



Science Chunks: Major Biomes Sample Packet

Teach your students the basics of the five major biomes in bite-sized chunks. The following sample packet includes most of the first lesson of the *Science Chunks: Major Biomes* digital unit study. You will see:

- ✓ The Introduction (*beginning on p. 4*)
- ✓ The Lesson (*beginning on p. 8*)
- ✓ The Lapbooking Templates (*beginning on p. 11*)
- ✓ The Notebooking Templates (*beginning on p. 14*)

If you have questions about what you see, please let us know by emailing support@elementalscience.com. To get started, head to:

🔗 <https://elementalscience.com/products/science-chunks-major-biomes-unit>

A Peek Inside a Science Chunks Unit

4

1. Lesson Topic

Focus on one main idea throughout the week. You will learn about these ideas by reading from visually appealing encyclopedias, recording what the students learned, and doing coordinating hands-on science activities.

2. Information Assignments

Find two reading options—one for younger students, one for older students, plus optional library books.

3. Notebooking Assignments

Record what your students have learned with either a lapbook or a notebook. The directions for these options are included for your convenience in this section along with the vocabulary the lesson will cover.

4. Hands-on Science Assignments

Get the directions for coordinating hands-on science activities that relate to the week's topic.

5. Lesson To-Do Lists

See what is essential for you to do each week and what is optional. You can check these off as you work through the lesson so that you will know when you are ready to move on to the next one.

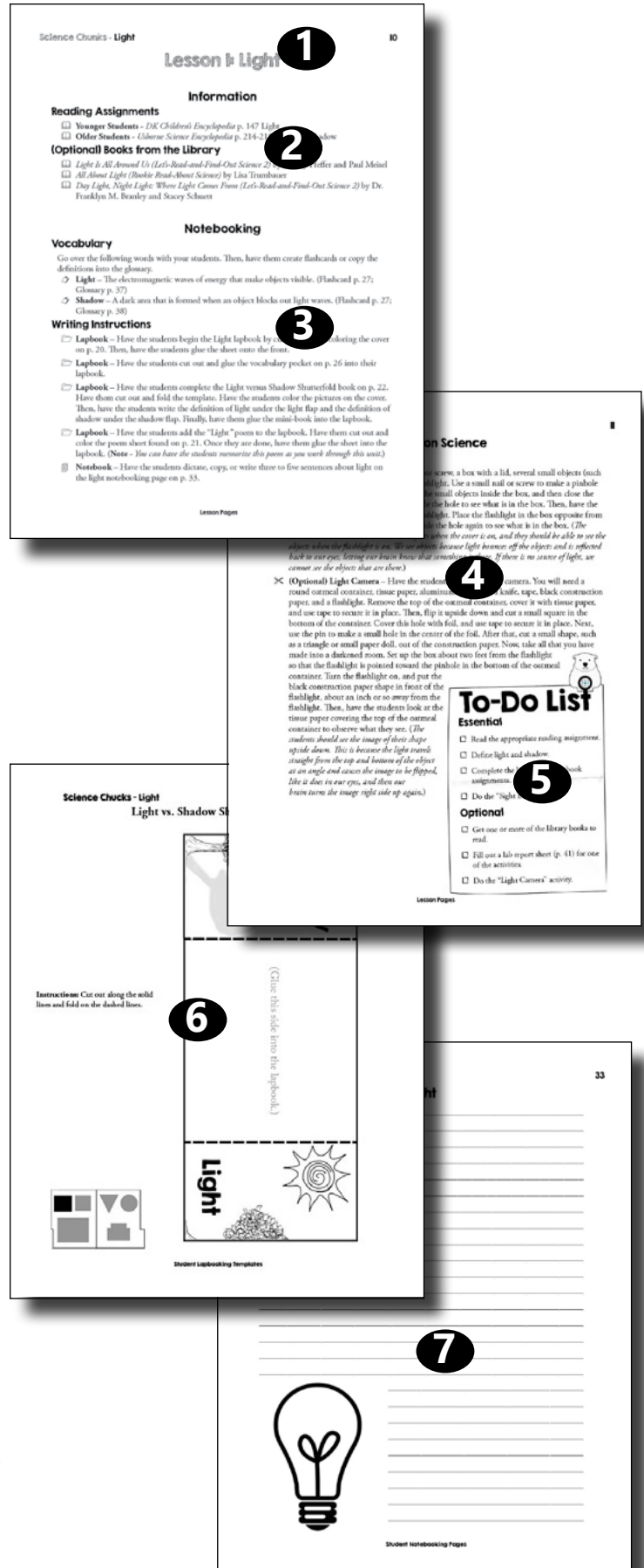
6. Lapbook Templates

Get all the information you need to create a lapbook on the subject.

