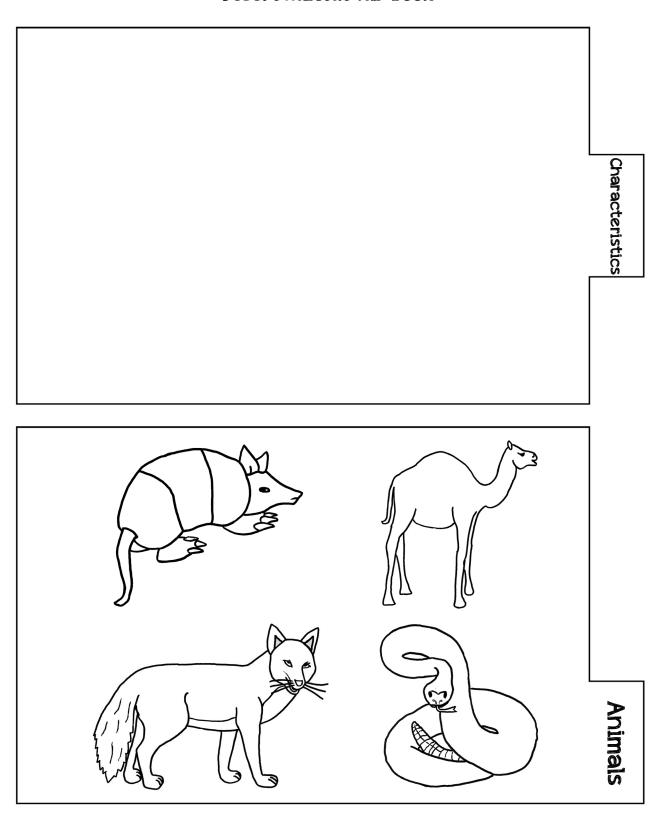


Desert Habitat Tab-book

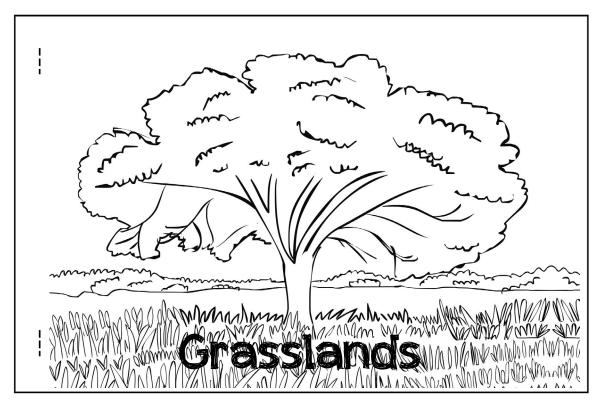


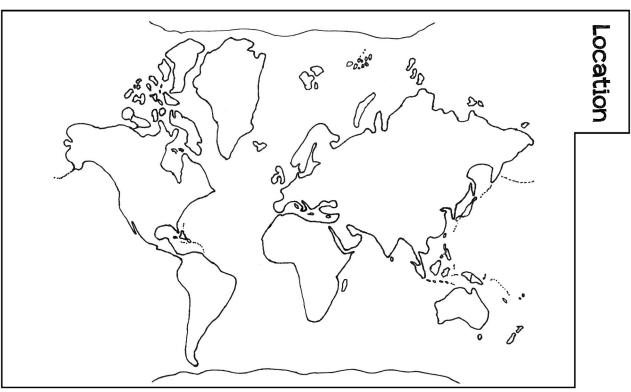


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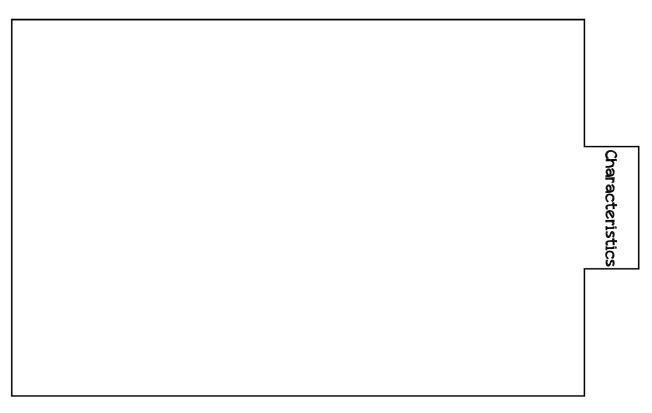


