



Tick Activity Book

Produced by Maine Center for Disease
Control and Prevention

10 TICK FUN FACTS

1. The scientific name for the deer tick is *Ixodes scapularis*. *Ixodes* is Greek for “stickiness” which makes sense because ticks easily stick to you if you brush against them while walking, and ticks secrete a sticky substance making them more difficult to remove.
2. There are 14 different species of ticks found in Maine.
3. Deer ticks have a dark scutum (like a dot or shield) behind their head and are more common in the spring and fall. Dog ticks have a white scutum (or white “racing stripes” or “suspenders”) down their back and are more common in the summer. Deer ticks can transmit the germs that cause Lyme disease and other diseases while dog ticks do not.
4. A tick must bite and be attached to your skin for at least 24-hours before it can pass on the bacteria that causes Lyme disease.
5. Ticks have a barbed beak called a *hypostome*. A tick sticks its *hypostome* into you when it bites, and the tick secretes an anesthetic (a pain reliever) and an anticoagulant (a substance that stops the blood from clotting) to keep from being noticed.
6. Deer tick nymphs (the “teenage” phase of being a tick) look like a poppy seed on your skin. Deer tick nymphs are the most likely stage to transmit the bacteria that causes Lyme disease, so it’s important to identify them and remove them.
7. Ticks find their hosts by detecting breath or body odors, or by sensing body heat, moisture, and vibrations. Ticks pick a place to wait for a host, resting on the tips of grasses and shrubs until they are brushed against.
8. Symptoms of Lyme disease include fever, headache, joint and muscle pains, fatigue, and the formation of the “bulls-eye” rash (*erythema migrans*) 3-30 days after a tick bite.
9. The most common diseases caused by ticks in Maine are Lyme disease, anaplasmosis, and babesiosis.
10. Simply washing clothes won’t kill a tick. Removing ticks from clothing is best done by throwing everything into a hot dryer for 10 minutes, even before washing.



Pick the Tick!

Directions: Circle the images that you think are ticks.



Remember:

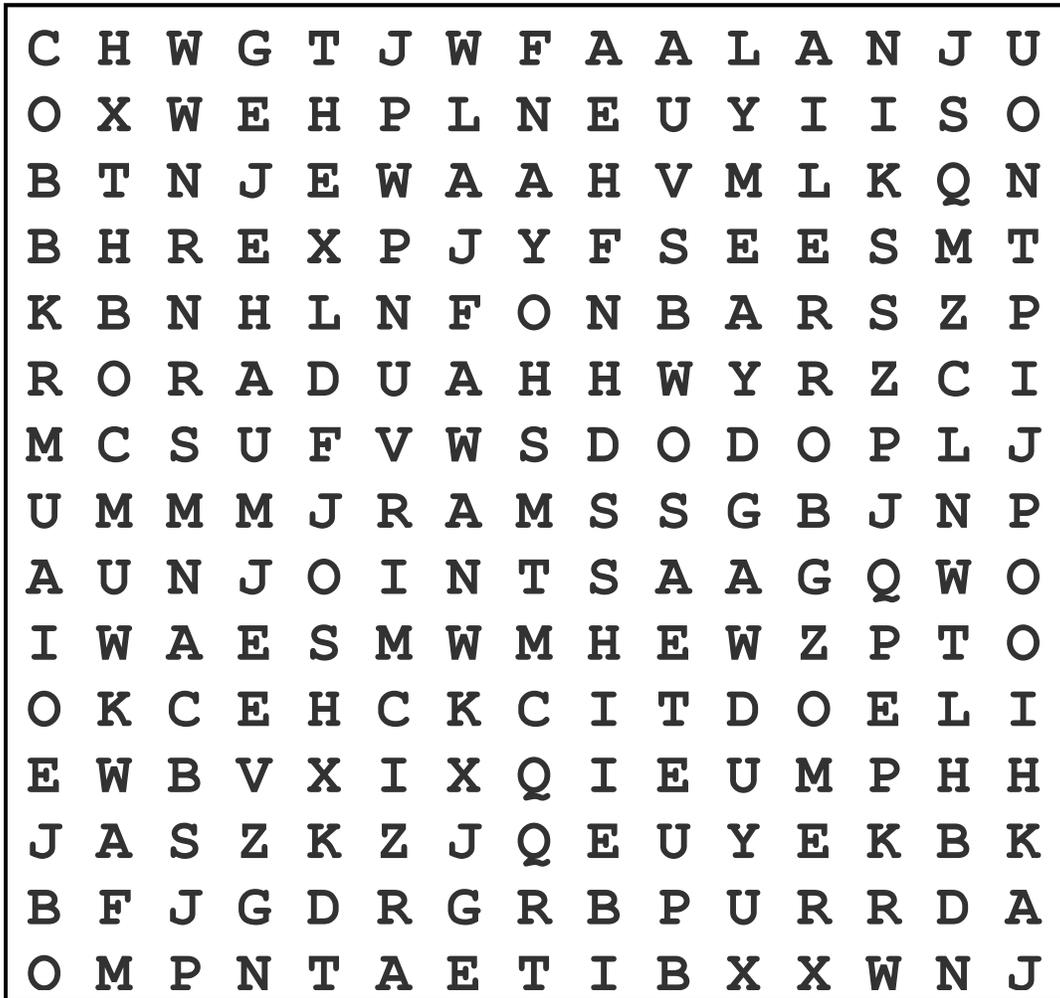
- Ticks do not have antennae.
- Ticks are made up of one fused body segment.
- Larvae have six legs, nymphs and adults have eight legs.
- Ticks have mouthparts that stick out from the front of their body.



