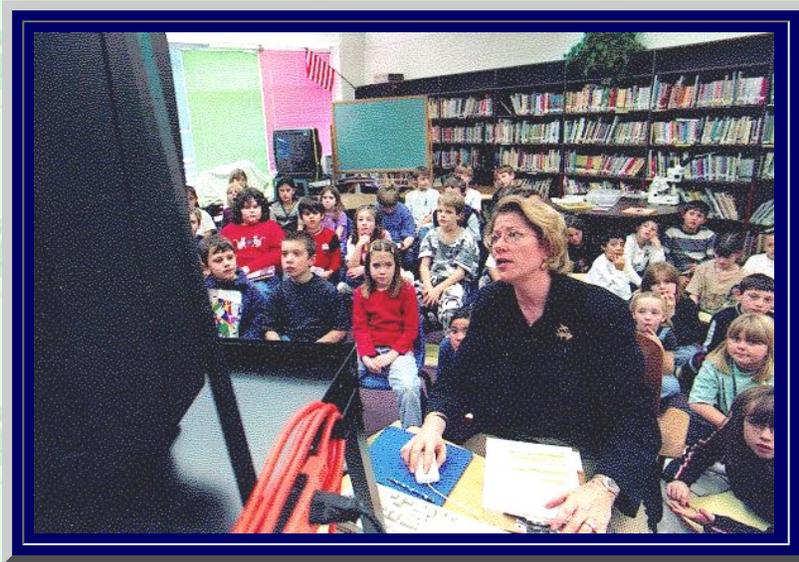




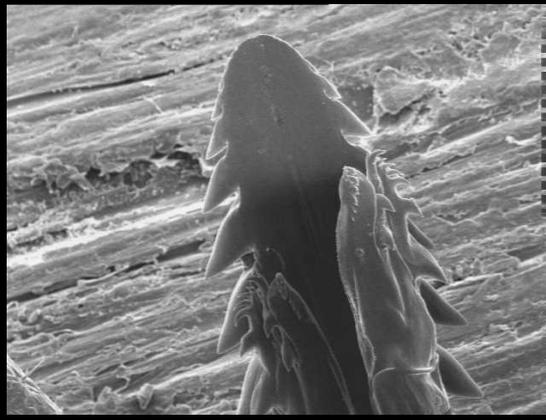
Bugscope

Bugscope is an interactive Internet Project about bugs. It involves the use of an electron microscope to capture images of different insect specimens. You can learn to control the electron microscope from your own classroom! Here is a picture of us operating the microscope from our Library Media Center:

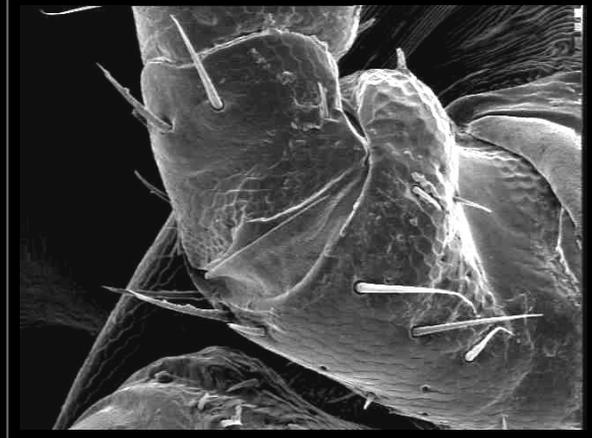


We were able to view a fly's leg, a ladybug claw, a deer tick's proboscis and a maggot! These are some of the things we learned by observing these images:





Tick Proboscis



Tick Arm Joint

Facts About Deer Ticks

- o A Deer Tick's proboscis is spiny and sharp.
- o Deer Ticks have spike-like points all over them so that they can attach and latch onto a **host**. Once attached to an animal or human, this **barbed** mouth, along with a special glue, allows the tick to hold tight until it has finished feeding.
- o The Deer Ticks are usually found living at the top of tall grasses. This helps them attach to an unsuspecting host.
- o A tick can be very harmful to people. It can give you **Lyme Disease**. Lyme Disease was first found in Lyme, CT. in 1975. These ticks get the **bacteria** from the white-footed mouse and other small rodents. If bitten by a deer tick, you may develop a skin rash with a "bull's-eye" appearance, fever, stiff neck, severe headache, pain in your arms and legs, and even **paralysis!**
- o Ticks can give living creatures **viruses** for which scientists may not have a cure.
- o Insects can move because they have **jointed-legs**.
- o Deer Ticks may live up to three years.
- o They feed once during each of their three stages. (**Larva, Nymph, & Adult**).
- o Ticks have six legs during their first stage. After they feed, they acquire two more.



New Terms We Learned

Adult - A living thing that is full grown. [\[back\]](#)

Bacteria - One celled microorganisms that can cause disease. [\[back\]](#)

Barbed - A hooked bristle or hair-like point. [\[back\]](#)

Electron Microscope - A microscope that uses electrons instead of light to magnify images.

[\[back\]](#)

Host - The animal upon which a tick will feed. Be careful not to become their host! [\[back\]](#)

Jointed Legs - Legs made up of sections that are jointed together. [\[back\]](#)

Larva - The wingless, almost worm-like form of a newly hatched insect. [\[back\]](#)

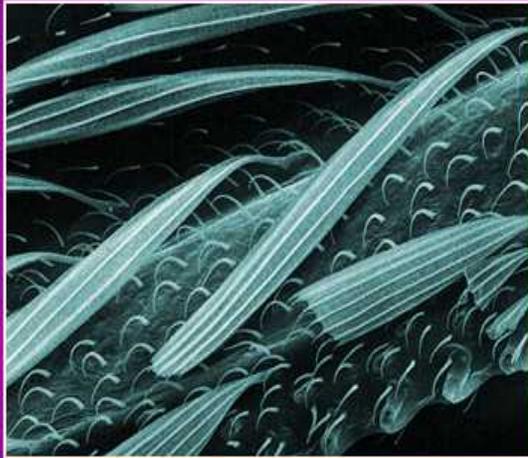
Nymph - One of an insect's young that undergoes incomplete metamorphosis. [\[back\]](#)

Maggot - The larva of a fly. [\[back\]](#)

Paralysis - Partial or complete loss of the ability to move. [\[back\]](#)

Proboscis - the barbed mouth-like part of a tick used for feeding. [\[back\]](#)

Viruses - Microscopic agents that cause disease such as bacteria. [\[back\]](#)



Mosquito Wing

The wings of a mosquito are its primary steering mechanism; the "hairs" and "feathers" here are probably used for better flight control. As part of their courtship, mosquitoes use the sound produced by flight, and these structures may be part of an instrument that sings the courtship songs particular to each species. The elaborate antennae of male mosquitoes are also sensory organs, giving them the keener sense of smell they need to locate females.

MICROSCOPIC LANDSCAPE



Wood Tick

What you see here is the business end of a tick, for those unfortunate enough to be bitten by one. Ticks climb to the tops of bushes, where they use special sense organs called setae that detect approaching animals by humidity and smell. As the animal passes by, the tick jumps on board to feed, after which it generally falls to the ground to lay eggs.

Links to Learn More About Lyme Disease

- o [American Lyme Disease Foundation](#)
- o [Centers for Disease Control and Prevention](#)
- o [HEALTHri](#)
- o [Lyme Disease Foundation](#)
- o [The Lyme Disease Network](#)



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