

Hannah's Hantavirus Activity Book



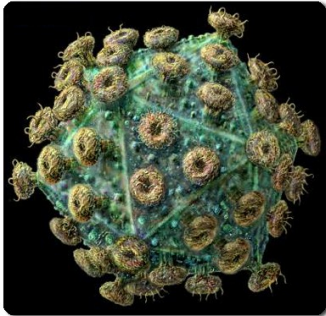
County of San Diego
Vector Control Program
5570 Overland Ave., Suite #102
San Diego, CA 92123
(858) 694-2888



What is Hantavirus?

Deer mice can carry a virus called "hantavirus". It can make people really sick.

The mice do not get sick, but they can spread the virus through their urine and droppings. This is because mice are vectors for hantavirus. A vector is an animal or insect that can spread diseases to people.



Hantavirus

Mice leave their droppings around homes and buildings. If a mouse has hantavirus then their droppings will also have hantavirus. The droppings dry up and can become dust. When you breathe in the dust with hantavirus in it, you can get sick.

Deer Mice

Deer mice do not like to be around people. They like to live in open spaces and places that are not used a lot. Some places they like to live are barns, sheds, and cabins.

People who live where there are lots of trees and bushes, like canyon areas, may find deer mice.



Deer Mouse

Not all mice carry hantavirus. You cannot tell the difference between a mouse that has hantavirus and one that does not have it. You should always be careful when cleaning up after mice.

What does a Deer Mouse Look Like?



Deer mice are two colors. Their bellies are white and the rest of their body is a darker color, ranging from reddish to golden brown, or grey. They have large hairless ears, a long tail that is dark on top and big eyes.

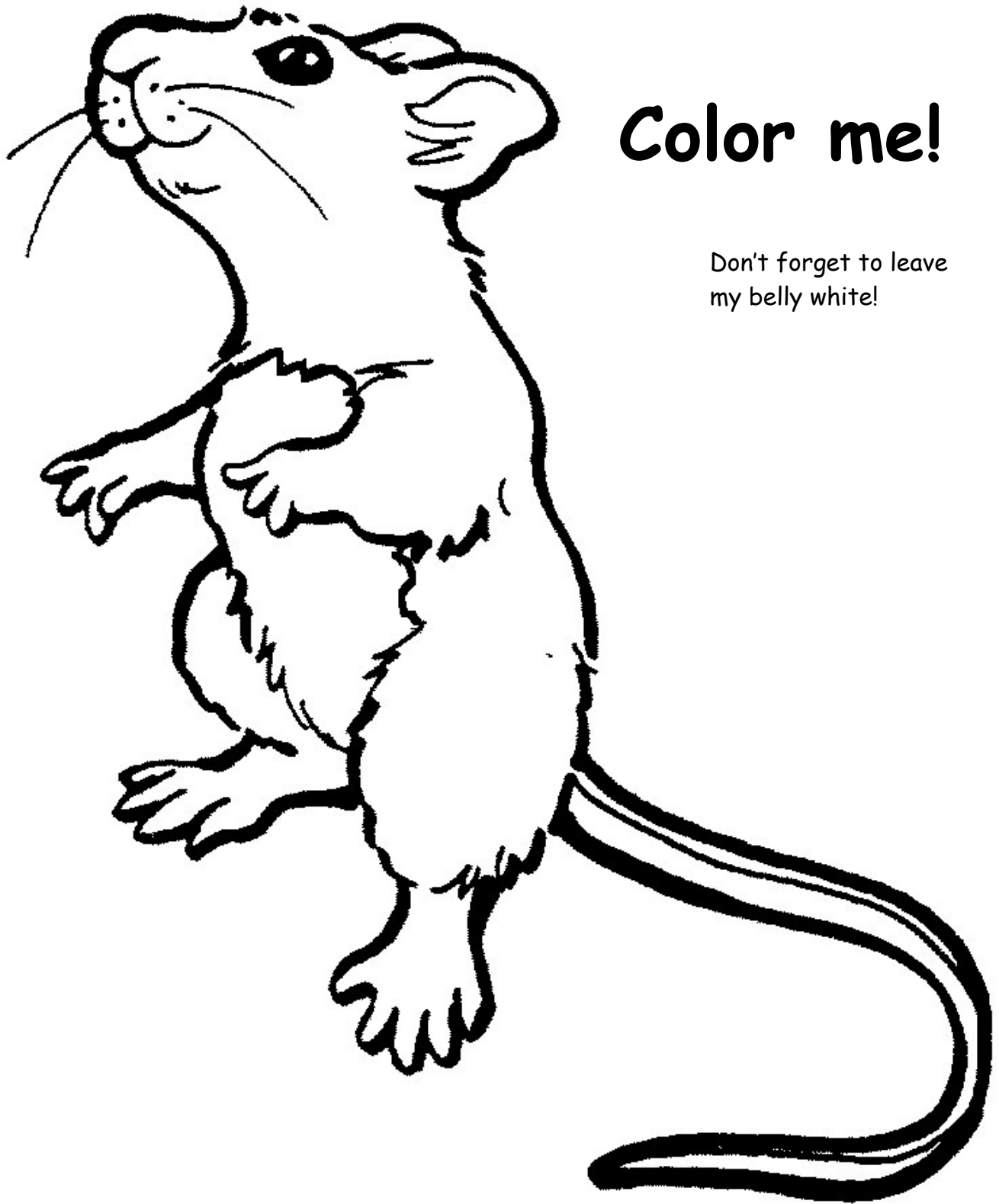
What do they eat?

What a deer mouse eats depends on where it lives and the time of year. In the spring they like to eat insects. In the fall and winter deer mice mostly eat seeds.



Where do they live?

Deer mice usually live in places where they can hide. Common deer mice homes include old logs, under rocks, and sometimes in buildings like sheds or barns that are not used by people.



Deer mice can carry a disease called "hantavirus". If you find mice living in your cabin, barn or shed, be very careful. There are special ways to clean up mouse droppings. Tell your parents so they can learn how to clean up the mess without stirring up dust. Keep reading to find out how.



