



Science Chunks: Invertebrates Sample Packet

Teach your students the basics of invertebrates in bite-sized chunks. The following sample packet includes most of the first lesson of the *Science Chunks: Invertebrates* 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-invertebrates-unit>

A Peek Inside a Science Chunks Unit

5

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.

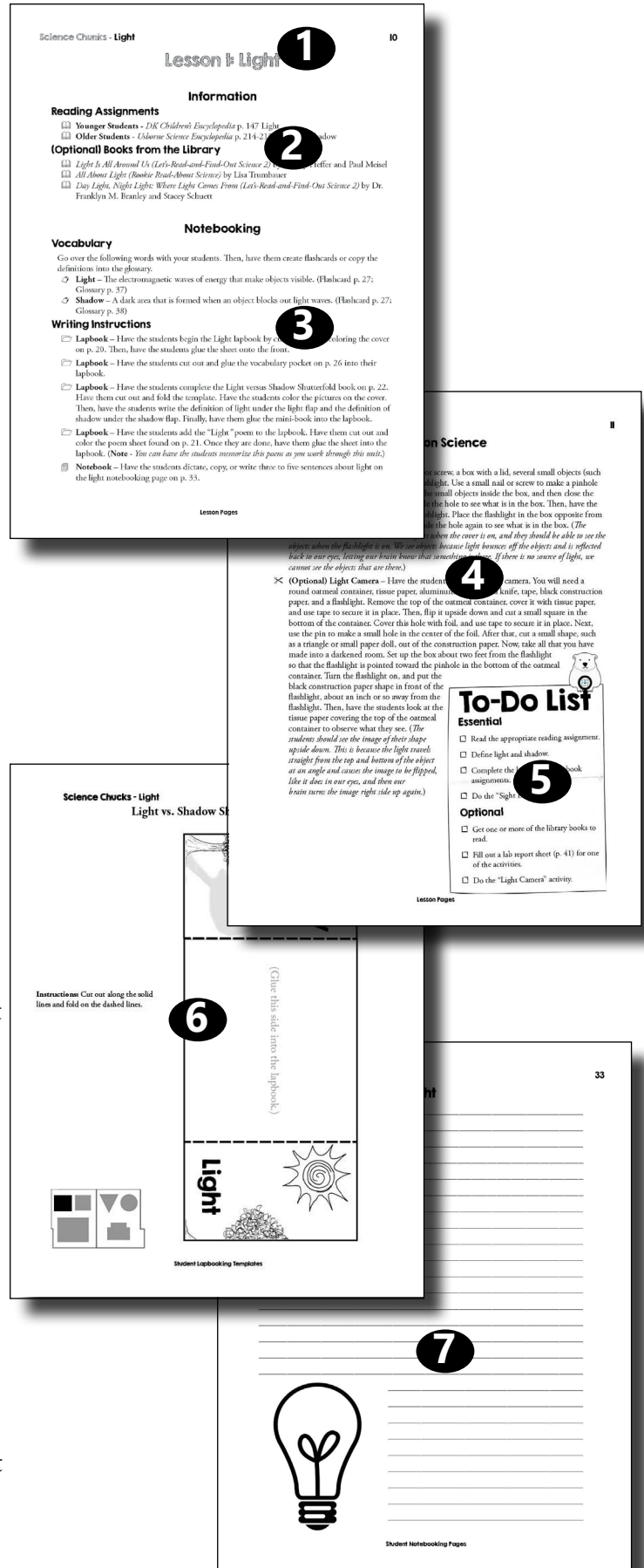
6. Lapbook Templates

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).



THIS UNIT IS INTENDED FOR HOME USE ONLY

The images and all other content in this book are copyrighted material owned by Elemental Science, Inc. Please do not reproduce this content on e-mail lists or websites. If you have an eBook, you may print out as many copies as you need for use WITHIN YOUR IMMEDIATE FAMILY ONLY. Duplicating this book or printing the eBook so that the book can then be reused or resold is a violation of copyright.