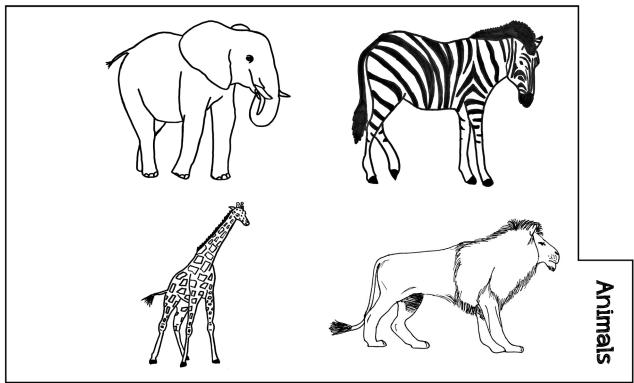
Grassland Habitat Tab-book



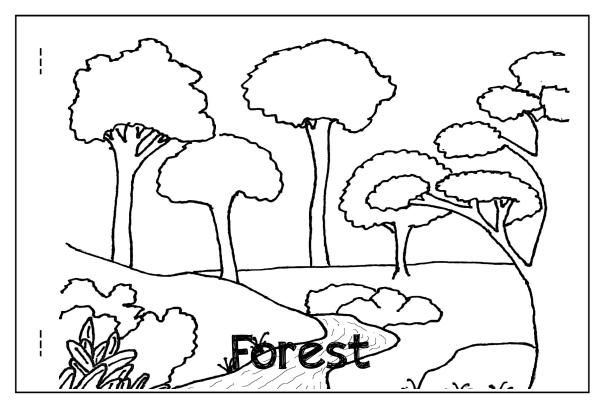


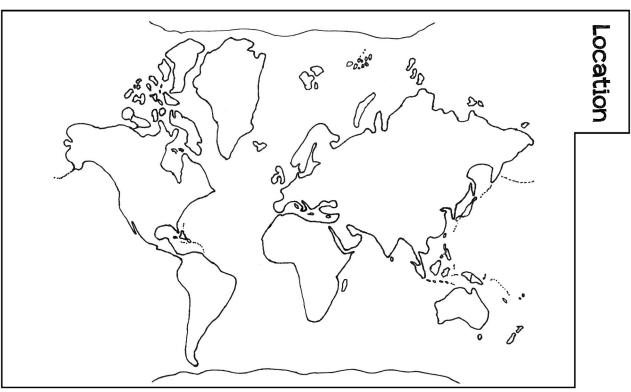
Grassland Habitat Tab-book



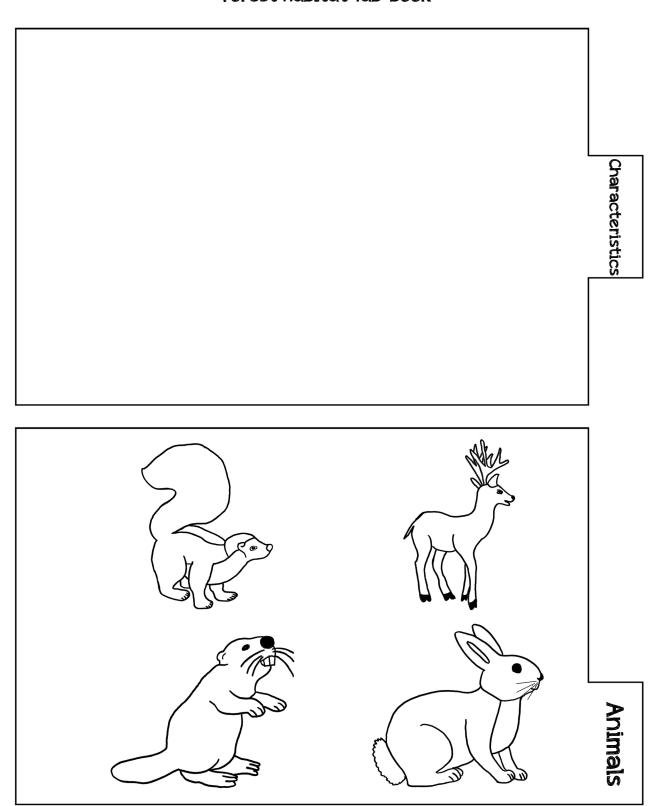


Forest Habitat Tab-book

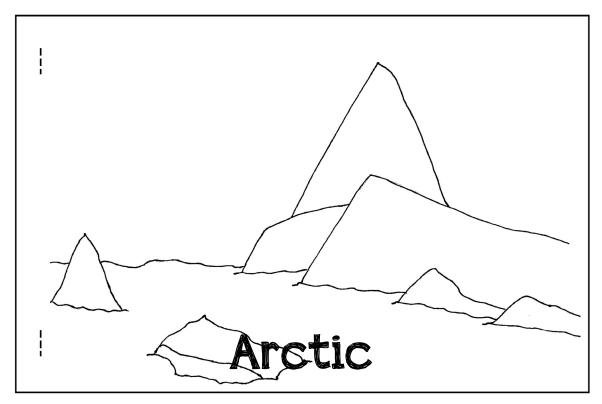


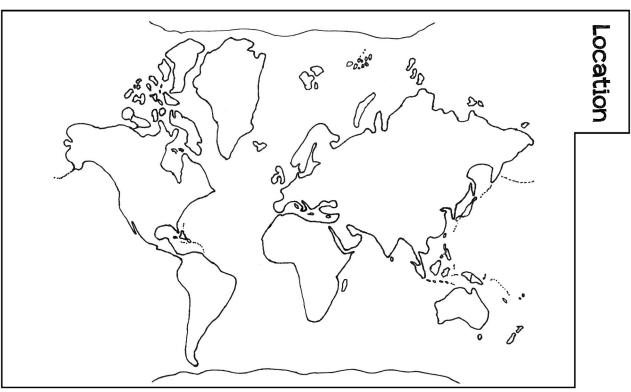


Forest Habitat Tab-book

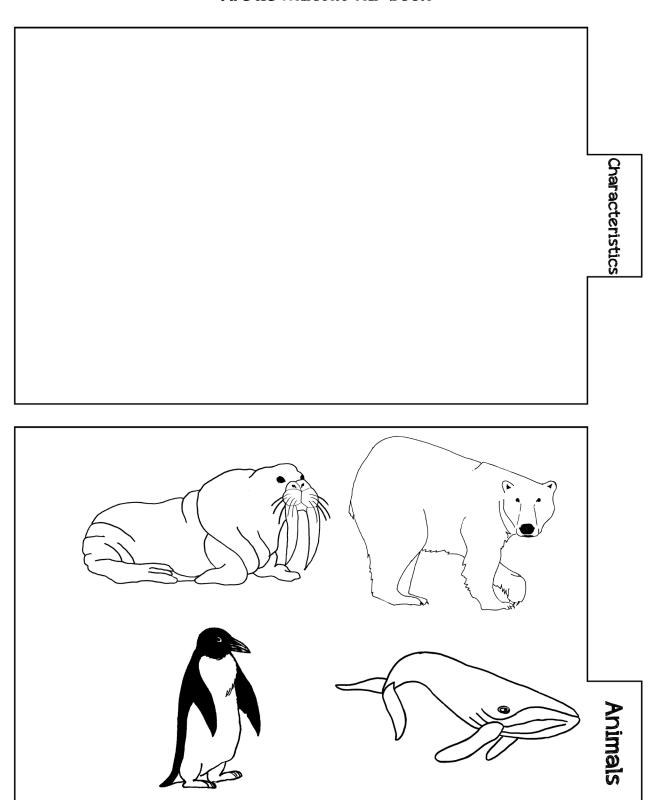


Arctic Habitat Tab-book





Arctic Habitat Tab-book



Biology for the Grammar Stage Coloring Pages

Introduction

The coloring pages provided in this eBook are meant to coordinate with *Biology for the Grammar Stage*. There is one coloring page for almost every narration topic assigned in the program. Each page has a large, black line illustration along a key fact sentence for the students to learn about the topic. Simply have the students color the picture as they desire using crayons, colored pencils, or watercolor paints. As they work, you can read the fact out loud several times.

