

33 From One to Another



Humans are not the only organisms that can spread disease. Some diseases, such as the bubonic (byu-BAH-nick) plague (PLAIG) and malaria (muh-LAIR-ee-uh), are spread by vectors (VEK-terz). A **vector** is an organism (other than a person) that spreads disease-causing germs usually without getting sick itself. Rats, ticks, mosquitoes, and fleas can act as vectors for various human diseases. Ticks, for example, spread Lyme disease. That's why it's important to wear long sleeves and pants to avoid picking up ticks when hiking in some areas.



What is the role of vectors in spreading disease?

MATERIALS




For each student

Student Sheet 30.1, "Anticipation Guide: Diseases,"
from Activity 30

PROCEDURE

1. In your group of four, brainstorm diseases you can get from animals. Write down as many as you can think of in your science notebook.
2. In order to prepare to watch the story on the video, first read Analysis Questions 1–3.
3. Watch the video segments on the bubonic plague.

ANALYSIS

1. In 1900, people did not know how the bubonic plague was spread. What did officials do to try to stop the spread of disease?
2.
 - a. Draw a diagram showing how the bubonic plague is spread.
 - b. Identify the vector of this disease.
3. By 1906, officials knew how the bubonic plague was spread. What did they do this time to stop the spread of disease?
4.
 - a. Malaria, a disease particularly common in Africa, is caused by a tiny germ known as *Plasmodium*. When a female mosquito bites a person infected with malaria, she sucks up *Plasmodium* along with the blood. When she bites a healthy person, germs in her saliva infect that person. What is the vector in this case?
 - b. Now that you know the vector of malaria, suggest two ways that the spread of malaria could be reduced or prevented.
5.  Fill in the “After” column for Statements 7–8 only on Sheet 30.1, “Anticipation Guide: Diseases.” Did your thinking change?



EXTENSION

To learn more about the bubonic plague go to the *Issues and Life Science* page of the SEPUP website.