Schools and co-ops: You MAY NOT DUPLICATE OR PRINT any portion of this book for use in the classroom. Please contact us for licensing options at support@elementalscience.com.

Table of Contents

Introduction.....3

A Peek Inside a Science Chunks Unit	5
Unit Introduction	6
Materials List	9

Lessons.....10

Lesson 1: Mollusks	11
Lesson 2: Crustaceans	13
Lesson 3: Arachnids and Cnidarians	15
Lesson 4: Invertebrate Life Cycles	17
Lesson 5: Insects	19

Student Lapbook Templates.....21

Invertebrates Lapbook Cover Page Template	23
Mollusk and Crustacean Accordion Fold-book	24
Invertebrate Poem	25
Arachnid and Cnidarian Mini Tab-book	26
Metamorphosis Sheet	27
Insect Accordion Fold-book	28
Vocabulary Cards	29

Student Notebook Pages.....33

Mollusks Notebooking Page	35
Crustaceans Notebooking Page	36
Arachnids and Cnidarians Notebooking Page	37
Invertebrate Life Cycles Notebooking Page	38
Insects Notebooking Page	39
Invertebrates Vocabulary	40

Appendix.....42

Activity Sheet Template	43
Lab Report Template	44

“Life Cycles” Article	45
Butterfly Life Cycle Pictures	46
Invertebrates Review Sheet	47

Unit Introduction

Science Chunks - Invertebrates is a unique and versatile unit study that leads you through a survey of invertebrate animals. 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 - Invertebrates 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.

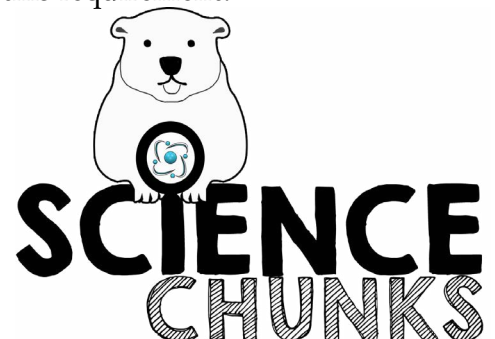
In this program, the reading assignments and additional books scheduled in the lesson fulfill this component. The reading assignments are broken for you into two levels: younger students (1st to 3rd grade) and older students (4th to 6th grade).

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 plants. In the notebook section, you will find all the pages you need to create a simple notebook on plants, 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. 43.

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** - *Kingfisher Encyclopedia of Animals*
-  **Older Students** - *Animal! (DK and Smithsonian), 2016 Edition*

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. 9.

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 five weeks to complete.

Final Thoughts

Read Further

If you would like to read more about the 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 - Invertebrates* 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 we can. I hope that you will enjoy creating memories using *Science Chunks - Invertebrates*!

~ 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

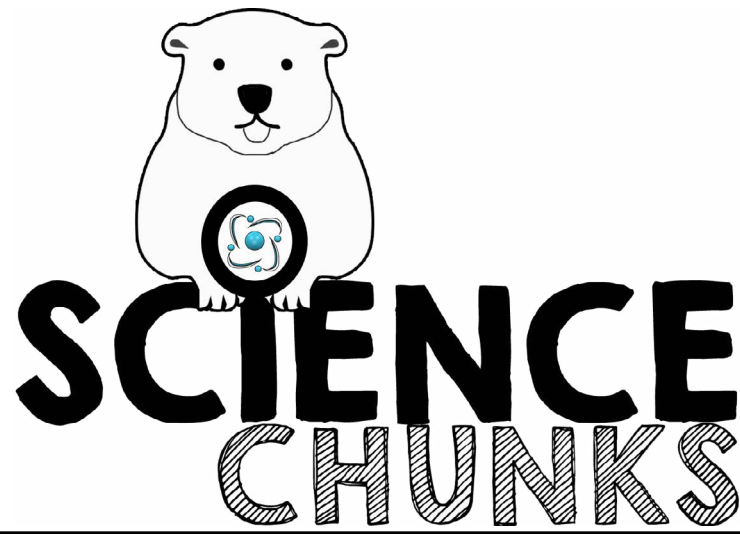
You will need the following materials to assemble the notebook:

