

## Global Pandemics: the Black Death and Spanish Flu

This lesson plan contains two parts that can be taught together or separately:

- 1) Black Death: Contagion in the Middle Ages
- 2) Spanish Influenza: Contagion in 20<sup>th</sup> Century America

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**Grades:** 6-8

**Subjects:** Social Studies, Language Arts, Science

**Overview of Lesson Plan:** In the first lesson, students experience how easily contagious disease can be transferred through human contact and relate it to how the “Black Death” was spread among members of a community and its devastating impact. In the second lesson, students learn how a pandemic affected 20<sup>th</sup> century America. Students draw comparisons between the two periods.

**Suggested Time Allowance:** Two 45-minute class periods

### Objectives:

Students will:

1. Demonstrate how germs are spread through human contact
2. Investigate disease epidemics, focusing on the historical events taking place during the times of the epidemics and the epidemics' effects on society as a whole.
3. Imagine that they are living during the times of the outbreaks of the epidemics researched in class and discuss how the epidemic is affecting their lives and their countries.

### Resources / Materials:

- Glo Germ (available from <http://www.hdd.net/cgi-bin/glogerm/hazel.cgi> for \$9.95-- according to the manufacturer, it's enough for 25 people—only 2-3 students will be “contaminated” with it for each class period).
- Black Light (do not use a UV light as misuse can harm the eyes)—can be purchased from various sources online for \$10-\$20.
- Paper, colored pencils, markers for artwork
- Plague primary source: [“The Florentine Chronicle”](#) by Stefani Marchione di Coppo or Boccaccio’s [“The Decameron”](#).
- [Influenza primary sources](#)

### Activities / Procedures:

#### DAY 1

#### WARM-UP

Prior to class, apply the Glo Germ liquid to your hands. Greet students as the mayor of a medieval town as they arrive to class. Choose two or three students as Guild Leaders, and shake their hands. Divide the class into as many groups as you have Guild Leaders and assign them a trade—some authentic guilds were potters, hatters and silversmiths. Women could potentially

join guilds if their husbands were masters, but Paris and a few other cities were home to all-female guilds of embroiderers and seamstresses. You may wish to form one all-female guild to demonstrate this rare, but interesting feature of gender roles.

Each group (of at least 10 students) should have 3 masters and 3 journeymen. The remaining students are apprentices. Remind students that journeymen are day laborers who have completed their apprenticeship, but have not yet become masters. They work as needed for masters, may have an apprentice of their own, and must work on their own time to produce a masterpiece for consideration by the masters of the guild.

### **ACTIVITY**

Announce that each guild has an opening for a master. (The number of masters in a guild was often restricted, which allowed guilds to control the supply and therefore the price of goods.) Each journeyman, with the help of 1-2 apprentices, will “create a masterpiece” in a limited time period (5-10 minutes). Journeymen and their helper(s) will draw the best picture they can of an object that would logically have been created by medieval members of that guild. Students in a hatters’ guild, for example, should draw a really fancy hat. Members of the potters’ guild should draw fancy ceramics, etc. It may help to show pictures of some medieval crafts to get them started, but in its core form this activity is preparatory to a discussion of the plague. The authenticity of the work is not as important as the physical interaction around the evaluation and trading of the “masterpieces”. Teachers who wish to extend the time and emphasize medieval art could start by consulting the resources below:

**Medieval hats:** [http://classroomclipart.com/cgi-bin/kids/imageFolio.cgi?direct=History/Middle\\_Ages/Costumes&img=0](http://classroomclipart.com/cgi-bin/kids/imageFolio.cgi?direct=History/Middle_Ages/Costumes&img=0)

This site has 15-20 images that can be downloaded showing samples of medieval clothing, especially hats

**Medieval furniture:** Search [images.google.com](http://images.google.com). There are a number of chests, ornate chairs and bed sets on the first page.

**Medieval embroidery:** Search [images.google.com](http://images.google.com). You’ll need to inspect several pages to make sure the examples are authentic, but you can easily find 4-5 examples to print.

While the journeymen & apprentices work, the masters should circulate and give advice. They may share the pictures you have printed or give their own suggestions. The masters, after all, will be judging the final work, so their opinions are valuable. After the journeymen have completed their masterpieces, the masters should choose the best one and congratulate the winner with a handshake. If you have time, you can then let the guilds interact by having students trade their crafts with other students and finish the transaction with a handshake.