Solve the Secret Code

A message on how to protect you and your family from hantavirus is hidden in the lines below. Use the key to solve the code and reveal the message.

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

Answer:

Avoid areas where deer mice have lived, they can carry hantavirus.

Show This Page to Your Parents!

How to Clean Up Mouse Droppings



There are very special ways to clean up after mice. NEVER sweep or vacuum the droppings! Always have your parents follow these steps when cleaning up after mice:

1. If you have not been in a building for a long time, let it air out for 30 minutes by opening windows and doors.



2. Wear rubber gloves when cleaning up.

3. Spray down areas where you see mouse droppings with a disinfectant, or mix of one part bleach and nine parts water.



4. Put any droppings, nesting materials, and used cleaning items in sealed plastic bags, and throw away in a covered garbage can.

5. First wash your gloved hands...



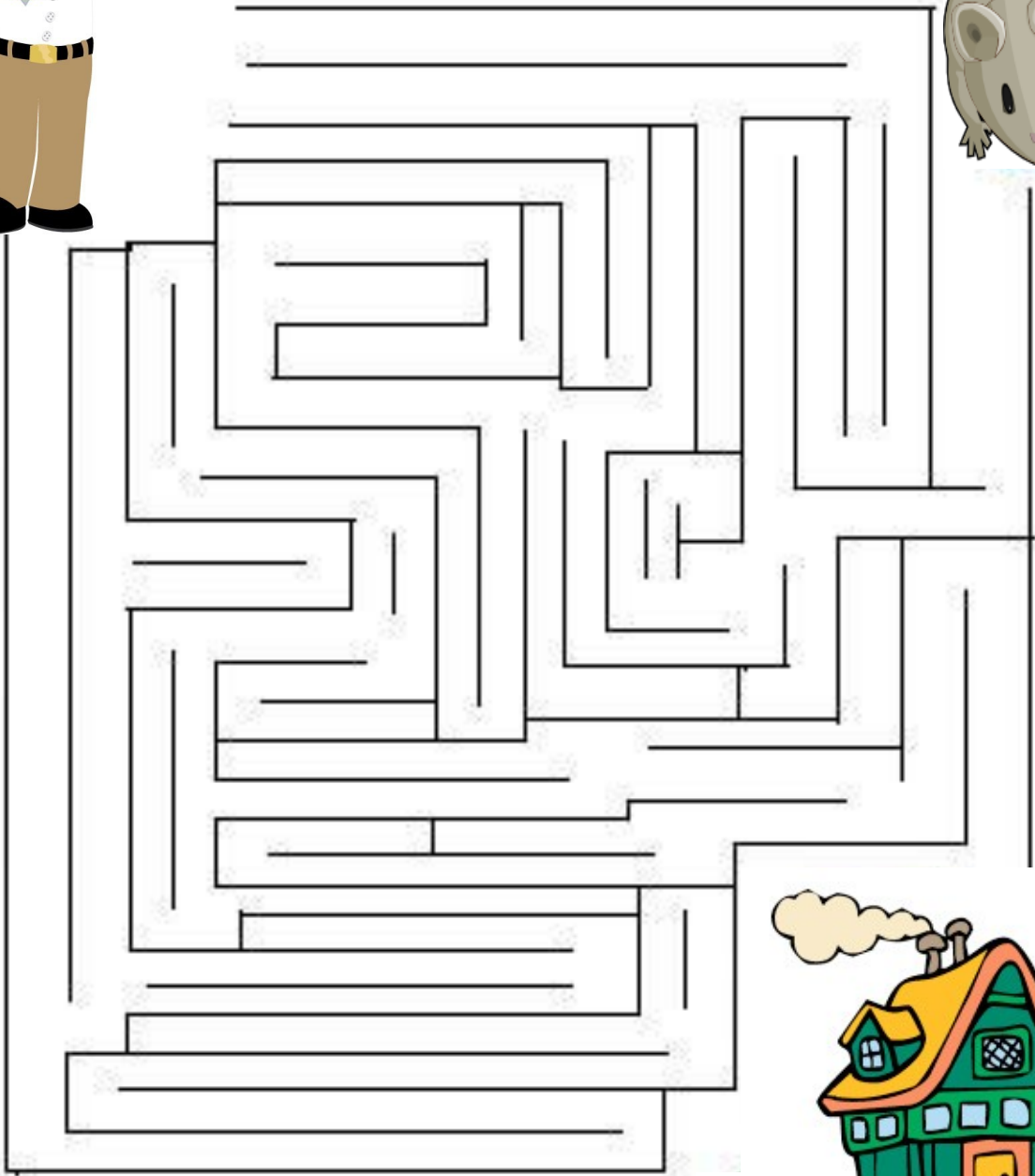
then wash your bare hands with soap and warm water, and throw the gloves away.



If your parents have questions call the San Diego County Vector Control Program at 858-694-2888.

The Amazing Mouse Maze

Help Hannah find her way home without running into a deer mouse.



Deer Mice Facts

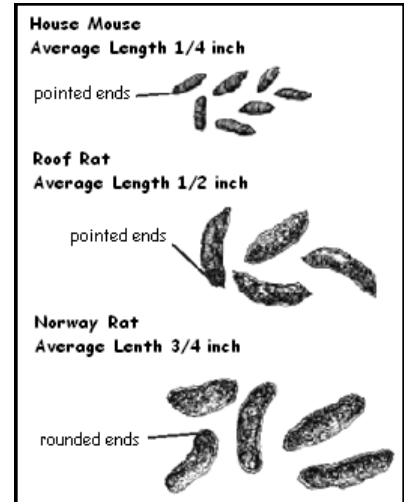
- ♦ Deer mice live up to 5 years
- ♦ Mice like to eat 15-20 times a day, so they are constantly looking for food
- ♦ Female mice can have up to 4 litters per year, averaging 3-6 babies per litter

How do you know if you have mice?