- ✂ 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:** Small, unglazed terracotta pot, Small rock or piece of mulch
- ✂ **Lesson 2:** Tweezers, Toothpick, Cotton Swab, Gummy Worm, Marshmallow, Lettuce Leaf
- ✂ **Lesson 3:** String (about 5 feet long)
- ✂ **Lesson 4:** Butterfly Life Cycle Pictures (Appendix p. 46)
- ✂ **Lesson 5:** Piece of fruit, Honey or syrup, Plate





Lessons







Lesson I: Mollusks

Information

Reading Assignments

-  **Younger Students** – *Kingfisher Encyclopedia of Animals* p. 127 Slug and Snail, p. 131 Octopus
-  **Older Students** – *Animal! (DK and Smithsonian)* pp. 24-25 Cephalopods, pp. 26-27 Mollusks



(Optional) Books from the Library

-  *Are You a Snail? (Backyard Books)* by Judy Allen
-  *Life of the Snail (Nature Watch)* by Theres Buholzer
-  *Tiny Snail* by Tammy Carter Bronson
-  *An Octopus Is Amazing (Let's-Read-and-Find... Science, Stage 2)* by Patricia Lauber
-  *Octopus (Day in the Life: Sea Animals)* by Louise Spilsbury
-  *Good Thing You're Not an Octopus!* by Julie Markes and Maggie Smith




Notebooking

Vocabulary

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

-  **Invertebrate** – An animal without a backbone. (Flashcard p. 29; Glossary p. 40)
-  **Mollusk** – A group of invertebrate animals, including snails, slugs, and octopuses. (Flashcard p. 30; Glossary p. 41)

Writing Instructions

-  **Lapbook** – Have the students begin the Invertebrate lapbook by cutting out and coloring the cover on p. 23. Then, have the students glue the sheet onto the front.
-  **Lapbook (multi-week)** – Have the students work on the Mollusk and Crustacean accordion fold-book on LT p. 24. Cut out the page, and color the pictures of the snail and octopus. Have the students tell you what they have learned about the snail and octopus. Then, write their favorite piece of information next to each of the animals on the page.
-  **Notebook** – Have the students dictate, copy, or write one to four sentences on what they have learned about mollusks on p. 35.

Hands-on Science

Coordinating Activities

- ✂ **Snail Home** – Have the students attract a mollusk (a snail or slug) to observe. You will need small, unglazed terracotta pot (soaked overnight), and a small rock or piece of mulch. Have the students set a pot that has been soaked in water upside down in the garden. Have them prop up one side with a small rock. Try to set the pot in a shaded place that has a fair amount of foliage nearby. After 4 hours, check the pot to see if any snails or slugs have made their home there. *(If there are no snails, you can try to give it more time by watering the pot and propping it up again. Then, check the pot the next morning to see if there are snails in there this time.)*
- ✂ **(Optional) Edible Octopus** – Make octopus hot dogs. Begin by cutting a hot dog two-thirds of the way up several times to create legs. Then, cook the hot dog on the stove according to the package instructions. Serve with your student's favorite side!