Tickborne Diseases

Ticks can pass diseases to humans in Maine and in the rest of the world. The germs that cause Lyme disease, anaplasmosis, babesiosis, Powassan, as well as *Borrelia miyamotoi* can all be found in ticks in Maine. These germs can make humans and animals sick.

Directions: Using the list below, find and circle all the words related to tickborne diseases hidden in the puzzle. The words can be forward, backward, up, down, or diagonal.

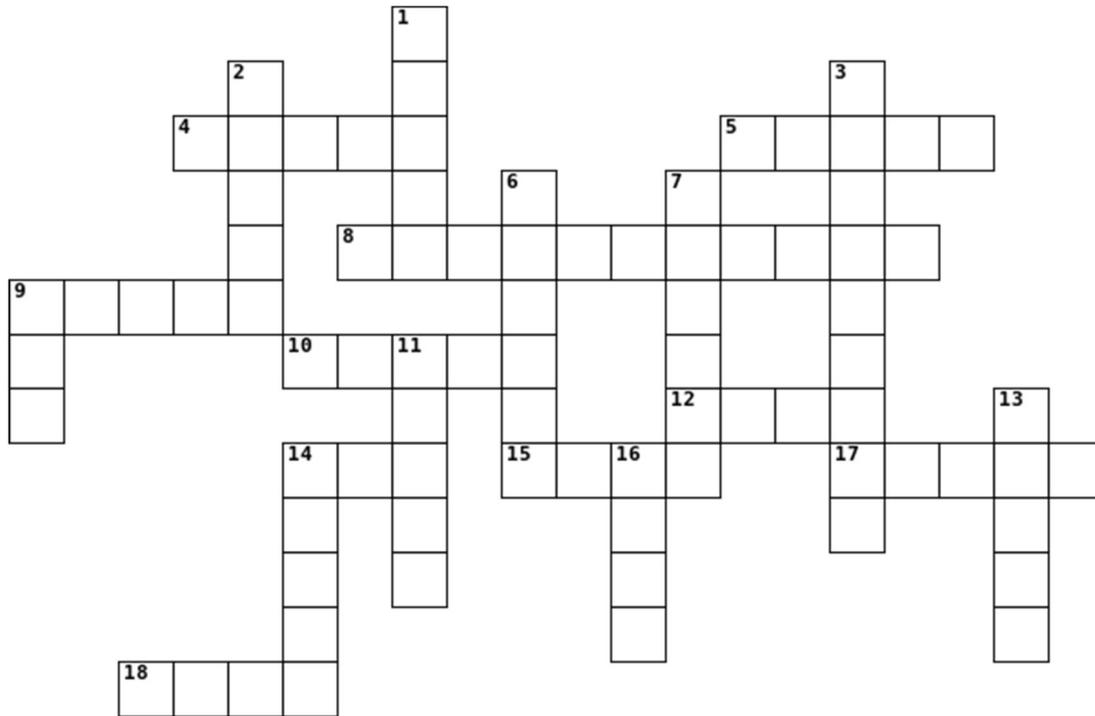


Anaplasma
 Babesia
 Bite
 Borrelia
 Deer
 Fever

Joints
 Lyme
 Powassan
 Rash
 Skin
 Tick Check



Crossword Puzzle



Across

4. The _____ is the second stage of the tick life cycle.
5. After being in tick habitat, always do a tick _____!
8. The deer tick is also known as the _____ tick.
9. Tuck your pants into your _____ to protect yourself from ticks.
10. Ticks will _____ by waving their front legs in the air to find a host.
12. Deer ticks pass the germ that causes _____ disease.
14. The _____ tick is a pest in Maine.
15. Unlike the female, the _____ tick has a large, decorative scutum.
17. The _____ is the third stage of the tick life cycle.
18. The _____ tick is the type of tick that can pass Lyme disease to humans.

Down

1. Stay in the center of the _____ to avoid ticks.
2. Wear long _____ to prevent ticks climbing on your legs.
3. Wear an EPA approved _____.
6. The _____ is the hard shield on the back of the tick.
7. Only adult _____ ticks need to bite to ingest blood.
9. Tick larvae have _____ legs.
11. Tick nymphs have _____ legs.
13. It is best to remove a tick with tweezers or a tick _____.
14. You can kill ticks on your clothes by putting them in the _____ on high heat.
16. Deer ticks like to hide in the _____ litter on the forest floor.





Find the Hidden TICK Message!

4 15 1 20 9 3 11

3 8 5 3 11 4 1 9 12 25!

4 15 14 20 12 5 20 20 8 5

20 9 3 11 19 2 9 20 5!

Here is the Code:

1 - A	5 - E	9 - I	13 - M	17 - Q	21 - U	24 - X
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Ticks: What Would You Do?

1. You are playing outside at recess and see that your friend has a tick on him. You're having fun and don't want to stop playing, but you know that the longer the tick is attached to your friend, the greater the chance that your friend might develop a disease from ticks.

