

# Informational Reading Article

*NYC Rats Are Even Grosser Than You Thought, Study Finds (1220L)*

**Instructions: COMPLETE ALL QUESTIONS AND MARGIN NOTES using the CLOSE reading strategies practiced in class. This requires reading of the article three times.**

**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** are part of your score for this assessment. Answer the questions carefully in **complete sentences** unless otherwise instructed.

Student \_\_\_\_\_ Class Period \_\_\_\_\_

## NYC Rats Are Even Grosser Than You Thought, Study Finds

Rats are a part of daily life in New York as they scurry about subway tracks and garbage heaps. However, even though the creatures been neighbors of New Yorkers for centuries, researchers are still learning exactly how these rodents could affect the health of millions.

In a recently released study from scientists at Columbia University, researchers confirmed the fears of every New Yorker. These ubiquitous pests are housing dangerous bacteria including E. Coli, Salmonella and viruses including the deadly Seoul Hantavirus.

From studying 133 rats, researchers found a host of expected bacteria and viruses in addition to a few surprises including the Seoul Hantavirus and 18 unknown viruses.

The Seoul Hantavirus, which can cause a hemorrhagic fever, had never been documented in New York City before.

Dr. Ian Lipkin, an infectious disease expert at the Columbia University Mailman School of Public Health, said the idea for the study came after the September 11 terrorist attacks. Lipkin and molecular biologist the late Joshua Lederberg, were discussing possible biological attacks and realized they needed to have a

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

*read: Must do 3*

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baseline of what was already around the New York landscape. “We decided to get a baseline to figure out what was in New York City streets and elsewhere so if something new appeared then we’d know it,” said Lipkin.

It took Lipkin 10 years to get the funds together to start the study and another four to complete it. Lipkin said it took a year simply to trap the 133 rats they used for the study.

“It’s not easy to trap rats, they’re really smart,” said Lipkin, who said the rats would shy away from entering metal traps.

While almost any New Yorker will likely turn and run from an approaching rat, there are plenty of ways that rats can possibly transmit diseases to humans. Lipkin said this study could be key in explaining unknown causes for hepatitis or other infectious medical cases. “Rats are sentinels for human disease,” he said. “They’re all over the city; uptown, downtown, underground. Everywhere they go, they collect microbes and amplify them. And because these animals live close to people, there is ample opportunity for exchange.”

Study author Cadhla Firth, an associate research scientist at the Columbia University Mailman School of Public Health, said there are multiple ways people can be infected by rats since the rodents can leave behind large quantities of saliva, urine and feces. Pets can also come into direct contact with the rats and then possibly infect their owners.

“New Yorkers are constantly exposed to rats and the pathogens they carry, perhaps more than any other animal,” said Firth, who conducted the study as a research scientist at Columbia’s Center for Infection and Immunity. “Despite this, we know very little about the impact they have on human health.”

Lipkin said the discovery of 18 unknown viruses, including two hepaciviruses that appeared to be similar to the human hepatitis virus, was particularly surprising. “It’s a lot of new viruses,” said Lipkin.

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**Comprehension questions – answers may be in phrases.**

1. *List three infections caused by rats, according to the text.*
2. *How many years do the scientists mentioned have invested in this research project?*
3. *Define **ubiquitous** as used in the article.*
4. *What issue did the scientists have in regards to catching the rats used in the study?*
5. *Define **sentinals** as used in the text.*

7/8.RI.4,5,6

**2. Answer each question in one or more complete sentences.**

*What is unique about finding the Seoul Hantavirus in NYC rats?*

*What event inspired this research project? Explain.*

*What is one main method in which rats can transfer disease to humans?*

7/8.RI.5,6

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9 Rules For Emailing From Google Exec Eric Schmidt (1190L)

3. Most articles, including this particular article, are based on scientific research which is fact-based. However, there are instances of opinion included in the text. Cite evidence of five facts and five opinions included in the text.

FACT

OPINION

7/8.RI.8

4. 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 the issue? State your claim in a well-developed paragraph citing evidence from the text to support your claim.

7/8.RI.1,8