



[KidsHealth.org/classroom](http://KidsHealth.org/classroom)

## Teacher's Guide

This guide includes:

- Standards
- Related Links
- Discussion Questions
- Activities for Students
- Reproducible Materials

## Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Demonstrate the ability to access valid information and products and services to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Demonstrate the ability to use decision-making skills to enhance health.
- Demonstrate the ability to use goal-setting skills to enhance health.
- Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

National Health Education Standards:  
<http://www.cdc.gov/healthyschools/sher/standards/index.htm>

Let's hear it for leukocytes! These germ-fighting white blood cells are an important part of the immune system, along with the other cells, tissues, and organs in the human body that work together to help you fight illnesses. These activities will help your students learn how the body protects itself from disease.

## Related KidsHealth Links

### Articles for Kids:

#### Your Immune System

[KidsHealth.org/en/kids/immune.html](http://KidsHealth.org/en/kids/immune.html)

#### Movie: The Immune System

[KidsHealth.org/en/kids/ismovie.html](http://KidsHealth.org/en/kids/ismovie.html)

#### Word Find: Immune System

[KidsHealth.org/en/kids/bfs-iswordsearch.html](http://KidsHealth.org/en/kids/bfs-iswordsearch.html)

#### Activity: Immune System

[KidsHealth.org/en/kids/bfs-isactivity.html](http://KidsHealth.org/en/kids/bfs-isactivity.html)

#### Quiz: Immune System

[KidsHealth.org/en/kids/isquiz.html](http://KidsHealth.org/en/kids/isquiz.html)

#### What Are Germs?

[KidsHealth.org/en/kids/germs.html](http://KidsHealth.org/en/kids/germs.html)

#### Why Do I Need to Wash My Hands?

[KidsHealth.org/en/kids/wash-hands.html](http://KidsHealth.org/en/kids/wash-hands.html)

### Article for Teachers:

#### Tips From School Nurses on Keeping Students Healthy

[KidsHealth.org/en/parents/healthy-nurse-tips.html](http://KidsHealth.org/en/parents/healthy-nurse-tips.html)

## Discussion Questions

*Note: The following questions are written in language appropriate for sharing with your students.*

1. What does the immune system do? Why is this job so important?
2. What parts of the body make up the immune system?
3. What are germs? How can germs spread from person to person. What you can do to avoid being infected by germs?
4. What can you do to help your immune system keep you healthy?



## Activities for Students

*Note: The following activities are written in language appropriate for sharing with your students.*

### Germ Headquarters

#### Objective:

Students will:

- Learn about the parts of the immune system and how they function

#### Materials:

- Computer with Internet access
- Word processing program and printer, or pen and paper

#### Class Time:

1 hour

#### Activity:

Shhh. OK, it looks like the coast is clear. ATTACK! You and some of your closest germ friends have just invaded a person's body. You're well on your way to causing a serious infection, but you run into a roadblock. The person's immune system is fighting back! Your mission is suddenly at risk of failure! You need to use your radio to call Germ Headquarters and inform them of the situation. Using information in the articles at KidsHealth, write a dialogue back and forth between the invading germs and Germ Headquarters. In the dialogue, describe how the person's immune system is trying to stop the germs from causing an infection. Include the following terms in your dialogue: white blood cells, spleen, bone marrow, lymph, and lymph nodes.

#### Extensions:

1. After your dialogue is finished, grab a friend and perform a dramatic reading for your class. Listen to other class members' dialogues. Discuss the similarities and differences in the dialogues. Do you think the germs will succeed in their mission to infect the person? Why or why not?
2. Sometimes kids can have problems with their immune systems. Select an immune system problem like allergies, lupus, or juvenile rheumatoid arthritis. Conduct research on KidsHealth to learn more about this problem, and write a 1-page fact sheet explaining the symptoms and treatment of the disorder. You could also invite an allergist or immunologist (a doctor specializing in immune system problems) to class for a visit to provide more information.
3. Your immune system is busy protecting you from sneaky germs trying to make you sick! Why don't you give your immune system a break? Think of one way you can help your immune system to keep you healthy. How can you meet this goal? Create a chart that helps you keep track of your progress toward your goal.