Mice are very messy! They leave poop, or droppings, and urine around where they live. Tell your parents if you see mouse droppings!

Remember that not all mice carry hantavirus. But it is always a good idea to be careful anyway!

Mice also like to nibble on things. If you find something that looks nibbled on and there are droppings near by, you might have a mouse problem.



Make a Mouse!

You will need:

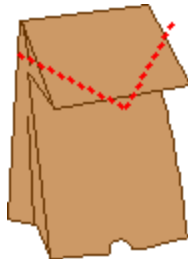
- ♦ A brown paper bag
- ♦ Glue
- ♦ Scissors
- ♦ Construction paper
- ♦ Markers or crayons
- ♦ Pipe cleaners for whiskers

2. You now have the shape of a mouse's head.



To Make:

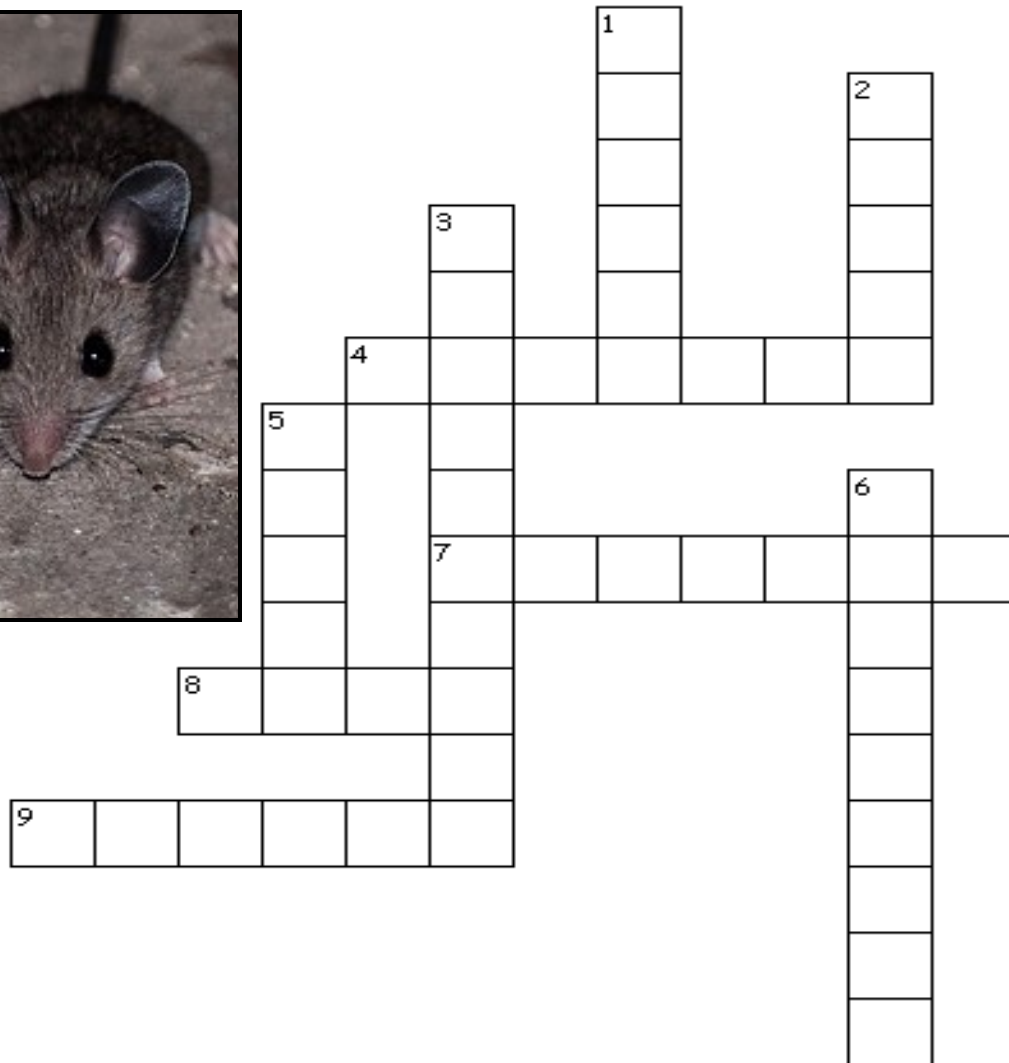
1. Fold the 2 square edges of a paper bag under (at the dotted lines), to form the mouse's pointed snout.



3. Cut out ears, eyes, a nose, and whiskers using thin paper strips or pipe cleaners threaded through the paper bag. Glue them to the mouse.



Mouse Invasion



Down

1. Hantavirus does not hurt mice, but it can make _____ sick.
2. Deer mice eat these in the Fall
3. Name of the virus deer mice can carry
5. Dust from _____ and droppings can have hantavirus in it
6. Mice leave this in areas where they live

Across

4. Deer mice eat these in the Spring
7. Deer mice can be _____ for hantavirus
8. A specific type of mouse that can spread hantavirus
9. _____ that are not used a lot are places where deer mice like to live

Answers 1. People 2. Seeds 3. Hantavirus 4. Insects 5. Urine 6. Droppings 7. Vectors 8. Deer 9. Cabins

Mouse Jokes

What do mice do
when they are at
home?
Mousework!

What is small, furry,
and good with a
sword?
A Mouseketeer!



What is a
mouse's favorite
game?
**Hide and
squeak!**

What has 12 legs, 6
eyes, 3 tails and can't
see?
Three blind mice!