What would you do?

2. You are at lunch and you see a bulls-eye rash on your friend's arm. You ask about the rash and your friend tells you that it's from a bug bite.

What would you do?

3. You and your family are planning on going camping overnight in the woods. You know there will be ticks in the woods.

What do you need to do to prepare for your trip?



No Ticks for ME! Vocabulary List

Vocabulary	Definition
Abdomen:	The stomach of the tick, which holds blood and germs/pathogens.
Anaplasmosis:	A tickborne disease caused by the bacterium <i>Anaplasma phagocytophilum</i> . Can be passed to humans through the bite of an infected deer tick.
Arachnid:	A group of related arthropods that include spiders, ticks, mites, and scorpions.
Babesiosis:	A tickborne disease caused by the parasite <i>Babesia microti</i> . Can be passed to humans through the bite of an infected deer tick.
Barb:	A point or pointed part that projects backwards.
<i>Borrelia miyamotoi</i>:	A tickborne bacterium that can be passed to humans through the bite of an infected deer tick.
Bull's-eye rash (Erythema migrans):	A red, expanding rash that looks like a target or bull's eye. This is the most common symptom of Lyme disease and can be found at the site of the tick bite or anywhere else on the body.
Capitulum:	Mouthparts of the tick.
Carbon dioxide:	The gas that all animals breathe out that can attract ticks.
Deciduous:	A type of tree that has leaves that fall every year.
Dehydration:	The loss of water from the body.
Environmental Protection Agency (EPA):	A federal agency devoted to protecting human health and the environment.
Host:	A living animal or plant that provides food or shelter for another organism.
Hypostome:	The mouth that the tick inserts into the host to feed on blood. It is needle-like and has many barbed teeth to keep the tick in place.
Repellent:	A spray applied to the skin to prevent insect bites. "Bug spray"
Larva (Larvae):	The baby stage of the tick that hatches from the egg. Unlike nymphs and adults, larvae only have 6 legs.

