

Check Yourself for Ticks!

Student Booklet



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Preface

Ticks are medically important arthropods, since they have the ability to transmit Lyme disease, tularemia, Rocky Mountain spotted fever, and ehrlichiosis in Texas. In 1984, Lyme disease was found to be present in Texas and it is now found in 1-2% of ticks in Texas. Lyme disease is the most frequently diagnosed tick-borne disease in the United States, where 133 cases were reported in Texas in 2002 and 85 cases were reported in 2003. Tularemia is a bacterial disease affecting both animals and humans, with 3 cases reported in Texas in 2002 and 2 cases reported in 2003. Rocky Mountain spotted fever is the most frequently reported rickettsial illness in the United States, with 13 reported cases in Texas in 2002 and 14 reported cases in 2003. In Texas, ehrlichiosis is a rare disease with fewer than 10 cases reported each year, according to the Texas Department of State Health Services. However many people with ehrlichiosis show no symptoms and do not seek medical care or in other cases may have been misdiagnosed, according to the Centers for Disease Control and Prevention.

In this booklet are a variety of exercises designed to help you learn about ticks and why they are so dangerous.



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Lesson 1-1: What is a tick?

Glossary Terms

Abdomen
Arachnid
Cephalothorax
Exoskeleton
Scutum

Questions to ask before reading the passage:

What is a tick?

Are ticks and insects the same?

What characteristics make a tick a tick?

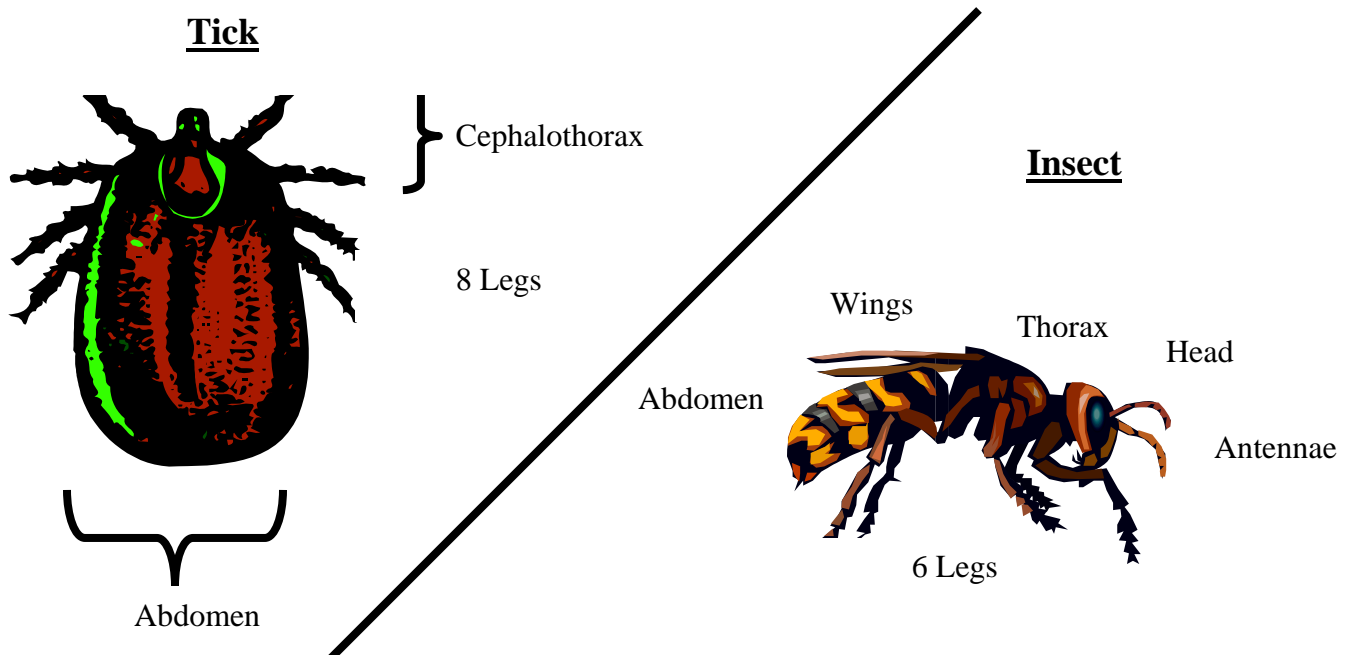
Reading Exercise:

There are around 300 species of ticks in the United States. Since there are so many different kinds of ticks, they can live in almost any habitat from forests to around houses. All ticks need a high level of humidity and moderate temperatures to develop. This means we will not find ticks in desert-like places because there are high temperatures and low humidity there.

Ticks are not insects, they are **arachnids**. Ticks have two body parts: the **cephalothorax** and the **abdomen**. Insects have three body parts: the head, thorax and abdomen. Ticks have eight legs and insects have six legs. Ticks eyes and eight legs are located on the cephalothorax. Insects have their eyes on their head and their six legs are located on the thorax. Ticks do not have wings or antenna, like insects usually have.

Ticks have their skeleton on the outside of their body. This is called an **exoskeleton**. Some ticks also have a **scutum**. A scutum is a hard plate that covers the tick's back. It is just like a shield.

Ticks are very closely related to mites, spiders and scorpions, which means they are all arachnids.



Wrap-Up Questions for Lesson 1-1:

Is a tick an insect?

What are the body parts of a tick?

What are the main differences between ticks and insects?

Lesson 1-2: Soft Ticks vs. Hard Ticks

Questions to ask before reading the passage:

Has anyone ever been bitten by a tick?

What do ticks eat?

Do you think there are different types of ticks?

