

Meet the Minibeasts



The First Book of Bugs by Margaret Williamson, *The First Book of Bees* by Albert B. Tibbets and *Hexapod Stories* by Edith M. Patch are the books upon which this guide is based.

~A Guided Study by Lisa Kelly~



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Please read these notes.

Author's Notes

When using this guide, the greatest emphasis should be placed on using it in a manner that is best for the student(s). It is designed to be flexible enough to use with children from ages 7 to 9, but please adapt as needed. This makes it appropriate for children of varying reading, skill and interest levels as well as helpful for combining children together.

The narration suggestions listed in the section under “After the Reading” reflect these variations. Some children will need only the gentlest and lightest of narrations suggestions with little to no writing, while other children will need narration suggestions which include more writing or digging deeper into creative or reflective style narration suggestions.

Multiple suggestions are offered so that the teacher and the student can choose one (or sometimes two) from a variety of suggestions. Please do not expect your students to respond to all of the narration prompts listed under each reading.

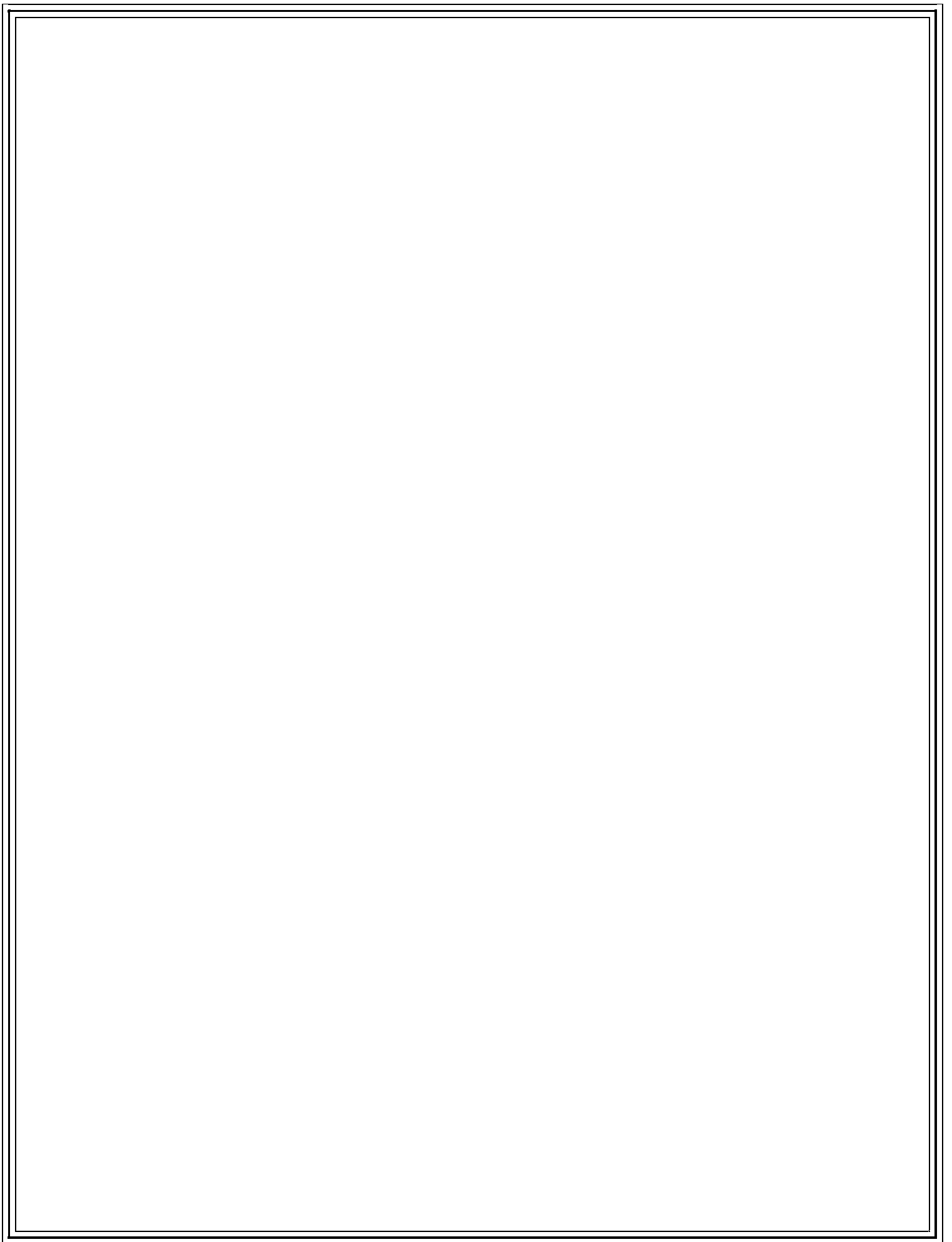
Oral narrations are the primary method for building attention and composition skills. In general, narrating orally should be the method used on most days and for most subjects, particularly for this level. The narration suggestions included offer a variety of ways for the teacher to allow the students to tell what they know orally as well as offer some ways for alternative approaches –such as written, dramatic/role play, descriptive and creative. These alternative approaches need only be used occasionally –or as children show interest.