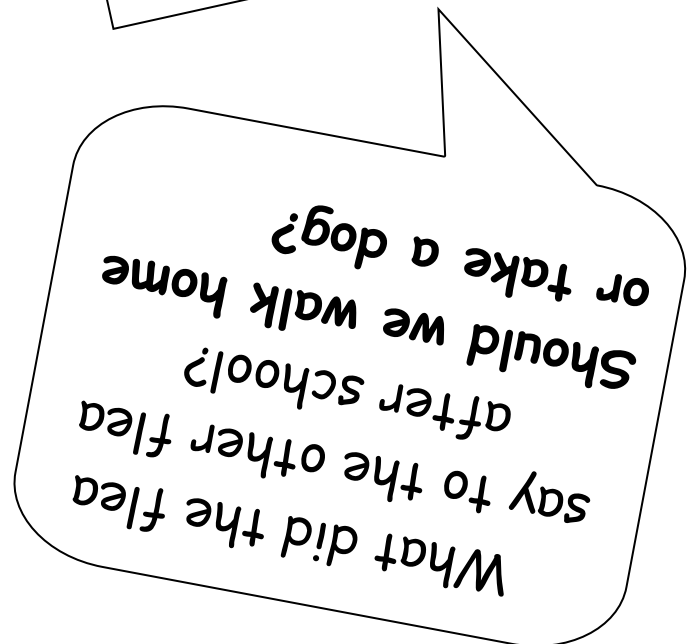
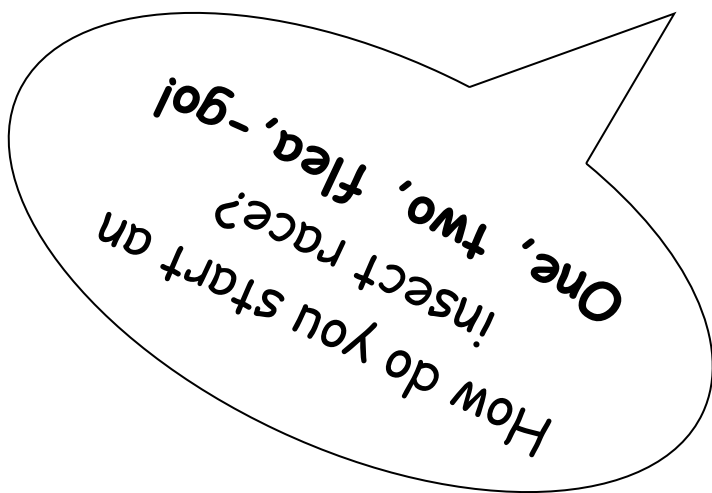
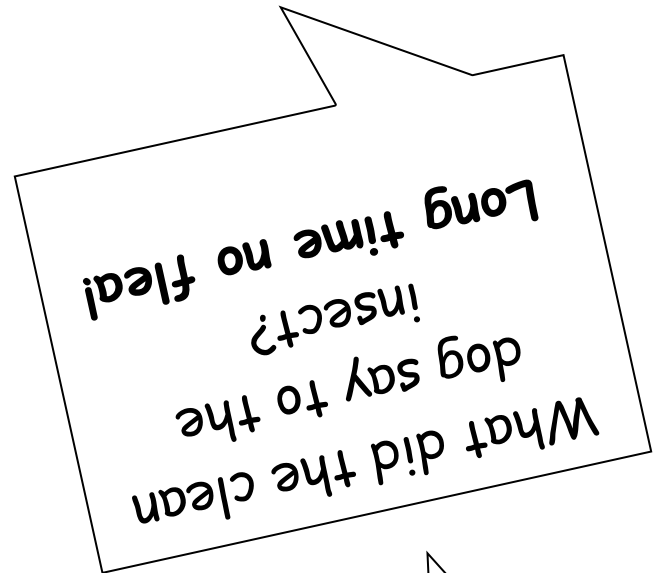
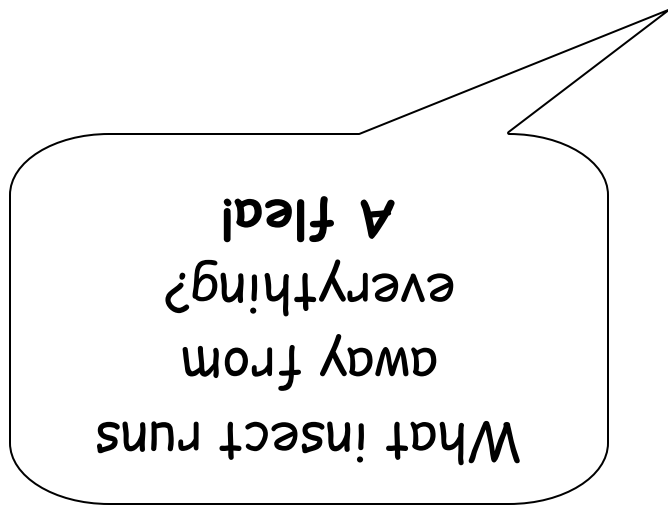
Questions?

If you or your parents need to know more about hantavirus, plague or any other vector borne diseases, contact:



County of San Diego
Vector Control Program
5570 Overland Ave., Suite #102
San Diego, CA 92123
(858) 694-2888
www.SDVector.com





Answer Key: 1. Jump 2. Bite 3. Fifty 4. Larva 5. Itchy 6. Blood 7. Repellent 8. Four

