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.

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.

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.

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

To Make:
1. Fold the 2 square edges of a paper bag under (at the dotted lines), to form the mouse’s pointed snout.
2. You now have the shape of a mouse’s head.
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

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

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

Answers
Mouse Jokes

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

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

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

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:

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www.SDVector.com
What insect runs away from everything?
A flea!

What did the clean dog say to the insect?
Long time no flea!

How do fleas travel?
Itch hiking!

How do you start an insect race?
One, two, flea, go!

Should we walk home after school?
Or take a dog?
1. Fleas can **jump** up to 150 times their own height.

2. Fleas have to do this to eat.

3. Fleas can lay up to **fifty** eggs per day.

4. What is the second stage of flea life?

5. Fleas like to eat **blood**.

6. Fleas also like to eat **food**.

7. You should wear **repellent** when camping or hiking.

8. Fleas have **four** stages of life.

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Fleas have four stages of life:

**The Egg stage:** Fleas lay their eggs on animals or on the ground. The eggs fall off the animal and land on the ground. Fleas may also lay eggs on the ground near the animal.

**The Larva stage:** When the egg hatches, it turns into a larva. Larvae are white worms with dark heads. They live on the ground or floor. Larvae avoid light because they are blind and feed on organic matter found within cracks and crevices. Fleas usually tell off of the animal and land somewhere on the ground. After feeding a few times, the female flea lays her eggs on an animal. The eggs usually fall off of the animal.

**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 it senses movement, heat, noise, or when an animal or person exhales, which means there is food near.
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.

Female fleas can eat 15 times their body weight per day!

A female flea can lay as many as 2,000 eggs during her life.

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!

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Fun Flea Facts

Answers to Word Search

- Fleas will live anywhere, in corners, on furniture, in your carpet.
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- 100 other fleas hiding in your house.
- If you happen to find 1 flea on your pet, there may be more than 100 other fleas hiding in your house.
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- Enough to jump over skyscrapers!
- Could jump that high, they could jump 1,000 feet. That is high enough to jump over skyscrapers!
- Some fleas can jump up to 150 times their own length. If people
Can you find the words hidden in the puzzle? They go up, down, diagonal, and backwards!

BITE  BLOOD  PLAGUE  CAT  CHIMPUNKS

DOG  EGGS  FLEA  HUMAN ITCH

VECTOR  LARVA  PUPA  REPELLENT  SQUARES

Words are on next page
Connect the fleas!

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.
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. Fleas bite human skin to drink our blood. When a flea bites you, it injects saliva into you. Fleas bite us. Fleas can make us sick.

Always make sure your pets are protected too. Use flea control products to keep animals. This helps ensure that you do not bring fleas home.

Wear insect repellent when you go to places where there are wild animals. This helps prevent flea bites. Fleas can carry diseases that make us sick. Fleas and animals can carry diseases that make us sick. Fleas that carry plague are just one example. Insects and animals can carry diseases that make us sick. Fleas that carry plague are just one example.

Flea Bites Can Make Us Sick

Flea Biting Skin

Flea Bites Are Itchy. Do You Know Why?
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.

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. Both male and female fleas drink the blood of living animals and people.

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!
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 long sleeves with pants so fleas will not jump on you.

Ground Squirrels

When you go camping or hiking, 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. 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.

Tell your parents if you find fleas or flea bites on you or your pet. 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.

No Fleas for Me Please!

- Do not take your pets with you when you go camping or hiking if you do not have to.
- Do not touch or feed wild animals like squirrels or chipmunks. They can carry plague and fleas.
- Always wear insect repellent and long sleeves with pants when you go camping or hiking.
- If you do have fleas or flea bites, tell your parents.

Hints to protect yourself:

- Fleas, Fleas everywhere!
- Plague and Fleas

Ground Squirrels

Plague and Fleas
Activity Book

Hector's Plague