Once trading ends, have the class “scan” their hands under the black light. Students who shook your hand will have a glowing hand. Also scan your hand and tell the student you transferred your “germs” to the students who shook your hand. Scan objects that the glowing students have touched. Those objects will also glow, indicating germs are present.

Record the number of students “infected” with the Glo-Germ and determine the percentage. Compare this to the actual mortality rates faced by Europeans in the plague years. Europe’s

overall population loss was at least one third, but in densely populated cities, it spread much more quickly, in some cases killing 60-75% of the population.

### **HOMEWORK:**

The immediate effects of the plague were devastating. Students will read a primary source in order to gain a better understanding of the spread and effects of the disease. For homework, students read a shortened version of [“The Florentine Chronicle”](#) by Stefani Marchione di Coppo, attached below, for discussion on Day 2.

Vocabulary: pestilence, physician, bubo, symptom, confessor, sacrament, trench, waterline, florin, sweetmeats (sweets), apothecaries, ordinance, liability

Advanced students may read the introduction to Boccaccio’s [“The Decameron”](#).

### **Day 2**

#### **DISCUSSION** (15 minutes)

Lead students in a discussion of [“The Florentine Chronicle”](#) by Stefani Marchione di Coppo.

- How virulent was the plague? Did most people who got the plague survive or succumb?
- Was recovery from the plague even possible?
- Which particular groups (priests, doctors, merchants, urban versus rural population, for example) or classes of people (working class, craftsmen, ruling class, for example), if any, were affected by the plague or was it an indiscriminate killer?
- How did the plague affect various elements of a society, such as economics, transportation, and different aspects of daily life?
- What epidemics exist today? How are they being treated by the world of medicine and by the media?
- How have modern medicine and medical technology affected the prevention and containment of diseases that have the potential to be epidemics today?

The Black Death has been identified as *Yersinia pestis*, a bacterium that can infect humans and animals.

A disease that spreads so extensively that it affects an entire country, continent, or even the world is called a ‘pandemic.’ The Black Death was a pandemic, and in the last century there were three influenza pandemics. All of them were called pandemics because of their worldwide spread and because they were caused by a new influenza virus. The 1918 pandemic (also called the Spanish flu) was especially severe.

Lead into a description/discussion of influenza:

- How many students have gotten the flu or know someone who has?
- What is the flu and what are the symptoms?
  - Influenza (commonly called the “flu”) is a contagious respiratory illness caused by influenza viruses. Influenza usually starts suddenly and symptoms may include fever, headache, fatigue, aches, sore throat, and a runny or stuffy nose.
  - Having these symptoms does not always mean that you have the flu. Many different illnesses, including the common cold, can have similar symptoms.

Because the flu is common and most students have direct or indirect experience of it, many assume that it is relatively harmless and similar to the common cold. In fact, each year in the United States, on average:

- 5% to 20% of the population gets the flu;
- More than 200,000 people are hospitalized from flu complications, and
  - The flu can cause mild to severe illness and at times can lead to death. Although most healthy people recover from the flu without complications, some people, such as older people, young children, and people with certain health conditions (such as asthma, diabetes, or heart disease), are at high risk for serious complications from the flu.
- About 36,000 people die from flu.

(Source: Centers for Disease Control and Prevention)

During World War I (1914-1918), reports of influenza in Europe began to reach America. It appears that American soldiers serving abroad may have been among those to spread it when they returned to the United States. It also spread to Asia, Africa and South America. The virus seemed to change quickly and the pandemic broke out in three separate waves between 1918 and 1919. Worldwide, the pandemic killed about 20 million people, including 675,000 Americans out of a population of 105 million. A similar death rate in today's population would mean more than 2 million casualties in an 18-month period.

(Source: The Great Pandemic: The United States in 1918-1919)

<http://1918.pandemicflu.gov/index.htm>

### **Homework:**

Have students read a summary of [primary sources](#) from the time of the influenza pandemic in the United States. Document is attached below.