Glossary Terms

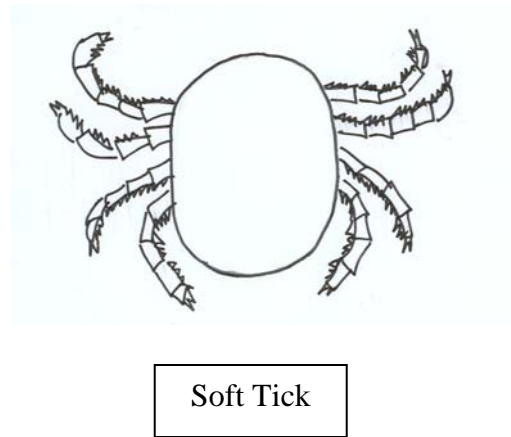
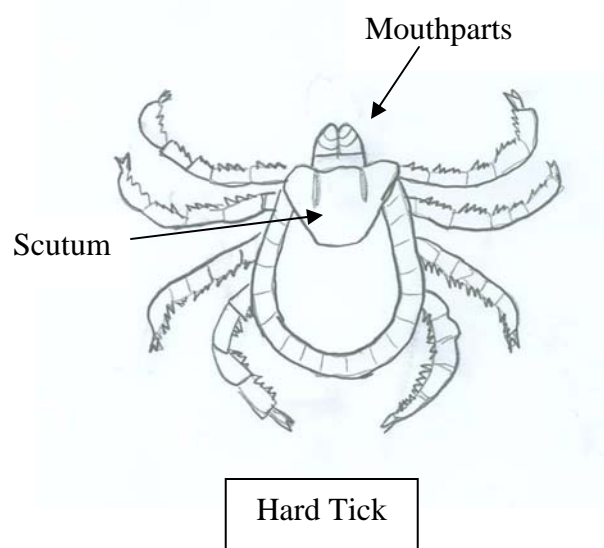
Scutum

Reading Exercise A:

There are two basic types of ticks. There are soft ticks and hard ticks. Soft ticks look differently than the hard ticks. Soft ticks have a soft, leathery exoskeleton and do not have a **scutum**. You can not see a soft tick's mouthparts when you look at them because their mouthparts are underneath their body. Soft ticks can blow up like a balloon when they feed on blood because they do not have the hard scutum on their back. Soft ticks are very fast feeders and can fill up with blood in a few hours!

Hard ticks do have a scutum, so they are not able to take in as much blood. Hard ticks also have mouthparts that you can see because they stick out in front of the body. When the hard tick finds a host, it will slice open the skin using its mouthparts and then attach itself using saliva or spit. Hard tick's saliva is like cement and can help hold the tick in place on the host. The hard ticks are very slow feeders and it might take several days for them to get a blood meal!

As the tick feeds, it may suck in about 100 times its body weight! Animal blood is made up of several things, including blood cells and water. When the tick takes in a blood meal, it will only keep the blood cells and will return most of the water in the blood back to the host!



Wrap-up questions for Lesson 1-2:

What are the two types of ticks?

What are the differences between the hard and soft tick?

How does the hard tick attach itself to a host?

Are the hard ticks slow or fast feeders?

Activity 1-1: Tick Jeopardy Game

Your teacher will place you into teams. Your team will be asked a question about ticks. If you answer correctly, your team earns a point. If you answer incorrectly your team will not receive any points. Once all the questions have been asked, the team with the greatest number of points wins.

Suggested True/False Quiz Questions:

1. Ticks are arachnids
2. Ticks legs are found on its abdomen
3. Ticks have antennae
4. Ticks eyes are found on the cephalothorax
5. There are over 1000 species of ticks in the United States
6. Ticks can live in many different habitats
7. Ticks must live in places with high humidity
8. Ticks must live in places with very hot temperatures
9. You can find ticks in deserts
10. Ticks have four body parts
11. Ticks have a thorax
12. Ticks have six legs
13. Ticks never have wings
14. Ticks are related to mites
15. Ticks are insects
16. Soft ticks are a type of tick
17. When a tick feeds on blood it can suck as much as 100 times its body weight
18. Soft ticks have a scutum
19. A scutum is like a shield on the back of a tick
20. Hard ticks have a scutum
21. You can see a soft ticks mouthparts from above
22. Hard ticks are faster feeders than soft ticks
23. Hard ticks use their saliva as cement to keep them in place when they feed
24. It may take soft ticks up to several days to get a blood meal

Activity 1-1: Tick Jeopardy Game Continued

Suggested Greater Difficulty Quiz Questions:

1. How many body parts do ticks have?
2. What are the body parts of a tick?
3. How many legs do ticks have?
4. What are the two basic types of ticks?
5. Why can't you find ticks in deserts?
6. What is a scutum?

Tie Breaker Questions:

1. How are ticks and insects different from one another?
2. How are hard and soft ticks different from one another?

Activity 1-2: Tick Games

A. Unscramble the words to answer *how many body parts and how many legs tick have*.

CKTIS	VEAH	OTW	DOBY
RTAPS	NAD	GEIHT	
GSEL			

B. Unscramble each of the clue words using the word bank. You will not use all the words in the word bank. Copy the letters in the numbered boxes to bottom row of boxes with the same number to figure out the secret phrase.

AOTAEXHPCROHL	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 11 6
TEGHI	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 15 1
RADH	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 7 16
FOST	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 17
TOKEXNEESOL	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 4 14
CUTMUS	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 3
RATHOTMUSP	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 10
DABMOEN	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 8
DAIRACSNH	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 12 13 2
TICKS	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 5

Word Bank

(not all words will be used)

Abdomen

Arachnids

Balloon

Cephalothorax

Eight

Exoskeleton

Feed

Hard

Host

Mouthparts

Scutum

Soft

Ticks

<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 1 2 3 4 5	<input type="text"/> <input type="text"/> <input type="text"/> 6 7 8	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 9 10 11 12 13 14 15 16 17
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Lesson 2-1: Locating a Host

Glossary Terms

Blood meal

Dehydrated

Host

Hydrated

Vertebrate

Questions to ask before reading the passage:

Have you ever seen a tick?

Where did you see the tick?

