

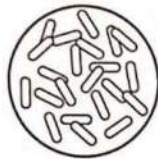
Name _____

Day
1

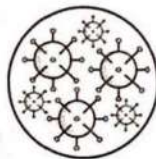
Weekly Question

Are all germs bad?

Have you ever had a cold or the flu? The “germs” that make you sick are usually bacteria or **viruses**. Bacteria and viruses are **microscopic**. Many germs can move easily from person to person. Germs on your hands can stay on the things you touch, such as doorknobs or keyboards. Germs can enter the air when you cough or sneeze. If a healthy person comes into contact with these germs, the germs can enter his or her body and make that person sick. Viruses and bacteria that cause disease are called **infectious** microorganisms.



bacteria



virus

A. Write the letter to match each vocabulary word with its definition.

- | | |
|-------------------------|-----------------------------------|
| 1. <u>b</u> infectious | a. invisible to the naked eye |
| 2. <u>c</u> viruses | b. causing disease |
| 3. <u>a</u> microscopic | c. tiny disease-causing organisms |

B. Number the steps in the correct order to show how the flu might spread from one person to another.

- 3 The person who breathes in the particles becomes sick with the flu.
- 2 A second person breathes in the virus particles through the nose.
- 1 Someone sneezes and spreads flu viruses into the air.

C. Write two characteristics that bacteria and viruses share.

1. both are microscopic
2. both can be infectious

Daily Science

Big
Idea 2

WEEK 3

Vocabulary

infectious
in-FEK-shus
able to cause or transmit disease

microscopic
MY-kro-SKAHP-ik
too small to be seen without a microscope

viruses
VI-russ-ehz
extremely tiny, infectious organisms

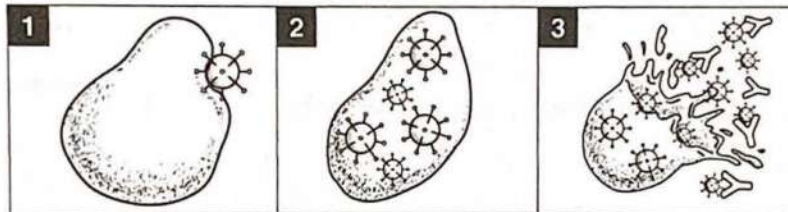
Name _____

Day 2 **Weekly Question**
Are all germs bad?

Remember that viruses are tiny, infectious particles that cause disease. A virus must enter a plant cell or an animal cell to reproduce. When it enters the cell, it is infecting the plant or animal. Some viruses even infect bacteria cells! After a virus reproduces, the infected cell breaks open and the new viruses are released. These new viruses can infect more cells.

Luckily, our bodies have an **immune system** to protect us from viruses. The immune system makes **antibodies** that attach to viruses and keep them from entering our cells. Antibodies even keep some harmful bacteria from reproducing.

A. Write the letter of the caption that describes each picture.



b

a

c

- a. The virus reproduces inside the cell. c. When the viruses leave the cell, they are attacked by antibodies.
b. A virus enters a cell in the body.

B. Use words from the passage to complete the sentences.

If it weren't for antibodies created by our immune system, we would get sick more often. We would be unprotected from harmful viruses that enter the cells of our bodies and reproduce.

Daily Science

Big Idea 2

WEEK 3

Vocabulary

antibodies
AN-tih-BOD-eez
substances produced by the immune system that stick to and destroy germs

immune system
ih-MYOON SIS-tum
a system in the body that defends against disease

Name _____

**Day
3**

Weekly Question

Are all germs bad?

Not all bacteria cause disease. Some bacteria in air, water, and soil are important decomposers. They get their food by breaking down large particles of dead matter into nutrients that they can absorb.

You might be surprised to learn that bacteria do the same thing in our **intestines**! Our intestines contain billions of bacteria. These bacteria break down the food we eat, and cells in our body absorb the nutrients. In fact, without these bacteria, it would be very difficult for us to digest our food and get the nutrition we need to stay healthy.

Use information from the passage to answer the questions.

1. What part do bacteria play in helping you stay healthy?

The break down food we eat which helps us absorb nutrients.

2. Antibiotics are medicines that kill bacteria. They are used to treat certain diseases, such as pneumonia and strep throat. How might taking antibiotics also have a negative effect on your body?

Antibiotics could kill the ~~bad~~ good bacteria we need to stay healthy.

3. Yogurt is a food that is made by adding live bacteria to milk. Why might some people like to eat yogurt when they are taking antibiotics for an infection?

They will get new bacteria to replace the bacteria that may be destroyed in their digestive system.

Daily Science

**Big
Idea 2**



WEEK 3

Vocabulary

intestines

in-TES-tins
the part of the digestive system that absorbs nutrients from the food we eat

Name _____

**Day
4**

Weekly Question

Are all germs bad?

Daily Science

**Big
Idea 2**

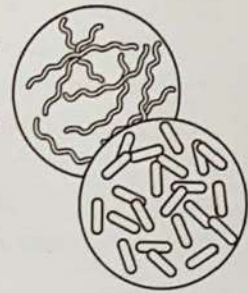


WEEK 3

Scientists are finding many uses for bacteria. Since bacteria are such good decomposers, they can be used to clean up waste. One type of bacteria digests oil. People use it to repair damage from oil spills, both in the ocean and on roads. Other bacteria are good at breaking down toxic substances in sewage, so these bacteria are used in water treatment plants.

Scientists are also exploring ways to get bacteria to produce energy. Scientists have created simple fuel cells, which are like batteries, that use bacteria to convert garbage into electricity. These fuel cells may someday recycle waste into electricity during space flights.

So are all germs bad? Not at all. In fact, tiny bacteria may soon provide the solutions to some of Earth's biggest problems.



A. Use information from the passage to answer each question.

1. How do bacteria clean up pollution? Some bacteria break down oil or toxic substances

2. How might bacteria help provide energy in the future? _____

Bacteria could be used to convert garbage into energy.

B. Suppose a scientist was studying bacteria in her lab to find out what the bacteria could help clean up. What do you think the scientist could do to learn what the bacteria were good for? How might the scientist set up her experiment?

The scientist could put the bacteria on several different things, such as oil or trash, and study the bacteria for a certain amount of time to see if it breaks down any of those things.

Name _____

**Day
5**

Weekly Question

Are all germs bad?

Daily Science

**Big
Idea 2**



WEEK 3

A. Next to each clue, write the letter of the word it describes.

- | | | |
|----------|--|------------------|
| <u>d</u> | 1. These attack germs. | a. infectious |
| <u>c</u> | 2. Food is digested here. | b. viruses |
| <u>b</u> | 3. You can get a cold from these. | c. intestines |
| <u>a</u> | 4. able to cause disease | d. antibodies |
| <u>e</u> | 5. When this is working well,
you don't get sick. | e. immune system |

B. Write true or false.

- | | |
|--|----------|
| 1. Viruses infect cells and reproduce inside them. | <u>t</u> |
| 2. There are bacteria in your intestines. | <u>t</u> |
| 3. Viruses make antibodies. | <u>f</u> |
| 4. Bacteria can help with digestion. | <u>t</u> |
| 5. Germs block decomposers. | <u>f</u> |
| 6. Germs can be passed through the air. | <u>t</u> |

C. Describe how someone who is sick can spread his or her illness. *Answers will vary*

If a person coughs or sneezes, he or she can spread viruses or bacteria through the air. If another person breathes in the virus or bacteria, that person might become ill.