### **Day 3**

Discussion questions for primary sources:

- How virulent was the Spanish flu? Did most people who got the flu in 1918 and 1919 survive or succumb?
- Which particular groups (soldiers, doctors, merchants, urban versus rural population, for example) or classes of people (working class, farmers, office workers, for example), if any, were affected by the flu or it strike indiscriminately?
- How did the flu affect various elements of a society, such as economics, transportation, and different aspects of daily life?

### **Evaluation/ Assessment:**

Students write an essay comparing the effects of the two pandemics. How did each affect particular social groups, economics, or daily life?

### **Extension Activities:**

1. Investigate an epidemic, such as the bubonic plague or the Ebola virus, and learn about how it impacted the countries or societies it ravaged at its height. Have students take the

perspective of various individuals in society (priest, government official, merchant, etc.). As a class, with students in character, discuss the impact of the epidemic on their society.

2. Use the map at the following website to find a description of the influenza pandemic's effect in your state: [http://1918.pandemicflu.gov/your\\_state/index.htm](http://1918.pandemicflu.gov/your_state/index.htm)
3. Extend the lesson on viruses and pandemics to current events. Newshour with Jim Lehrer, a PBS program, offers an excellent lesson plan titled "Bird Flu: The next Pandemic?", written by Lisa Prosocki. It includes a brief article, lesson ideas, and a 10-question quiz on viruses to test students' (and your own!) knowledge. You can find the complete lesson at: <http://www.pbs.org/newshour/extra/teachers/lessonplans/health/birdflu.html>
4. Literature Circles Book Titles:
  - *Fever 1793* (2000) is a historical novel by Laurie Halse Anderson is based on an actual epidemic of yellow fever in Philadelphia
  - *Code Orange* by Caroline Cooney (2005) revolves around a New York City teenager, who comes into contact with a century-old sample of smallpox scabs.

## RESOURCES

Boccaccio: "The Decameron" – Introduction. A 5-page excerpt from Medieval Sourcebook offers a literary connection to the Black Death. This introduction describes the symptoms of the plague, people's reaction to victims, and their attempts to prevent it. Reading level is difficult. <http://www.fordham.edu/halsall/source/boccaccio2.html>

The Florentine Chronicle—This primary source from a 14th-century Italian writer provides similar information to Boccaccio, but is more accessible. An edited version is attached to this lesson plan.

<http://www2.iath.virginia.edu/osheim/marchione.html>

Stiles, Ben "Women and Guilds in the Middle Ages"—three paragraphs excerpted from larger works which give a brief overview of women as guild members.

<http://web.archive.org/web/19990421194447/www.millersv.edu/~english/homepage/duncan/medfem/guilds2.html>

Interactive map of the spread of the Plague. This map has a timeline below it. As you click dates on the timeline, new colors on the map show the spread of the disease. This would be fun to project for the class.

[http://www.wadsworth.com/history\\_d/templates/student\\_resources/0534600069\\_spielvogel/InteractiveMaps/swfs/map11\\_1.html](http://www.wadsworth.com/history_d/templates/student_resources/0534600069_spielvogel/InteractiveMaps/swfs/map11_1.html)

This is a link for an online game in which players choose a type of disease (bacteria, virus or parasite), select symptoms, and watch it spread. As the disease spreads, players earn evolution points, which can be spent making the disease more virulent. The game ends when everyone dies or no one else is infected. Sick and twisted, but entertaining, I mean educational.

<http://www.crazymonkeygames.com/Pandemic-2.html>

“Drastic Health Board Order Closes Places of Amusement and Saloons in Pennsylvania.” The Allentown Morning Call. 10/4/1918. Excerpts are included in the list of primary sources [http://www.med.umich.edu/medschool/chm/influenza/assets/pdfs/camp\\_crane/amc/amc07.pdf](http://www.med.umich.edu/medschool/chm/influenza/assets/pdfs/camp_crane/amc/amc07.pdf)

*Connection to animal research:*

Smith, Michael. “Spanish Flu in Monkeys Causes Uncontrolled Immune Response.” MedPage Today, January 17, 2007. <http://www.medpagetoday.com/InfectiousDisease/URItheFlu/tb/4873>

**Academic Content Standards:**

SS.08.HS.02 Distinguish between cause and effect relationships and events that happen or occur concurrently or sequentially.

Historical Skills: Understand relationships among events, issues, and developments in different spheres of human activity (i.e. economic, social, political, cultural).