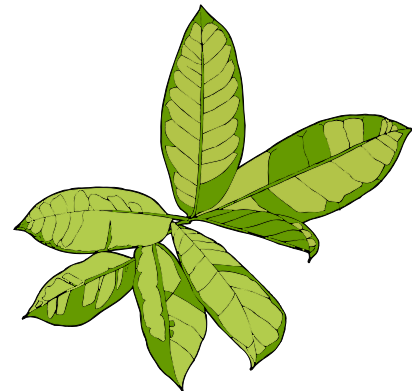
Can ticks bite your pets?

Reading Exercise A:

Ticks eat blood as their food. When a tick drinks blood it is called a **blood meal**. Before a tick can grow larger, it needs a blood meal. To get a blood meal, the tick must find a **host**. A host is the animal that the tick chooses for its blood meal. A host can be a human, dog, deer, cow, or other **vertebrates** living on land. Ticks can even feed on reptiles such as lizards!

How do ticks find their host? A developing tick will climb up a blade of grass or the leaf of a plant or tree branch and wait for a host come along. Ticks can tell if a host is near by feeling vibrations on the ground when the animal walks, sensing the CO₂ in the air that animals breathe out, and by feeling the warmer temperatures from the body. When a tick senses a host, it will stand upright and wave its front legs to attach to a host.

If the tick is unsuccessful, they will climb back to the ground before they become **dehydrated**. Once they are **hydrated** again, they will climb back up the plant and wait for a host again. They must have a host in order to complete their lifecycle or continue with a generation. If they do not find a host, they will die!



Wrap-up questions for 2-1:

What does a tick need in order to grow larger?

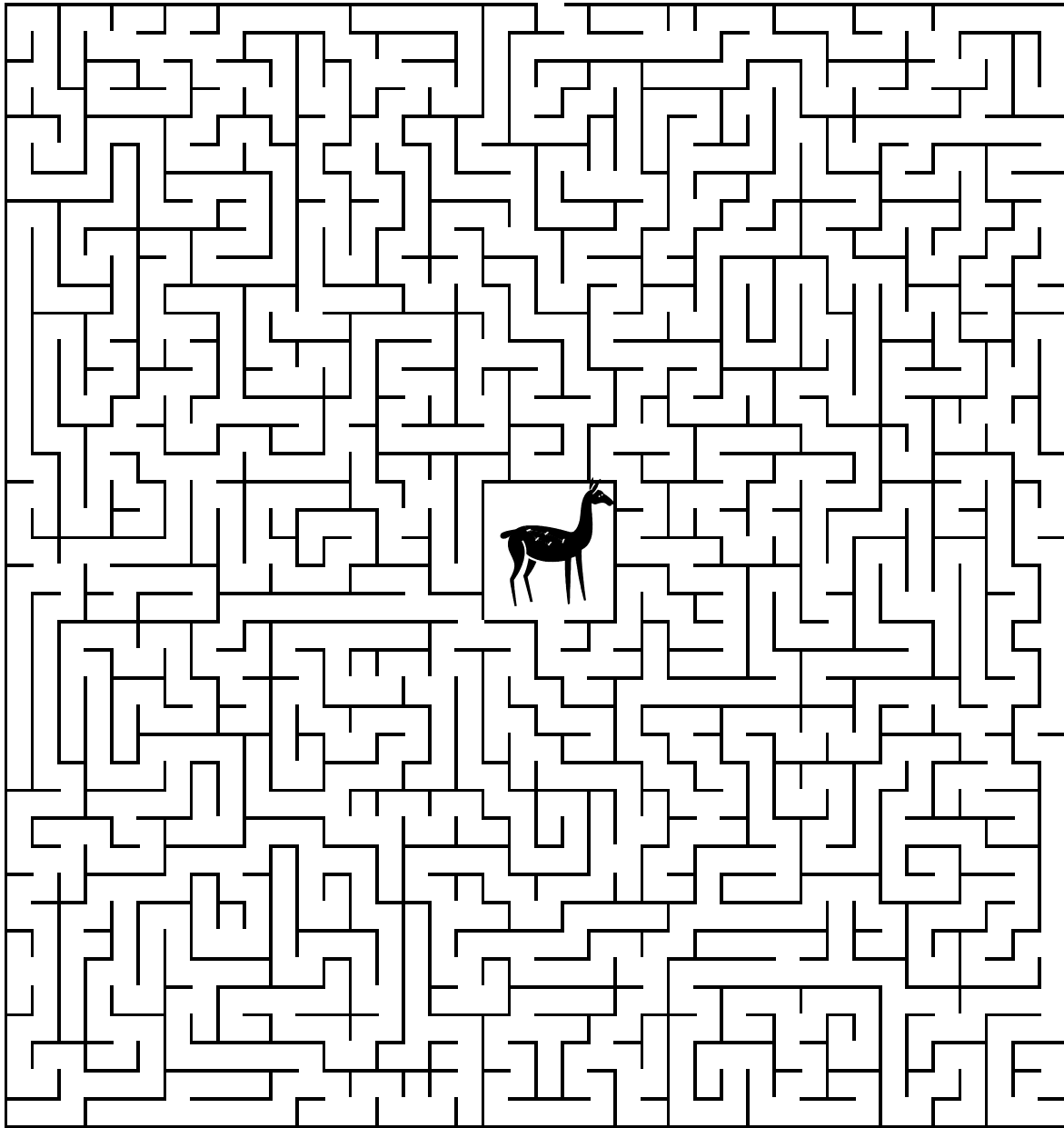
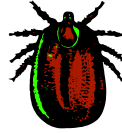
What cues does a tick use to detect a host?

How does the tick attach to a host?

What happens to a tick if it can not find a blood meal?

Activity 2-1: Tick Maze

Help Tinsley the tick find his host.



Lesson 2-2: Tick Feeding

Questions to ask before reading the passage:

On what animals do you think ticks feed?

