

# THE BLACK DEATH: UNIT PLAN PRESENTATION





# UNIT GOALS

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**Math-** Through the use of statistics and numerical theory, students will gain an enriched understanding of the Black Plague and through doing so appreciate the role mathematics can play in helping us better understand historical events and extremely large quantities. After the math lessons are completed, students will be able to analyze large numerical quantities in the context of word problems, graph the statistics of world events, and write complete summaries of their findings.

**Science-** Students will gain an understanding of infectious disease in the past, present and future. Students will explore the foundations of infectious disease and study the organisms that are involved. Students will gain an understanding of the impact of infectious disease from studying the Black Plague. The Black Plague will serve as a basis of understanding for discussing the current and future state of infectious disease.



# UNIT GOALS

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**English-** Through the exploration of various topics, both that deal heavily with the Black Plague, mentioning it specifically in the text, as well as other texts from the Medieval Period that are interwoven and show themes related to the Black Plague, we aim to teach our students how contemporary events have an effect on texts. We want our students to be able to analyze, synthesize, and use information from other disciplines and harness them when reading to increase comprehension.

**Social Studies-** Students will learn through various sources the impact the Black Plague had on different aspects of the world. Students will gain research, evaluating and analytical skills when learning about the Black Plague. They will also become knowledgeable on how disease can impact different parts of the world in different ways. Furthermore, students can identify key components of the Black Plague and how it has impacted history.





ELA

*Ms. Nesi and Mrs. Langling*





## MAIN GOALS:

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This unit, we aim to have our students understand Medieval Literature and how contemporary occurrences, like the Black Plague, can have a cumulative effect on texts.



## TEXTS TO BE STUDIED:

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- The Canterbury Tales and Petrarchan Sonnets
- The Song of Roland and Beowulf
- Sir Gawain and the Green Knight and Le Morte  
D'Arthur
- Dante's Inferno







LESSON: PETRARCHAN SONNETS

*Mrs. Langling*



# PETRARCHAN SONNETS

## 8TH GRADE

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### Flipped classroom

Students will be given Webquest for homework

Webquest contains:

- ❖ article about Petrarch
- ❖ short video about his life
- ❖ short reading about the love of his life that died from the plague (Laura)
- ❖ a small collection of his sonnets



# STANDARDS ADDRESSED

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## CCSS.ELA-LITERACY.RL.8.1

Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

## CCSS.ELA-LITERACY.SL.8.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.





# STUDENT LEARNING OBJECTIVES

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Students will understand the characteristics and requirements of a petrarchan sonnet.

Students are able to formulate ideas about the petrarchan sonnet based upon their knowledge of the black plague and its' implications on medieval literature.

Goal: For students to understand the structure of the petrarchan sonnet and how his sonnets reflect his feelings of loss during the black plague.



# IN CLASS DIRECT INSTRUCTION

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- ❖ We will discuss the Webquest and the information that was presented
- ❖ We will discuss the format and structure of the Petrarchan sonnet
- ❖ We will then discuss the sonnets that were on the Webquest
  - ❖ Looking at structure and meaning
  - ❖ Thinking about themes and academic vocabulary
- ❖ Focussing on the meaning of the poem and its relevance to the Black Death (Laura)





# INDEPENDENT INSTRUCTION

- ❖ Students will be broken into groups of two
- ❖ Each group will receive a worksheet with examples of sonnets
- ❖ The groups will be asked to decipher whether or not the structure of the sonnet is petrarchan. Why? Or why not?