7. Notebook Templates

Have all the sheets you need to create a notebook on the subject, including a glossary for the vocabulary terms.

In the appendix you will find a blank activity sheet, a blank lab report sheet, and a review sheet (or quiz).



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Unit Introduction

Science Chunks - Major Biomes is a unique and versatile unit study that leads you through a survey of the five major biomes. It is designed to be a gentle approach to homeschool science based on the Unit Study method suggested in *Success in Science: A Manual for Excellence in Science Education* by Bradley and Paige Hudson. This study can be used as a stand-alone unit for elementary science.

What Is Included in This Unit

Science Chunks - Major Biomes includes the three keys to teaching science. With each lesson you will be doing the following:

- ✓ Listening to (or reading) **scientific information** from visually appealing encyclopedias
- ✓ Dictating (or writing down) what the students have learned and seen using **lapbooking or notebooking**
- ✓ Watching (and doing) **hands-on science** through a variety of science activities

Here is how this works for a lesson.

Section 1 - Information

The elementary student is an empty bucket waiting to be filled with information, and science-oriented books are a wonderful way to do that. These books can include age-appropriate children's science encyclopedias, living books for science, and/or children's nonfiction science books.

In this program, the reading assignments and additional books scheduled in the lesson fulfill this component. The reading assignments are broken for you into two levels: younger students (1st to 3rd grade) and older students (4th to 6th grade).

Our idea is that you will read these selections with your students, pausing to ask questions or discussing the information once you are done reading.

Section 2 - Notebooking

The purpose of the notebooking component for elementary science education is to verify that the students have placed at least one piece of information into their knowledge bucket. You can use notebooking sheets, lapbooks, and/or vocabulary words to fulfill this requirement.

In this program, we have included two writing options, a lapbook and a notebook, for you to use with your students. In the lapbook section, you will find all of the templates and pictures you will need to complete a lapbook on the major biomes. In the notebook section, you will find all the pages you need to create a simple notebook on the major biomes, including notebooking sheets and a glossary.



Section 3 - Hands-on Science

Scientific demonstrations and observations are meant to spark students' enthusiasm for learning science, to work on their observation skills, and to demonstrate the principles of science for them. This component of elementary science education can contain scientific demonstrations, hands-on projects, and/or nature studies.

In this program, the coordinating activities at the end of each lesson fulfill this section of elementary science instruction. If you would like to record what you have done, you can use one of the templates in the appendix pp. 45-46.

What You Need in Addition to This Guide

Books Scheduled

The following books are what we used to plan the reading assignments for this unit:



Younger Students - *DK Children's Encyclopedia*



Older Students - *DK Smithsonian Super Earth Encyclopedia*

However, you could certainly use the encyclopedias you already have on hand or books from the library. Simply look up the topic assigned for the day, read about it, and complete the section in your lapbook.

You will need also simple craft supplies and other science materials—see a complete list of essential items on p. 8.

How This Unit Works

We have included a to-do list with each lesson to give you an idea of what is essential and what is optional. There are several ways you can schedule this unit. Here is a quick look at a few of the options.

Possible Schedules for Your Week

- **One Day** – You can set aside about an hour to an hour and a half each week to complete all the essential tasks in one day.
- **Two Days** – You can set aside about 30 to 40 minutes twice a week to complete all the essential tasks, plus a few more, in two days. On the first day, you can complete the reading assignments and either the lapbook or notebook assignments. On the second day, you can complete the coordinating activity and the vocabulary assignments as well as read any library books.
- **Three Days** – You can set aside about 30 minutes three times a week to complete all the essential tasks, plus a few more, in three days. On the first day, you can complete the reading assignments and either the lapbook or notebook assignments. On the second day, you can complete the coordinating activity and write a lab report using one of the templates. On the third day, you can do the vocabulary assignments as well as read any library books.





- **Four Days** – You can set aside about 20 to 30 minutes four times a week to complete all the essential tasks, plus a few more, in four days. On the first day, you can complete the reading assignments and either the lapbook or notebook assignments. On the second day, you can complete the coordinating activity and write a lab report. On the third day, you can do the vocabulary assignments as well as read any library books. On the fourth day, you can do the optional coordinating activity as well as read any library books.