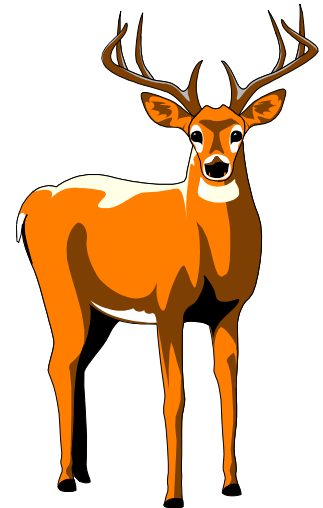
If a tick feeds on blood, what types of mouthparts are needed?

How do you think a tick feeds on a host, if the host is running or jumping around?

Reading Exercise B:

Ticks feed by inserting their mouthparts under their host's skin and feeding on the blood. This means they stay and in one spot and do not move very much. Since ticks are able to carry diseases, it is important to check yourself and your pets to make sure that ticks are not imbedded in the skin. Ticks will only be found outdoors, so you do not have to worry about them living inside with you, like fleas. However, they carry more dangerous diseases than fleas and are sometimes harder to find on skin.

Adult ticks usually remain on deer and other mammals in the fall and winter. If you spend large amounts of time outdoors during fall and winter, be sure to check yourself, other family members and pets daily. If you or your family hunts, also be sure to check for ticks that may have fallen off during the handling of animals.



Wrap-up questions for 2-2:

How do ticks feed?

Are ticks dangerous?

Can ticks be found indoors?

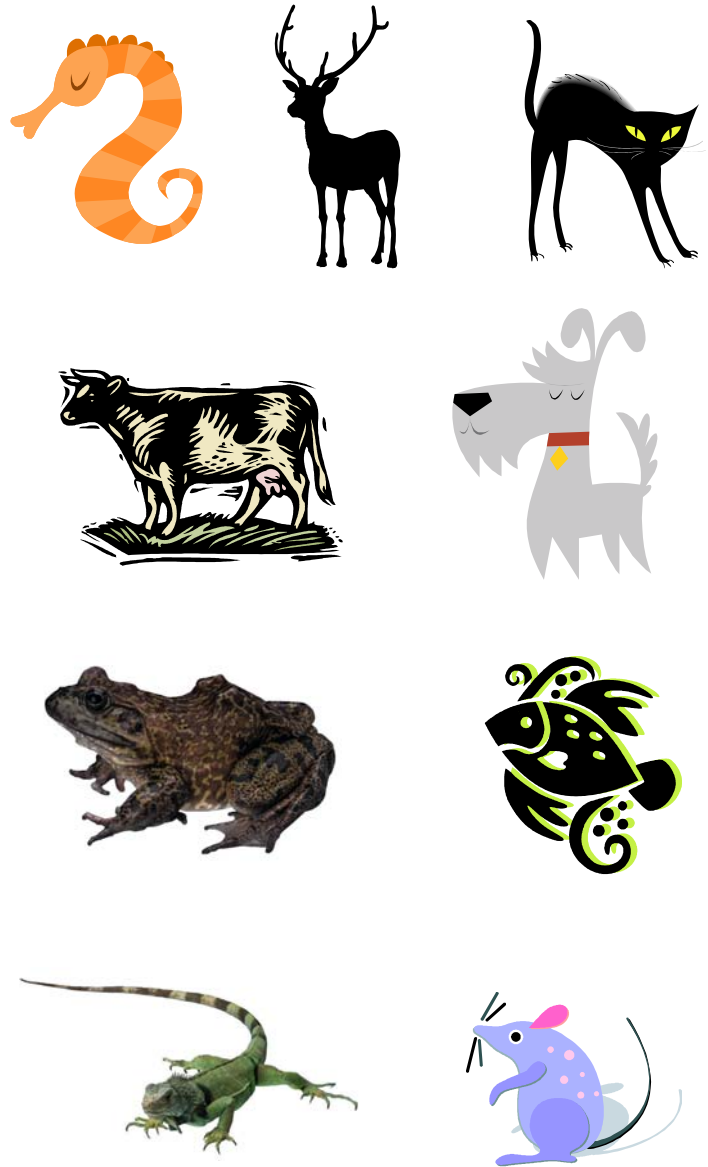
Where do most ticks live in fall and winter?

Activity 2-2: Tick Hosts

Name 10 different vertebrates that can be HOSTS of ticks:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Hints: Here's some help: Some of these animals can be hosts, and some cannot. Can you figure out the difference?



Lesson 3: Tick Lifecycle

Questions to ask before reading the passage:

How do you think ticks grow?

Have you ever seen different sized ticks?

What size are ticks?

Glossary Terms

Host

Larvae

Lifestage

Nymph

Reading Exercise B:

Ticks go through four **lifestages** as they develop. These four lifestages are egg, larva, nymph and adult. The adult female tick will lay around 100 eggs at a time, but sometimes a female can lay up to 20,000 eggs at a time! The female tick will lay the eggs in the soil or leaf litter.

The egg hatches into a larva that only has six legs. The larva stage is the smallest lifestage and they are sometimes called “seed ticks” because they are so small. This newly hatched larva must get a blood meal in order to molt and grow larger. Once the larva finds a host and gets a blood meal, it will molt and gain another pair of legs.

Once the larva molts and has eight legs, it is called a **nymph**. The nymph will take in another blood meal and will molt into an adult tick. The adult tick is larger than a nymph.

The tick’s entire lifecycle from egg to adult can take a year to several years to complete! The long lifecycle is due to the number of **hosts** needed for the tick to develop from the egg stage to the adult stage. Some ticks feed on only one host, while others need two, three or more hosts to complete their lifecycle.

Wrap-Up Question for Lesson 3-1:

How many lifestages are found within the tick’s lifecycle?

What are the lifestages of a tick?