# ASSESSMENTS

## Formative

- ❖ Students answers and opinions will be observed throughout the lesson.
- ❖ Worksheets will be collected at the end of class time
- ❖ Students will take a short quiz using Plickers







# LESSON: CHAUCER

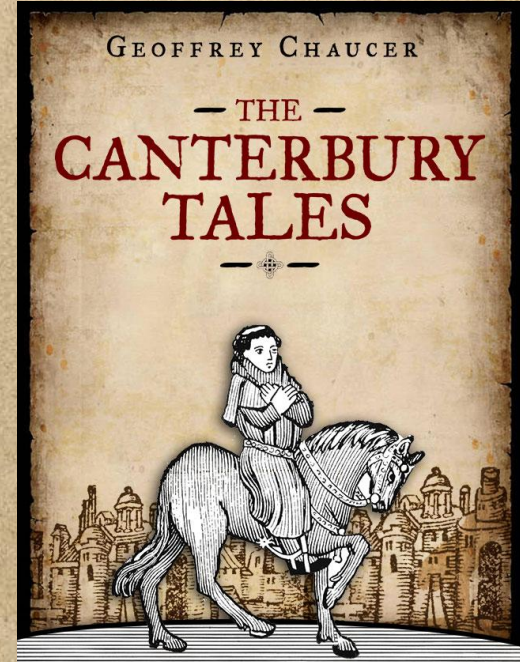
*Mrs. Nesi*



# THE CANTERBURY TALES

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This lesson focuses on Chaucer and the Canterbury Tales. Chaucer's father died in 1349 from the Black Plague, and elements of the Plague are relevant throughout the Tales. Students will study them and complete comprehension questions for homework.







# OBJECTIVES

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- ❖ Students recall important details from *The Canterbury Tales*.
- ❖ Students will determine the central theme in *The Canterbury Tales*.
- ❖ Students will connect the history of the Bubonic Plague to themes within *The Canterbury Tales*.
- ❖ Students will understand the impact the Bubonic Plague had on Chaucer and his writing.



# STANDARDS

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## CCSS.ELA-LITERACY.RL.8.2

Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.

## CCSS.ELA-LITERACY.RL.8.1

Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

## CCSS.ELA-LITERACY.W.8.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)



# DIRECT INSTRUCTION

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- ❖ To grab my students' attention, I will show them a clip from the popular movie "A Knight's Tale" which contains Chaucer as a main character.
- ❖ We will first discuss Chaucer, his personal life, and give students background on *The Canterbury Tales*.





## INDEPENDENT PRACTICE

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Students will be broken, heterogeneously, into 3 groups. They will each be given one version of the story: *The Knight's Tale*, *The Pardoner's Tale*, and *The Wife of Bath's Tale*.

Each of these groups will read the text, and answer three comprehension questions regarding the text.

Each group will also receive a large piece of poster paper, on which they will write the answers to their questions.

At the end of this portion of the lesson, we will all come together, and perform a jigsaw on these three tales.

Heterogeneous grouping- benefits students with special needs or ELL students.



# ASSESSMENT

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## *Formative:*

- Observation throughout the class, with a checklist to see how students are meeting objectives and comprehending the text.
- As an exit ticket, students will each take a Chromebook from the rack in our classroom and log onto Socrative.com
- Each student will complete a short, 5 question quiz on *The Canterbury Tales*, Chaucer, and The Black Plague
- Assessment data from Socrative.com will be directly imported onto an Excel spreadsheet for Ms. Nesi to collect and analyze.



# ASSESSMENT

## *Homework:*

Students will take *The Canterbury Tales* and write a two paragraph short response to where they found the theme of The Black Plague in the text.

They will cite specific examples from the text.

Special Needs students and ELL students will have the option of listening to an audiobook version of *The Canterbury Tales* while they read. ELL students will also be given the option to display their knowledge non-linguistically, through a drawing.

Supplemental readings on The Black Plague, such as primary documents, will be given to high achieving students.





# THE BIOLOGY BEHIND THE PLAGUE

*Mr. McKenna*



The background is a textured, aged parchment page from an antique manuscript. It features faint, handwritten text in a cursive script, likely in a historical language. Several diagrams are visible, including a complex geometric diagram in the top left corner and a circular diagram with internal lines in the bottom left corner. The overall appearance is that of a historical scientific or philosophical text.

# STANDARDS

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- ❖ MS-LS1-2: Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.
- ❖ MS-LS2-2: Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.



# LEARNING TARGETS

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- ❖ Students will understand the structure and function of the organism causing the Black Plague (*Yersinia pestis*).
- ❖ Students will create a visual representation and label the components of *Yersinia pestis*.
- ❖ Students will remember the interactions causing the transmission of the Black Plague.
- ❖ Students will create a visual representation of the transmission of *Yersinia pestis* among humans and other organisms.