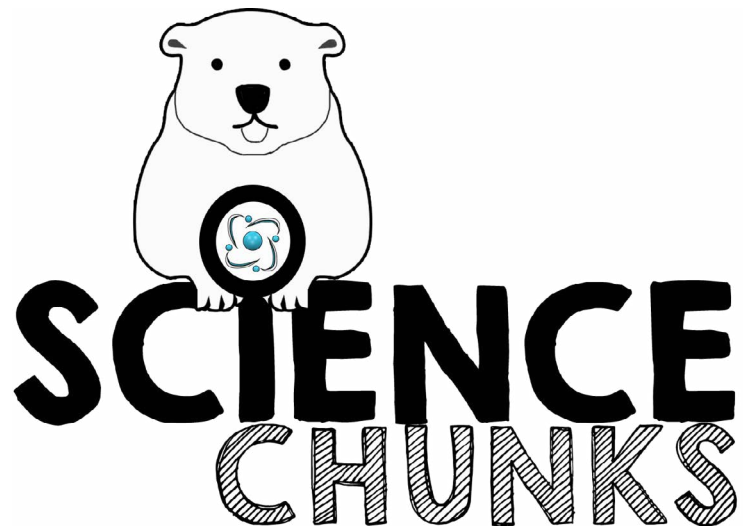
To-Do List

Essential

- ☐ Read the appropriate reading assignment.
- ☐ Define invertebrate and mollusk.
- ☐ Complete the lapbook or notebook assignments.
- ☐ Do the "Snail Home" activity.

Optional

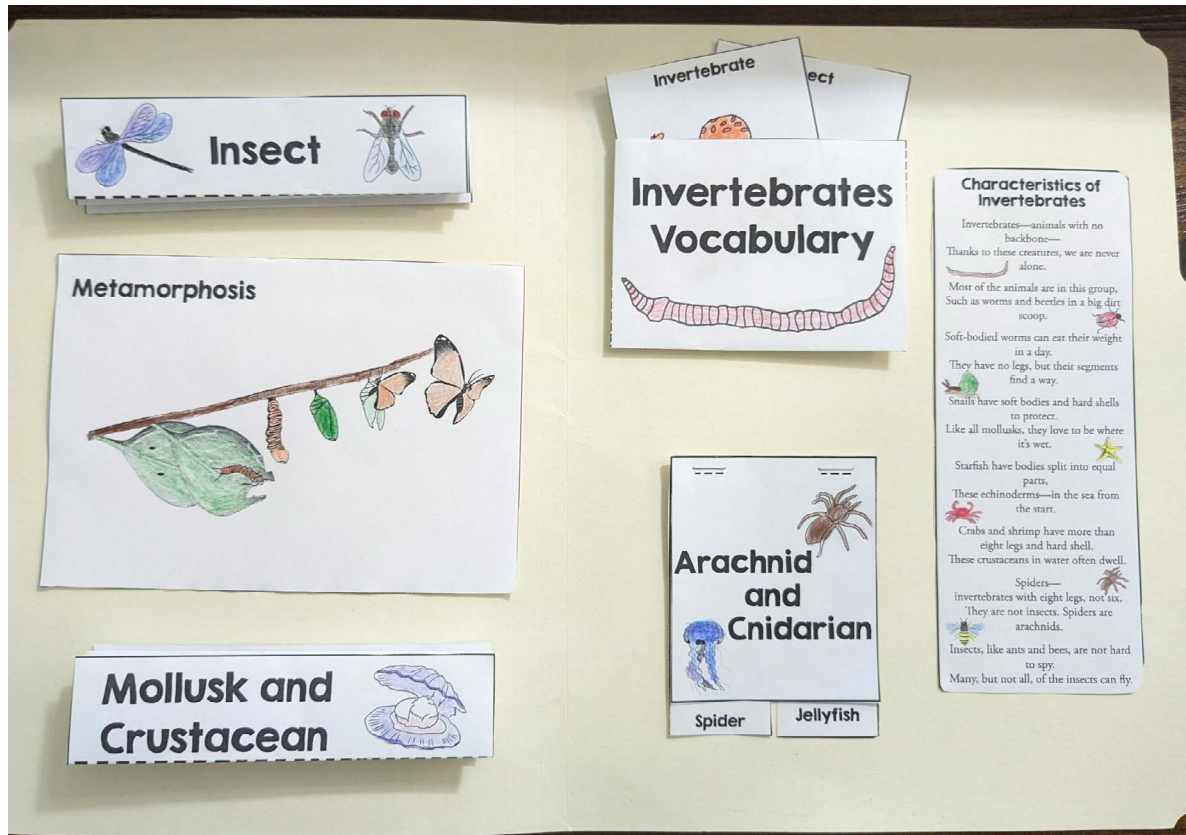
- ☐ Get one or more of the library books to read.
- ☐ Fill out a lab report sheet (p. 44) for one of the activities.
- ☐ Do the "Edible Octopus" activity