Feel free to adapt any narration suggestion as needed. An older student may have an interest in a narration suggestion which can be altered to make it more appropriate, such as turning a suggestion meant to be given orally to one that is written.

If you have any questions, comments or concerns, please feel free to email me through the contact section of the website

Thank You,

Lisa Kelly



Book List

The First Book of Bugs by Margaret Williamson (Living Books Press)

The First Book of Bees by Albert B. Tibbets (Living Books Press)

Hexapod Stories by Edith M. Patch (Yesterday's Classics)

Optional Book List

Chirping Crickets by Melvin Burger

Fireflies by Julie Brinckloe

Ladybugs by Gail Gibbons

More optional books are listed in the official guide –this is a sample only.

Optional Resources

Toy Models of Insects/Bugs

Butterfly Garden Kit

Ant Farm

Cootie, the game by Hasbro

Online Resources

For Links Below, See *A Mind in the Light* –Resources: Nature Study & Science: Minibeasts/Entomology

Interactive Educational Sites: Insects and Bugs Theme

Ted-Ed Video Clip: Why do Honeybees Like the Hexagon Shape?

Minibeasts Posters [4] –Free PDF file from *A Mind in the Light* –this will be attached in an automated email once purchase of this guide has been made

Supplies

- modeling clay, Play-Doh or Salt-Dough –see recipe for the latter in the appendix
- spray paint (white)
- spray glue or adhesive
- large sheet of paper/poster (black)
- large piece of scrap cardboard, an old towel or old newspapers

More supplies are listed in the official guide –this is a sample only.

Reading & Lesson Schedule

Week #	Day One	Day Two	Day Three
1	Introduction to Bugs	<i>The First Book of Bugs</i> -R1	Bug, Insect or Spider?
2	<i>The First Book of Bugs</i> -R2	<i>The First Book of Bugs</i> -R3	OL Ladybug [Ladybird]
3	OL Firefly	<i>The First Book of Bugs</i> -R4	<i>The First Book of Bugs</i> -R5
4	OL Daddy Longlegs	OL Cobwebs	Spider Webs & Collecting Webs

There are two terms or 24 weeks included in the official guide –this is a sample only.



Introduction to “Bugs”

This study is based on three main living books –one of which is titled *The First Book of Bugs*. While this book is a lovely, colorful introduction to all small, insect-like creatures, the general term “bugs” in its title can be confusing. There *are* small creatures which are formally categorized as “bugs”, but this category does not include *all* insects, spiders and other small creatures. All bugs are insects but many insects are not bugs.

For small children, the UK uses the word “Minibeasts” to include insects, spiders, bugs, centipedes and other small arthropods often grouped together for study. This seemed like a less confusing word for students, so it became part of the title of this study. This guide will introduce students to the word “insect” and in subsequent lessons will distinguish between bugs, insects and spiders. Later the word “hexapods” will be introduced. Most insects are hexapods, but there are a few types which are not.

Introductory Activity

Ask students: “What do you know of bugs?” and “What do you know of insects?”

Note: Toy models of insects/bugs can be purchased online for a reasonable price. These are fun to use for sorting and classifying activities. Small picture cards are included with this curriculum, so this purchase is not required. You could substitute the toy models for the pictures when using the sorting mats, if you’d prefer.

1. Study and name the parts of the insect using either a toy insect or the diagram from the appendix [Printable Resources]. Allow your students to discover as much on their own as possible. Also, consider using and displaying the “Parts of the Bee” poster [Free PDF in automated email sent with purchase of this guide].

2. You may wish to use the Montessori 3-part cards to allow your student to practice naming the parts of an insect. **These cards are included in the Appendix –Printable Resources.**

- First, lay out the cards for your child. The control card is placed down first, then the matching picture is placed down next to it and finally the label is placed under this picture.
- After watching you the first time, the student can then lay out the cards on his own thereafter.
- Ask your child to let you check his work before putting the cards away. Later, he might be able to use the control cards to check his own work.

Note: The focus on the 3-part cards is to isolate each part visually. Montessori 3-part Cards are included in the Appendix –Printable Resources. A page of queen bees in soft gray is also included, which can be printed and used to make your own 3-Part Cards, if you prefer. Use the ready-made cards as a reference for how to create them. The insect for the 3-part cards is a queen bee. Using this insect as an example allows for the wings to be included as a part, but remind your students that some insects do not have wings.

3. Complete the included page “Parts of the Insect” [Appendix –Printable Resources].

Additional Activities

For additional fun, you could allow your children to create their own model of an insect or spider using Play-Doh or modeling clay. Be sure that they include only the specific parts for that choice. For example, a spider should have 2 body sections, 8 legs and no wings or antenna.

If you and your child are interesting in studying the metamorphosis of a butterfly, then you should **now consider** purchasing your butterfly kit or sending off for your caterpillars to allow for good timing in their arrival. Once your caterpillars arrive, you should set up your kit following its directions.