# ACADEMIC LANGUAGE

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- ❖ Students will remember, understand, explain and create demonstrations of knowledge related to the biology of the Black Plague.
- ❖ Challenging vocabulary:
  - ❖ *Yersinia pestis*, cell organelles, coccobacillus, anaerobic





# ENGAGEMENT/MOTIVATION

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- ❖ Will ask students if they have recently been sick?
- ❖ What caused them to be sick?
- ❖ Have they ever heard of the Black Plague?
- ❖ What do they think caused the Black Plague (bacteria, virus, God?)

\*Students have already been learning about the Black Plague in other content areas so they should be able to activate prior knowledge and interest in the topic quickly.

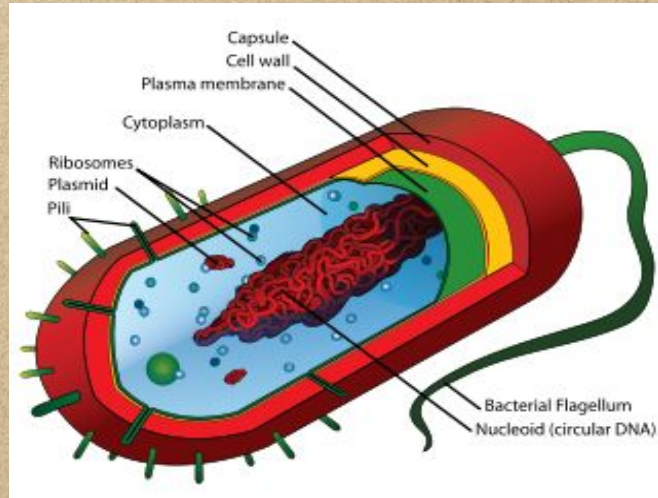


# DIRECT INSTRUCTION

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Classification: gram negative, rod-shaped coccobacillus, facultative anaerobic organism

Structure:





## FUNCTION OF *YERSINIA PESTIS*

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- ❖ **Bubonic:** Most common, bite from rodent or flea, infects lymphatic system.
- ❖ **Pneumonic:** Bacteria spread to lungs, can be transmitted by coughing.
- ❖ **Septicemic:** Bacteria enter the bloodstream. Bubonic and Pneumonic can become septicemic.



# DIRECT INSTRUCTION

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- ❖ Cycle of transmission of *Yersinia pestis*.
- ❖ Rodents > Rat Flea > Pets > Humans



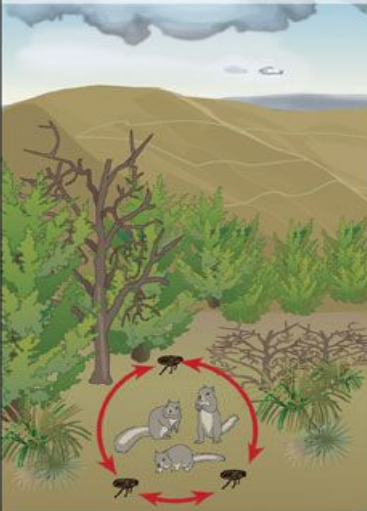


# Plague Ecology in the United States



## Plague in Nature

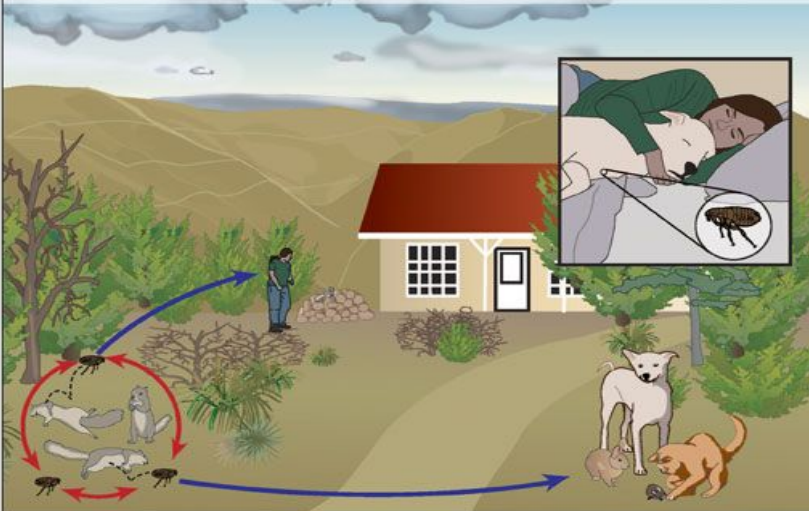
Plague occurs naturally in the western U.S., especially in the semi-arid grasslands and scrub woodlands of the southwestern states of Arizona, Colorado, New Mexico and Utah.