Student Lapbook Templates

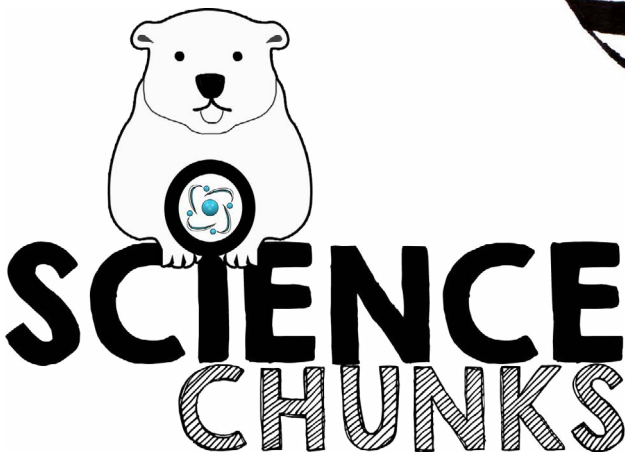
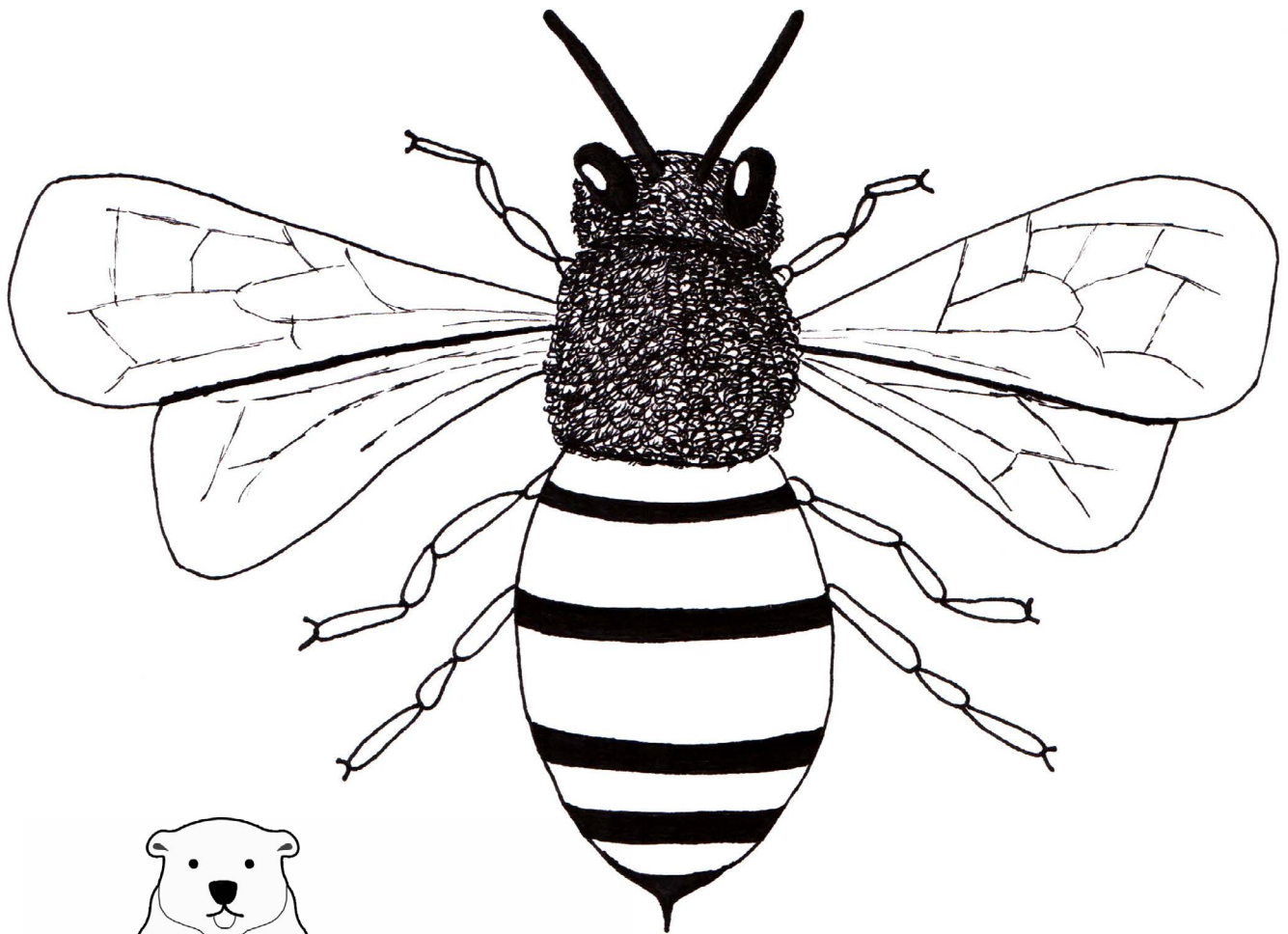
Invertebrates Lapbook