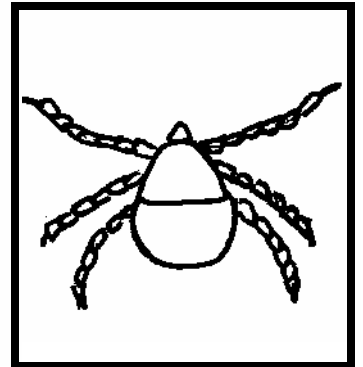
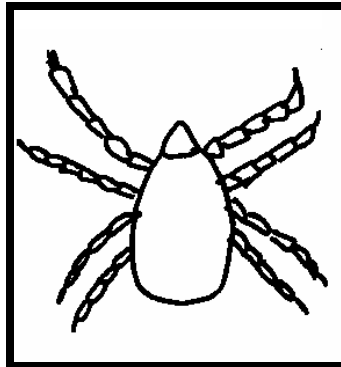
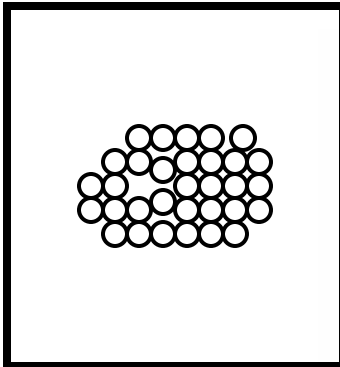
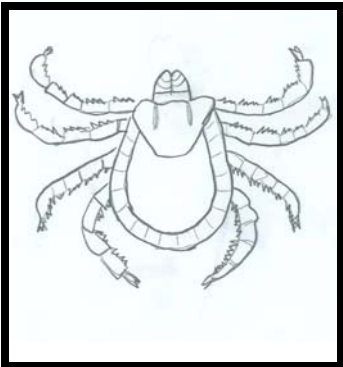
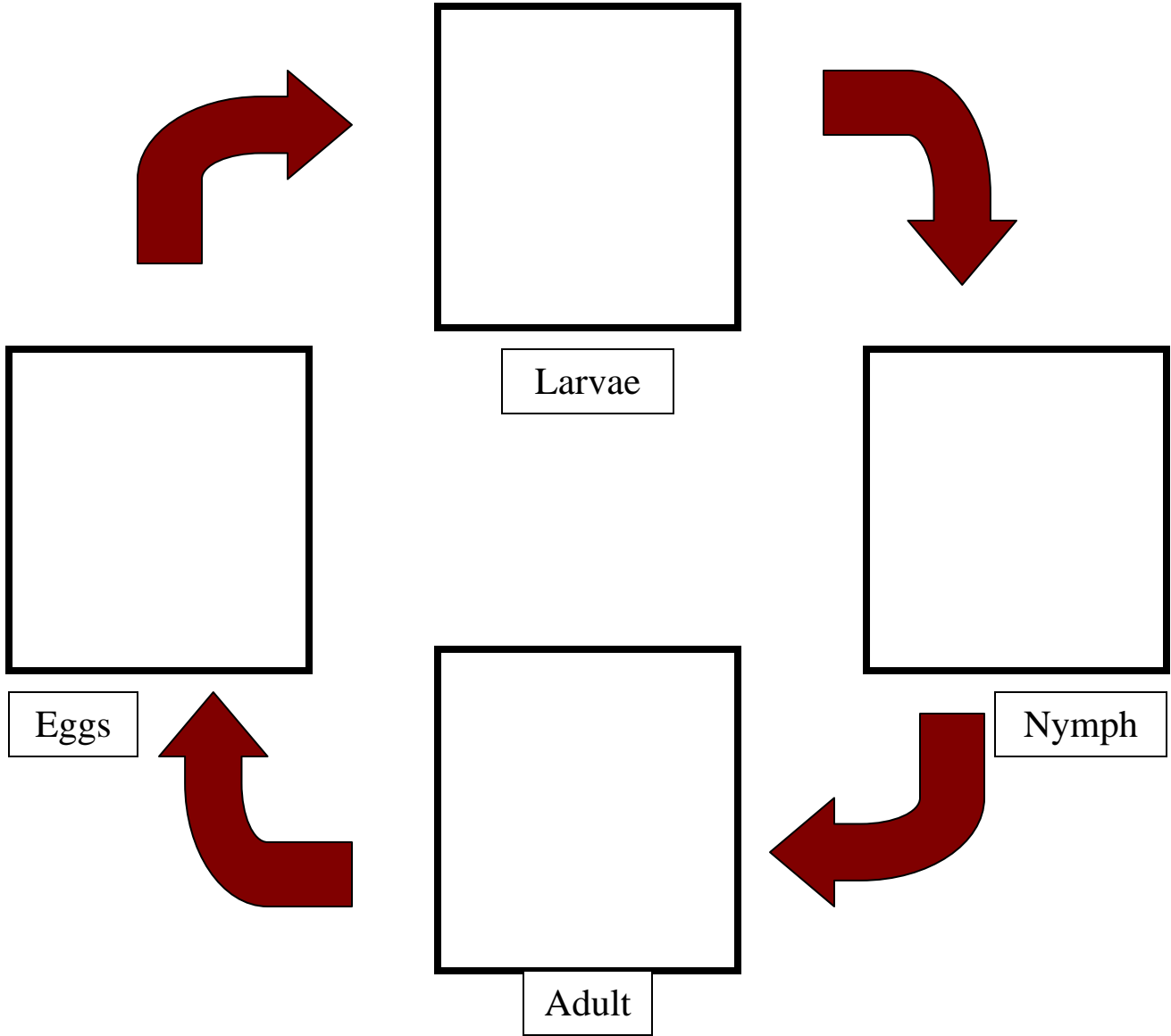
How many legs are found on a tick larva?

What are larvae ticks called?

Why is a tick’s lifecycle so long?

Activity 3-1: Tick Lifecycle

Cut out the four lifestages of the tick below and glue them in the correct box.



Lesson 4-1: Dangers of Ticks

Questions to ask before reading the passage:

- Do ticks only feed on humans?
- Are ticks able to transmit disease?
- Can you name one disease that ticks can transmit?

Glossary Terms

Amphibian
Anemia
Babesiosis
Dermatosis
Ehrlichiosis
Lyme disease
Lymph node
Rocky Mountain Spotted Fever
Terrestrial

Reading Exercise A:

Ticks are not picky when they choose a blood meal. In fact, they are able to attach to all **terrestrial** vertebrate animals, even **amphibians**. This makes ticks very dangerous! They are a close second to the mosquito when it comes to transmitting diseases to humans.