The plague bacterium (*Yersinia pestis*) is transmitted by fleas and cycles naturally among wild rodents, including rock squirrels, ground squirrels, prairie dogs and wood rats.

## Plague in Humans

Occasionally, infections among rodents increase dramatically, causing an outbreak, or epizootic. During plague epizootics, many rodents die, causing hungry fleas to seek other sources of blood. Studies suggest that epizootics in the southwestern U.S. are more likely during cooler summers that follow wet winters.



Humans and domestic animals that are bitten by fleas from dead animals are at risk for contracting plague, especially during an epizootic. Cats usually become very ill from plague and can directly infect humans when they cough infectious droplets into the air. Dogs are less likely to be ill, but they can still bring plague-infected fleas into the home. In addition to flea bites, people can be exposed while handling skins or flesh of infected animals.

CS225948



## GUIDED PRACTICE

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- ❖ Students will jigsaw online reading regarding structure, classification and transmission of *Yersinia pestis*.
- ❖ Groups will present to the class and have class discussion.
- ❖ Students will have an opportunity to ask questions.

<https://www.cdc.gov/plague/transmission/index.html>



# INDEPENDENT PRACTICE

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- ❖ Students will complete multiple choice worksheet regarding classification of *Yersinia pestis*.
- ❖ Students will create their own drawing or computer animated diagram of the *Yersinia pestis* organism and label its components.
- ❖ Students will create a drawing demonstrating the cycle of transmission of *Yersinia pestis* among organisms.



# ASSESSMENT

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- ❖ Formative Worksheet
- ❖ Formative Diagrams





# METACOGNITIVE

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- ❖ Students will be asked to complete an exit ticket.
- ❖ What did they like about the lesson?
- ❖ What was confusing about the lesson?
- ❖ Questions about the lesson?





# SOCIAL STUDIES

*Ms. Drogan*



# STANDARDS ADDRESSED

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- 6.7 INTERACTION ACROSS THE EASTERN HEMISPHERE (ca. 600 CE–ca. 1450):  
Trade networks promoted the exchange and diffusion of language, belief systems, tools, intellectual ideas, inventions, and diseases.
- CCSS.ELA-LITERACY.RH.6-8.1
  - Cite specific textual evidence to support analysis of primary and secondary sources.
- CCSS.ELA-LITERACY.RH.6-8.6
  - Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).
- CCSS.ELA-LITERACY.RH.6-8.7
  - Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.



The background is a textured, aged parchment or paper surface. It is covered with faint, handwritten text in a cursive script, likely from a historical manuscript. There are several diagrams and sketches scattered across the page. In the top left, there is a complex geometric diagram with lines and points. In the middle left, there is a circular diagram with a vertical line through its center. In the bottom right, there is a circular diagram with a shaded, textured interior. The overall appearance is that of an old, scholarly document.

## STUDENT LEARNING OBJECTIVES

- I will summarize the time period surrounding the Black Plague
- I will describe how life was during the time period of the Black Plague
- I will analyze primary sources focused on the Black Plague



## GOALS OF THE LESSON

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- This will be an introductory lesson on the history of the Black Plague. Students will study a brief history of the time period, the societal impact, and geography of the disease.
- The goal of this lesson is to get students excited and prepared research the topic in depth.



