

GO MOTHING

What is mothing?

- Mothing is using a light to look for moths at night. Most moths are nocturnal, which means they are active at night.
- Moths live anywhere that has plants for their caterpillars to eat. Caterpillars are one stage in the moth life cycle.
- Different species of moths live in open fields and lawns than in forests or gardens. Why do you think that is?

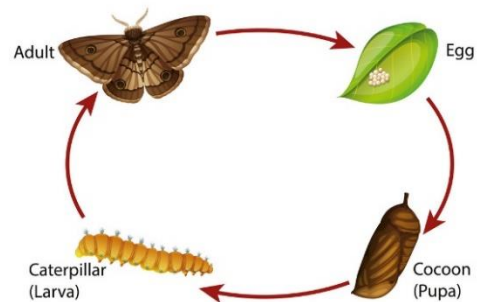
What do you need to go mothing?

- A light source such as a:
 - Flashlight
 - Lantern
 - Porch light
- A white bedsheet, towel, shower curtain, laundry basket, or other flat surface
- Permission to go outside after dark

How do you go mothing?

1. Decide where you want to moth!
You may want to do this step before it gets dark, or a few days ahead of time.
2. You'll need something to hold your light and somewhere to hang up your sheet.
3. Since mothing happens at night, make sure you have permission to be at your site at night, and take an adult with you.
4. Before you go out to moth, check the weather!
Clear nights with no rain in the forecast are best. Like people, moths find shelter when it rains.
5. When you are ready to get started, hang up your sheet and aim your light source at it.
6. It may take a while for nearby moths to see your light. Wait and see what lands on your sheet.
7. When you are finished mothing, be sure to turn off your light so the moths can fly away again.

Life Cycle of a Moth



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A white towel hanging over a chair

Try to identify what you see!

You can use [a silhouette chart](#) to identify moths, or use a local field guide like the *Peterson Guide to Moths of the Southeastern United States*.

Here is a sampling of what you might see at your light!



Luna moth (*Actias luna*)



Toothed Phigalia (*Phigalia denticulata*)



Double-banded Grass-veener (*Crambus agitatellus*)



Beautiful Wood-nymph (*Eudryas grata*)



Frilly Grass Tubeworm Moth
(*Acrolophus mycetophagus*)



Caddisflies (family Leptoceridae)



Beetles (family Coleoptera)



Lacewings (family Chrysopidae)



Dobsonfly (family Corydalidae)



Mayflies (order Ephemeroptera)

MORE OPTIONS

- Try using different kinds of light. Which kind of light attract the most insects?
- Move to a different place. Are there different moths in different places?
- Try mothing at different times of the year. Do you see different moths depending on when you look?

Can you go mothing without going outside?

You can try mothing through a window, but you probably will not see as many insects. Here is how to do it:

1. Stand at a window.
2. Turn all the lights off in the room.
3. Wait patiently until you hear something hitting the window.
4. Look carefully. It may be a moth.
5. It might take a couple of tries before you see a moth. You may see other nocturnal insects.

Did you know?

Moths are in the insect Order Lepidoptera, and share this Order with Butterflies. There are a few ways to tell the difference between moths and butterflies. When they are at rest, moths usually hold their wings out flat like an airplane and butterflies usually fold their wings together behind them. Butterfly antennae are usually thin with little knobs on the ends, while moth antennae are usually feathery.



Almost all moths are nocturnal, meaning that they are most active at night. Many species are drawn to electric lights. Scientists think that moths use the light of the moon to fly and so the light from electric lights confuses them. They seem to get lost and usually stay near the lights at night. You might see them around porch lights or street lights. They hide during the day so it's easy to overlook them. They will come to you if you are able to stay up until they become active!

What kinds of insects live near you?

What is an insect?

An insect always has:

- 3 body parts
 - Head
 - Thorax
 - Abdomen
- 6 legs
- An **exoskeleton**, which is a hard shell outside its body

Most insects have:

- Compound eyes
- 2 antennae

Some insects have:

- wings



Think & Do

- Using the pictures above, look for insect body parts.
- Label the body parts by drawing an arrow pointing to each body part and writing the name of the part.
- Is a moth an insect? What other kinds of insects do you see near you? Can you name 5 insects that live near you?
- Do you see more of some insects than others? Which insects do you see the most?
- What are they doing? What time of day or night do you see them?

CONTINUE EXPLORING MOTHS AND OTHER INSECTS

Many moths and other insects use **camouflage** to blend in with their surroundings. You can find out more about camouflage at the Duke Gardens website <https://gardens.duke.edu/resources>

1. What colors or patterns do you see in the moths and other insects around you?
2. Make sketches of what you see.
3. Take pictures of moths and other insects you see with a phone or camera and post them to:
 - a. iNaturalist, <https://www.inaturalist.org/>
 - b. Project Noah, <https://www.projectnoah.org/>
 - c. BugGuide, <https://bugguide.net/node/view/15740>
 - d. Or another community science project.