

# Springboard<sup>into</sup> Comprehension 5

## Main Idea      Plagues

Coral Reefs

Compare and Contrast

Air, Land, and Water Transport – Then and Now  
Olympic Game Technology

Fact and Opinion

The Cackleberry Creek Foghorn  
Defying Gravity

Cause and Effect

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Prejudice on the Goldfields  
Houdini – Man of Magic or Deceit?

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RA 11.5–12.5



Information Report

# PLAGUES



WRITTEN BY JONNY WEBSTER

# PLAGUES

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# INTRODUCTION

Throughout recorded history, there have been events of mass death and destruction. Violent wars killed thousands of people. Famines starved whole communities. Earthquakes shattered cities, and volcanoes wreaked havoc on the people who lived around them. However, the greatest killer in history turns out to be none of these things. For sheer loss of life and terrible suffering, nothing can beat the plague. When a plague strikes, the death toll can be in the hundreds of millions.

The word *plague* has come to mean any disease that quickly and ruthlessly kills vast numbers in a short period of time. Originally, the term referred to just one kind of disease, the infamous bubonic plague. However, other diseases have travelled around the world with lethal effect, too. Explorers found new lands and often spread diseases among the local people who had no natural defence against them. Millions of people died due to illnesses such as measles.



This illustration from 1349 shows people burying victims of plague.

Plagues have happened for thousands of years. In the past, no one knew what caused them. It is only recently that scientists have begun to understand and even treat the lethal diseases that cause them. Many diseases have been brought under control in modern times. However, some scientists warn that it is only a matter of time before a new, terrible plague storms across the world.



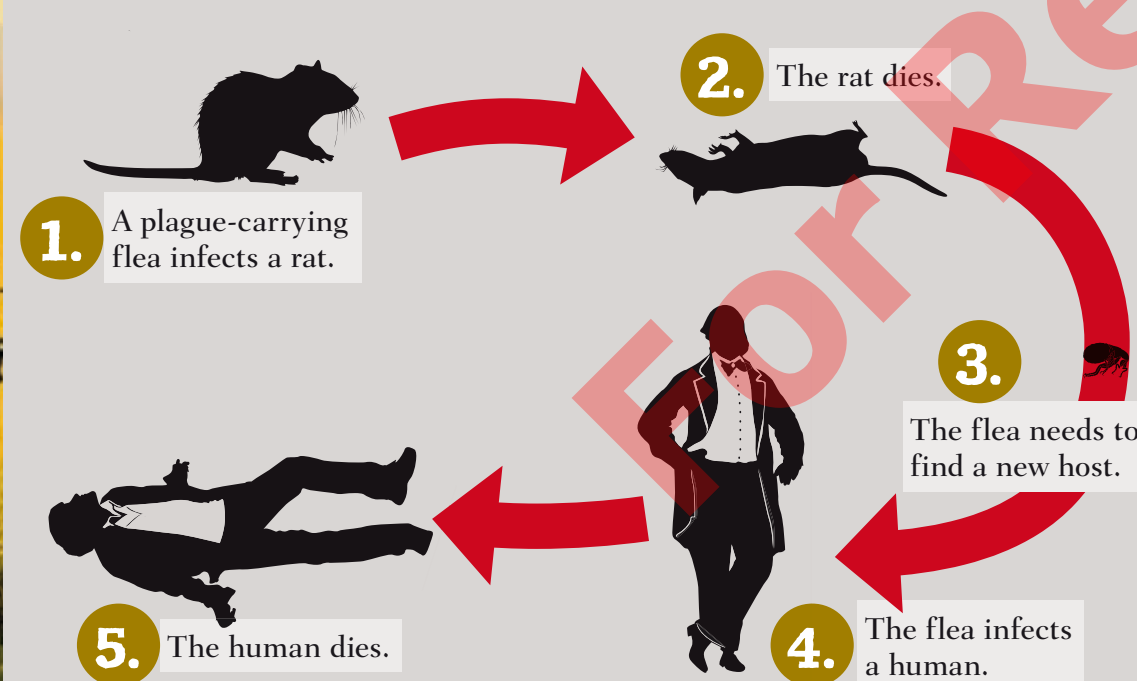
Fears in 2009 of a possible new plague, swine flu, have caused these children in India to wear protective masks.

# BUBONIC PLAGUE

The most infamous of the diseases that has affected large populations of people, or **pandemics**, is the bubonic plague. It is a disease caused by bacteria. The disease is carried by animals and can be transferred to humans. A disease like this is called a **zoonotic disease**. Bubonic plague is usually carried by rats. The fleas that live on the rats spread the plague to humans when they bite them. The plague bacteria infect the flea and block up its stomach. As it begins to starve, the flea desperately feeds, even though it stays hungry. Eventually, it vomits blood into the bite wound of its victim, and this plague-ridden blood spreads the infection.

Areas where rats, and the fleas that accompany them, are found are more likely to be struck by the bubonic plague. The link with rats and fleas was only confirmed in 1897. Before that, most people believed a person could catch the plague by breathing infected air. Once infected with the bubonic plague, and without treatment, most victims die within a matter of days.

## HOW BUBONIC PLAGUE SPREADS TO HUMANS



This picture shows a plague bacterium. Bacteria are tiny, single-celled organisms.



Viruses can also cause illnesses. This picture shows the measles virus. Viruses are smaller than bacteria. They have no cells and need a host to reproduce.



A photograph of a plague-infected flea, filled with blood

## THE EARLIEST PLAGUE

The earliest written mention of a plague outbreak is found in the Bible. It describes events believed to have occurred over 3,000 years ago. In the First Book of Samuel, the city of Ashdod is struck with a plague that kills most of the population. Was it bubonic plague? The Hebrew text refers to swellings. It even talks of “mice” which may have spread the disease. Modern people cannot be sure exactly what kind of plague it was from these few clues. Over the next 1,000 years, the ancient Greeks also wrote of various plagues that caused huge loss of life. However, people have little proof of exactly what diseases caused these plagues of the past.

A painting from 1630 that shows the Plague of Ashdod



## “WE ALL FALL DOWN”

There is a theory that the famous nursery rhyme “Ring-A-Ring-A-Rosie” describes the characteristic signs, or symptoms, of a person who has been infected with bubonic plague.

RING-A-RING-A-ROSIE  
A POCKET FULL OF POSIES  
A-TISSUE, A-TISSUE  
WE ALL FALL DOWN!



When the infected blood from the flea enters the bloodstream, it causes rose-shaped swellings of the lymph nodes called **buboes**. These buboes give the “bubonic” plague its name. Hundreds of years ago, people thought they could catch the plague by breathing it in, so they carried handfuls of flowers, such as posies, to press to their noses. They believed that the smell of the flowers would block the disease.

“A-tissue” in the rhyme may refer to the sneezing that some victims experience as an early sign of the infection. It might also refer to coughing. The plague-tainted blood spreads all around the body. One effect of this can be uncontrollable internal bleeding. The body’s organs fail under attack from the disease. As their insides decay, victims may cough up large quantities of blood. Victims rarely survive a day with these symptoms – “We all fall down.”

Children sing the rhyme in playgrounds around the world. However, there is little real evidence that the rhyme was originally about the plague. Still, it is a good way of remembering how the disease affects its victims.