If you choose to complete one lesson per week, this unit will take you four weeks to complete.

Final Thoughts

Read Further

If you would like to read more about philosophy behind the Science Chunks series, check out *Success in Science: A Manual for Excellence in Science Education* and the following articles from our website.

- **The Three Keys to Teaching Science** – This article shares the three keys to teaching science, including a free session that walks you through what each key can look like.
 <https://elementalscience.com/blogs/news/3-keys>
- **The Basics of Notebooking** – This article details the basic components of notebooking along with how a few suggestions on what notebooking can look like.
 <https://elementalscience.com/blogs/news/what-is-notebooking>
- **Lapbooking versus Notebooking** – This article takes a look at the differences between lapbooking and notebooking.
 <https://elementalscience.com/blogs/news/lapbook-or-notebook>
- **Scientific Demonstrations versus Experiments** – This article explains the difference between scientific demonstrations and experiments along with when and how to employ these methods.
 <https://elementalscience.com/blogs/news/89905795-scientific-demonstrations-or-experiments>

Last Words

As the author and publisher of this curriculum, I encourage you to contact me with any questions or problems that you might have concerning *Science Chunks - Major Biomes* by emailing us at support@elementalscience.com. I, or a member of our team, will be more than happy to answer them as soon as I am able. I hope that you will enjoy creating memories using *Science Chunks - Major Biomes*!

~ Paige Hudson

Materials List

Lapbook Materials

You will need the following materials to complete the lapbook:

- ✂ 2 sheets of 8 ½" by 11" card stock OR 1 file folder
- ✂ Colored pencils or crayons
- ✂ Markers for decorating the cover
- ✂ Glue stick
- ✂ Scissors
- ✂ Stapler

Notebook Materials

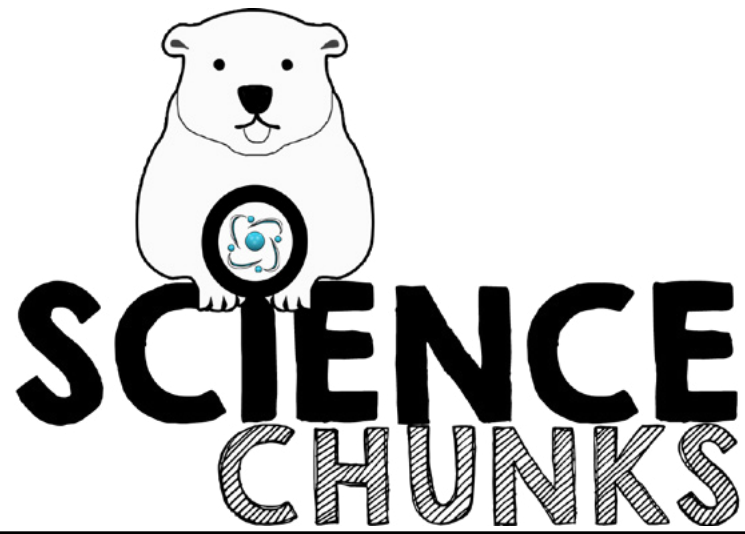
You will need the following materials to assemble the notebook:

- ✂ Hole punch and 3 brad fasteners or string OR
- ✂ Staples

Coordinating Activity Materials

You will need the following materials to complete the essential coordinating activities:

- ✂ **Lesson 1:** Epsom salts, hot water, food coloring, and paper
- ✂ **Lesson 2:** A 2-liter soda bottle with a top, gravel, potting soil, several small plants, scissors, tape, and water
- ✂ **Lesson 3:** Plastic or air-dry plants, real dirt, rocks, toy animal figures, and a shoebox
- ✂ **Lesson 4:** A shallow dish, sand, a few rocks, and several store-bought cacti or succulent plants
- ✂ **Lesson 5:** *No supplies needed*






Lessons





Lesson 1: Polar Biome

Information

Reading Assignments

-  **Younger Students** - *DK Children's Encyclopedia* p. 126 Habitats, p. 197 Polar Habitats
-  **Older Students** - *DK Smithsonian Super Earth Encyclopedia* pp. 200-201 Tundra, plus the following article on the difference between biome, ecosystem, and habitat:
 <https://elementalscience.com/blogs/science-activities/biome-ecosystem-habitat>



(Optional) Books from the Library

-  *Many Biomes, One Earth* by Sneed B. Collard III and James M. Needham
-  *What Is a Biome? (Science of Living Things)* by Bobbie Kalman
-  *The Arctic Habitat (Introducing Habitats)* by Molly Aloian and Bobbie Kalman
-  *Arctic Tundra (Habitats)* by Michael H. Forman





Notebooking

Vocabulary

Go over the following words with your students. Then, have them create a flashcard or copy the definition into the glossary.