## Help Wanted: Leukocytes

### Objective:

Students will:

- Learn about the role of white blood cells in the immune system

### Materials:

- Computer with Internet access
- Help wanted advertisements from newspaper or Internet
- Help Wanted: Leukocytes handout (available at: [KidsHealth.org/classroom/3to5/body/systems/immune\\_handout1.pdf](http://KidsHealth.org/classroom/3to5/body/systems/immune_handout1.pdf))

### Class Time:

1 hour

### Activity:

Sniffle, sniffle. Cough. Sounds like you're coming down with something. Well, your germ-fighting white blood cells will make you feel better fast. Uh-oh. You have a problem. You just received an urgent message from your spleen that you're short on white blood cells! You'd better put a help wanted ad in the local paper to get some – and fast! Take a look at some ads from the newspaper or the Internet to get some ideas about what you should say in your ad. Then check out the articles on KidsHealth to find out about white blood cells. Now you're ready to write an ad of your own. Include the following information:

- A job description (what the white blood cell will have to do on the job)
- A list of qualifications (characteristics and skills that the white blood cell needs to have)
- The benefits of the job (what the white blood cell will get for doing its job well)

Good luck in hiring some qualified white blood cells before you get sick!

## Reproducible Materials

### Handout: Help Wanted: Leukocytes

[KidsHealth.org/classroom/3to5/body/systems/immune\\_handout1.pdf](http://KidsHealth.org/classroom/3to5/body/systems/immune_handout1.pdf)

### Quiz

[KidsHealth.org/classroom/3to5/body/systems/immune\\_quiz.pdf](http://KidsHealth.org/classroom/3to5/body/systems/immune_quiz.pdf)

### Quiz: Answer Key

[KidsHealth.org/classroom/3to5/body/systems/immune\\_quiz\\_answers.pdf](http://KidsHealth.org/classroom/3to5/body/systems/immune_quiz_answers.pdf)





Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Quiz

Instructions: Answer each question.

1. What is the job of the immune system?

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2. What are leukocytes?

- a. red blood cells
- b. white blood cells
- c. platelets
- d. plasma

3. What do phagocytes do?

- a. chew up invading germs
- b. allow the body to remember previous invaders
- c. carry oxygen throughout the body
- d. help you stop bleeding if you get a cut

4. List two places where leukocytes can be found:

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5. What is another name for the glands in your neck?

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6. What do lymph nodes do?

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7. Name three places where you have lymph nodes:

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8. \_\_\_\_\_ are doctors who specialize in immune system problems.

9. Name two ways you can help your immune system protect you:

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10. True or false: When your lymph nodes are swollen, your immune system is at work. T F



## Quiz Answer Key

1. What is the job of the immune system?  
The job of the immune system is to protect the body from disease. The parts of the immune system work together to fight of outside invaders like germs.
2. What are leukocytes?
  - a. red blood cells
  - b. white blood cells
  - c. platelets
  - d. plasma
3. What do phagocytes do?
  - a. chew up invading germs
  - b. allow the body to remember previous invaders
  - c. carry oxygen throughout the body
  - d. help you stop bleeding if you get a cut
4. List two places where leukocytes can be found:  
spleen and bone marrow
5. What is another name for the glands in your neck?  
lymph nodes
6. What do lymph nodes do?  
Lymph nodes work like filters to remove germs that could hurt you
7. Name three places where you have lymph nodes:  
in your neck, in your armpit, and in your groin area
8. Immunologists are doctors who specialize in immune system problems.
9. Name two ways you can help your immune system protect you:  
any two of the following: washing your hands regularly, eating nutritious foods, getting plenty of exercise, and getting regular medical checkups
10. True or false: When your lymph nodes are swollen, your immune system is at work.  T  F