

# Franklin Jr./Sr High School Reading Article

## "New York City Rats, Fleas Could Carry Bubonic Plague"

Reading Strategy for the Article: Students will take turns reading aloud. Mark the text and write in the margins as you read. CBS News

(1080L)

**Instructions: COMPLETE ALL QUESTIONS AND WRITE NOTES in the margin box. This requires reading of the article more than once.**

**Step 1:** Skim the article using these symbols as you read:

(+) agree, (-) disagree, (\*) important, (!) surprising, (?) wondering

**Step 2:** Number the paragraphs. Read the article carefully and make notes in the margin.

Notes should include:

- Comments that show that you **understand** the article. A summary or statement of the main idea of important sections may serve this purpose.
- Questions you have that show what you are **wondering** about as you read
- Notes that differentiate between **fact** and **opinion**.
- Observations about how the **writer's strategies** (organization, word choice, perspective, support) and choices affect the article.

**Step 3:** A final quick read noting anything you may have missed during the first two reads.

Your margin notes will be assessed by your teacher along with your answers to the questions.

## New York City Rats Are Even Grosser than You Thought Study Finds

Rats in New York City carry fleas and other parasites capable of transmitting bubonic plague and other virulent diseases, a new study reports.

For the study, scientists from Columbia and Cornell Universities collected a sample of 133 rats from across the city and analyzed more than 6,500 specimens of fleas, lice and mites the rats were harboring.

The bugs they found included Oriental rat fleas, a type of flea that can transmit bubonic plague -- the bacterial illness known as the Black Death that wiped out millions of people in Europe during the Middle Ages.

The good news is that the researchers found no evidence of plague bacteria itself. Without that, the rats and fleas are more of a nuisance than an actual threat.

"If these rats carry fleas that could transmit the plague to people, then the pathogen itself is the only piece missing from the transmission cycle," study author Matthew Frye, an urban entomologist at Cornell University, said in press statement.

Plague still occurs in the U.S., although it is exceedingly rare, with perhaps a dozen cases reported each year. According to the Centers for Disease Control and Prevention, cases are mostly spread by encounters with wild rodents such as prairie dogs, wood rats, mice, rabbits and squirrels in the Southwest, especially northern New Mexico, northern Arizona and southern Colorado. A handful of cases have also been seen in California, Oregon and other western states over the last four decades.

The CDC says the last urban outbreak of plague in the U.S. occurred in Los Angeles in 1924-25.

*Notes on my thoughts, reactions and questions as I read.*

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However, even though there have been no cases of illness in the Northeast, a recent scientific sampling of bacteria found in the New York City subways found traces of partial DNA matching bubonic plague, along with other pathogens.

Aside from the potential for transmitting plague, Oriental rat fleas can also carry other diseases. Some samples in the latest study were found to carry Bartonella bacteria, which can cause cat scratch disease, trench fever and Carron disease in humans.

"These pathogens can cause a wide range of clinical syndromes, some severe," said study co-author Cadhla Firth, a research scientist at Columbia University's Center for Infection and Immunity.

The researchers say the best way to protect ourselves from these potential infections is to keep the rat population under control. "Removing food and water and preventing access to shelter are key to knocking back rodent infestations," Frye said. Careful sanitation is also essential, he added.

New York City has long been rumored to have as many rats as people -- a population of some 8 million. However, more recent data suggests that the actual number is not nearly so high. A study published last October estimated that perhaps 2 million rodents currently roam the Big Apple. Whatever the total number, anyone who's ridden the subways recently can confirm that the city's rat population appears to be quite healthy.



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Comprehension Questions— you may answer in phrases.

1. *How many rats did scientists collect for the study?*
2. *Define **virulent** as used in the article?*
3. *Define **ubiquitous** as used in the article.*
4. *What is the good news from the story?*
5. *In a couple of sentences give evidence on the likelihood of an outbreak of the plague in New York City.*
2. *What is the best way to protect humans?*
3. *How can this protection be accomplished?*

**Application of Reading:** You are a high-ranking New York City official who has just become aware of the serious nature of rats in New York City. What do you propose the city do about this issue? State your claim in a well-developed paragraph citing evidence from the text to support your claim. UNDERLINE THE SPECIFIC EVIDENCE YOU USE FROM THE STORY