-  **Biome** – A very large community of living things, both plants and animals. (Flashcard p. 29; Glossary p. 41)
-  **Polar Biome** — A biome with little vegetation and very cold temperatures. (Flashcard p. 30; Glossary p. 42)

Writing Instructions

-  **Lapbook** – Have the students begin the Major Biomes lapbook by cutting out and coloring the cover on p. 22. Then, have the students glue the sheet onto the front.
-  **Lapbook** – Have the students complete the Biomes mini-book on p. 23. Have them cut out the template and color it. Next, have the students tell you what they have learned about biomes and write it on the inside of the booklet. Then, have them fold the book in half and glue the booklet into the lapbook.
-  **Lapbook** – Have the students cut out the pages and color the cover of the Polar Biome flip-book on p. 24. Then, have the students color on the map where the polar biome habitat is typically found on the “Locations” page. After that, have the students tell you what they have learned about the polar biome and write it for them on the “Characteristics” page. Lastly, staple the pages together and glue the biome flip-book into the lapbook.
-  **Notebook** – Have the students dictate, copy, or write two to six sentences on what they have learned for polar biome on p. 36.

Hands-on Science

Coordinating Activity

- ✂ **Ice Painting** – You will need Epsom salts, hot water, food coloring, and paper. Mix equal parts of the Epsom salts and hot water together until most of the Epsom salts have dissolved. Add a few drops of food coloring and mix well. Then, have the students use the mixture to paint a snowflake design or ice storm on the paper. As it dries, the ice crystals will form!
- ✂ **(Optional) Biomes of the World** – This week, you need coloring pencils and a picture of the polar biome or the template on p. 47. Have the students glue the photo of the polar biome on the poster, or have them color the picture on the template. You can also have them add a sentence or two about the biome to the poster.
- ✂ **(Optional) Memory Work** – There is no poem included in this lapbook as there is with other Science Chunks units. If you would still like to have your students work on memorizing a poem with this unit, you can use the following one:

Biomes

Deserts are dry and dusty places,
Hot all day, so water is scarce in these spaces.

The grassland is a prairie or pasture,
There are few trees and much grass for the horse and rancher.

The forest is full of different trees.
It has distinct layers that let plants grow with ease.

The arctic is a cold and icy land.
The ground is forever frozen, and the
landscape is bland.

The aquatic zones are full of water.
Oceans and wetlands have fish and otter.



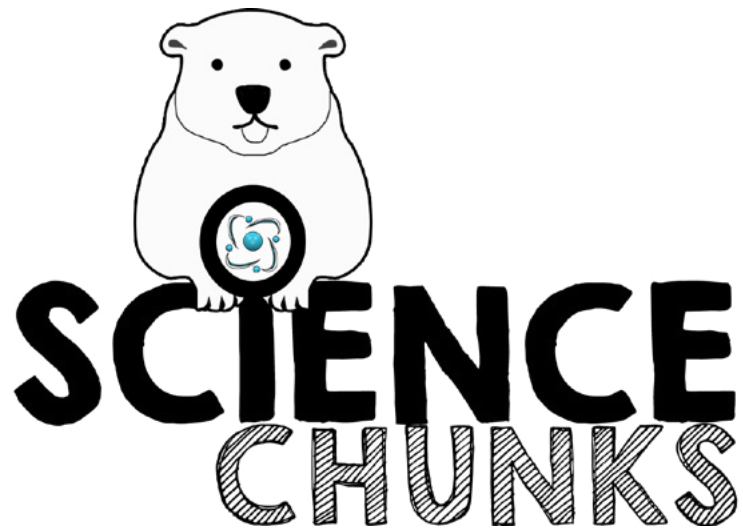
To-Do List

Essential

- ☐ Read the appropriate reading assignment.
- ☐ Define biome and polar biome.
- ☐ Complete the lapbook or notebook assignments.
- ☐ Do the “Ice Painting” activity.

