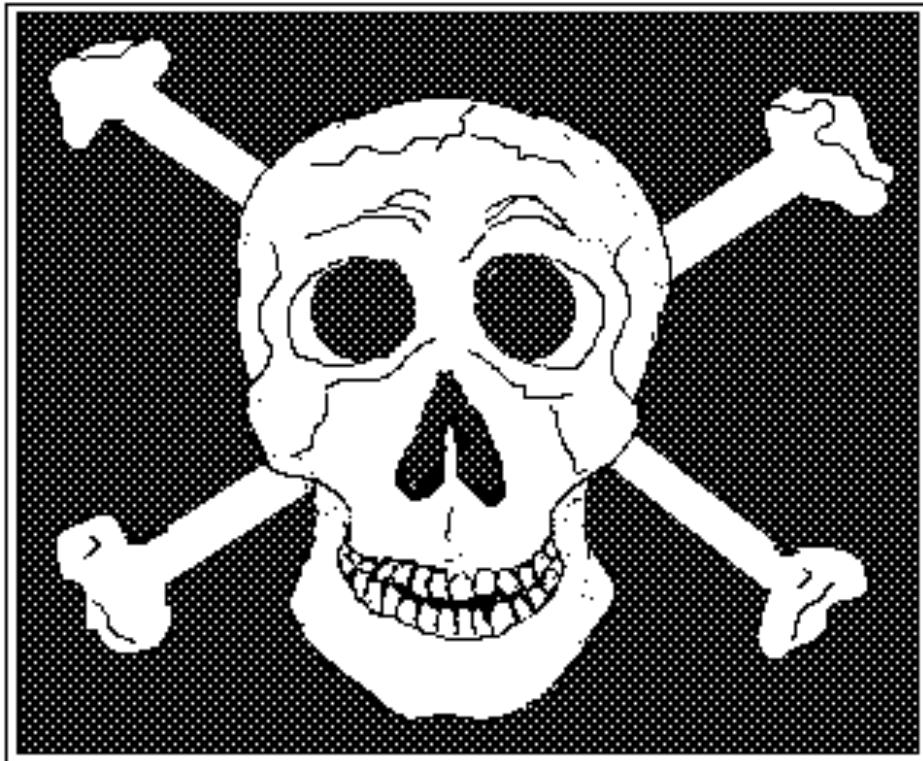


The Black Plague



A Hands-on Epidemic Simulation

Created by:
Cory M. Wisnia
Mendocino USD/CSIN
cwisnia@mcn.org
Mendocino Middle School
POB 421 Mendocino CA 95460
707-937-0564

A Pilgrimage during the time of the Black Plague

Imagine that YOU are traveling to a variety of towns and villages on a pilgrimage or a trading voyage. It is the time of the Pestis Puerorum a form of the Black Plague which is particularly virulent among children and young people, during the mid 1300's. It is the second great plague to invade Europe. This Plague was so deadly that it took until the 1800s before the population again rose to the numbers before the Plague, about 500 years!!

The rules of the journey:

- You will be a traveler on one of 6 journeys to start, either a Pilgrimage mostly by land or as a trader, mostly by sea. The plague was spread by these trading and pilgrim routes, as travelers went from town to town.
- When you visit a town or village, you will roll ONE DIE to see how many nights you will spend in that particular place. Several of the villages will have just begun to show evidence of the plague. Draw out of the bag (representing the nights lodging & meals) as many beans as the nights you are staying. If you get a bean that is red color, you have contracted the Plague bacterium, which was a bacillus type bacteria. If you get a bean which is not a solid color but is mottled/pinto type, you have contracted Cholera from the water. Only a few towns are having outbreaks of Cholera, mostly those which are by rivers, but it is also very deadly.
- If you DON'T contract either the plague or cholera, continue on your journey after you have drawn your beans. You can also choose to stay at this town for one more role if you wish. Replace the beans you have drawn into the container for the next traveler. You have a map. Mark your journey on the map and list how many days you spent in each location. * If you DO contract the plague or cholera before you continue to the next town, you need to: 1) get a skull to tape on yourself 2) mark on your map where you got the plague 3) put back all the beans into the bag 4) go to the next two towns. DON'T draw out any beans in this town. At the first town roll the die. If you roll a 1,2,3 get ONE plague or cholera bean from the teacher and put it into the bag. If you roll 4,5,6 get TWO plague or cholera beans from the teacher and put them into that towns bag. Go on to the second town. Get a skull to put onto the bag of the second town, if there isn't already one on that bag. This represents that you're likely to die in this second town.

