

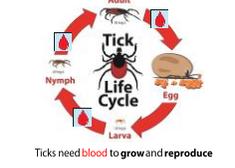
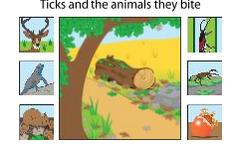
## Ticks: Life Cycle & Safety Tips Lesson Plan (Grades K-2)

Marin/Sonoma Mosquito & Vector Control District

The following lesson plan can be used to introduce the tick-related materials that you received with your classroom tick packet. If you haven't already done so, download the Tick Life Cycle and Safety Tips Presentation from our website at [bitly.com/tickschool](http://bitly.com/tickschool)

Talking points and sample questions for students are provided for each slide, but please don't feel like you need to read them like a script! Some slides have animations, and the comments are presented chronologically (click 1, click 2, etc.) as you click to advance through each slide. You might consider printing this lesson plan and working through the PowerPoint Show to prepare for the lesson. If you need the presentation in another format or have any questions regarding your classroom tick packet, please contact Eric Engh at [erice@msmosquito.com](mailto:erice@msmosquito.com)

### Ticks (K-2 Presentation)

<p style="text-align: center;"><b>Slide 1:</b> <b>Introduction:</b></p> 	<ul style="list-style-type: none"> <li>• The Marin/Sonoma Mosquito &amp; Vector Control District has provided us with activities that will help us to learn about ticks and stay safer from them.</li> <li>• This would be a good time to ask students if they have ever had an experience with ticks, or if they know why ticks are dangerous.</li> </ul>
<p style="text-align: center;"><b>Slide 2: Tick Life Cycle</b></p> 	<ul style="list-style-type: none"> <li>• <b>Intro:</b> Ticks have four stages in their life cycle (egg, larva, nymph, and adult). There are many different kinds of ticks in the world, but they all drink blood.</li> <li>• <b>Click 1:</b> All ticks need blood so that they can grow and females need blood before they can lay eggs. Ticks bite many different animals (including people).</li> <li>• <b>Click 2:</b> A tiny 6-legged larva hatches from an egg, and needs blood before it can grow into a nymph. An 8-legged nymph needs blood before it can grow into an adult tick, and the larger 8-legged adult ticks need blood also. Adult female ticks drink more blood than males, because they use the blood so that they can lay hundreds or thousands of eggs!</li> <li>• Nymphs and adult ticks will bite people!</li> </ul>
<p style="text-align: center;"><b>Slide 3: Ticks &amp; Animals</b></p> 	<ul style="list-style-type: none"> <li>• <b>Intro:</b> Ticks are often found in natural places where there are wild animals. The different life stages of ticks are often found in slightly different places, and often bite different animals.</li> <li>• <b>Click 1:</b> Eggs &amp; larvae are often found near the ground, especially in leaf litter. A larva waits in the leaf litter to bite a small animal such as a mouse or bird that also spends time near the ground.</li> <li>• <b>Click 2:</b> Nymphs may also be found in leaf litter, but often climb up onto a mossy rock, log, or tree trunk to wait for an animal such as a lizard that also climbs up onto these places. Remember, nymphs will also bite people, so try not to climb or sit on these places when you are in tick habitat!</li> <li>• <b>Click 3:</b> Adults climb up grass or other plants, often alongside a trail.</li> </ul>

	<p>Here, they wait to bite a large animal that passes by, especially deer, but also people, dogs, horses, etc.</p>
<p><b>Slide 4: Tick Safety Tips</b></p> 	<ul style="list-style-type: none"> <li>• <b>Intro:</b> If you plan on visiting a place where ticks live to hike or play, there are things you can do before, during and after your visit to protect yourself from ticks.</li> <li>• <b>Click 1 (Before your visit):</b> Put on light colored clothing. If a tick crawls onto your clothes it will be much easier to spot the tick. Long sleeves and pants provide more protection than shorts and short sleeves.</li> <li>• <b>Click 2 (Before your visit):</b> Talk to your parents about using a tick repellent. Your parents need to read the directions very carefully before you use a repellent.</li> <li>• <b>Click 3 (During your visit):</b> If you are hiking, stay in the center of the trail whenever possible! If you walk along the sides of the trail, you are more likely to brush up against vegetation where ticks are waiting. <ul style="list-style-type: none"> <li>○ <b>Question:</b> What tick life stage is most likely in tall grass alongside the trail? (adults)</li> <li>○ <b>Question:</b> What tick life stage is most likely on rocks, logs, or tree trunks? (nymphs)</li> </ul> </li> <li>• <b>Click 4 (During your visit):</b> Check yourself and the people you are with for ticks often. It is a good idea to “buddy up” and take turns checking each other.</li> <li>• <b>Click 5 (After your visit):</b> Dry out those ticks! Ticks could be hiding in clothing and you don’t want to bring them inside. It is a good idea to dry your clothes on high heat in the dryer. The hot air will dry out and kill any ticks hiding in your clothes.</li> <li>• <b>Click 6 (After your visit):</b> Take a shower! Showering is a good way to check your entire body for any unwanted 8-legged “hitch hikers”. If you find that a tick is attached to you, tell an adult right away! The tick brochure that you will be taking home has information for adults about how to remove a tick properly.</li> </ul>
<p><b>Slide 5: Your Classroom Tick Packet</b></p> 	<ul style="list-style-type: none"> <li>• Your packet includes a tick magnifier, a tick ID card, a life cycle puzzle, and an activity journal.</li> <li>• Use the magnifier to help find ticks that may have hitched a ride on your (or your dog) on a hiking trip.</li> <li>• Use the tick ID card to identify any ticks that you find. On the back, it also has instructions about how to safely remove a tick.</li> <li>• The puzzle is for your class to share. Use a Ziploc bag to store the pieces.</li> </ul>
<p><b>Slide 6: Your Activity Journal</b></p> <p>Your Activity Journal...</p> <ul style="list-style-type: none"> <li>• Pages 1-4 review what you learned in this presentation</li> <li>• Pages 5-8 are activities for you to complete</li> <li>• If you have questions, have your teacher email Eric Engh at <a href="mailto:eric@msmosquito.com">eric@msmosquito.com</a></li> <li>• Remember what you learned when you visit tick habitat!</li> </ul> 	<ul style="list-style-type: none"> <li>• This would be a good time to answer questions from the lesson, and if there are any that you are not sure about, do not hesitate to contact Eric Engh at <a href="mailto:eric@msmosquito.com">eric@msmosquito.com</a>.</li> <li>• If your class will be visiting tick habitat together (hiking, outdoor school, etc.), please remind them at that time to discuss what they learned in this presentation.</li> </ul>