Down

1. Fleas can _____ up to 150 times their own height.

2. Fleas have to do this to eat.

3. Fleas can lay up to _____ eggs per day.

4. What is the second stage of flea life?

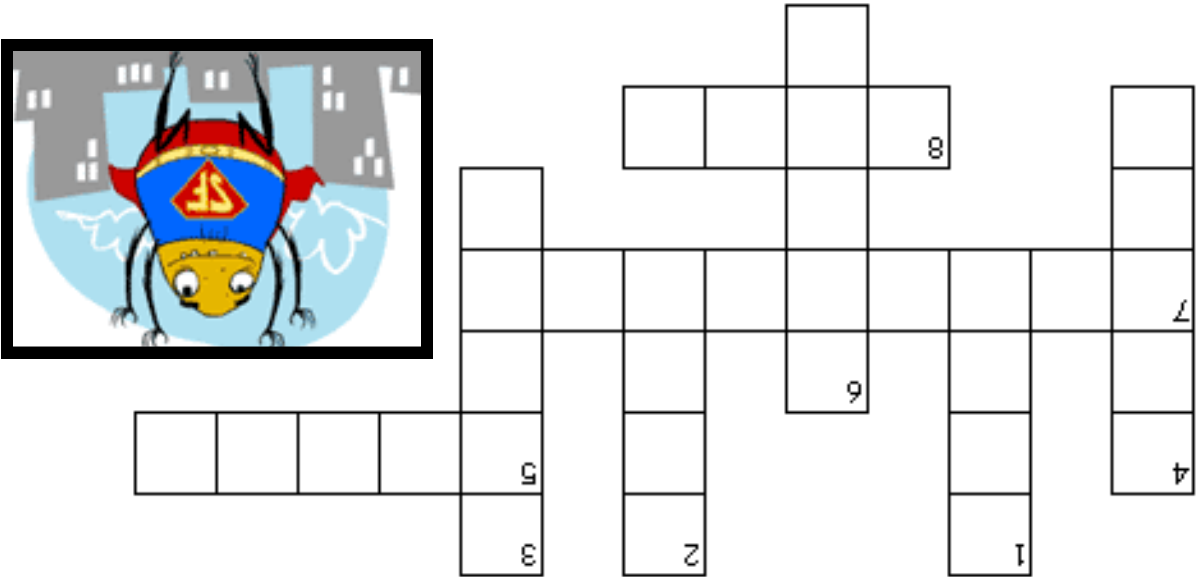
6. Fleas like to eat _____.

Across

5. Flea bites are _____.

7. You should wear _____ when camping or hiking.

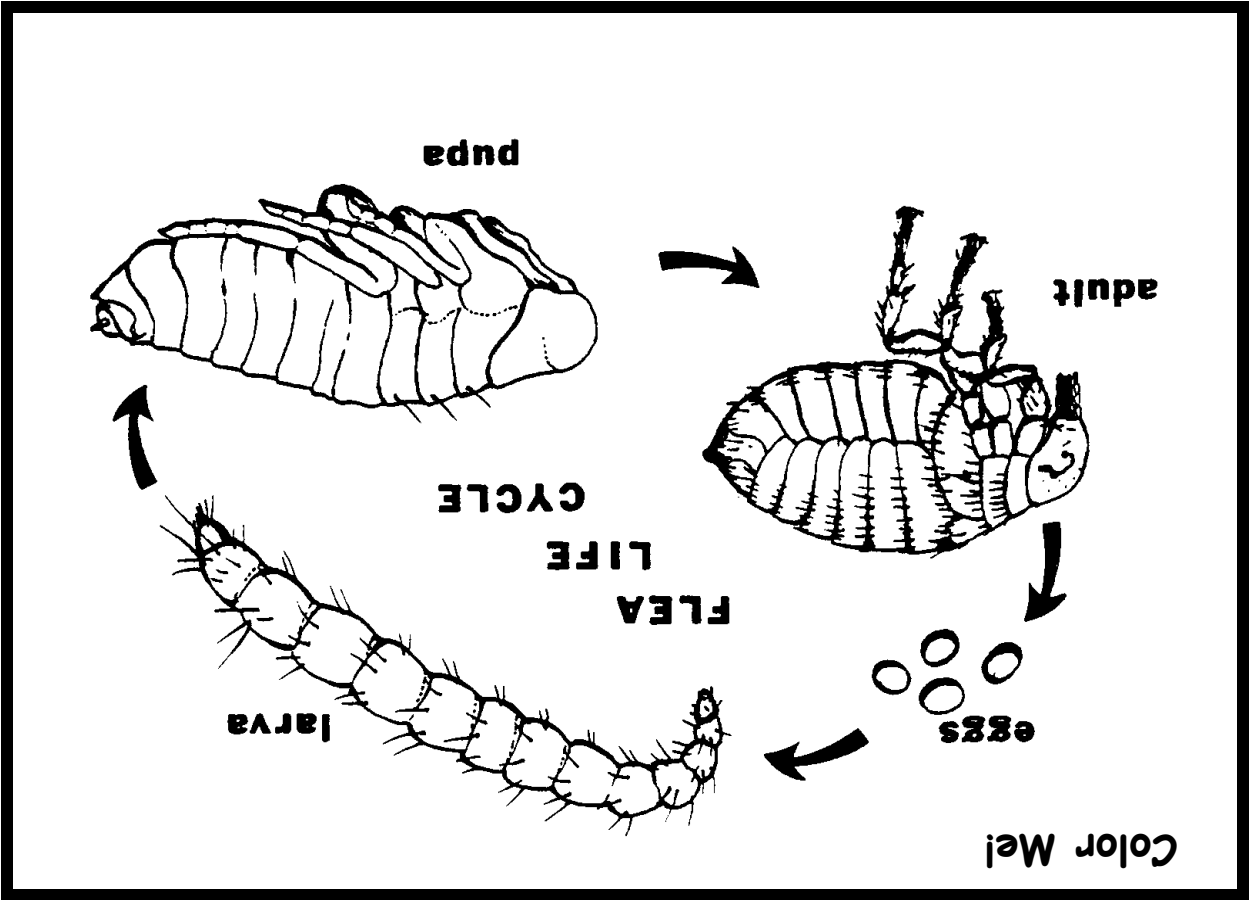
8. Fleas have _____ stages of life.



Super Flea Crossword

Can you solve the puzzle from what you have learned?

The Life Cycle of a Flea



Fleas have four stages of life!

The **Egg** stage: All fleas eat animal or human blood for food. After feeding a few times, the female flea lays her eggs on an animal. The eggs usually fall off of the animal and land somewhere on the ground.

The **LARVA** stage: When the egg hatches, it turns into a larva. Larvae look like little white worms with dark heads. The larvae live on the ground or floor. Flea larvae avoid light because they are blind and feed on organic matter found within cracks and crevices.

