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Cover Photo: Polyphemus moth (*Antheraea polyphemus*) near Dublin, Ohio, August 2009.
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Getting Ready for Grade 3™

Nature in Summer

Moths

written by Alice Lee Folkins



Summer Reads™



Moths**Table of Contents**

Introduction	3
Caterpillars	4
Silkworms	5
Is it a Moth or a Butterfly?	6
Rate your thinking and reading	7
Comprehension questions	7

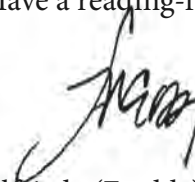
Dear Third Grader,

I am a teacher who has studied how children learn to read well. What I have learned has been used to write SummerReads and programs like QuickReads® and Ready Readers.

The best way to be ready for third-grade is to read every day of the summer. You can choose to read a chapter or a book from SummerReads. But be sure to read it at least three times on the same day. Here's how to use SummerReads:

1. Start by reading it yourself. Mark the words that you don't know.
2. Next, ask someone to read with you. Get that person to help you with any words you don't know. You can even go to the computer to www.textproject.org and hear a recording of the books.
3. Last, you're going to read by yourself to answer the questions at the end of the book. You can go to the computer to find the answers.

Have a reading-filled summer!



Elfrieda (Freddy) Hiebert, Ph.D.

Inventor of the TEXT model

Moths

Photo: Pupa of Gulf Fritillary butterfly (*Agraulis vanillae*) in its cocoon, near Pompano Beach, Florida.
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Introduction**Moths and Butterflies**

Whenever you are outdoors this summer, you are likely to see moths and butterflies flying about. During the long warm days of summer, these insects search for food, mate, and lay eggs. Both moths and butterflies pass through four stages of growth before they become adults. Moths and butterflies look very different from one stage of growth to another. Wings do not appear until the very last stage. You can see examples of each of the stages in a nearby garden, a park, or a piece of land that is overgrown with weeds. You will have to look very carefully but the wait will be worth it. Whatever the stage of growth, these insects are special.

Moths

Caterpillars



Adult moths and butterflies lay many tiny eggs. The eggs are usually placed on the bottoms of leaves. When an egg hatches, out comes a caterpillar. Some caterpillars are long and thin like worms. Other caterpillars are short and fat like slugs. But not all caterpillars look like worms or slugs. One kind of caterpillar looks like a big spider. Whatever their

Photo: Caterpillar of the Poplar hawk-moth (*Laothoe populi*).
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shape or size, moth caterpillars grow up to be moths and butterfly caterpillars turn into butterflies.

Caterpillars can be a tasty treat for birds and other animals. But caterpillars have ways to help them stay alive. Many caterpillars are the same color as the plants they eat. That makes it hard for other animals to see them. Caterpillars can also hide under leaves. Some caterpillars stay safe by looking like things, such as big spiders, that other animals do not like to eat. That's the reason why one kind of caterpillar looks like a big spider. Other caterpillars have small hairs with very sharp tips. These hairs contain a kind of poison. Once an animal has gotten sick from this poison, it leaves hairy caterpillars alone.

The caterpillars that stay alive make a special sac called a cocoon. The cocoon completely covers the caterpillar for several days or weeks. When the cocoon opens, an adult moth or butterfly comes out.

Moths**Silkworms**

Silkworms are the caterpillars of the silk moth. The eggs of the silk moth are tiny and the caterpillars that come out when the eggs hatch are tiny. But these silkworms do not stay tiny for very long. They eat and grow until the caterpillar is about the length of your longest finger. At this point, the caterpillars build cocoons.

Photo: A silkworm (*Bombyx mori*) spinning a thread.
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Over two to three days, the caterpillar spins about one mile of thread until it is completely covered in its cocoon. This cocoon is special since it is made from a single long thread that is very strong.

The thread of the cocoon is used to make silk for things like clothes and rugs. Other moth caterpillars also make silk threads. But the silkworm makes the longest and best silk thread. Even so, it takes a lot of silk thread to make something people can use or wear. For example, it takes about 150 cocoons to make just one silk tie that a man might wear.

Silkworms were once found in the wild of Asia. But for thousands of years, silkworms have been kept in farms that are mostly in Asia. At these farms, silkworms are kept on trays covered with special paper.

You won't see any silkworms outside this summer. But you will probably see another kind of animal that also makes silky threads—spiders!

Moths

Is it a Moth or a Butterfly?



Sometimes people have a hard time telling moths and butterflies apart. They both have four wings, a body, and two feelers on their heads. They both start out as eggs from which they hatch as caterpillars. Caterpillars of both types build cocoons from which they leave as adults. But butterflies and moths are different from each other in important ways.

Butterflies are usually out during the day. Their bright colors like yellow and red help them blend in with flowers in the sunshine. Moths are usually out at night or at dusk and dawn. Colors like gray and brown make it possible for moths to fly about in dim light without being noticed.

Moths and butterflies also have different body shapes. Butterflies usually have smooth thin bodies. The bodies of most moths are fatter and covered with hair. When butterflies rest, they usually hold their wings straight up over their backs. Most moths rest with their wings spread out to their sides.

Perhaps the best way to tell the two kinds of insects apart is to look closely at their feelers. Most butterflies have thin feelers, each of which has a knob at the end. The feelers of most moths are more like a comb and do not have a knob at the end.

Moths

Rate your thinking and reading

✓ Put a check each time you read one of the chapters of the book.

★ Give yourself a star for Sharing if you told someone about something you learned from reading the chapter.

✚ Give yourself a + if you can tell that your reading is getting smoother.

	1st Read	2nd Read	3rd Read	Sharing	Smoother
Introduction					
Caterpillars					
Silkworms					
Is it a Moth or a Butterfly?					

Comprehension questions

Caterpillars

1. Name at least two ways that caterpillars stay safe from animals that want to eat them.

2. True or false? A moth caterpillar will always grow up to be a moth.

true false

Silkworms

3. True or false? The silkworm is related to the earthworm that lives in dirt.

true false

4. A silkworm builds a cocoon because _____.

- people need silk to make ties
 it is changing from a caterpillar into a moth
 the caterpillar lives in a cold place
 it needs a place to lay its eggs

Is it a Moth or a Butterfly?

5. Describe the reason that butterflies are usually colorful and moths are not.

.....

6. Place a check on the bug that has the following features:

- Four wings moth butterfly
 Is out during the day moth butterfly
 Two feelers on its head moth butterfly
 Usually is colored gray or black moth butterfly
 Start out as caterpillars moth butterfly