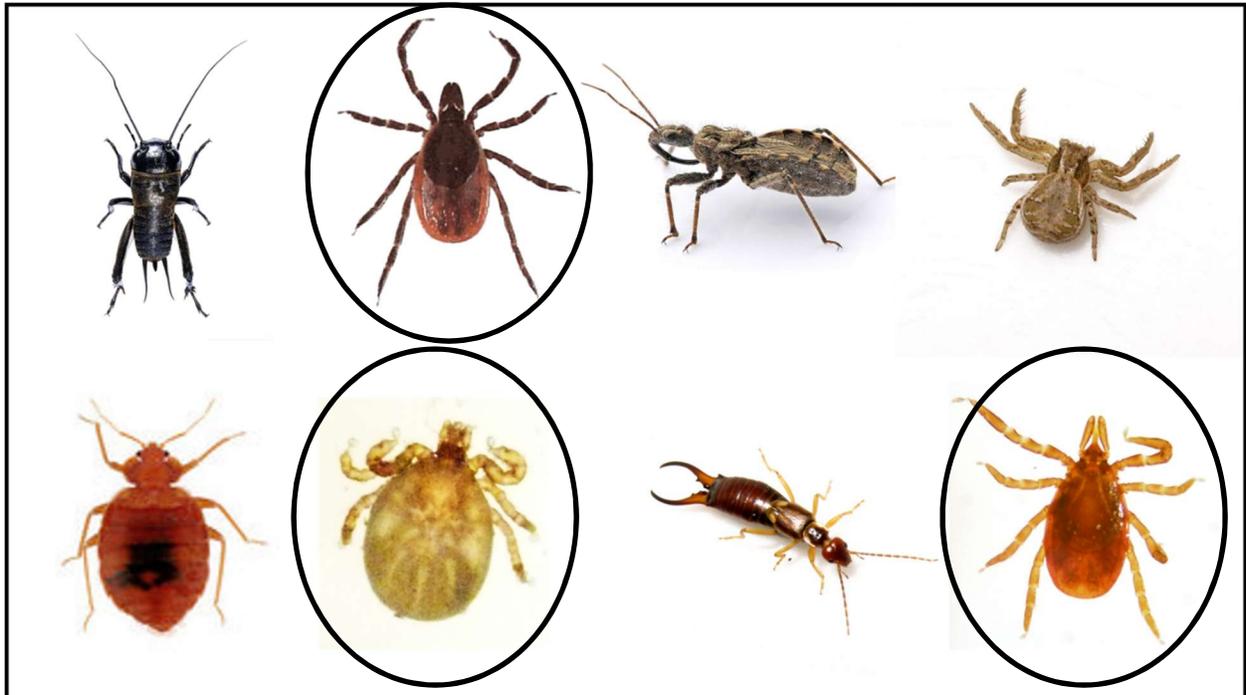


Vocabulary	Definition
Leaf Litter:	The layer of fallen leaves at the forest floor that can give ticks a place to hide and stay away from bad environmental conditions.
Lyme disease:	The most common tickborne disease in Maine, caused by the corkscrew shaped bacterium <i>Borrelia burgdorferi</i> . Can be passed to humans through the bite of an infected deer tick.
Molt:	The process that allows a tick to grow to the next life stage.
Nymph:	The tiny, 8-legged pre-adult or teenage stage of the tick.
Pathogen:	Any microorganism or virus that can cause disease.
Powassan:	A tickborne disease caused by the Powassan virus. Can be passed to humans through the bite of an infected deer tick.
Quest:	The behavior ticks use to find a host by waving their front legs in the air to sense carbon dioxide and other chemicals coming from a host.
Scutum:	The shield portion of the tick located just behind the mouthparts. Made of bony material called chitin.
Species:	A unique group of animals, different from other groups.
Tick Check:	Using your finger tips and eyes to check your body closely for ticks. Should be done every time you come in from outdoors, especially if you have been in tick habitat.



