

Learning Activity: Fight the Bite! Be a Skeeter Buster!

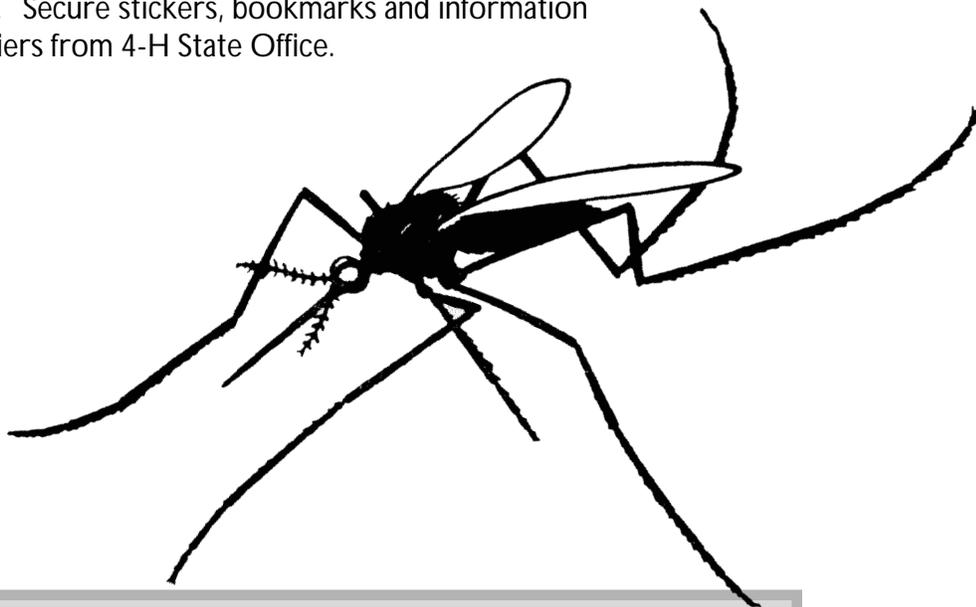


Key concepts:

1. West Nile virus prevention/awareness
2. Entomology lesson on mosquitoes

Preparation before the activity:

1. Review lesson.
2. Secure packet containing master for reproducing skull and crossbones visual and plain cards.
3. Secure stickers, bookmarks and information fliers from 4-H State Office.



What you need for the lesson:
Review the latest information about mosquitoes on our Web site:
www.lsuagcenter.com/mosquito

Project Book:
Entomology: Helper's Guide

Track:
Entomology/Environment

Age Group:
4th -12th Grades

Other Resources:

Visit our Web site:
www.lsuagcenter.com/mosquito
LSU AgCenter News Release
Mosquitoes: What's the Buzz?
Dr. Michael Perich

LSU AgCenter News Release
Knowledge Key to Preventing Mosquito-borne Diseases

LSU AgCenter News Release
Mosquitoes Problem for Gardeners: Take Precautions to Protect Yourself
Horticulturalist Dan Gill

Delivery Mode:
Project Club or 4-H Club Meeting

Time Allotted:
15-30 minutes

Number of Participants:
10-80

What You Say:	What You Show or Do:	What Participants Do:
A tiny bug can change the course of history. What insect do you think we are talking about?	Encourage response.	Correct response is mosquito.
Yes, this bothersome creature, jokingly referred to as our state bird, can cause several diseases, such as: can you name some?	Encourage response.	West Nile virus, malaria, dengue fever, eastern equine encephalitis, etc.
Which of the diseases is in the news today?	Encourage response.	West Nile virus
How do mosquitoes transfer this deadly disease?	Encourage response.	From their feeding habits
What do they feed on?	Encourage response.	Blood
The spread of the West Nile virus is a little different from other diseases. The mosquito gets the disease from one animal (mainly birds: cardinals, black birds, crows, blue jays) and then passes it on to another, including people and horses.		
Mosquitoes need blood meals to obtain the ingredients needed for laying eggs. Contrary to what most people believe, the regular food that mosquitoes consume is nectar. Do you think all mosquitoes bite? Why?	Encourage response.	No, only the females bite – because a blood meal is needed only for laying eggs.
How long is a mosquito's life cycle?	Encourage response.	The average is about 10 days – from egg to adult – but some species can mature as quickly as three to four days in the summer.



