

The Mighty Virus



Often you will hear someone who has a cold or the flu say, "It's just a virus." But the virus deserves more respect because it is one of the most strange and troublesome creatures in the world.

Viruses are too small to be seen with an ordinary microscope, and they can pass through filters that trap very tiny particles. So for many years no one even knew that viruses existed. Even after they were discovered, scientists didn't know for a long time whether or not viruses were alive. A virus is made up of only a core of DNA or RNA, chemicals which help it to reproduce, and a coating of protein. When the virus is outside of a living animal or plant, it seems like just a chemical crystal. It doesn't eat, breathe, or grow.

But when a virus meets a living cell, it begins to come alive. Its protein coat now acts like a little plunger and pushes the virus' DNA into a cell. Once it is inside the host cell, the DNA of the virus combines with the cell's DNA and takes control. The virus forces the cell to produce more viruses identical to the invading virus. When the cell becomes full of viruses, it bursts, and each virus finds a new cell in the body to invade. The plant or animal the virus has attacked becomes sick.

Many plants, such as tobacco and tomatoes, can be destroyed by viral diseases. And viruses cause disease in almost every kind of animal, including worms, chickens, dogs, and humans. Fortunately, some viral diseases can be prevented. Doctors have found a way to weaken or kill some viruses. When healthy people receive small doses of a virus in the form of vaccinations, they will not get the disease caused by that virus.

If a person does get a viral disease, there is really no cure except rest, since medicines do not usually work against viruses. Luckily, most viruses die quickly and the patient soon gets well.

Think About It

Beside vaccinations, what are some things that you can do to prevent a viral infection?

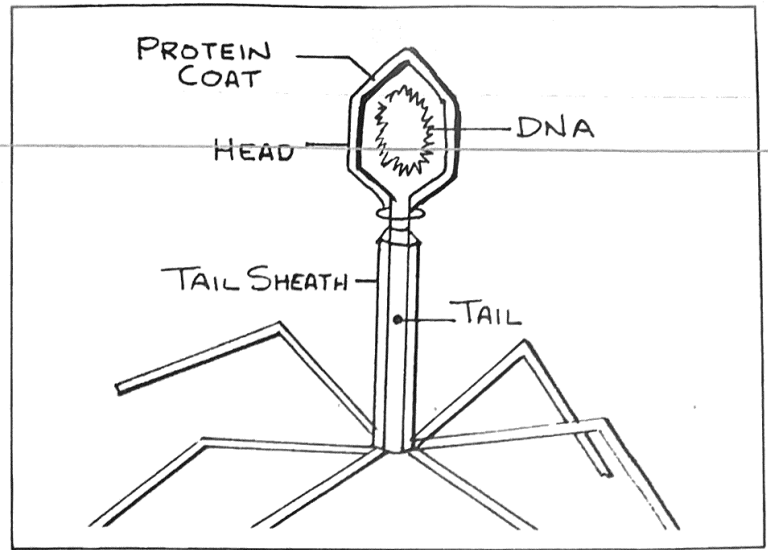
Name _____

The Mighty Virus

Main Idea

1. This story tells about

- _____ viruses.
- _____ chemical crystals.
- _____ DNA and RNA.



Sequencing

2. Number the events below in the order that they happen.

- _____ The plant or animal the virus has attacked becomes sick.
- _____ A virus meets a living cell.
- _____ The cell produces more viruses just like the invading virus.
- _____ The virus' DNA combines with the cell's DNA.
- _____ The protein coat pushes the virus' DNA into a cell.

Reading for Details

3. Scan the story to answer these questions.

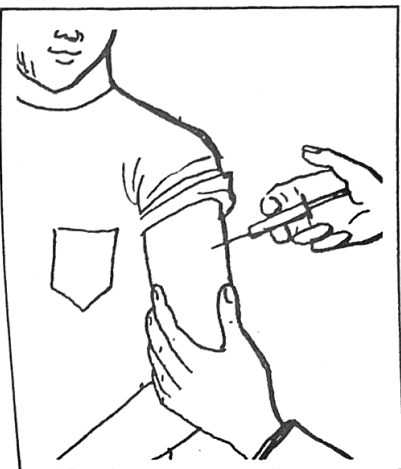
What is a virus made of? _____

What does DNA and RNA do for a virus? _____

When does a virus come alive? _____

What are two ways to fight viruses? _____

Why is it lucky that most viruses die quickly? _____



Reading for Understanding

4. Place the correct letter in the blank.

- | | |
|------------------------|---|
| _____ protein coat | a. state of a virus outside of a living plant or animal |
| _____ tomatoes | b. weak virus given to people to prevent diseases |
| _____ vaccination | c. pushes the virus' DNA into a living cell |
| _____ chemical crystal | d. can be destroyed by viral disease |