## LESSON OVERVIEW

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- Students will be introduced to the Black Plague. Class will begin with a reading and notes provided by the teacher as whole class instruction. After the reading and notes, students will be able to ask questions. Then, there will be directions on how to complete the stations activity.





DIRECT INSTRUCTION (I DO):  
COMPLETE THE READING AND  
SHOW CLASS HOW TO FILL OUT  
GRAPHIC ORGANIZER



## EXAMPLE OF PASSAGE

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### **HISTORICAL BACKGROUND**

Keep in mind that most of the population of Medieval Europe were devout Christians that were largely uneducated, especially with regard to biology. While faith remained supreme, the cause of the disease was concluded to be a punishment from God for humans to pay for their sins.



# EXAMPLE OF GRAPHIC ORGANIZER

**HISTORY** Summarize each section from the reading.

**ORIGINATION:** \_\_\_\_\_

\_\_\_\_\_

**HISTORICAL BACKGROUND:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

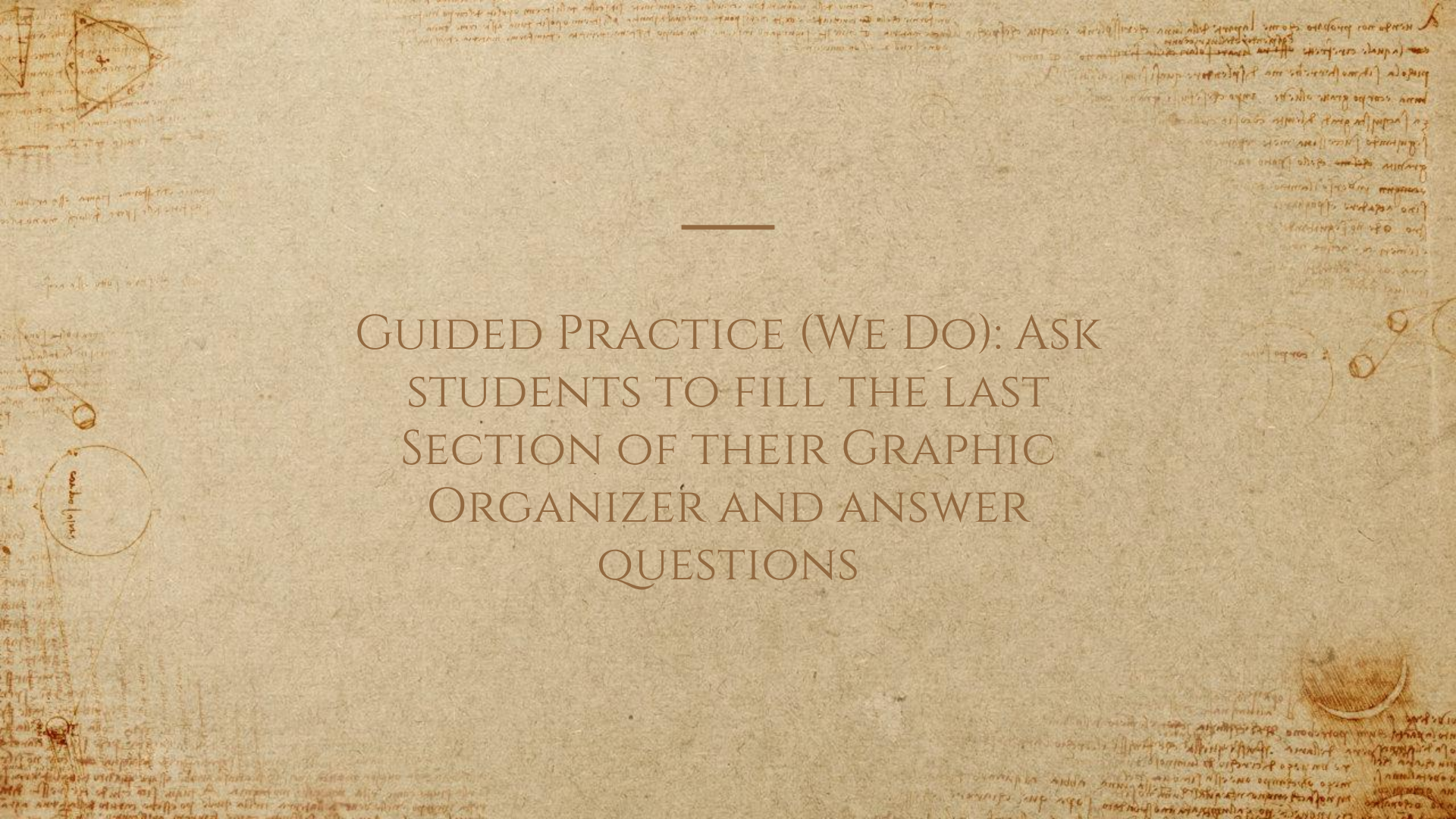
\_\_\_\_\_

**REMEDIES:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





GUIDED PRACTICE (WE DO): ASK STUDENTS TO FILL THE LAST SECTION OF THEIR GRAPHIC ORGANIZER AND ANSWER QUESTIONS



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# INDEPENDENT PRACTICE (YOU DO): STUDENTS WILL COMPLETE THE STATIONS ACTIVITY



# STATION #1: READING AND ANALYZING PRIMARY SOURCES

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- Students will read multiple primary sources of first-hand accounts of the Black Plague

1. "After this cessation of the epidemic, pestilence, or plague, the men and women who survived married each other. There was no sterility among the women, but on the contrary fertility beyond the ordinary. Pregnant women were seen on every side." Jean de Venette, 1348