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:



Invertebrates Lapbook Cover Page Template

Invertebrates

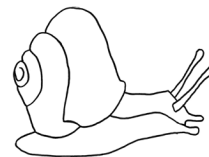


By: _____

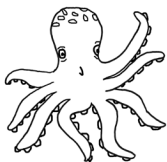
Instructions: Cut out along the solid lines.

Mollusk and Crustacean Accordion Fold-book

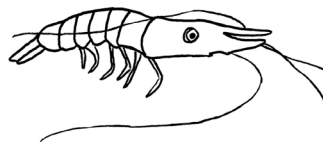
Mollusk and Crustacean



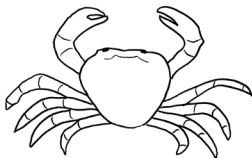
Snail



Octopus

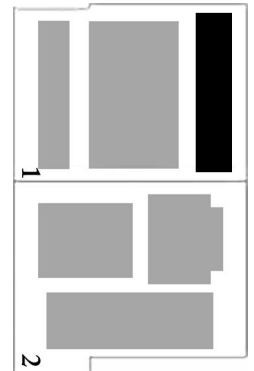


Shrimp



Crab

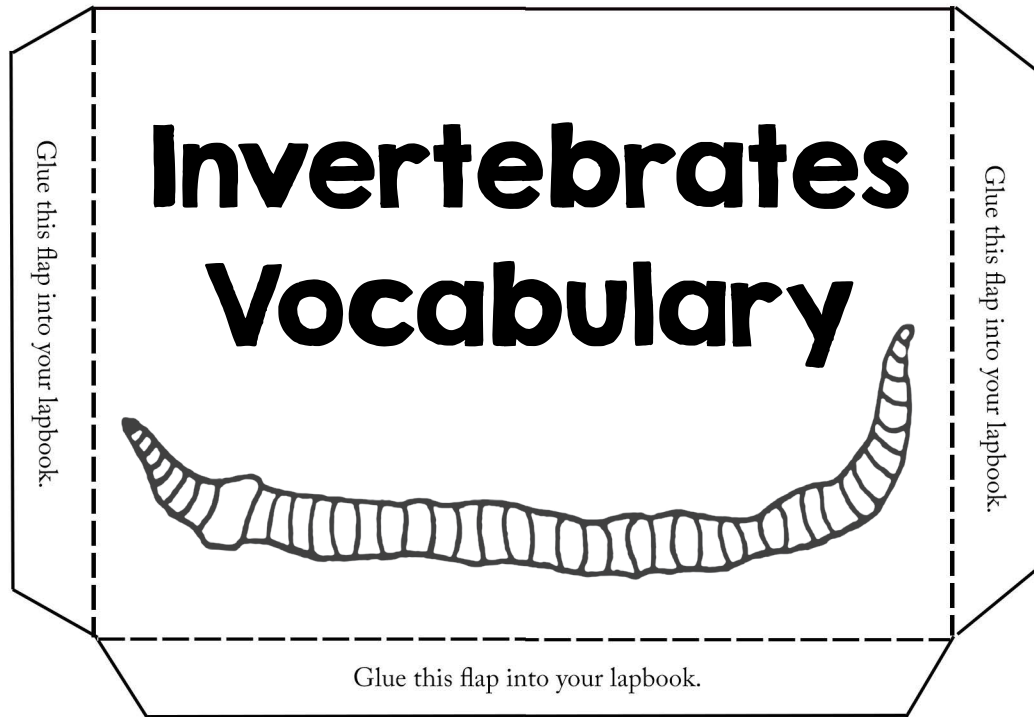
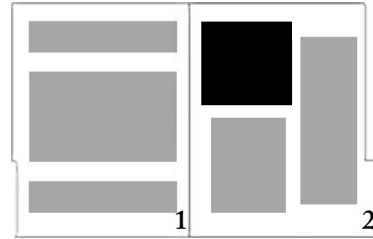
(Glue this box into the lapbook.)