Answer: Pick the Tick!

Directions: Circle the images that you think are ticks.



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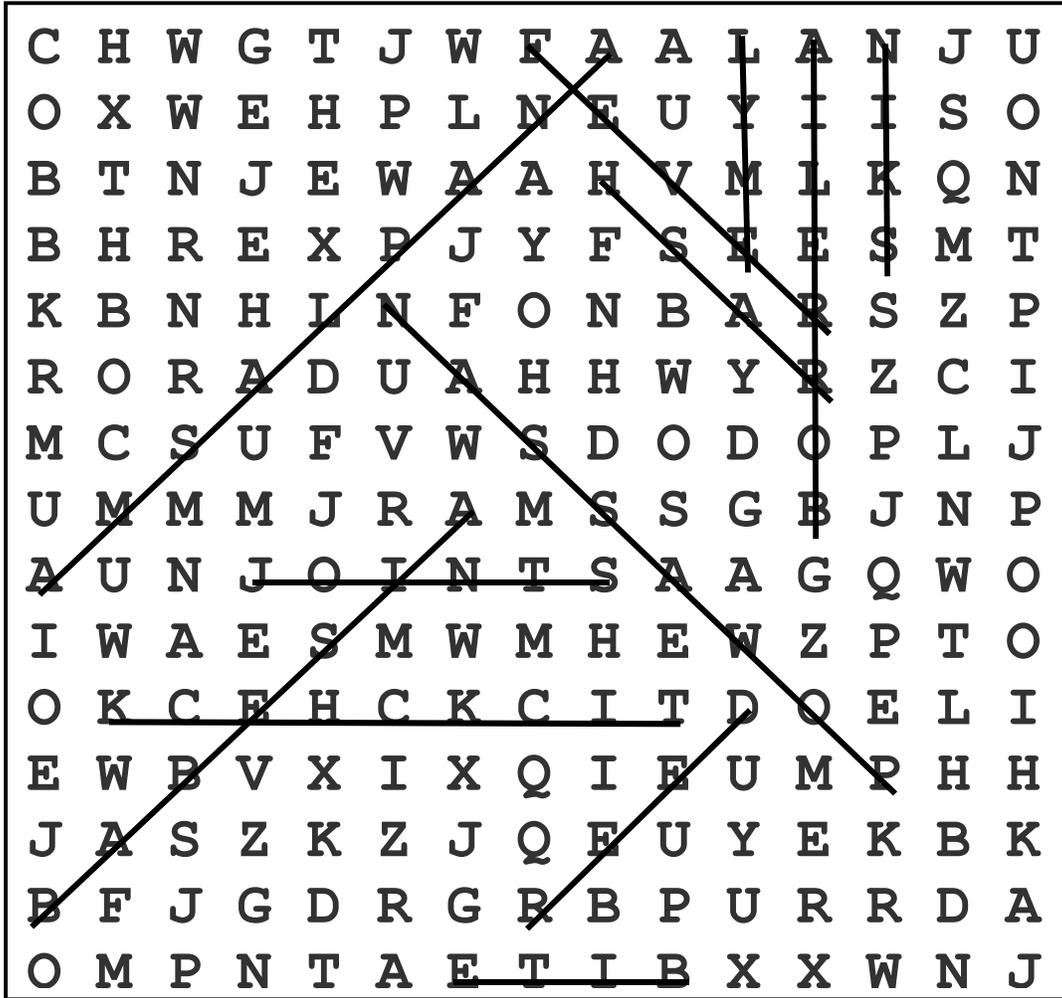
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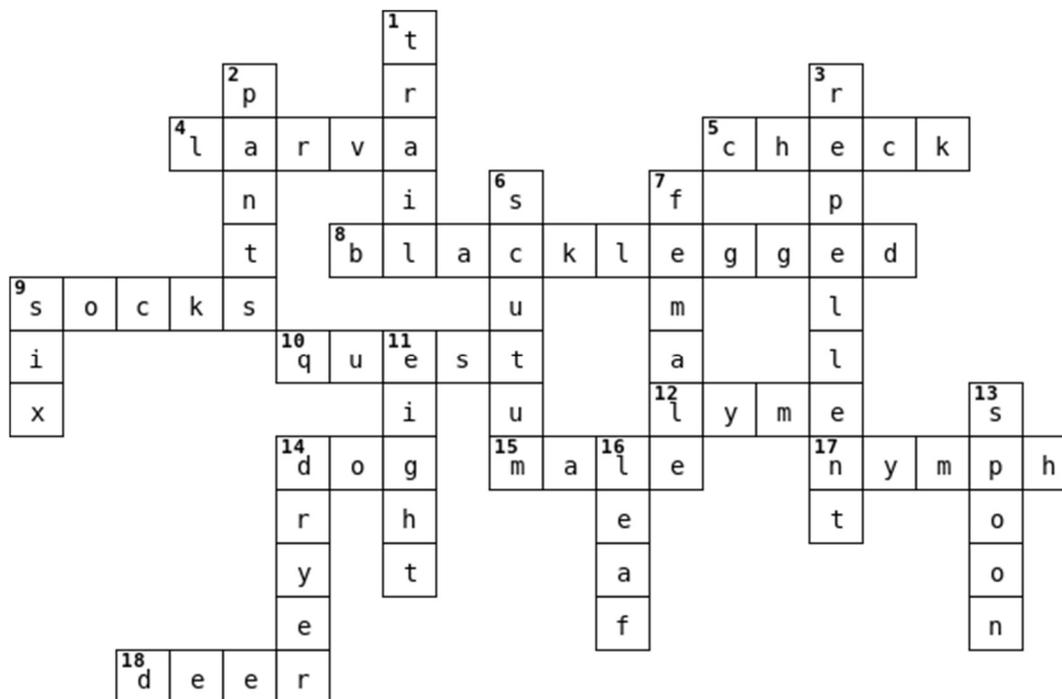