2. "A gush of blood from the nose was the plain sign of inevitable death..."  
Boccaccio, Giovanni- 1349



# STATION #1: ANALYZING PRIMARY SOURCES

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- Students will create a visual representation of two primary sources.

**IN THEIR WORDS: PRIMARY SOURCES** DIRECTIONS: Select two quotes and write a reaction/sketch.

**PARAPHRASE:** Use your own words to paraphrase what the quote is detailing.

What's your opinion or reaction about the quote you selected?

**CREATE A VISUAL FOR A PRIMARY SOURCE.**





# STATION #1: DIFFERENTIATION/ ACCOMMODATIONS

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- The primary sources will be on multiple reading levels, so students who struggle with reading and/or are ELL students will be able to understand their meanings.
- Additional, the students will have the option to write their interpretation of the quote.



## STATION #2

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- Students will watch a video about the history and effects of the Black Plague and complete discussion questions/graphic organizer.



## STATION #2: VIDEO

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# STATION #2: VIDEO GRAPHIC ORGANIZER

**HISTORY** Summarize the following from the video in your own words.

**GLOBAL EFFECT:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ONE INTERESTING FACT** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ONE SOCIAL EFFECT** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## STATION #2: DIFFERENTIATION/ ACCOMMODATIONS

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- Students will have as much time needed to watch/rewatch the video. The video will have subtitles. Additionally, different versions of the video (informational vs. song) will be provided to those with disabilities or language needs.