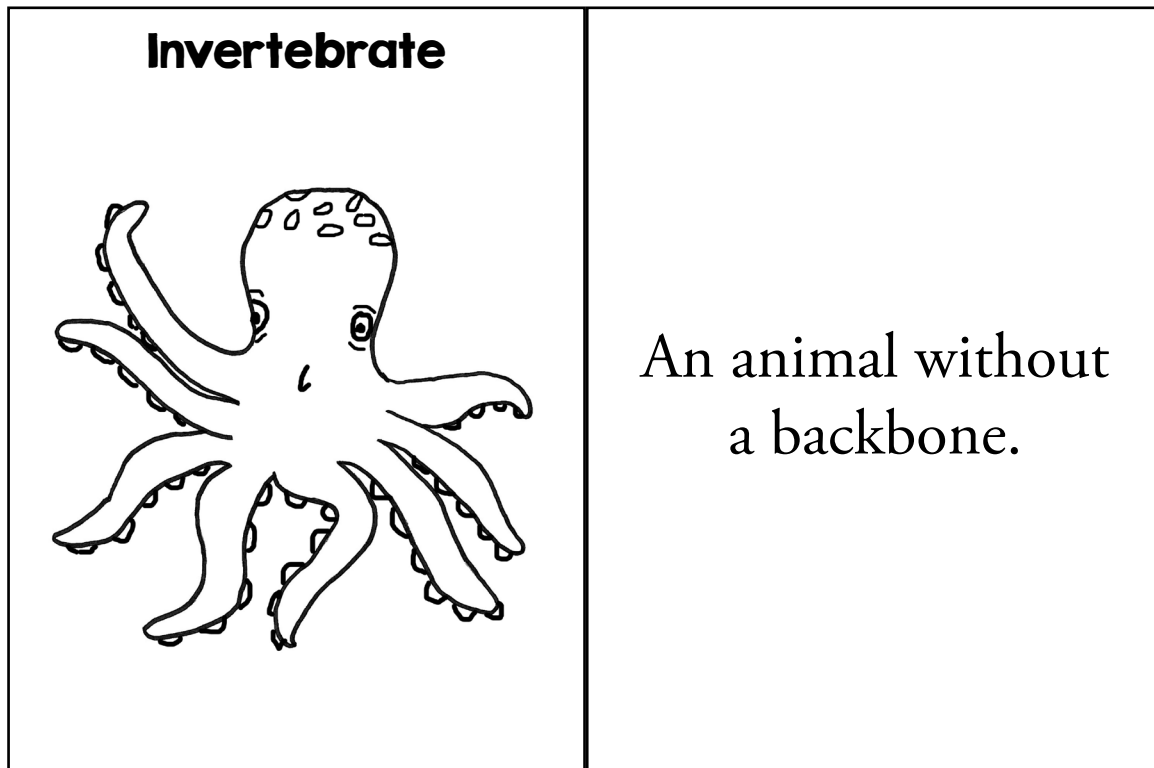
Instructions:
Cut out along the solid lines and fold on the dashed lines.