Ticks are able to spread many diseases such as **babesiosis**, **ehrlichiosis**, **Rocky Mountain spotted fever** and **Lyme disease**. Lyme disease often causes such symptoms as tiredness, fever, headache, joint pain, swollen **lymph nodes**, and a red, circular rash. Rocky Mountain spotted fever usually causes fever, a rash, and vomiting. Ehrlichiosis causes a fever, vomiting but no rash occurs. Babesiosis causes red blood cells to burst, which can cause fever, sweats, muscle aches, nausea, and vomiting.

Ticks can cause **anemia** due to blood loss of an animal from many ticks taking in a blood meal. Ticks can also cause **dermatosis**, due to the saliva that they put into the skin as the tick feeds. Dermatitis is a disease of the skin which can be a rash or itching. Ticks can also cause tick **paralysis**, due to the neurotoxins in their saliva. If you have tick paralysis your entire body can become paralyzed and you will not be able to move! Tick paralysis usually goes away after a while, but you need to go to a doctor immediately.

If you or your pet has any of these symptoms after a tick is found feeding in the skin, call your family doctor or veterinarian.

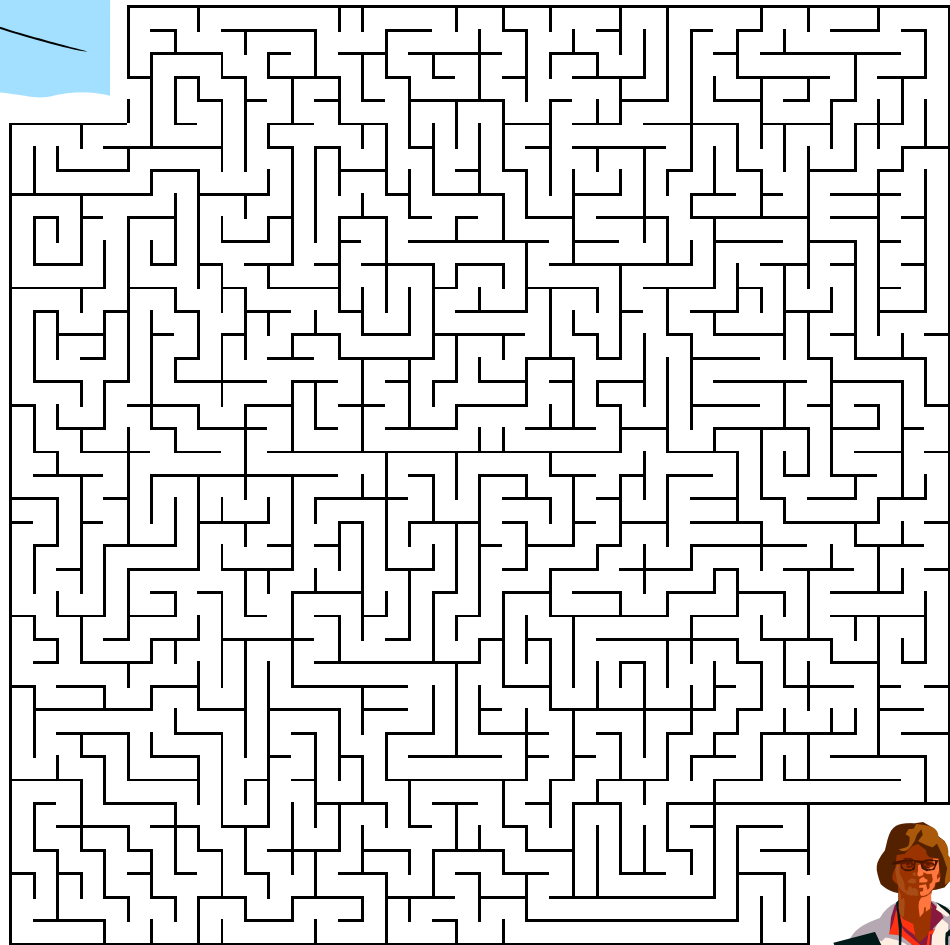
Wrap-up questions for 4-1:

- Do ticks only like to feed on one type of animal?
- Do ticks only transmit one disease?
- Can a tick cause paralysis in humans?
- What should you do if you suspect that you have a tick transmitted disease?



Activity 4-1: Make Your Way to the Doctor Maze

Jenny was bitten by a tick and now feels sick. Help her find her way to the doctor to get treatment.



Lesson 4-2: Ways to Avoid Ticks

Questions to ask before reading the passage:

Where are ticks found?

Do you think long-sleeved shirts and long pants help to prevent ticks from attaching to your body?

Can chemicals be applied to dogs and cats that will prevent attachment of ticks?

Reading Exercise B:

If you are going into an area infested with ticks you should do some things to try to avoid them. One way to prevent ticks from attaching to the skin is to wear long-sleeved shirts that are tight at the wrists and long pants that are tight at the ankles. You should also tuck your pants into white socks, so you can see the ticks crawl up the outside of your pants. This will make it easier for you to see the crawling ticks. Make sure to wear shoes that cover your entire foot, so no flip-flops! Wear a hat so the ticks can not drop onto your scalp from the trees.

Repellents can be applied to the skin and clothes to keep ticks from crawling onto your body.



If there is a heavy infestation of ticks in your yard, chemicals can be sprayed to help control them. This may be a good idea if pets live outdoors. Since ticks use plants to find their hosts, weeds should be removed and grass should be mowed. This way ticks don't have many habitats to live in.



Keep your pets from roaming in wooded or tall grassy areas. That way ticks will not attach to your pets.

Remember, ticks do not just like to feed on humans and pets. Keep rodents and wild animals from entering your backyard because they often have ticks that can infest you or your pets!