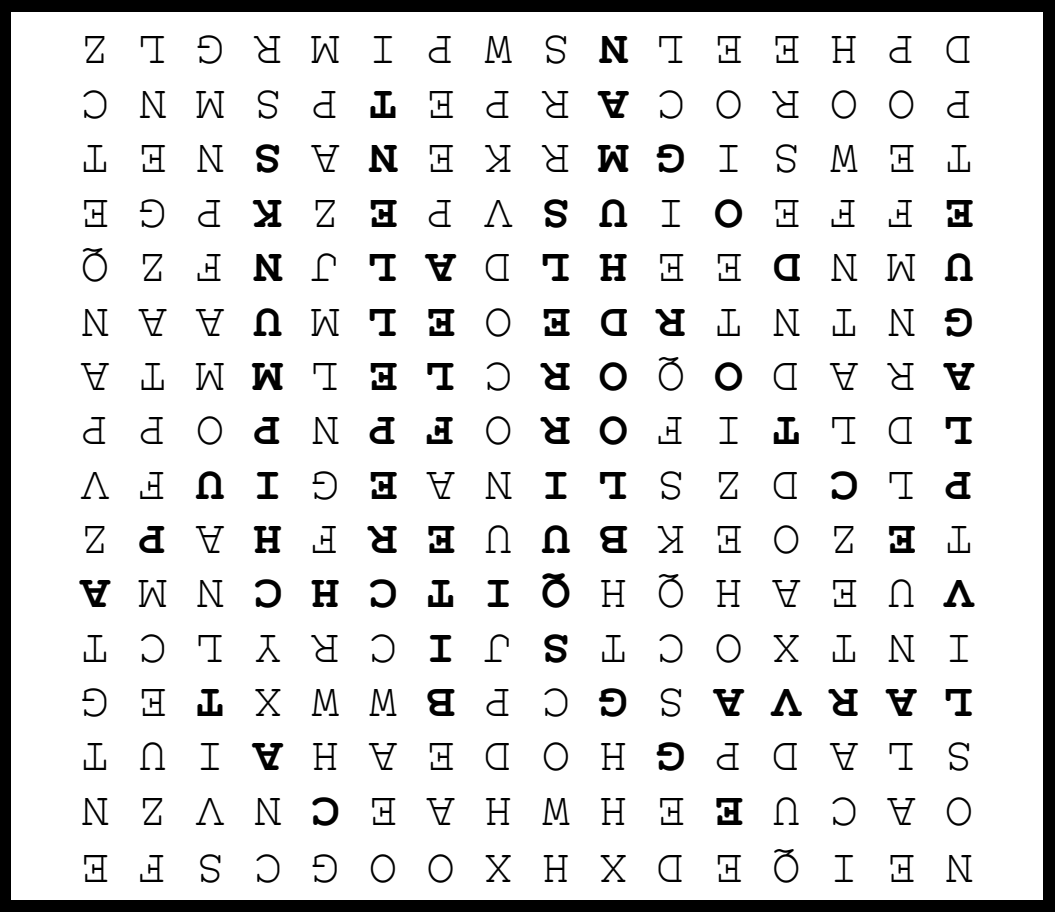
The **PUPA** stage: When the larva turns into a pupa, it forms a cocoon and the adult begins to form inside.

The **ADULT** stage: The pupa will turn into an adult when they sense movement, heat, noise, or when an animal or person exhales, which means there is food near.

Fun Flea Facts

- ♦ Some fleas can jump up to 150 times their own length. If people could jump that high, they could jump 1,000 feet. That is high enough to jump over skyscrapers!
- ♦ A flea can live 100 days without eating! Usually fleas only live for 2 to 3 months.
- ♦ A female flea can lay as many as 2,000 eggs during her life.
- ♦ Female fleas can eat 15 times their body weight per day!
- ♦ If you happen to find 1 flea on your pet, there may be more than 100 other fleas hiding in your house.
- ♦ Fleas will live anywhere, in corners, on furniture, in your carpet, even on your cat or dog!

Answers to Word Search



Fit as a Flea Word Search

Can you find the words hidden in the puzzle?
They go up, down, diagonal, and backwards!

