

Microbe Evidence File

Use evidence to support a scientific claim.

S5L4.b "Construct an argument using scientific evidence to support a claim that some microorganisms are harmful."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the author's claim. Number two details that are scientific evidence for the claim, so you can see how evidence supports an argument.

When Bacteria Spread

- ① Not all microorganisms cause harm. Many live in soil, water, and even on people without making them sick. However, some can cause disease. *Salmonella* is a bacterium that can enter food when raw chicken or its juices touch other foods. If a person eats the contaminated food, the bacteria can multiply in the intestines and cause fever, stomach cramps, and diarrhea.
- ② Scientists use evidence to show that *Salmonella* can be harmful. In investigations, researchers compare people who ate a certain food with people who did not. When more people who ate food contaminated with *Salmonella* became ill, that pattern supported a link. Testing can also find the same bacterium in leftover food and in samples from sick people. This evidence supports a claim, rather than a guess.
- ③ Careful food handling lowers the chance that harmful bacteria will spread. Cooks can keep raw chicken separate from foods that will not be cooked, wash hands after touching raw meat, and cook chicken thoroughly. These actions reduce the number of living *Salmonella* bacteria that could reach a person's food. The evidence about illness and contamination supports this claim: some microorganisms are harmful because they can enter the body and cause disease.

2 ANSWER WITH EVIDENCE Use the passage

1 What claim does the author support with scientific evidence?

2 Give two pieces of scientific evidence from the passage that support the claim about *Salmonella*.

3 Explain how the pattern of illness among people who ate contaminated food supports the claim that *Salmonella* is harmful.

4 Which food-handling action from the passage can reduce the spread of harmful microorganisms? Explain why it helps.

3 YOUR TURN Your own words

Write a three-sentence argument using this evidence: A clinic found the fungus that causes athlete's foot in skin scrapings from people with itchy, peeling skin between their toes. Antifungal medicine stopped the fungus from growing. State a claim, use the evidence, and explain how the evidence supports your claim.

PART 1 • READ AND MARK

Underline the author's claim. Number two details that are scientific evidence for the claim, so you can see how evidence supports an argument. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What claim does the author support with scientific evidence?	Some microorganisms are harmful because they can enter the body and cause disease.
2	Give two pieces of scientific evidence from the passage that support the claim about <i>Salmonella</i> .	More people who ate food contaminated with <i>Salmonella</i> became ill, and testing found the same bacterium in leftover food and in samples from sick people.
3	Explain how the pattern of illness among people who ate contaminated food supports the claim that <i>Salmonella</i> is harmful.	More people became ill after eating food contaminated with <i>Salmonella</i>, which links the bacterium to illness.
4	Which food-handling action from the passage can reduce the spread of harmful microorganisms? Explain why it helps.	Keeping raw chicken separate from foods that will not be cooked helps because it reduces the chance that living <i>Salmonella</i> bacteria will reach food.

PART 3 • YOUR TURN (SAMPLE ANSWER)

The fungus that causes athlete's foot can be harmful. A clinic found this fungus in skin scrapings from people with athlete's foot, and antifungal medicine stopped its growth. This evidence supports the claim because the fungus was linked to an itchy skin infection.

Accept equivalent claims that some microorganisms are harmful when supported by accurate evidence from the passage. For the open response, look for a clear claim, both pieces of provided evidence, and reasoning that connects the evidence to harm.