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Lyme
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Rash
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$\frac{D}{4}$ $\frac{O}{15}$ $\frac{A}{1}$ $\frac{T}{20}$ $\frac{I}{9}$ $\frac{C}{3}$ $\frac{K}{11}$

$\frac{C}{3}$ $\frac{H}{8}$ $\frac{E}{5}$ $\frac{C}{3}$ $\frac{K}{11}$ $\frac{D}{4}$ $\frac{A}{1}$ $\frac{I}{9}$ $\frac{L}{12}$ $\frac{Y!}{25}$

$\frac{D}{4}$ $\frac{O}{15}$ $\frac{N'}{14}$ $\frac{T}{20}$ $\frac{L}{12}$ $\frac{E}{5}$ $\frac{T}{20}$ $\frac{T}{20}$ $\frac{H}{8}$ $\frac{E}{5}$

$\frac{T}{20}$ $\frac{I}{9}$ $\frac{C}{3}$ $\frac{K}{11}$ $\frac{S}{19}$ $\frac{B}{2}$ $\frac{I}{9}$ $\frac{T}{20}$ $\frac{E!}{5}$

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Suggestions Ticks: What Would You Do?

1. You are playing outside at recess and see that your friend has a tick on him. You're having fun and don't want to stop playing, but you know that the longer the tick is attached to your friend, the greater the chance that your friend might develop Lyme disease.

What would you do?

It is understandable that you're having fun and don't want to stop, but you should stop your game and let your friend know that he/she has a tick on them. Then, you should go find a grown-up.

2. You are at lunch and you see a bulls-eye rash on your friend's arm. You ask about the rash and your friend tells you that it's from a bug bite.

What would you do?

Let your friend know that sometimes people can get sick from a bug's bite. Tell him/her to keep an eye on the rash to see if it expands (like a bull's-eye). Advise him/her to let a grown-up know.

3. You and your family are planning on going camping overnight in the woods. You know there will be bugs in the woods.

What do you need to do to prepare for your trip?

To protect yourself from getting bitten by ticks, you should bring bug spray, long socks, long pants, long-sleeved shirts, light color clothes (so you can see if you have any ticks on you), and a tick removal spoon or tweezers (in case you do have a tick on your body). Remember to check your body every day for ticks!

