



Facing Fear 3-5

Tough Issues

LESSON PLAN 5

Flu Pandemic

The students need to understand that there are things they can do every day to prevent the spread of disease, even during a pandemic.

Key Terms and Concepts

avian (bird) flu	flu pandemic	treatment
common cold	germs	upper respiratory
contagion	pandemic flu	virus
contagious	prevention	vulnerable people
diagnosis	seasonal flu	
flu	symptoms	

Purpose

To recognize ways people can help prevent the spread of disease

Objectives

The students will—

- Research to create a class chart that defines and differentiates among seasonal flu, avian (bird) flu, the common cold and pandemic flu.
- Read *Is It a Cold or the Flu?* to determine the differences between the two types of viruses; create profiles of fictitious patients for the class to diagnose their ailments and recommend treatment.
- Use *How Do You Feel?* to help families identify the cold and flu symptoms. (Home Connection)
- Work together to classify words and phrases that explain the meaning of “contagious.”
- Participate in a class experiment to demonstrate how easily germs are passed from person to person.
- Create a contact diagram and determine ways to prevent passing germs around the classroom.
- Create a comic strip or scenes from a cartoon to tell the story of catching a cold. (Linking Across the Curriculum)
- Create and deliver presentations to educate specific audiences about ways to prevent the spread of colds or flu.
- Use the Internet to guide their own plans for a school or community campaign to make “sneeze into your sleeve” more commonly accepted and practiced when tissues are not available. (Linking Across the Curriculum)



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Activities

- “The Flu”
- “Diagnosis”
- “Contagious”
- “Prevention”



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Materials

- Chalkboard and chalk or chart paper and markers
- Access to resources for research, online or in the media center
- Chart paper and a marker for each student




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"The Flu"

SET UP 5 minutes CONDUCT 30 minutes, plus research

Language Arts: Vocabulary and Research; Science: Health

1.  Create a chart with the following terms on the chalkboard and ask the students to create a similar chart at their desks.

Seasonal Flu	Avian (Bird) Flu
Common Cold	Pandemic Flu

2. Provide time for the students to write two or three things they know that would define or illustrate the meaning of each of the words. Next, have the students discuss their ideas with another student—adding to their charts, or editing or deleting information the students believe may be incorrect. Have the students repeat this exercise with at least two more students.
3. Now, tell them to use their charts to fill in the class chart. How would the students classify the types of information included in the chart? (Symptoms, causes, likenesses, differences, and prevention) Where is the information the weakest? What more information do they need?
4. Count off the class members: one; two, three, four; one, two, three, four; and so forth. All the number ones will be searching for needed information on seasonal flu; the twos will search for avian flu; the threes for common cold; and the fours for pandemic. Remind the researchers that the most important pieces of information will help the class define and differentiate among the terms.



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TEACHING NOTE Check these excellent online resources:

- American Red Cross
(<http://www.redcross.org/news/ds/panflu/>)
- Centers for Disease Control and Prevention
(<http://www.cdc.gov/flu/>)
- Department of Health and Human Services
(<http://pandemicflu.gov>)



Wrap-Up

Come together as a whole class.



Have the students complete the class chart, filling in the missing information in each of the squares.

Answers will vary, but may include—

- Seasonal flu is a contagious respiratory disease caused by viruses. In the United States, there is a flu season that begins every fall and ends every spring. The type of flu people get during this season is called “seasonal flu.” Seasonal flu spreads by contact with people who have the flu, but most people have some immunity to it. Symptoms include headache, sore throat, runny or stuffy nose, fever, cough, muscle pain and tiredness. Complications, such as pneumonia, are more likely among older adults, people with chronic respiratory problems and children. Vaccines are produced every season to protect people from common flu viruses.
- Avian flu is commonly known as “bird flu”; this strain of influenza virus occurs naturally in birds. Wild birds can carry the virus and not become ill; however, domestic birds may become infected by the virus and die from the illness. It is also possible for birds to infect people with the virus causing serious illness and sometimes death.
- Common cold is a relatively mild virus. It is highly infectious and can affect the nose, throat and upper respiratory system. Symptoms include sneezing, sniffing, runny nose or congested nasal passages; scratchy or sore throat; coughing; or headache. Colds usually last 3 to 10 days, but the coughing could last longer.
- Pandemic flu was named based on the combination of *pan*, meaning “all,” and *demos*, meaning “people.” If a disease spreads across borders, it can cause a pandemic. The last flu pandemic occurred in 1968–1969, with estimates of more than 34,000 deaths in the United States and over 700,000 worldwide. The symptoms are similar to seasonal flu, but there is no vaccine ready to be produced.