Optional

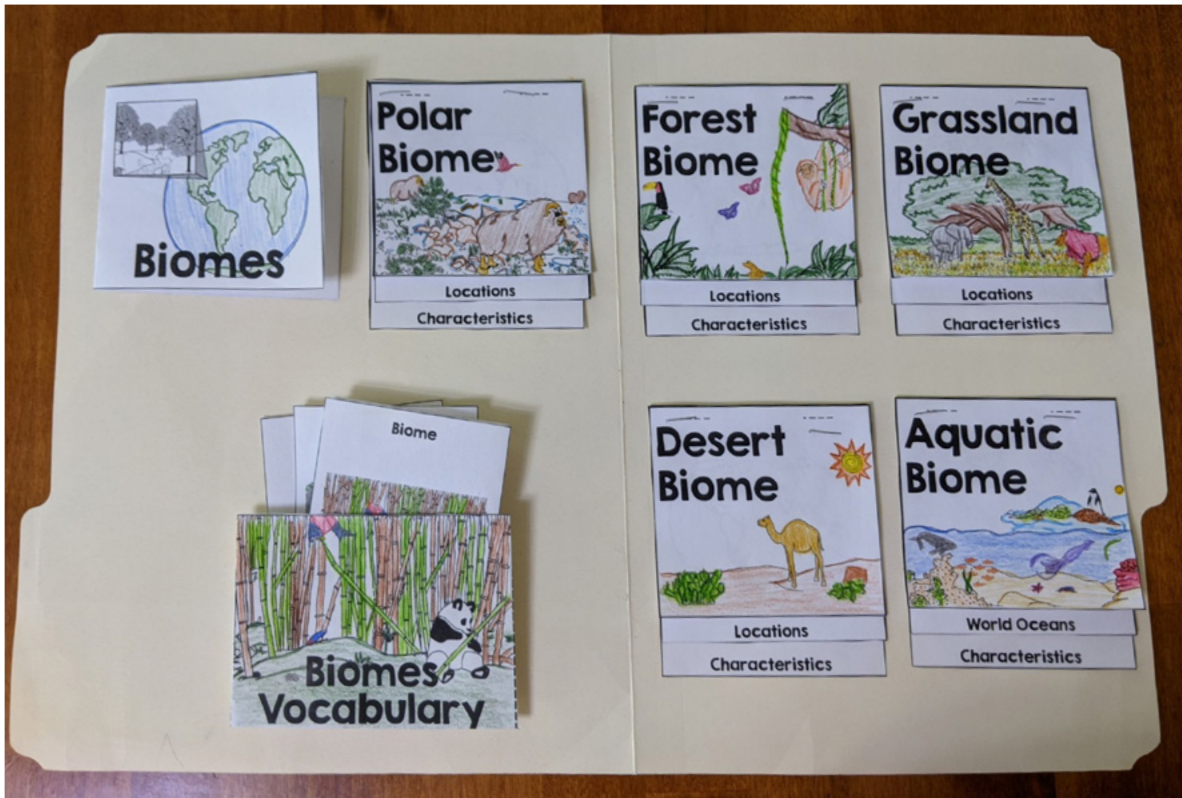
- ☐ Get one or more of the library books to read.
- ☐ Fill out a lab report sheet (p. 46) for one of the activities.
- ☐ Do the “Biomes of the World” or the “Biomes Poem” activity.