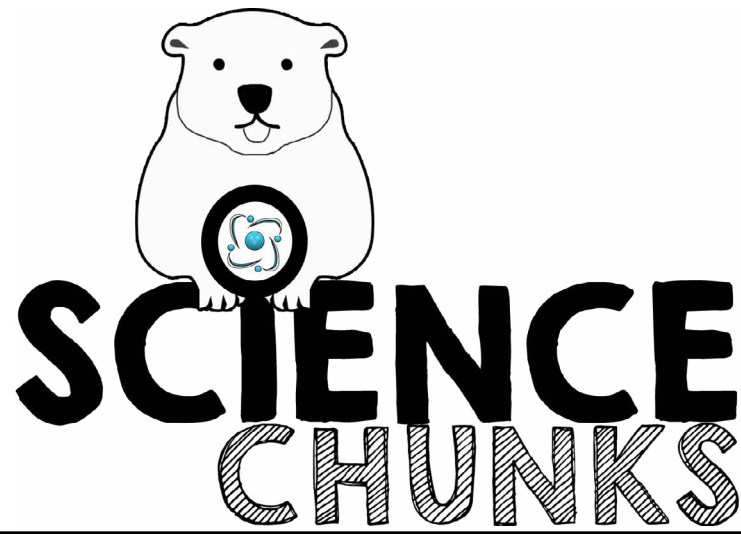
Vocabulary Cards

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



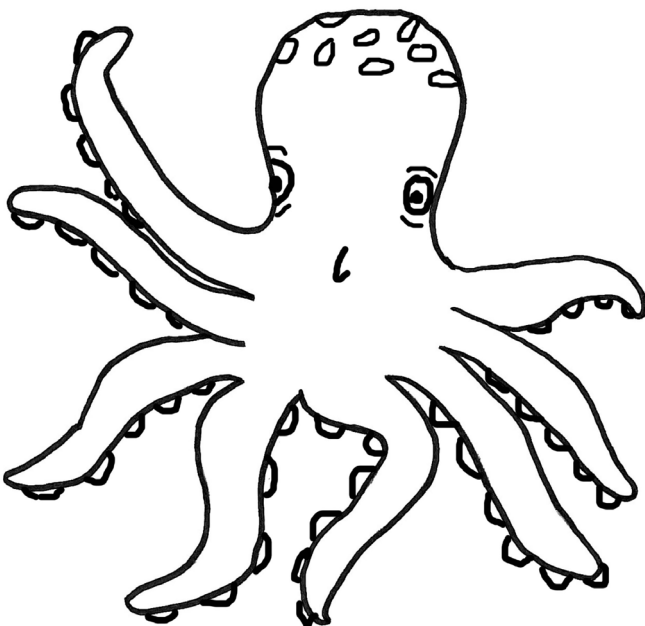
Instructions: Cut out along the outer solid lines, fold in half, and glue the two halves together so that the picture is on one side of the card and the definition is on the reverse.





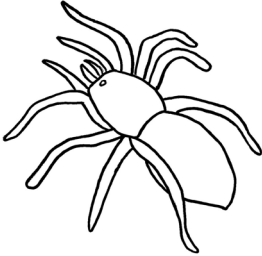
Student Notebook Pages

Mollusks

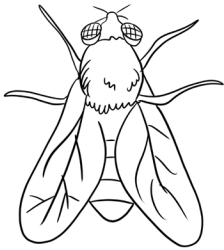
[illegible][illegible]

Invertebrates Vocabulary

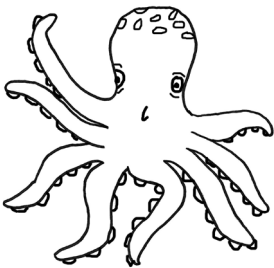
Arthropod —



Insect —



Invertebrate —



Metamorphosis —