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Ask the class: Why is it important to be able to differentiate among these terms? (People often misunderstand or confuse the terms and can jump to the wrong conclusions when hearing reports in the media.)

TEACHING NOTE If your school emergency plan addresses a closing in the event of a flu pandemic, consider sharing the plans as appropriate with students. Discuss with students events that would lead up to a school closing so they know what to look and listen for, such as public health announcements; how school closing and reopening announcements will be communicated; how students will receive and turn in homework assignments; and other items addressed in the plan. You may also want to discuss and compile lists of safe activities they can do to stay busy at home if they are not allowed to play outside. Have students share this information with their families.



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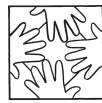


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LESSON PLAN 5 Flu Pandemic

Materials

- *Is It a Cold or the Flu?*, 1 copy per small group
- *How Do You Feel?*, 1 copy per student (Home Connection)



“Diagnosis”

SET UP 10 minutes CONDUCT 45 minutes

Science: Health; Mathematics: Problem Solving

1. Ask the students if they can tell the difference between a cold and the flu. (All answers are acceptable.) Next, tell them that they are going to become diagnosticians—determining the disease by the type of symptoms.
2. Divide the class into small groups and distribute *Is It a Cold or the Flu?* Have the students read the information. Provide time for each group to create a profile of plausible symptoms for a fictitious person—things a patient might tell his or her doctor. They will use this “symptoms profile” to challenge others to make a diagnosis and recommend treatment for the patient.



Wrap-Up

Call the groups back together. As each group describes the symptoms for its fictitious patient, have the rest of the class act as diagnosticians to determine what treatment will make the patient feel better.



Listen carefully as the students present their symptoms—are they consistent? Do the diagnosticians take into consideration limiting or descriptive terms, such as “a little,” “severe” or “sometimes”? Can they describe the reasons for their diagnosis? What are their suggested treatments?

Answers will vary. A sample scenario follows.

Patient: Doctor, I feel terrible. My head is pounding. I’ve had a raging fever for two days. I’m completely exhausted and my throat is a little scratchy. What’s the matter?

Doctor: You have the flu. Severe headaches, high fevers and extreme exhaustion are associated with flu, not colds. A sore throat is most often a symptom of a cold, but it can occur with the flu as well. Take this antiviral medication and take medicine to control your fever. It will take time for you to feel better. Rest and don’t go to school. The flu is highly contagious.

TEACHING NOTE Remind students that only medical professionals are qualified to make actual diagnoses when someone is ill.



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Home Connection

Send *How Do You Feel?* home with students to complete with their families, illustrating the parts of the body and how they are affected by the flu or a cold. Ask them to work as a family to indicate which symptoms belong to the flu and which ones to a cold. Where is the overlap? Can they tell one from the other based only on symptoms, not tests?

TEACHING NOTE If your students did not complete "Diagnosis" above, you may want to send *Is It a Cold or the Flu?* home with them as well.



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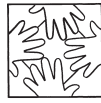
LESSON PLAN 5 Flu Pandemic

Materials

- Chalkboard and several colors of chalk or chart paper and markers of different colors
- Narrow strips of sticky notes, a stack of 30–50 per student
- Markers or crayons



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“Contagious”

SET UP 10 minutes **CONDUCT** 40 minutes, plus time for the experiment

Science: Health and Inquiry; Mathematics: Classification and Computation

TEACHING NOTE Cut the sticky notes in strips just wide enough for the students to write their initials on them. Select one color marker that represents the flu germ—choose two or three stacks and put a dot of this “contagious” color on the back of each strip. To make sure the students don’t suspect anything, use different color markers to mark the other stacks of sticky notes.

For the younger students, distribute a stack of about 30 sticky notes to each student; for the older students, distribute 40–50.

1.  Write the word “contagious” in the center of the chalkboard. Ask the students to tell you words and phrases they think about when they hear the word “contagious.” (Answers will vary, but may include—colds, flu and stomach virus; germs; sneezes and coughs; catch a cold; pass from person to person; wash your hands, use a tissue and cover your mouth when you cough or sneeze.) Write these words and phrases on the chalkboard.

TEACHING NOTE Remind students that their illnesses can be contagious, and that they can pass on their germs to others before the symptoms of a cold or flu appear.

2. As a class, classify the terms. (Things that are contagious; ways to spread an illness; the meaning of the word; and ways to prevent passing an illness to someone else.) Assign a color of chalk to each of the students’ classifications and have them help you circle each word that belongs within the categories. Now, write a class definition of “contagious,” using the categorized words.
3. Next, explain to the students that they are going to participate in an experiment to demonstrate how easily they can pass around a contagious disease in the classroom.
4. Distribute a marked stack of sticky notes to each student. Tell the students to write their initials on the front of each sticky note in their stack. Make sure that students with the same initials add another identifying letter or mark.



