

#12194 VIRUSES

CLEARVUE/SVE, 2004
Grade Level: 6–12
13 Minutes

CLEARVUE & SVE



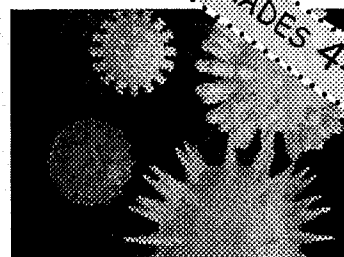
CAPTIONED MEDIA PROGRAM RELATED RESOURCES

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[#9470 VIRUSES AND MONERAN](#)

UNDERSTANDING HOW STUFF WORKS FOR STUDENTS



VIRUSES

Learning Objectives

After completing the program and participating in discussion, students will be able to:

- Give a definition for a virus and know what a virus is made of;
- Explain what a virus' only goal is and why it cannot reproduce on its own;
- Relate facts about the invention of the electron microscope and how it relates to viruses;
- Understand what a vaccine is, how it works, and how it is developed;
- Discuss why retroviruses pose a problem to scientists every year; and
- Explain how viruses could one day help us.

Review Questions

1. Ask students to explain what a virus is. Can you see a virus? What are viruses made of? What do viruses affect?
2. Have students discuss the solitary goal of a virus. What does a virus need to be able to reproduce?
3. Ask students to tell you what invention made examining viruses possible. What do they look like?
4. What are viruses covered in? Why? Have students explain the process a virus goes through from the time it latches on to another living being until it breaks free.
5. Ask students to discuss vaccines. What have they been vaccinated for? Where are vaccines produced? What type of virus needs a new vaccine every year because it mutates? What is it called?
6. Have students discuss the possibility that viruses could help us in the future. How could this happen? What kinds of things could a virus do to help humans?

Target Vocabulary

Virus	Molecules	Retrovirus
Cells	Vaccines	Arbovirus
Influenza	Antibodies	
Mutating	Electron microscope	

Activities

1. Have students further research vaccines. What exactly do vaccines do? Are they a cure? What viruses do not have vaccines yet? What viruses need a new vaccine every year?
2. Ask students to tell you what they can about the Spanish Flu of 1918. Have them research it further on the Internet. What was the survival rate? Were some people more susceptible than others? Why did so many people die? How were Americans affected? What are some interesting facts about this outbreak?
3. Have students work individually or in groups. Ask each group of students to pick one virus and research it. How long have we known about this virus? Does it have a vaccine? Tell them to give a brief history of their virus in a report to be turned in as well as shared with the class.

CLEARVUE & SVE

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Understanding How Stuff Works for Students Viruses

Name _____

What do you remember from the program? After viewing *Viruses*, fill in the blanks below.

1. Although you cannot see, smell, or taste _____, they are in every living organism on the planet.
2. Unlike other living things, viruses are not made of _____.
3. In order to survive, a virus must enter the cells of another _____. The virus can then use that cell material to live and reproduce.
4. The only goal of a virus is to _____.
5. The virus _____ was given its name because it was believed at the time to be caused by the influence of the stars and the planets.
6. Viruses had never been seen until the 1930s when German scientists built an _____. A virus has to be magnified 7,000 times its normal size to be seen.
7. World War I helped _____ viruses. Soldiers brought home viruses that were foreign to their homelands and make lots of people sick.
8. Vaccines are used to try and rid the world of _____ caused by viruses.
9. A _____ is an injection of a weakened form of a virus through which antibodies target infected cells; the body then reacts by sending white blood cells to destroy any infected cells. Once you have been infected with a virus, your _____ will always recognize it if it enters your body again.
10. _____ have the ability to change and mutate from year to year.

W	influenza	cells	memory cells
O	disease	retroviruses	electron microscope
R	living being	mutate	white blood cells
D	infect	polio	vaccine
B	viruses	spread	reproduce
A			
N			
K			

Understanding How Stuff Works for Students

Viruses

What do you remember from the program? After viewing *Viruses*, fill in the blanks below.

1. Although you cannot see, smell, or taste viruses, they are in every living organism on the planet.
2. Unlike other living things, viruses are not made of cells.
3. In order to survive, a virus must enter the cells of another living being. The virus can then use that cell material to live and reproduce.
4. The only goal of a virus is to reproduce.
5. The virus influenza was given its name because it was believed at the time to be caused by the influence of the stars and the planets.
6. Viruses had never been seen until the 1930s when German scientists built an electron microscope. A virus has to be magnified 7,000 times its normal size to be seen.
7. World War I helped spread viruses. Soldiers brought home viruses that were foreign to their homelands and made lots of people sick.
8. Vaccines are used to try and rid the world of disease caused by viruses.
9. A vaccine is an injection of a weakened form of a virus through which antibodies target infected cells; the body then reacts by sending white blood cells to destroy any infected cells. Once you have been infected with a virus, your memory cells will always recognize it if it enters your body again.
10. Retroviruses have the ability to change and mutate from year to year.

W	influenza	cells	memory cells
O	disease	retroviruses	electron microscope
R	living being	mutate	red blood cells
D	infect	polio	vaccine
B	viruses	spread	reproduce
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