Note: to understand what is happening, you can probably see that you will be a carrier of the plague or cholera and will be infecting others who come along after you. Historically, towns that carried the plague were marked for the disease, just like you've marked the bag. After visiting 2 towns after you have first contracted the plague, stop. At this point you have died, unless you can do the following: roll the die twice only; if and only if you roll two ones in a row, you have recovered and can go on your way. (it was very rare, but some people actually recovered from the plague. Some of these were then immune to the next plague, though not always). Otherwise you have died. Roll the dice in front of the teacher to have it count. Put a red dot on your own map where you died, and on the class map (green dot for cholera). Also put a red dot on the graph to show how many towns you were able to visit before dying.

Writing Postcards About Your Journey:

Note: Postcard (or letter) writing may have begun around this time, helped by the caring scribes of the monasteries along the pilgrimage routes.

- After you have been traveling through each new country for a while, and before you die, think of a "postcard" you can write back to your home, talking about your journey. If you contracted plague or there are plague warnings, note these in the postcard. Use the information sheets for more information on the town you have chosen. After the game is over, send a postcard back to your home town telling about your journey, by turning it in to the teacher (or sharing in a discussion).
- If you die early on your journey, (or finish your journey plague free), you can start over again and make another journey, trying another starting location, or going back home the way you came. You should first write some notes about your first trip in your journal. Keep all your data, since we will be using it to look at where people contracted the plague or cholera.

~Bon Voyage!~

Black Plague: Teacher Set-up

Supplies:

24 paper bags
24 playing dice (one per city)
White beans (200 per bag or 4800 total needed)
Red Beans (One Bag---similar to the size of white beans)
Pinto Beans (One Bag---white bean size)
Large Map
Graphs
Colored sticky dots for graphing.

Run off enough skulls for one per student, and place labels for towns on bags. Have students help by counting out 200 white beans and place into bags. (One idea is to have them count out 200, then use a scale to estimate 200 beans for one or two other bags in groups. A discussion about the pros and cons of this method would be worthwhile.)

Add the proper number of Red (Plague) and Pinto (Cholera) beans to those bags which will have them (see chart below). Students probably shouldn't know how many Plague beans are in the bags.

Just a note, Milan is listed as a destination on all of the Pilgrimages. It is listed as being closed to travelers, that is because Milan is one of the few cities not infected by the plague. You are welcome to set up a 25th bag of only white beans to represent Milan if you wish.

Beans per City Key:

City	White Beans	Red Beans	Pinto Beans
1. Liverpool	200		1
2. Bristol	200		1
3. London	200		1
4. Maidstone	200		1
5. Rotterdam	200		3
6. Brussels	200		5
7. Calais	200		1
8. Cherbourg	200		1
9. Paris	200		1
10. Dijon	200		1
11. Lyon	200		1
12. Marseilles	200	2	1
13. Bastia	200	5	1
14. Genoa	200	2	1
15. Venice	200	2	1
16. Siena	200		1
17. Florence	200		1
18. Rome	200	5	1
19. Cagliari	200	8	1

20. Marsala	200	5	1
21. Tunis	200	8	1
22. Algiers	200	2	1
23. Barcelona	200	1	1
24. Lisbon	200	1	1

Ideas For Enrichment

Graphing various relationships can be an integral part of the simulation, but can also be used as an enrichment.

Questions can be raised before the lesson:

1. Which type of trip might be more dangerous & why?
2. What is the average number of days or towns a person will be traveling before becoming infected?
3. Is it better to spend more time in a less number of towns or be able to travel to many towns over a short time?
4. How could these ideas, questions be graphed? What are some other possibilities?

In this way students could set up graphs ahead of time. Different colored dots could represent whether they died of the plague, cholera, or survived the entire trip. Different colors could also represent voyages versus pilgrimages.