You can use these pages with your younger "follow-along" students, with students who love to color, or with reluctant writers. We have scheduled these pages under the "Projects for the Week" section in the Biology for the Grammar Stage Teacher Guide.

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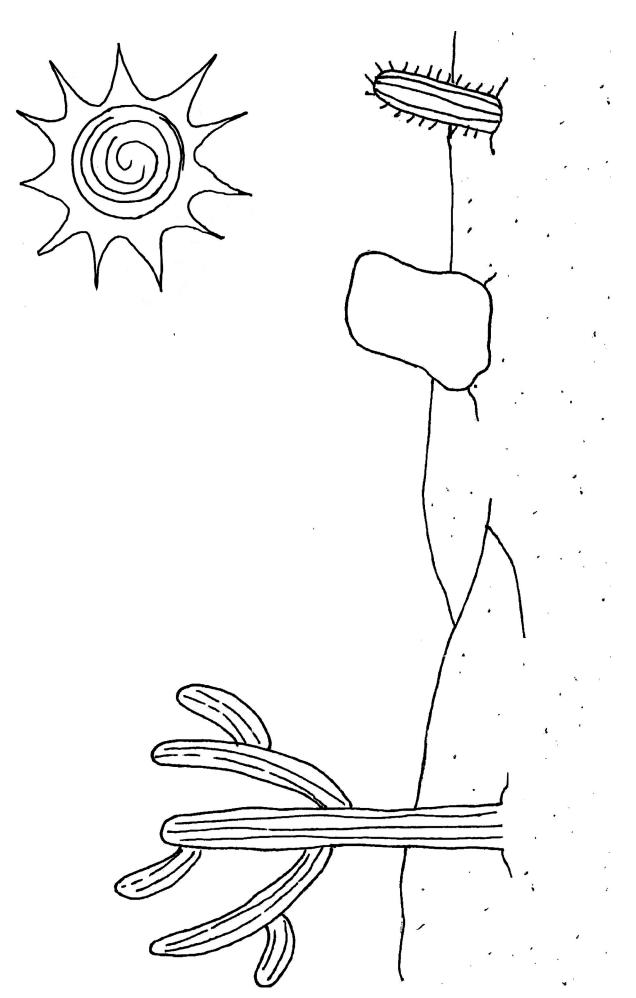