If you do have a pet with a tick problem, you can use chemicals that you apply to their skin monthly. These products should be prescribed by your veterinarian. For dogs, tick collars can be worn to prevent ticks from attaching to their skin. These collars work best if they are kept dry. You should not use these collars on cats.

Wrap-up questions for 4-2:

What should you wear if entering a tick infested area?

Why should white socks be worn?

Why should rodents and wild animals be controlled around homes?

What can be applied to pets so ticks will be less likely to attach to them?

Activity 4-2: The Dangers of Ticks Word Games

Cryptogram A: Try to decipher the code to reveal the hidden message!

Hint: T = 17 ; S = 3 ; D = 9; E = 7; Y = 22; and the fourth word is “ticks”

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

10	7	20	12	21	7	25	14	6	23	13	26	17	26	13	20	8	3	26	17	7	22	
																		!				
20	12	21	21	22	9	13	3	7	12	3	7	3										

Cryptogram B: Double Puzzle. Try to decipher the code to reveal the hidden message!

RMEEMEBR

HET

AYSW

OT

VIODA

TIKCS

5	6			1			

	2	

	4		

		3		

Decipher this code using the letters and numbers above:

						F	U	L
1	2	3	4	5	6			

Lesson 4-3: If A Tick Attaches, How Do You Remove It?

Questions to ask before reading the passage:

Do you think that a tick can be removed?

How would you remove a tick?

Do you think fire is a safe way to remove a tick?

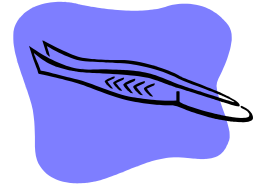
Glossary Terms

Irritate

Tweezers

Reading Exercise C:

If you find a tick, it is best to use **tweezers** to slowly and gently remove it. You should pick up the body with the tweezers and pull straight out. This will cause the mouthparts of the tick to be released from the skin. After the tick has been removed, you might see a small hole. If you see black lines after you pull out the tick body, then the head of the tick is still in the skin. You can try to pull out the mouthparts or go to the doctor so they can remove the head for you. It is important to remove the headparts, since they can cause infection. Always remember to wash your hands after handling a tick.



For pets, use a wide tooth flea comb to look through hair for ticks. If you look for ticks immediately after a walk or hike in infested areas, the ticks will be crawling around. The flea combs make them noticeable.

Here are some tips of what *NOT* to do in case you find a tick. First, do not use any matches, gasoline or cigarettes to **irritate** the tick into coming out of the skin. These are dangerous items and should not be anywhere close to your skin. Secondly, do not pour oil over the tick to kill it. Some people think oil will suffocate the tick, but ticks only need a small amount of oil to survive. Finally, do not rotate the tick as you try to remove it from the skin. The tick's mouthparts are barbed and they are more likely to stick into the skin if you twist the tick when removing it. The best way is to gently pull the tick straight out using tweezers.



It is always easier to remove ticks before they attach, and easier to remove newly attached ticks than ones that have been feeding for a while.

Once you have removed the tick, it is important to properly kill them. The best way is to drop the tick into alcohol within a jar to kill it and then throw it away. However, you can also keep the tick in the container and take it to a doctor or entomologist for identification. If you just flush the tick down the drain it WILL NOT KILL THEM. Also, do not squish the tick with your fingernails. Ticks can carry diseases and it is not a good idea to put the disease on the skin.

Wrap-up questions for 4-3:

What should be used to gently remove a tick?

How should the tick be pulled from the skin?

Should gasoline, matches or oil be used to remove ticks?

Is it easier to remove a newly attached tick or a tick that has been feeding for a while?

How should the tick be killed after it is removed from the skin?

Activity 4-3: Dangers of Ticks Word Search

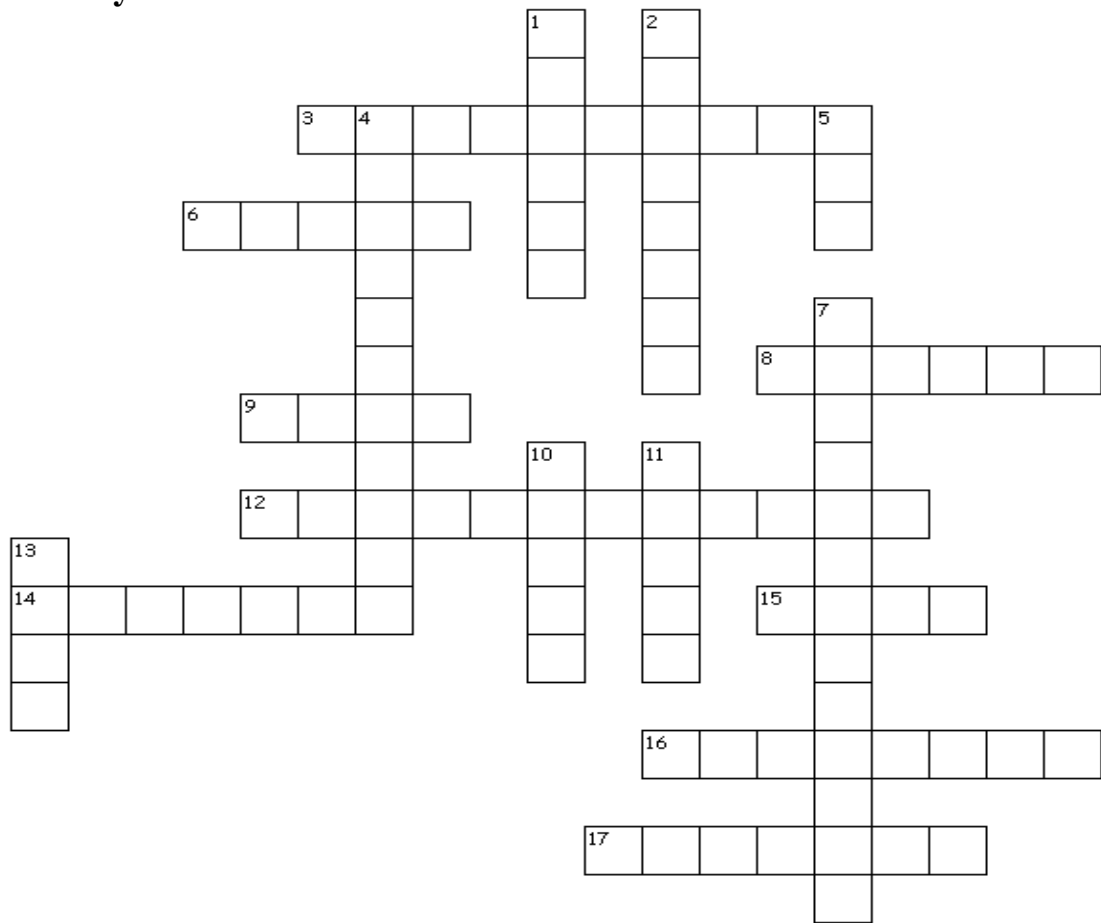
S W B T O N S I V F O H O G S G R P L S
A D M R O S D U Z E W S D A L E P Y O P
X T O W H H U O S L K O O T P A L X N N
F L W O G S H U M M A F I E Z N J R G X
L M C E W S O G Q U H E L Y N E Q M S K
J S R R E R D Y R U U L M F N M X Y H L
S R R K E Z U Y N E E X P D W I J T I O
J Y Q G S G E H O N A L O I O A Y F R H
I J N W U Z G R T Y I O T X T O E Z T M
N A J Z A Q I N S I H W O N Y H L L S Q
D K Q I J M F T S I S Y L A R A P B C O
D N L X K S Y O R D D E M W R P H K N B
H R C E F T A V A D I S E A S E S X O O
Y Z Z Q C N Y K X V H R F T H T Z O N K
F N Z G K A B H W E T L J F T B Y N X O
U B D O Y P K Z K I C X V I O J M Q A Y
Q K E O D G G U C C N N X E C L O H X V
S S A R G N D K S H V Y F K B W P B A N
R C J O M O S E H B F P M J Z M G Z O V
L A X Q V L P Z Y B N T I L H Z E J G A