Other

In debriefing this activity, a discussion concerning how students might change the rules is appropriate. Is this a "fair" game. If not how would they change the rules to make it more real or fairer? Other enrichment can be to research the towns that are being visited, and look for special artistic highlights for postcard writing/pictures.

Name: _____

Pilgrimage #1: Liverpool, England to Rome, Italy

(via the Channel, Netherlands and overland)

Date: June, 1349 Anno Domini

LOG BOOK OF YOUR JOURNEY

Cities on Itinerary	# Nights	Comments
Bristol, England		
London		
Rotterdam		
Brussels		
Paris		
Dijon		
Lyon		
Marseilles		
Genoa		
Bastia		
Milan - You try to go here but it has been closed to all travelers , continue on...		
Siena		
Florence		
Rome		

Number of total days on your pilgrimage: _____

Comments about journey:

Name: _____

Pilgrimage #2: Dijon, France to Venice, Italy

(via boat through the Straights of Gibraltar)

Date: June, 1349 Anno Domini

LOG BOOK OF YOUR JOURNEY

Cities on Itinerary	# Nights	Comments
Paris		
Calais		
Cherbourg		
Lisbon		
Algiers		
Tunis		
Cagliari		
Marsala		
Rome		
Genoa		
Siena		
Milan - You try to go here but it has been closed to all travelers , continue on...		
Florence		
Venice		

Number of total days on your pilgrimage: _____

Comments about journey:

Name: _____

Pilgrimage #3: Brussels, Netherlands to Rome, Italy

(via Channel, through France & Italy)

Date: June, 1349 Anno Domini

LOG BOOK OF YOUR JOURNEY

Cities on Itinerary	# Nights	Comments
Rotterdam		
London		
Maidstone		
Bristol		
Cherbourg		
Calais		
Paris		
Dijon		
Lyon		
Marseilles		
Genoa		
Florence		
Milan - You try to go here but it has been closed to all travelers , continue on...		
Rome		

Number of total days on your pilgrimage: _____

Comments about journey:

Name: _____

Trade Voyage #1: Florence, Italy to Liverpool, England

(via boat, through the Straights of Gibraltar)

Date: June, 1349 Anno Domini

LOG BOOK OF YOUR JOURNEY

Cities on Itinerary	# Nights	Comments
Venice		
Marsala		
Tunis		
Cagliari		
Rome		
Genoa		
Algiers		
Barcelona		
Lisbon		
Cherbourg		
Rotterdam		
London		
Bristol		
Liverpool		

Number of total days on your trading voyage: _____

Comments about journey:

Name: _____

Trade Voyage #2: Milan, Italy to Rotterdam, Netherlands

(via boat, through the Straights of Gibraltar)

Date: June, 1349 Anno Domini

LOG BOOK OF YOUR JOURNEY

Cities on Itinerary	# Nights	Comments
Genoa		
Rome		
Marsala		
Tunis		
Cagliari		
Algiers		
Marseilles		
Barcelona		
Lisbon		
Cherbourg		
Calais		
Maidstone		
London		
Rotterdam		

Number of total days on your trading voyage: _____

Comments about journey:

Name: _____

Trade Voyage #3: Marseilles, France to Rotterdam, Netherlands and return to Marseilles, France

(via boat, through the Straights of Gibraltar)

Date: June, 1349 Anno Domini

LOG BOOK OF YOUR JOURNEY

Cities on Itinerary	# Nights	Comments
Barcelona		
Algiers		
Lisbon		
Cherbourg		
Calais		
Rotterdam		
London		
Bristol		
Cherbourg		
Algiers		
Cagliari		
Bastia		
Barcelona		
Marseilles		

Number of total days on your trading voyage: _____

Comments about journey:

Town Key: Plague Simulation

England

1. Liverpool
2. Bristol
3. London
4. Maidstone

Netherlands

5. Rotterdam
6. Brussels

France

7. Calais
8. Cherbourg
9. Paris
10. Dijon
11. Lyon
12. Marseilles
13. Bastia (Corsica)

Italy

14. Genoa
15. Venice
16. Siena
17. Florence
18. Rome
19. Cagliari (Sardinia)
20. Marsala (Sicily)

Tunisia, Algeria, Spain & Portugal

21. Tunis (Tun)
22. Algiers (Algeria)
23. Barcelona (Sp)
24. Lisbon (Port)