World History: Understand and interpret events, issues, and developments within and across eras of world history.

**Future CCG Standards**

Describe the role of science and technology in local, national and global issues.

Explain risks and benefits in personal and community health from a science perspective.

### **Marchione di Coppo Stefani, The Florentine Chronicle**

*Marchione di Coppo Stefani was born in Florence in 1336. He wrote his Florentine Chronicle in the late 1370s and early 1380s. Stefani, Marchione di Coppo. Cronaca fiorentina. Rerum Italicarum Scriptores, Vol. 30. , ed. Niccolo Rodolico. Citta di Castello: 1903-13.*

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#### **Concerning A Mortality In The City Of Florence In Which Many People Died.**

In the year of the Lord 1348 there was a very great pestilence in the city and district of Florence. .... Almost none of the ill survived past the fourth day. Neither physicians nor medicines were effective... there seemed to be no cure. .... And it was not just that men and women died, but even ....dogs, cats, chickens, oxen, donkeys sheep showed the same symptoms and died of the same disease.

The symptoms were the following: a bubo [swelling] in the groin, where the thigh meets the trunk; or a small swelling under the armpit; sudden fever; spitting blood and saliva (and no one who spit blood survived it). It was such a frightful thing that when it got into a house...frightened people abandoned the house and fled to another. Those in town fled to villages. Physicians could not be found because they had died like the others. And those who could be found wanted vast sums in hand before they entered the house.

Child abandoned the father, husband the wife, wife the husband, one brother the other, one sister the other... And those who died had neither confessor nor other sacraments. And many died with no one looking after them. And many died of hunger because when someone took to bed sick, another in the house, terrified, said to him: "I'm going for the doctor." Calmly walking out the door, the other left and did not return again.

At every church, or at most of them, they dug deep trenches, down to the waterline, wide and deep, depending on how large the parish was. And those who were responsible for the dead carried them on their backs in the night in which they died and threw them into the ditch, or else they paid a high price to those who would do it for them. The next morning, if there were many [bodies] in the trench, they covered them over with dirt. And then more bodies were put on top of them, with a little more dirt over those; they put layer on layer just like one puts layers of cheese in a lasagna.

Servants, or those who took care of the ill, charged from one to three florins per day and the cost of things grew. The things that the sick ate, sweetmeats and sugar, seemed priceless. Sugar cost from three to eight florins per pound. And other confections cost similarly. Capons and other poultry were very expensive and eggs cost between twelve and twenty-four pence each; and he was blessed who could find three per day even if he searched the entire city. Finding wax was miraculous. .... Thus it was ordered that no more than two large candles could be carried [in any funeral]... Benches on which the dead were placed cost like the heavens and still the benches were only a hundredth of those needed. Priests were not able to ring bells as they would have liked. ... They could not sound bells, sell benches, nor cry out announcements because the sick hated to hear of this and it discouraged the healthy as well.

Some fled to villas, others to villages in order to get a change of air. Where there had been no [pestilence], there they carried it; if it was already there, they caused it to increase. None of the guilds in Florence was working. All the shops were shut, taverns closed; only the apothecaries and the churches remained open. If you went outside, you found almost no one.

This pestilence began in March, as was said, and ended in September 1348. And people began to return to look after their houses and possessions. And there were so many houses full of goods without a master that it was stupefying. Then those who would inherit these goods began to appear. And such it was that those who had nothing found themselves rich with what did not seem to be theirs and they were unseemly because of it. Women and men began to dress ostentatiously.

### **How Many Of The Dead Died Because Of The Mortality Of The Year Of Christ 1348**

Now it was ordered by the bishop and the Lords [of the city government] that they should formally inquire as to how many died in Florence. When it was seen at the beginning of October that no more persons were dying of the pestilence, they found that among males, females, children and adults, 96,000 died between March and October.

### **How They Passed Ordinances Concerning Many Things In Florence**

In the said year, when the mortality stopped, women and men in Florence were unmindful of [traditional modesty concerning] their dress. And ordinances were passed concerning this giving authority to the Judge... to enforce these ordinances. The tailors made such boundless demands for payment that they could not be satisfied. Authority was granted [to the judge] that he should handle all matters himself. Servants were so unhappy about the very high prices [they paid] that it was necessary to make great efforts to restrain [the price rises]. The workers on the land in the countryside wanted rent contracts such that you could say that all they harvested would be theirs. And they learned to demand oxen from the landlord but at the landlord's risk [and liability for any harm done to the animal]. And then they helped others for pay by the job or by the day. And they also learned to deny [liability for] loans and [rental] payments. Concerning this serious ordinances were instituted; and [hiring] laborers became much more expensive.

