

Insects in the Night



Every day, we see many different insects scurrying about. Yet there are even more insects we don't see regularly because they are *nocturnal*. Nocturnal animals are active at night, and spend the daylight hours sleeping. They have special *adaptions* to help them survive when the sun goes down. Let's explore some of these great insects!

1. Bugs in the Light

Nothing is the act of attracting and discovering moths. It's a mix of science, bugs, and outdoor fun. Why moths? Because they're cool! There are about 1,000 butterfly species in North America, but over 11,000 moth species. On a good night of mothing, you could see dozens of species.

Don't Just Sit There, Do Mothing!

Observing moths is easy: wait for them to come to you. Moths are attracted to light (no one truly knows why). Hang a white sheet on a clothesline or outside wall for the moths to rest on, then shine a light on the sheet (or leave a nearby light on). It won't take long for moths to come. Record what you see! How many moths are there? Can you draw them? Share photos of your favourite moths! Like all wildlife, never handle a moth:



2. Bugs in the Dark

On warm summer nights, we find fireflies near long grass and by the edges of marshes and lakes. These creatures seem simple, but they are full of mystery. Try these activities to discover a firefly's secrets! Record what you see! Be gentle when catching fireflies, use a net or jar for best results. Release your fireflies after observation.

1. It can be difficult to imagine what a firefly looks like without catching one. Here is a hint: fireflies aren't flies, they're beetles. Why is a beetle different from other insects? Look at a firefly in your bug jar. How is it different from a mosquito or house fly?
2. Scientists think outdoor lights may confuse fireflies. Test this idea by watching for fireflies one evening with outside lights on, and on another night with no lights. Did you see any differences?
3. Fireflies light up to communicate! Just like different birds sing different songs, each type of firefly has a different light pattern. Using a stopwatch, can you see different patterns in your backyard?

3. Bugs in the Belly

Are you ready to hear a scary story?

In Albany, New York a tourist unknowingly introduced a fungus that spread across North America. This fungus is deadly; researchers think it may lead to species *extinction!*

It's not a horror movie. It's called *white-nose syndrome* (WNS) and it has affected bats since 2006. Infected bats wake frequently during their *hibernation* and their body's fat stores are used up too quickly. Sadly, this has led to the deaths of millions of bats.

Do you have a positive bat-titude?

Bats are the best. They gobble up **thousands of insects every night**. Some bats can eat 600 insects in one hour. How's that for pest control! You can help bats in many ways:

- Garden with plants that bloom day and night to attract *pollinating* insects. You'll boost habitat, and may bring hungry bats swooping by. Try fireweed, snowberry, goldenrod, and cardinal flower.
- Trade outdoor anti-bug lights for a regular light to attract insects for bats to munch.
- Build a bat house using the Canadian Wildlife Federation's online guide.
- Educate your friends and family about how important bats are!
- Never disturb or touch bats.



Build Yourself Bat Ears!

Bats depend on their ears to find food and navigate in the dark. They use *echolocation*: the ability to "see" by detecting the sound waves reflected off their surroundings. How would you feel if you had large bat ears? How would the world around you sound?

Materials: 2 plastic milk jugs, 2 plastic cups, scissors

1. Ask an adult to cut off the bottom of the milk jugs and cups.
2. Hold up the milk jugs to your ears, spout facing your ear. How well can you hear?
3. Hold up the cups to your ears, bottoms facing your ear. How well can you hear?
4. Cup your ears with your hands (behind the ears). How well can you hear?
5. Try different sounds, like music or birds, and from different distances. What do you notice?