Word Bank

ANEMIA
BLOODMEAL
DANGEROUS
DISEASES
GRASS
LONGPANTS

LONGSHIRTS
PARALYSIS
REPELLENT
TICKS
TWEEZERS
WOODS

Wrap Up Activity: Tick Crossword



Across

3. Prevent ticks from crawling on body
6. What a tick needs to molt
8. Place where ticks are usually not found
9. Shedding the exoskeleton
12. Doctor that can help your pets
14. Second body region of a tick
15. This kind of tick feeds quickly
16. Liquid that you should never pour on your skin
17. Ticks transmit this to vertebrates

Down

1. Holds tick in place while feeding
2. Tool used to remove ticks
4. Outside skeleton of a tick
5. Number of legs found on a tick larva
7. First body region of a tick
10. Number of legs found on an adult tick
11. This lifestage is sometimes called seed ticks
13. This kind of tick feeds slowly

Word Bank

Blood
 Soft
 Molt
 Gasoline
 Larva
 Veterinarian
 Desert
 Saliva
 Tweezers
 Six
 Repellents
 Disease
 Abdomen
 Cephalothorax
 Exoskeleton
 Eight
 Hard

Glossary Terms

Abdomen (Lesson 1) - the end segment of the body in an arthropod (third body region of a insect, and second body region of a tick).

Amphibians (Lesson 4) - a class of cold-blooded vertebrate, such as frogs, toads, or salamanders, that have gilled larvae living in water and adults breathing air.

Anemia (Lesson 4) - a condition in which the amount of blood within a body is lower than average.

Arachnid (Lesson 1) - a class of arthropods that have a two-segmented body, four pairs of legs and no antennae, such as spiders, scorpions, mites, and ticks.

Babesiosis (Lesson 4) - infection caused by bacteria that infects mammals red blood cells.

Blood Meal (Lesson 2) – a feeding of blood that ticks need to grow to the next life stage and lay eggs.

Cephalothorax (Lesson 1) - the fused head and thorax of an arachnid or crustacean. The first body region of a tick.

Dehydrated (Lesson 3) - to remove water.

Dermatosis (Lesson 4) - a disease of the skin.

Ehrlichiosis (Lesson 4) - a bacteria that is transmitted by tick that can cause fever, chills, headache, nausea and muscle aches.

Exoskeleton (Lesson 1) - an external supportive covering of an arthropod. (Bones on the outside.)

Host (Lesson 2) - a living animal or plant where a parasite can live on or within. The term used for the animal that gives a tick its blood meal.

Hydrated (Lesson 3) - to add or supply with water.

Irritate (Lesson 4) - to make angry or not pleasurable.

Larvae (Lesson 3) – the second lifestage of a tick after the egg stage that only has six legs.

Lifestages (Lesson 2) - stages in which an organism develops in order to become an adult.

Lyme Disease (Lesson 4) - a bacteria that is transmitted by ticks that causes tiredness, fever, chills. If left untreated, it can cause joint pain and heart/nerve problems.

Lymph nodes (Lesson 4) - any of the round bundles of lymphoid tissue which filter the flow of lymph passing through the node.

Nymph (Lesson 2) - a stage of development before becoming an adult. The third lifestage of a tick.

Paralysis (Lesson 4) - loss of the ability to move.

Repellents (Lesson 4) -something that forces away or causes distance between two objects.

Rocky Mountain Spotted Fever (Lesson 4) - a bacteria that is transmitted by a tick that causes chills, fever, pains in muscles and joints, and a rash to occur.

Scutum (Lesson 2) -a hard plate made of chitinous protein located on a hard tick's back side.

Terrestrial (Lesson 4) – living on land.

Tweezers (Lesson 4) - a hand held tool made of metal that can be used to remove small items that are lodged into the skin.

Vertebrate (Lesson 2) – animals that have a spinal collumn

**** Some definitions adapted from Merriam-Webster's Online Dictionary: <http://www.m-w.com/dictionary>.

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