Answers are on next page



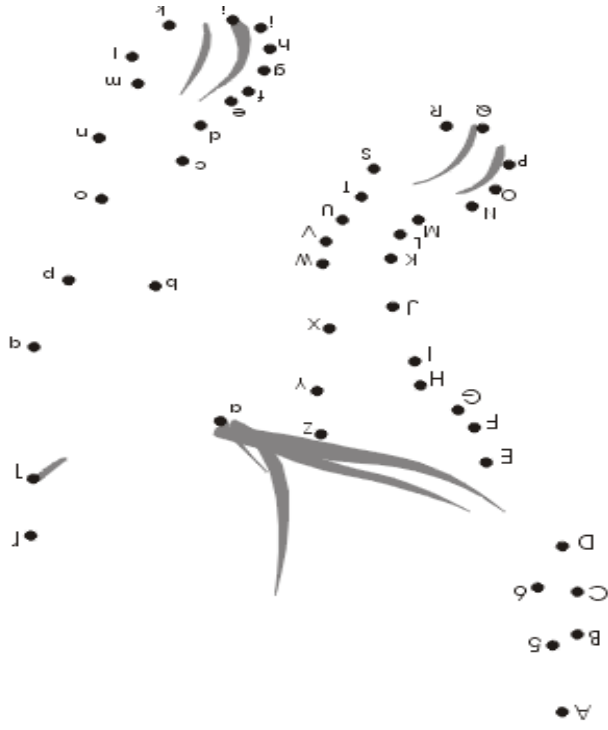
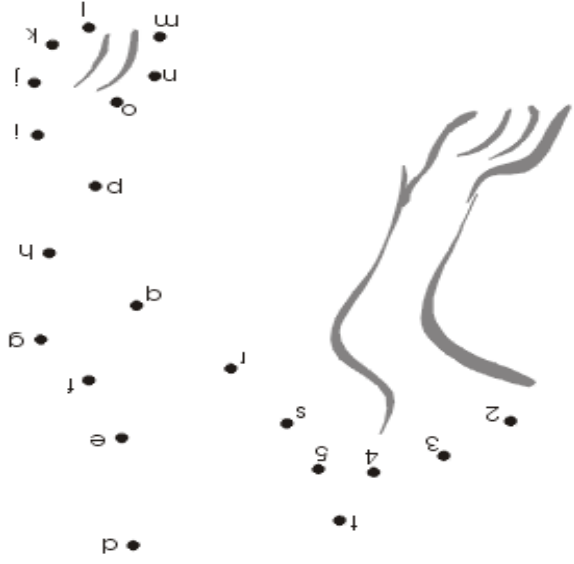
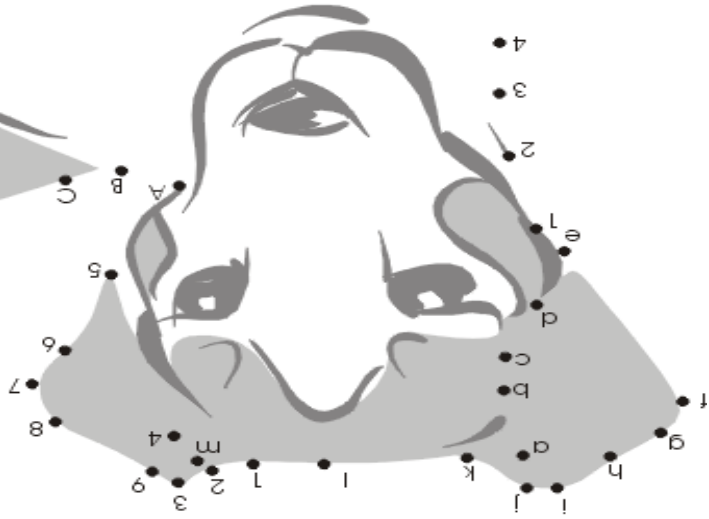
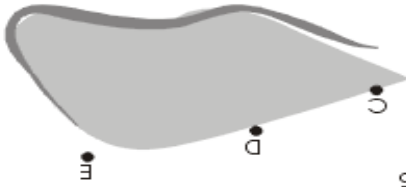
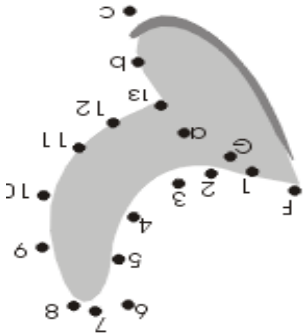
N E I Q E D X H X O O G C S F E
 O A C U E E H W H A E C N A Z N
 S L A D P G H O D E A H A I T U
 L A R V A S G C P B W W X T E G
 I N T X O C T S J I C R Y L C T
 V U E A H Q H Q I T C H C N M A
 T E Z O E K B U U E R F H A P Z
 P L C D Z S L I N A E G I U F V
 L D L T I F O R O F P N P O P P
 A R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

WORDS

BITE BLOOD PLAQUE CAT CHIMPUNKS
 DOG EGGS FLEA HUMAN ITCH
 VECTOR LARVA PUPA REPELLENT SQUIRRELS

Make sure that your pets do not bring fleas into your house. Fleas can lay up to 50 eggs per day! If you find fleas on your pet, have your parents get rid of the fleas by using flea control products that are safe for pets.

Connect the fleas!



Fleas Bite

Flea bites are itchy. Do you know why?

When a flea bites you to drink your blood, it injects saliva into you. The saliva has a chemical in it called an "anticoagulant". Anticoagulants stop blood from clotting so the flea can keep drinking. Most of us have a reaction to this anticoagulant. That is why you get a bump that makes you itch!

Flea bites look like a red bump on your skin. Female fleas need the protein in blood to make their eggs.



Flea Biting Skin



Flea Bites Can Make Us Sick

Insects and animals can carry diseases that make us sick. Fleas that carry plague are just one example.

Wear insect repellent when you go to places where there are wild animals. This helps ensure that you do not bring fleas home.

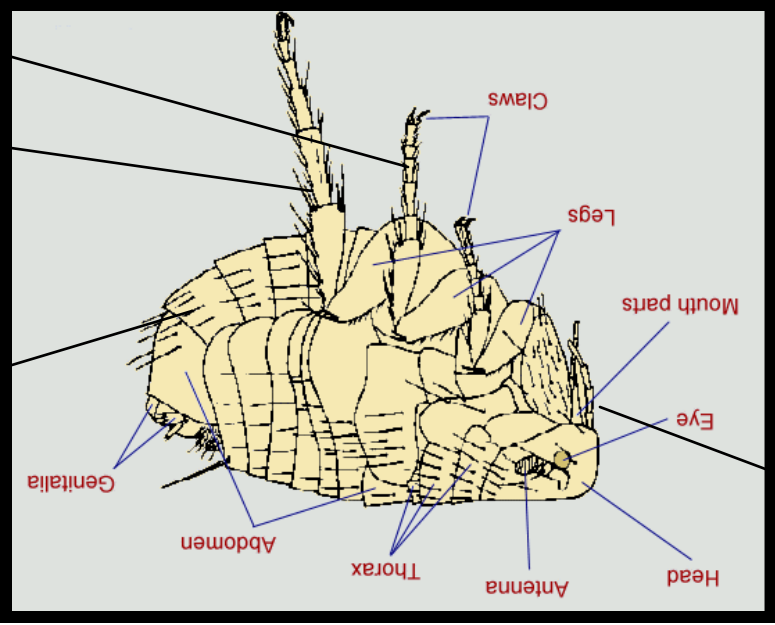
Always make sure your pets are protected too. Use flea control products to keep them safe.



What is a Flea?

Fleas are small, dark, reddish-brown, wingless insects. Their bodies are flat, so they can easily move through hairs on an animal or human body. Their legs are long and very good for jumping. The flea body is hard and covered with lots of hairs and short spines that are pointed backwards. The mouth parts of an adult flea are made so that they can easily suck blood from a host.