You could also look into starting an art farm as a natural history project too.

The First Book of Bugs/Reading 1

- ❖ Read Section 1: “About Bugs”.

Before the Reading

- ❖ Connection: What can you share about the parts of an insect?
- ❖ Note: Be sure your students read and enjoy the numerous illustrations and diagrams through this book.

After the Reading

- Tell all that you know about bugs.
- Tell how bugs help us. Tell how they can be a nuisance to us.
- Write a list with your teacher of as many bugs as you can think. Choose one and tell more about it.

Bug, Insect or Spider?

Activities with Insect Models

Objective: Classify toy insect models according to type –insect, bug or spider.

1. Write a list with your student on the board or a large sheet of paper comparing the physical characteristics of insects, true bugs and spiders [see page which follows]. Use the toys as models to look for these characteristics as you list them. Be sure to distinguish between bugs, insects and spiders. If you were unable to purchase or find the toy model bugs, then use the pictures for the sorting mats for this work [Appendix –Printable Resources].
2. Print and then have student use both sorting mats [1 and 2; Appendix –Printable Resources] to practice distinguishing between the three categories. [A teacher key is included in the appendix for the sorting mats.]
3. Students can also sort toy model insects in other ways: wings/no wings or forms of movement such as jumpers/walkers/flyers/multiple forms of movement. (For example, a fly can walk and fly.) Feel free to allow them to come up with their own categories for sorting too. Students can use the toy models or the picture cards for this additional categorizing work.

Is it a Bug, an Insect or a Spider?

Insects

- 6 legs
- 3 body sections: head, thorax and abdomen
- rings in abdomen
- wings and legs grow from thorax
- almost never breathe through mouth
- some insects have wings
- centipedes have many more than 6 legs, so it is not an insect
- a caterpillar is considered an insect because it is the larval stage of one...it turns into one

Spiders

- two body sections
- not a bug or insect; part of the arachnids
- 4 pairs of legs
- no antenna
- no wings

Bugs

- are one type of insect
- Ladybugs are not actually bugs despite their name; they are beetles
- bugs eat through a stylet-a mouth shaped like a straw for sucking food

The First Book of Bugs/Reading 2

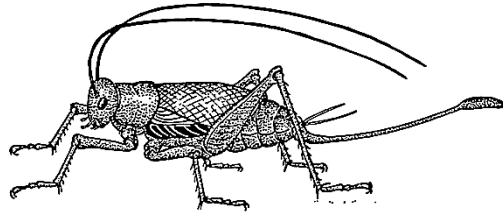
- ❖ Read Section 2: “Crickets and Their Cousins”.

Before the Reading

- ❖ Connection: Distinguish between bugs, insects and spiders. What do you know of crickets?
- ❖ Word to Know: molt (molting) [Note: The word molting is not used in this reading, but you may wish to add it as you read over this section of the book. You might also write the word on the board.]
- ❖ Display the “Parts of the Cricket” poster [Free PDF in automated email sent with purchase of this guide] and discuss.

After the Reading

- Tell what you now know of crickets.
- Write a list with your teacher of some of the relatives of the cricket. Choose one that you found interesting and tell about it.
- Draw a picture of the cricket and its relatives. Label as many of these insects as you can with the help of your teacher. Give your picture a title or caption and share it with someone, telling about it.



Additional Reading


Chirping Crickets by Melvin Burger

Reminder

- Be sure you have sent off for your caterpillars if you are planning on using a butterfly kit for a natural history project.

The official guide also includes a few coloring pages and numerous printable resource pages. This is a sample only.

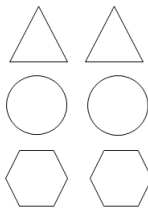
Parts of a Bee



Label the following parts of the queen bee, writing the word once in either whole words or in:

.....antennacompound eye
.....abdomenproboscis
.....headleg
.....wing	

Check off each part when you have labeled it correctly. Write the name of the insect on the line below.



Which Color Does a Bee Like Best?

Flower Color	Number of Bee Visits	Other Visitors? What Kind?
Red		
Yellow		
Blue		
Purple/Violet		
Orange		
Green		
White		
Black		


Note: You will also need the number of bees that visit each color. The 2-robot will check for the number of visits. Write the names of the insects that visit the color of the flower on the line below.


Minibeasts Scavenger Hunt

Minibeast Type	How Many?	Notes
two leg		Where did you find it?
Sixth Minibeast		
trap		
mark		
leaves on a leaf		
small insect		
stomach		
Minibeast on top		

Note: You will need the name of the insect that you find. Write the name of the insect on the line below. You will also need the number of insects that you find. Write the number on the line below. You will also need the name of the insect that you find. Write the name of the insect on the line below.

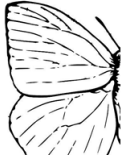
Symmetry Cards - Mirror Activity





1/2 Butterfly Outline Shape Follows

(Print with the paper folded in half. Open. Trace the outline of the upper wing and the body. Fold the paper back in half.)



Butterfly Outline Shape Follows

(Print with the paper folded in half. Print one on each side and fold in half.)