What You Say:	What You Show or Do:	What Participants Do:
<p>Not all species of mosquitoes bite mammals. Can you guess how many species of mosquitoes we have in Louisiana?</p>	<p>Encourage response.</p>	<p>Correct answer is 65.</p>
<p>What can you do to help lower the mosquito population and suppress the number of cases of West Nile virus?</p>	<p>Show poster or material supplied.</p>	<ul style="list-style-type: none"> • Wear a mosquito repellent with DEET each time you go outside. Children should ask an adult to apply theirs. • Empty all containers filled with water or flush them out at least twice a week. • Avoid outdoor activities when mosquitoes are more active (dusk to dawn). • Wear long-sleeve shirts and pants, when possible, and avoid dark colors, which attract mosquitoes. • Clean up debris in your yard or other areas. Mow grass regularly. • Adults should use an insecticide to spray areas of thick vegetation in the yard. • Read and follow label directions on any insecticides or mosquito repellents you use. Follow restrictions regarding use of mosquito repellent on small children, and do not exceed recommended rates.
<p>Now! LET'S PLAY THE MOSQUITO GAME!</p>	<p>Entomology Helper's Guide (CCS) p. 10</p>	
<p>Divide group into four: mosquitoes, infected mosquitoes, humans and infected birds.</p>	<p>Hand out: Infected Birds and Infected Mosquitoes: Receive three to four cards (depending on size of group) with skull and crossbones. Non-infected Humans and Mosquitoes: Receive three to four plain white cards (depending on size of group).</p>	<p>Separate into assigned group. Do not show other participants your cards.</p>

What You Say:	What You Show or Do:	What Participants Do:
<p>“Mosquitoes” fly around the room and tap a human or a bird on the shoulder and hand that person a card. This signifies you have bitten that person.</p>	<p>Play game for up to 15 minutes or until the total human population is infected.</p>	<ul style="list-style-type: none"> • If you are a non-infected mosquito, you will hand your human a white card. • If you are an infected mosquito, you will hand your human several skull and crossbones cards. • If you are a non-infected mosquito and you have bitten an infected bird you then receive several skull and cross-bones cards and begin passing them to humans and birds you bite.
<p>STOP! When a mosquito feeds on a human, it injects saliva into the body. If the mosquito is infected with the West Nile virus, the human becomes infected. Also, if the non-infected mosquito bites an infected bird, it then becomes a carrier for the West Nile virus.</p>		<p>Continue playing the game. Humans who receive skull and crossbones cards from two different mosquitoes die and are removed from the activity.</p>
<p>What happened when you played the human and mosquito game?</p>	<p>Encourage answers.</p>	<p>The population became infected, and some even died.</p>
<p>What did you learn about how West Nile virus is transmitted?</p>	<p>Encourage answers.</p>	<p>We learned how the West Nile virus or other insect-transmitted diseases spread quickly through a population.</p>
<p>How would you weigh the risk associated with use of insecticides to manage mosquitoes with the need to prevent certain diseases such as the West Nile virus?</p>	<p>Encourage answers.</p>	<p>The risk of damage caused by using insecticides is low because we have people who are trained in proper use. In addition, what is the value of a human life? By using insecticides, we can keep the mosquito population suppressed; therefore, we keep the West Nile virus suppressed.</p>



What You Say:	What You Show or Do:	What Participants Do:
Should all insect pests be eradicated?	Encourage answers.	NO, because you may cause an imbalance in nature. Remember, the food chain depends on insects as a food source as well as a consumer.
What precautions can you take against being infected by mosquito-carried diseases?		<ul style="list-style-type: none"> • Wear a mosquito repellent with DEET each time you go outside. Children should ask an adult to apply theirs. • Empty all containers filled with water or flush them out at least twice a week. • Avoid outdoor activities when mosquitoes are more active (dusk to dawn). • Wear long-sleeve shirts and pants, when possible, and avoid dark colors, which attract mosquitoes. • Clean up debris in your yard or other areas. Mow grass regularly. • Adults should use an insecticide to spray areas of thick vegetation in the yard. • Read and follow label directions on any insecticides or mosquito repellents you use. Follow restrictions regarding use of mosquito repellent on small children, and do not exceed recommended rates.
<p>Note: Viruses like the West Nile may never go away, but through education and personal protection we can help keep them under control.</p>		



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www.fightthebitelouisiana.com

For more information on mosquito-borne diseases, pesticide safety and a variety of other issues, visit the LSU AgCenter's Web site at:

www.lsuagcenter.com



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