Shortened from text provided at <http://www2.iath.virginia.edu/osheim/marchione.html>

[Back of top](#)

## The Influenza Epidemic of 1918-1919—Primary Sources

September 1918

“This epidemic started about four weeks ago, and has developed so rapidly that the camp is demoralized and all ordinary work is held up till it has passed....These men start with what appears to be an ordinary attack of LaGrippe or Influenza, and when brought to the Hosp. they very rapidly develop the most viscous type of Pneumonia that has ever been seen. Two hours after admission they have the Mahogany spots over the cheek bones, and a few hours later you can begin to see the Cyanosis extending from their ears and spreading all over the face, until it is hard to distinguish the coloured men from the white. It is only a matter of a few hours then until death comes, and it is simply a struggle for air until they suffocate. It is horrible. One can stand it to see one, two or twenty men die, but to see these poor devils dropping like flies sort of gets on your nerves. We have been averaging about 100 deaths per day, and still keeping it up. There is no doubt in my mind that there is a new mixed infection here, but what I don't know.”

A physician stationed at Fort Devens outside Boston, late September, 1918

[http://1918.pandemicflu.gov/the\\_pandemic/02.htm](http://1918.pandemicflu.gov/the_pandemic/02.htm)

October 1918

“There are six sick in one house and they are in two beds. None of the families in this little community have enough bedding to keep warm nor the clothing needed in sickness. The Red Cross women have taken the entire situation in charge and are using one of the mill dwellings as headquarters. This is furnished with...things needed for preparing nourishment and otherwise caring for the sick. All nurses have been formed in squads and relieve each other day and night. Every precaution is taken to keep the disease from spreading. Masks are worn and disinfectants are used freely.”

News and Courier (Charleston), letter from a resident in Cheraw, October 10, 1918

[http://1918.pandemicflu.gov/the\\_pandemic/02.htm](http://1918.pandemicflu.gov/the_pandemic/02.htm)

Philadelphia, Oct. 3—The most sweeping closing order issued by the Philadelphia Board of Health in many years was decided upon today in an effort to check the epidemic of Spanish influenza and pneumonia which is growing more serious here each day.

All schools, churches, Sunday schools, theatres, motion picture places and concert halls were ordered closed for an indefinite period. The order includes public and private dance halls, billiard and pool rooms, bowling alleys, skating rinks, boxing exhibitions and banquets and public gatherings in hotels and prohibits the gathering of crowds even at football games.

The drastic action is due in part to an effort to prevent any serious curtailment of war materials, Philadelphia and its environs constituting one of the greatest war industry centers in the world. At Hog Island alone there are more than 4,000 men off duty due to illness.

Saloon proprietors were warned not to let patrons congregate or remain long in the premises; funerals of influenza or pneumonia victims must be private and employees in hotels, barber shops, restaurants and stores are not to be permitted to remain at work if they show indications of these diseases. ... The question of closing the courts will be decided upon tomorrow.

There were 636 new cases of influenza reported today and the health department expects a big jump in figures tomorrow as orders were sent out to physicians to report all cases. It is estimated that there are more than twenty thousand cases of influenza in this city. The number of deaths reported today was 139.

There is a shortage of doctors, due in part to the fact that 26 percent of the city's physicians are in war service and appeals have been sent out for medical assistance. All the students in two pharmaceutical colleges here have been assigned to assist overworked druggists. The ... council of defense and the Red Cross have united in sending out calls for nurses.

Some of the hospitals are so crowded that they are declining to take other medical cases. In nearly every hospital a certain proportion of the staffs of doctors and nurses have fallen victims to the disease.

The Allentown Morning Call. 10/4/1918.

[http://www.med.umich.edu/medschool/chm/influenza/assets/pdfs/camp\\_crane/amc/amc07.pdf](http://www.med.umich.edu/medschool/chm/influenza/assets/pdfs/camp_crane/amc/amc07.pdf)

[Back to top](#)