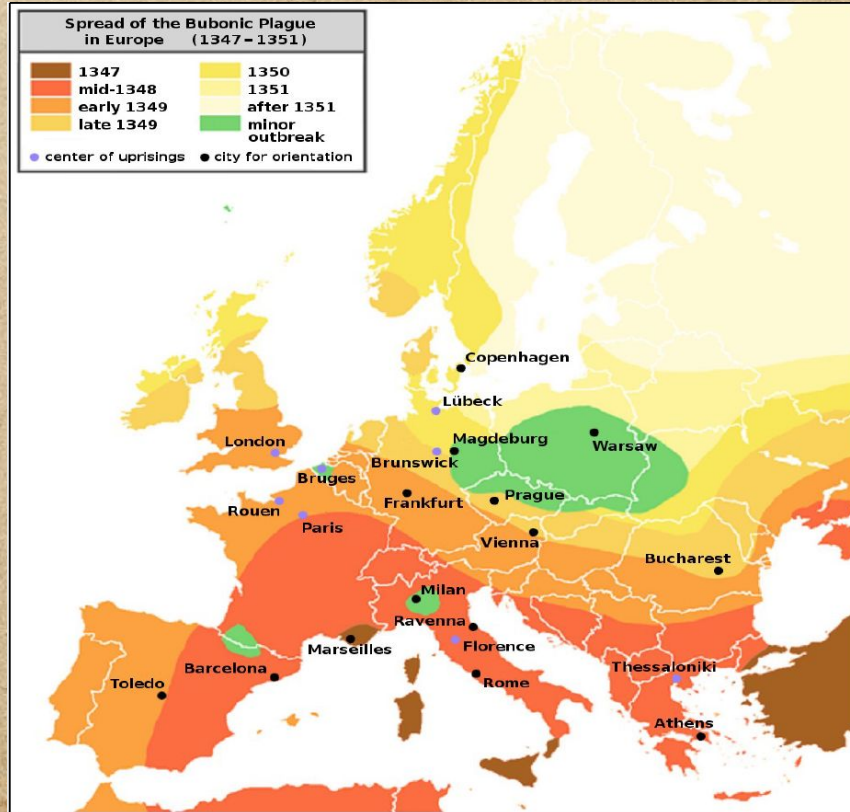
## STATION #3: GEOGRAPHY

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- Students will analyze the geography of the Black Plague by using a map and fill out a graphic organizer.



# STATION #3: MAP OF EUROPE





# STATION #3: GEOGRAPHY GRAPHIC ORGANIZER

**GEOGRAPHY AND EFFECTS OF THE PLAGUE** Answer the following questions after reading the map.

**GEOGRAPHY:** According to the map, generally describe the locations of the first outbreaks of the plague. \_\_\_\_\_

**GEOGRAPHY:** Analyze the map and write three details observed. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Write two facts that led to the decline of feudalism.

Fact 1: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Fact 2: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DECLINE OF  
FEUDALISM!**





## STATION #3: DIFFERENTIATION/ ACCOMMODATIONS

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- Students will be provided the map in color.
- Students who need accommodations will receive guided notes on how to analyze a map.



# FORMATIVE ASSESSMENT

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- Students will complete an exit ticket with the following:
  - 1 interesting fact they learned about the BP
  - Why they found that fact interesting
  - 1 prediction they have about the BP
  - 1 question they have about the unit





MATH

*Mr. Paccione*





# STANDARDS

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## CCSS.MATH.CONTENT.8.SP.A.3

Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

## CCSS.MATH.CONTENT.8.EE.A.3

Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.



# LEARNING OBJECTIVE AND GOAL

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After this lesson, students will be able to:

- ❖ Plot statistical data in a linear model.
- ❖ Understand how to express very large quantities using scientific notation.

Through this lesson, students will:

- ❖ Gain an enriched understanding of the Black Plague and its statistics.
- ❖ Recognize the role mathematics can play in helping us better understand extremely large quantities.



# ACADEMIC LANGUAGE

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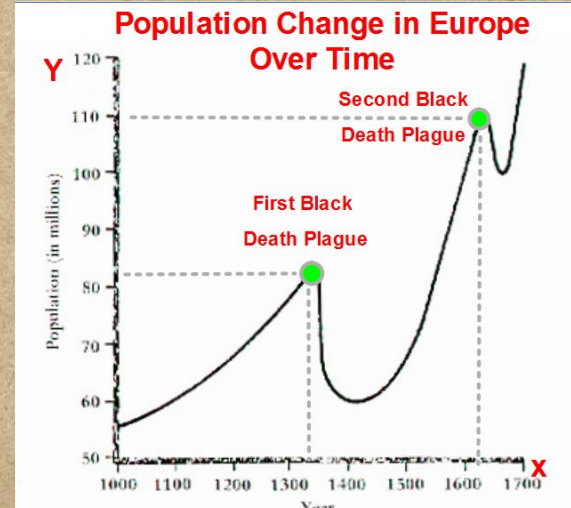
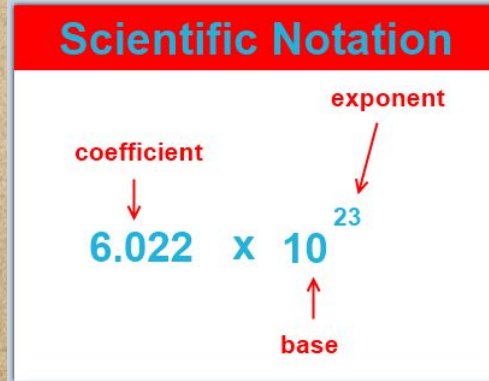
- ❖ **ANALYZE**
  - ❖ Students will analyze the data.
- ❖ **INTERPET**
  - ❖ Students will interpret what the data means.
- ❖ **QUESTION**
  - ❖ Students will question if their results are valid.
- ❖ **SUMMARIZE**
  - ❖ Students will summarize their findings using proper notation.