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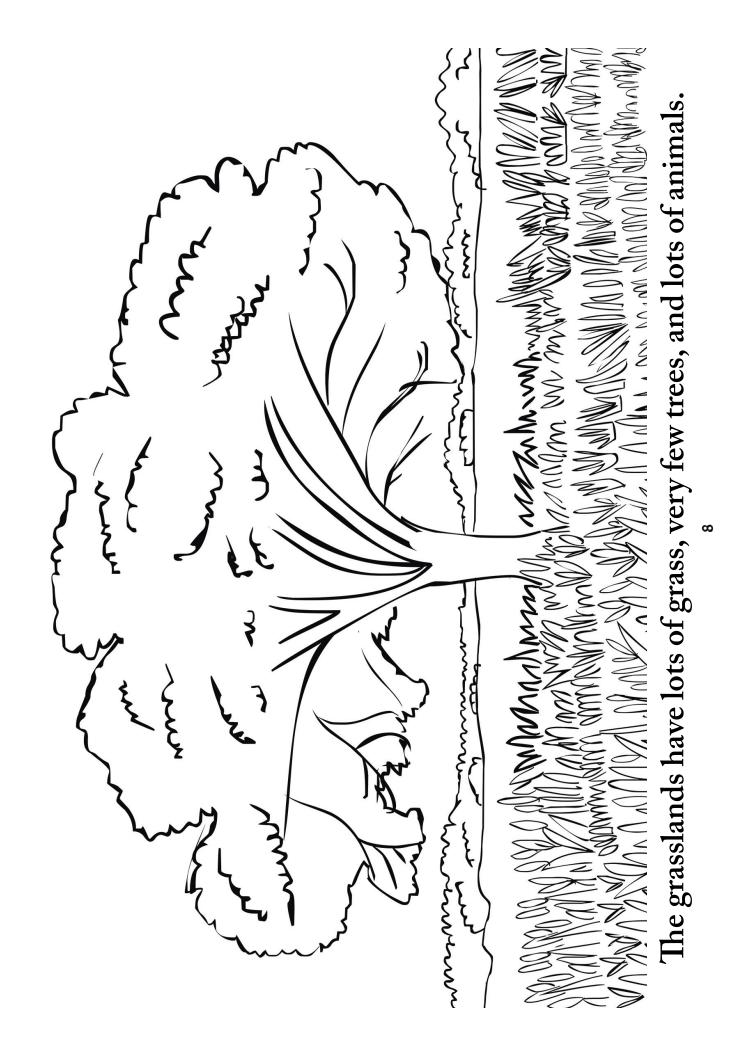
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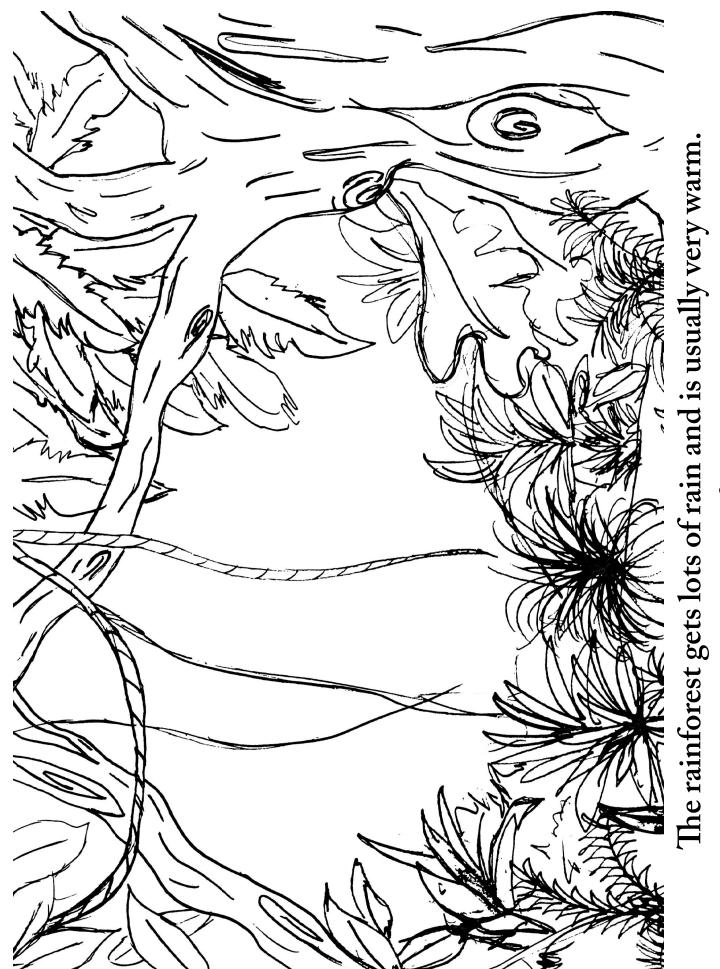
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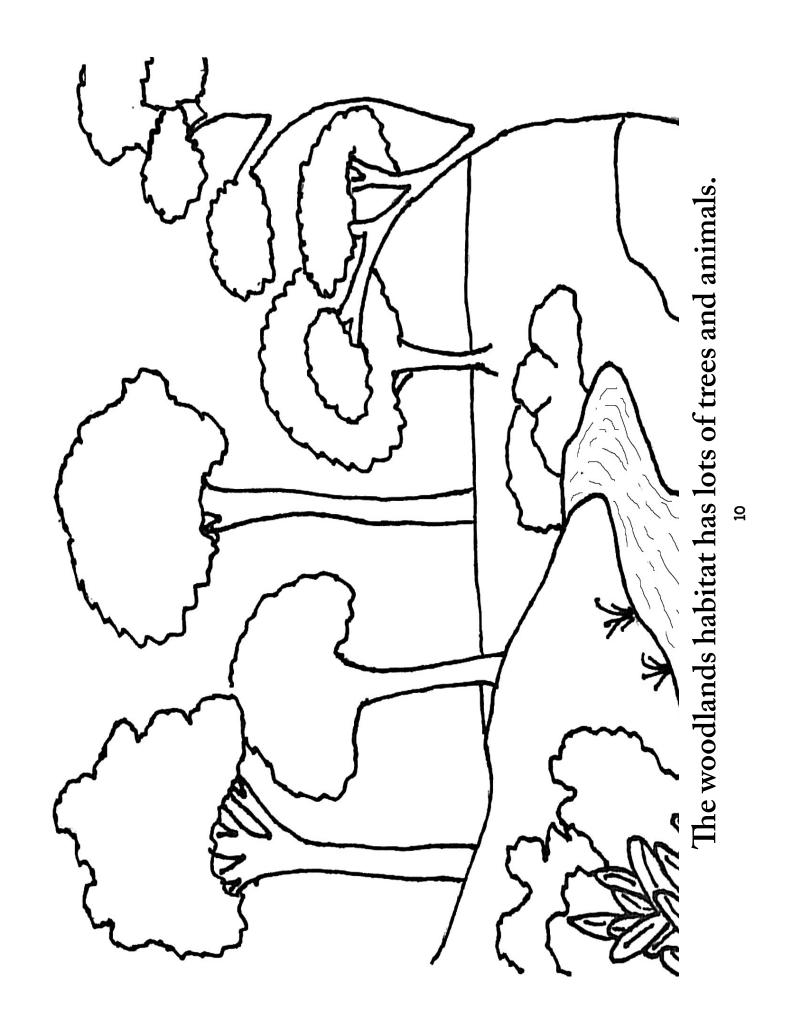
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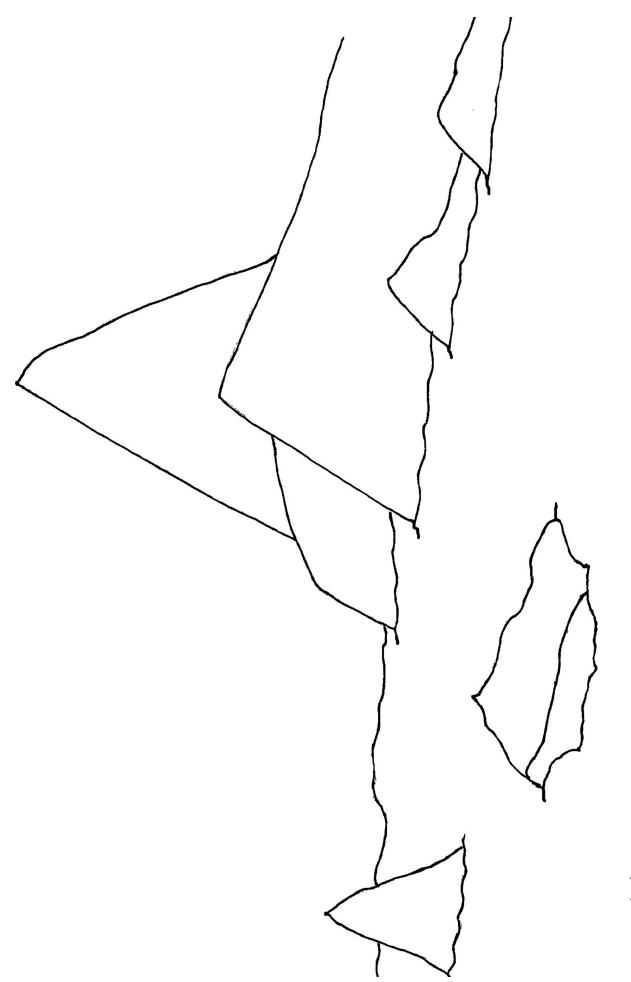


The desert is a hot, dry place with few plants and animals.









The arctic is a very cold place with very few plants and animals.



elemental science

Are you ready to start?

Learn about animals, the human body, and plants by purchasing *Biology for the Grammar Stage* here:

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