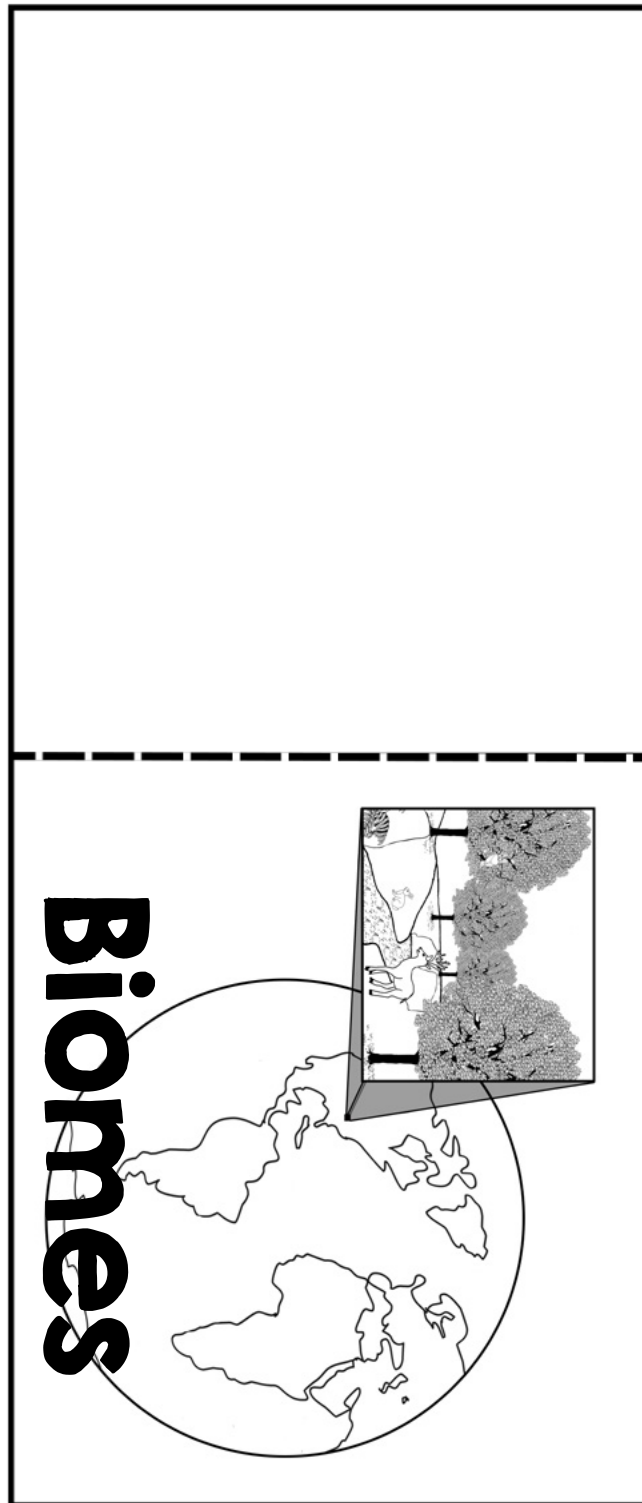
Student Lapbook Templates

Major Biomes Lapbook

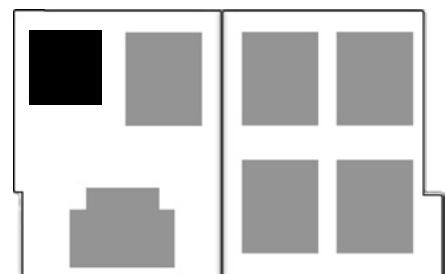
You will need two sheets of card stock or one file folder. If you are using card stock, begin by taping the two sheets together on the longest edge. The completed lapbook will look like this on the inside:

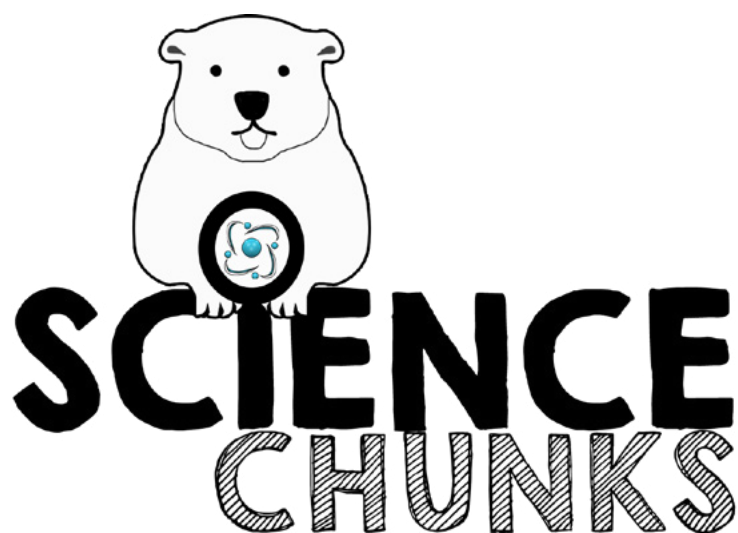


Biomes Mini-book



Instructions: Cut out along the solid lines and fold on the dashed lines.





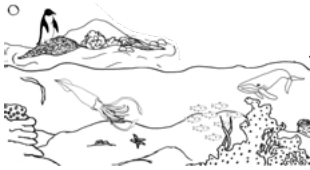
Student Notebook Pages

Polar Biome

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Major Biomes Vocabulary

Aquatic Biome —



Biome —



Desert —



Drought —