Sharp mouth parts
that are good for
sucking blood



What do Fleas Eat?

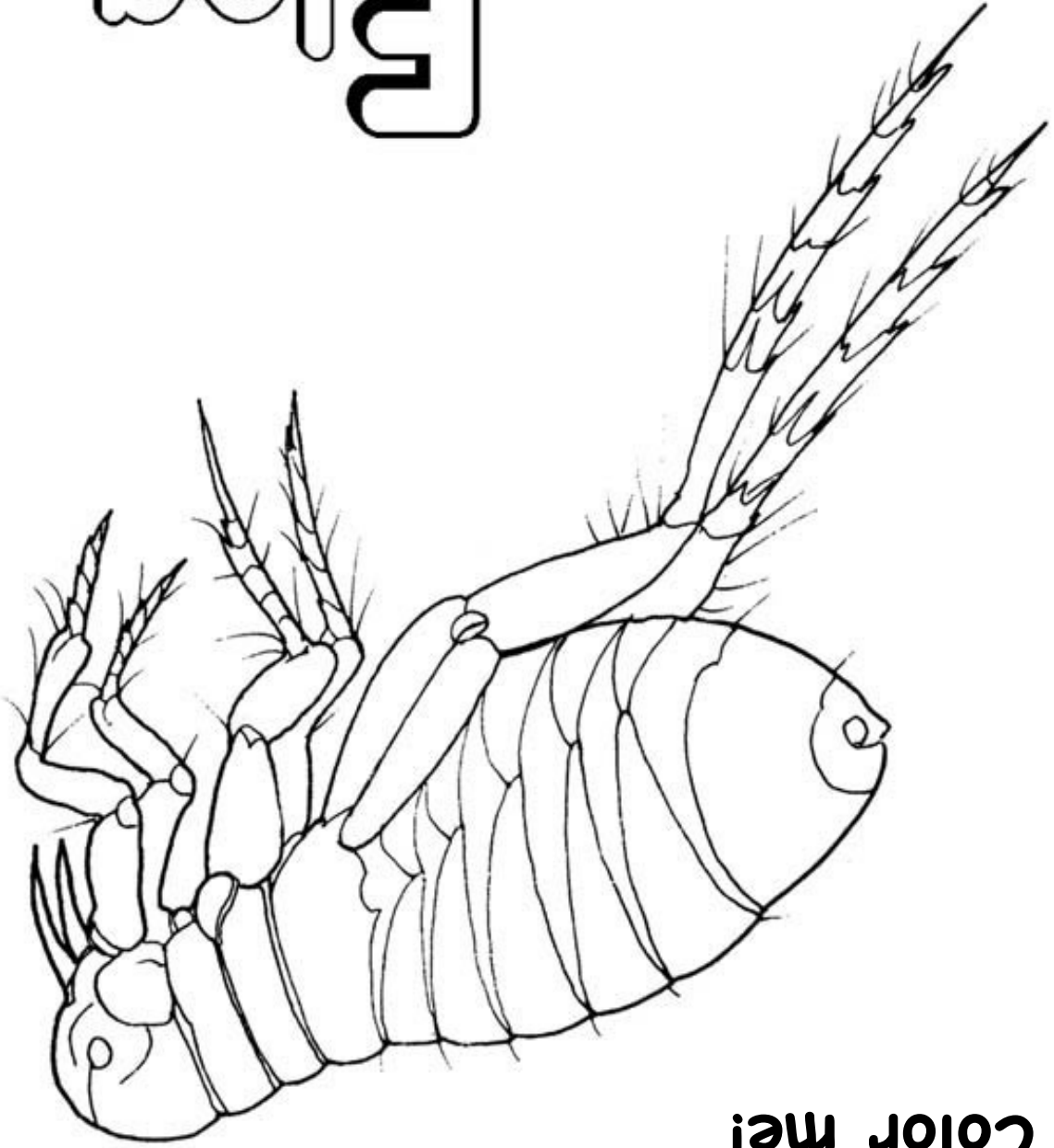
Both male and female fleas drink the blood of living animals and people. Adult female fleas cannot lay their eggs until they have had a meal of blood.



This flea biting human skin!

Fleas on wild animals can carry plague and other diseases, so make sure they do not catch a ride on you or your pets!

Color me!



Flea

Plague and Fleas

Fleas, Fleas everywhere!

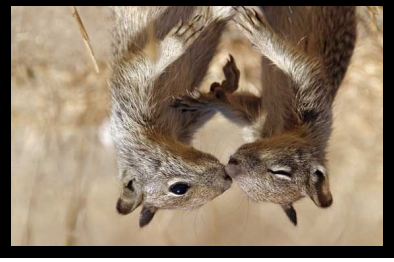
Why is it so important to know about fleas? Fleas can make us and our pets itchy and sick. They spread diseases like plague. This is because fleas are vectors. A vector is an animal or insect that can spread diseases to people.

The best thing you can do to protect yourself is to make sure that you, your pets, and your house do not have fleas. If you go camping or hiking, be sure to wear insect repellent and leave your pets at home if possible. Wild animals can carry plague and when fleas bite them, the fleas can get plague. Here are some helpful hints to protect yourself:

No Fleas for Me Please!



- ♦ When you go camping or hiking, wear insect repellent and long sleeves with pants so fleas will not jump on you.



Ground Squirrels

- ♦ Do not touch or feed wild animals like squirrels or chipmunks.
- ♦ Do not take your pets with you when you go camping or hiking if you do not have to.
- ♦ If you have to take your pet with you, have your parents talk to your vet about the best way to keep fleas off your pets.
- ♦ Tell your parents if you find fleas or flea bites on you or your pet.

Hector's Plague Activity Book



County of San Diego
Vector Control Program
5570 Overland Ave., Suite #102
San Diego, CA 92123
(858) 694-2888