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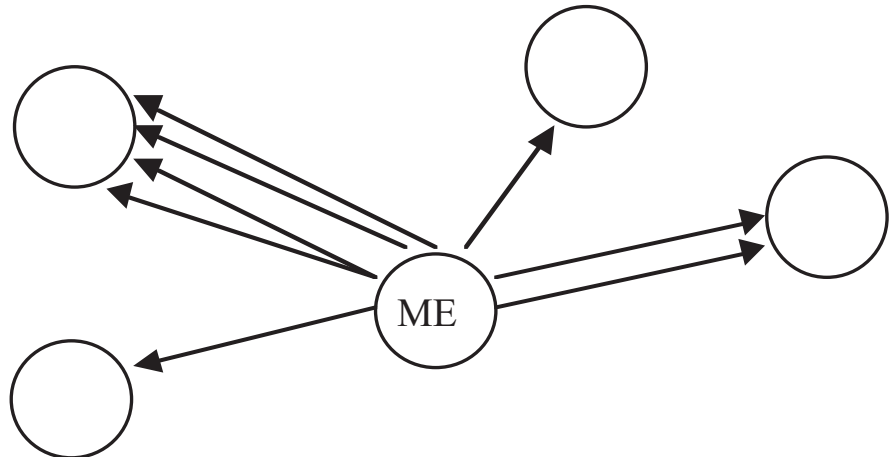
Explain that they will now continue class, only every time they touch something in the classroom, they must leave a sticky note. If they pick up a book from the classroom library, they must leave a sticky note on the book and on the shelf they touched. If they go to the pencil sharpener, if they open the file drawer or if they touch another student's desk, they must leave a sticky note. If there is already a sticky note there, the students must place theirs on top of the other sticky note.

TEACHING NOTE If you have the cooperation of the school administration and other classes, you can have this activity continue outside the classroom as well. Otherwise, complete the activity only in the classroom. Depending on the activity in the classroom and the students' ages and their ability to focus on the activity, continue for two to four hours.



Wrap-Up

Call all the students back together. Draw the following diagram sample on the chalkboard.



Explain to the students that they will create a contact chart to illustrate who and what they touched and exposed to germs throughout the day. Ask them to walk around the room to find their sticky notes and to record each place they touched and the names and the color of the dots of others who came in contact there.

Tell the students the color dot that represented the germ or “contagion.” Have them tally the number of times each of them came into contact with that color dot. Discuss the number of ways they touched the germ or contagion and then perhaps spread it to others. Did any students avoid touching a contaminated area? Explain.



Now, ask the students what this experiment illustrates. (Answers will vary, but may include—You can easily pick up a flu germ just by doing what you do normally each day. Germs are spread person to person.)



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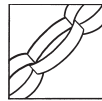
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Explain that, although germs live outside the body, they can't make us sick unless they enter the body. Ask the class: How does this help us understand ways to prevent catching a cold or flu, even if we touch things that may have germs on them? (Answers will vary, but may include—Don't put your hands in or near your mouth, nose or eyes. Wash your hands regularly with soap and water. Wash your hands before you eat. If you don't have soap and water, use an alcohol-based hand sanitizer to clean your hands.)

Besides spreading germs that are on your hands, in what other ways might you spread flu germs? (If you don't cover your mouth when you sneeze or cough, germs spread through the air. If you don't use tissue when you blow your nose, you could spread germs. If you don't throw away used tissues promptly, they can spread germs. If you share a bite from your apple or sandwich with others, you might spread germs. If you don't take flu shots when available, you might catch the flu and spread it to others. Even if you don't feel like you have the flu yet, you may still have flu germs that can spread to other people.)

TEACHING NOTE The Centers for Disease Control and Prevention and other public health experts tell us the best way to cover a cough or sneeze, if you don't have a tissue, is to sneeze into your sleeve, elbow or upper arm. In this way, the germs are not put on your hands where they can be spread.



Linking Across the Curriculum

Language Arts: Vocabulary and Writing; Fine Arts: Visual Arts

For this activity you will need construction paper and markers or crayons. Have students talk about the phrase “catch a cold.” What images do they think of when they hear that expression? Distribute paper and markers and ask the students to draw panels for a comic strip or scenes from a cartoon that would tell the story, literally, of catching a cold.



