



High School Science Virtual Learning

Applied Biological Science

Ebola Virus

April 29, 2020



High School Applied Biological Science

Lesson: April 29, 2020

Objective/Learning Target:

Students will be able to describe Ebola Virus' ability to infect and cause symptoms. Students will be able to recognize symptoms and effects of an Ebola virus infection



Let's Get Started Questions:

Watch the [National Geographic video](#) about Ebola Virus.

1. What kinds of symptoms does Ebola Virus cause?
2. Is there a cure or treatment for Ebola Virus?



Let's Get Started: **Answers**

1. Fever, diarrhea, vomiting, internal bleeding, external bleeding (often through the eyes)
2. According to the video, no.

UPDATE: [FDA approves Ebola vaccine](#)



Lesson Activity: Ebola Outbreaks

Directions: Follow the [World Health Organization's](#) timeline slideshow, depicting Ebola outbreaks in Africa. Use the timeline to answer the questions on the following page.

Link(s): [Timeline](#)



Practice

You will use the information from the activity on slide 5 to answer the following questions.



Practice Questions

1. What 2 African countries had the first outbreaks of Ebola virus?
2. What is the Ebola virus named after?
3. What animal was thought to have been the source of the virus?
4. Where was the virus discovered in March 2014?
5. How was the virus being transmitted?
6. What things were being done to prevent further spread of the virus?
7. What countries had Ebola cases throughout 2014 and 2015?



Practice Questions **Answer Key**

1. What 2 African countries had the first outbreaks of Ebola virus? **South Sudan and Democratic Republic of the Congo**
2. What is the Ebola virus named after? **A river in Democratic Republic of Congo**
3. What animal was thought to have been the source of the virus? **Fruit Bats**
4. Where was the virus discovered in March 2014? **Guinea**
5. How was the virus being transmitted? **Person to person contact, often in healthcare settings**
6. What things were being done to prevent further spread of the virus? **Community education, increase in infrastructure spending (clean water), vaccine research**
7. What countries had Ebola cases throughout 2014 and 2015? **Guinea, Sierra Leone, Mali, Nigeria, Liberia, Senegal, United States, Spain, Democratic Republic of Congo**

Practice: Ebola Symptoms

You will use the information from the [Ted Talk Education video](#) to answer the following questions.





More Practice Questions

1. What does the Ebola virus attack first in the body?
2. What initial symptoms do we see?
3. Where does the virus spread to?
4. What ends up killing Ebola victims?
5. What limits the contagiousness of the Ebola virus?
6. List a few viruses that have been more deadly than Ebola.
7. What are the widespread and effective solutions are there to controlling the spread of Ebola?



More Practice Questions

1. What does the Ebola virus attack first in the body? **Immobilizes immune system cells**
2. What initial symptoms do we see? **Fever, ache, sore throat**
3. Where does the virus spread to? **Invades lymph nodes, kidneys and other organs.**
4. What ends up killing Ebola victims? **Cytokine storm, damaging blood vessels (which causes internal and external bleeding)**
5. What limits the contagiousness of the Ebola virus? **Ebola only exists in bodily fluids. Fluids must be transmitted for the virus to spread. Infected people usually are not contagious until symptoms are present.**
6. List a few viruses that have been more deadly than Ebola. **Measles, malaria, and influenza**
7. What are the widespread and effective solutions are there to controlling the spread of Ebola? **Isolation, sanitation, information**

Additional Information

Watch this [Ted Talk of Soka Moses](#), discussing how individuals affected by Ebola virus have continued to face challenges from the virus.

