



## Virus Hunter

### INTRODUCTION

You will watch a short video that explores outbreaks of the deadly Nipah virus in Bangladesh. The lessons from this example apply to many other infectious diseases.

### PROCEDURE

Play the interactive video [Virus Hunter: Monitoring Nipah Virus in Bat Populations](#). At various points, the video will pause and ask you to think about the content. You will not be able to continue watching the video until you have answered and saved your response to the prompt. You can record your answers in this worksheet or as directed by your instructor.

As you answer the prompts, keep in mind that some questions do not have a “right answer.” You will have the opportunity to revisit your responses at the end of the video.

1. Disease-causing microorganisms (including certain viruses, bacteria, protists, and fungi) are called **pathogens**. A **zoonotic pathogen** spreads disease from animals to humans. List some diseases that you think might be caused by zoonotic pathogens.
2. A **reservoir** is an animal species in which a pathogen survives and replicates, often without causing disease. What data would support the conclusion that fruit bats are the reservoir species for Nipah virus?
3. Certain viruses have evolved to cause only mild or no symptoms in their reservoir species. Why might this be advantageous for the virus?
4. List some ways in which a human might be exposed to a virus from a reservoir species. Think about how the human and the reservoir species might come in contact, directly or indirectly.
5. What do you think the scientists and bat hunters will do with the wild bats that they capture?

6. If you had the tools to analyze the blood of the bats, what data would you collect and why?
  
  
  
  
  
  
  
  
  
  
7. How could a mutation in Nipah virus make it more infectious in humans? Describe what changes could help the virus spread more easily among people.
  
  
  
  
  
  
  
  
  
  
8. Would a human vaccine for the Nipah virus permanently protect a human population from disease? Why might we need to continue developing new vaccines, especially when there is a nearby reservoir species?
  
  
  
  
  
  
  
  
  
  
9. How could community members and scientists help reduce the virus's spread among people?
  
  
  
  
  
  
  
  
  
  
10. Where you live, what examples are there of human populations being close to wildlife? How might this lead to disease?