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LESSON PLAN 5 Flu Pandemic

Materials

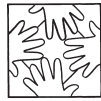
- Computer with access to a presentation program, such as PowerPoint, and an LCD projector

OR

- Transparencies and transparency markers, plus an overhead projector



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“Prevention”

SET UP 5 minutes **CONDUCT** 45–60 minutes, plus time for group presentations

Language Arts: Writing; Science: Health

1. Work together to create a class list of ways to prevent spreading the flu: Wash your hands before you eat and after you use the bathroom; sneeze into a tissue and throw it away, or if you don't have a tissue, sneeze into your sleeve; stay away from others when you are sick; and when there is no soap and water available, use alcohol-based hand sanitizers to wash your hands.
2. Divide the class into small groups and provide access to a computer and presentation program, like PowerPoint; or distribute transparencies and markers. Have the groups turn the list of prevention techniques into a presentation.

Before they begin designing their presentation, make sure the students choose a target audience: younger students, their peers, the PTA or the community. Then, have them design and produce an appropriate presentation to educate the public on preventing the spread of the flu.



Wrap-Up

Share presentations and guide the students to critique each other's.



Critiques should take into account the following:

- Do the presentations illustrate the importance of taking action and using proper techniques to prevent the spread of flu?
- Do the presentations use effective images and words for the target audience?
- Do the presentations deliver the correct message of prevention?
- Invite student groups to use their presentations in the appropriate settings for their audience: a meeting of students in a particular grade in the cafeteria, a PTA meeting or a tour of younger students' classrooms.



Linking Across the Curriculum

Language Arts: Communication and Media Literacy

For this activity you will need a computer with Internet access.



Although the U.S. Department of Health and Human Services, the Centers for Disease Control and Prevention (CDC) and the American Red Cross support “sneeze into your sleeve” as the correct way of preventing the spread of germs when you do not have a tissue, it may not yet be a common practice.



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Ask the students to discuss the best way to cover a cough or sneeze. (Cover your mouth or nose with a tissue and toss it away immediately.) Ask the class: What do you do if you don't have a tissue? (Use the inner part of your elbow or the upper part of your arm.)

Have the students access the Internet to watch Dr. Ben Lounsbury's "Why Don't We Do It in Our Sleeves?" (<http://www.coughsafe.com/media.html>) or check the Web site for the CDC at <http://www.cdc.gov/flu/protect/covercough.htm>. Ask them to critique the information from the video: Is it complete? Is it correct? Is it effective? Why or why not?

Lead a class discussion of the social acceptability of using your sleeve to cover a sneeze or cough if you don't have a tissue. Then, as a class or in small groups, have the students design a plan to help make this method more commonly practiced in their school or community. As a class, select the most practical ideas and begin to implement the campaign.

TEACHING NOTE Dr. Lounsbury's film is copyrighted. If your class plans to use the video in a format other than viewing it on the site, you will need permissions. Visit Dr. Lounsbury's home page for more information at <http://www.coughsafe.com/index.html>. You may also wish to check the posters available from the CDC at <http://www.cdc.gov/flu/protect/covercough.htm>.



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Is It a Cold or the Flu?

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Name _____

Directions: When you are sick, you may not care if it's the flu or a cold. However, it's important for your doctor to know exactly how you feel to diagnose your illness and prescribe the right treatment. Below is a chart that can help you better understand the difference between a cold and the flu.

Symptoms	Cold	Flu
Fever	Rare	Usual; high (100° F to 102° F; occasionally higher, especially in young children); lasts three to four days
Headache	Rare	Common
General Aches, Pains	Slight	Usual; often severe
Fatigue, Weakness	Sometimes	Usual; can last as long as two to three weeks
Extreme Exhaustion	Never	Usual; at the beginning of the illness
Stuffy Nose	Common	Sometimes
Sneezing	Usual	Sometimes
Sore Throat	Common	Sometimes
Chest Discomfort, Cough	Mild to moderate; hacking cough	Common; can become severe





Is It a Cold or the Flu?

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Treatment

Cold

Flu

Antihistamines
Decongestant

Antiviral medicines; see your doctor

Nonsteroidal anti-inflammatory medicines

Over-the-counter medicines for fever, sore throat and headache

Prevention

Wash your hands often

Annual vaccination; antiviral medicines—see your doctor

Avoid close contact with anyone with a cold

Wash your hands and avoid close contact with anyone with the flu

Adapted from “Is It a Cold or the Flu?” by the U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Allergy and Infectious Diseases, September 2005.

Available at <http://www.niaid.nih.gov/publications/cold/sick.pdf>. Accessed on March 1, 2007

Now, consider these symptoms as you write what a fictitious patient might say on a visit to the doctor. Challenge others to diagnose the illness.





How Do You Feel?

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Name _____

Directions: When you have the flu or a cold, you really feel bad. Some of the symptoms are similar, but may be more severe in one illness or the other. Use markers to color the areas that are affected by a cold or flu. Label and describe how each part of your body feels.