# CHALLENGING VOCABULARY

✦  
✦  
✦

## BIVARIATE SCATTER-PLOT SCIENTIFIC NOTATION



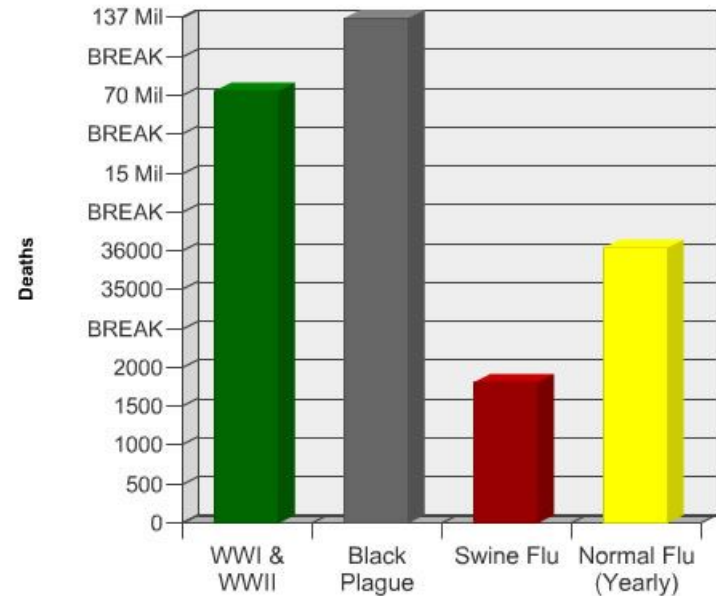


# ENGAGEMENT

❖ Students will have learned the history of the Black Plague through the social studies portion of the unit.

❖ I will build on this by activating their prior knowledge and presenting them with some of the more staggering statistics, and ask them to copy them down.

## DEATH TOLLS





## EXPLICIT INSTRUCTION (I DO)

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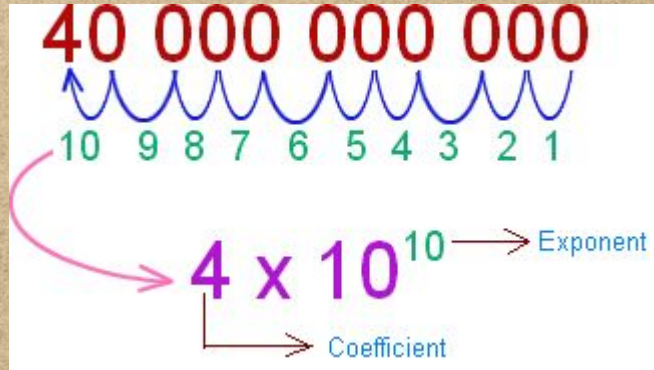
- ❖ I will begin my lecture explaining how scientific notation works and what situations represent appropriate use.
- ❖ I will go through numerous examples in which I will convert full numbers to scientific notational representations
  - ✳ For example, converting 4,000,000 to  $4 \times 10^6$



## EXPLICIT INSTRUCTION (I DO)

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- ✦ I will give the students strategies, such as counting the comma with loops, in order to help them in their later performance.





## EXPLICIT INSTRUCTION (I DO)

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- ✦ I will show the students how writing large quantities in shorter forms is beneficial when using linear models and graphs.
- ✦ I will include an example of a scatter-plot and instruct the students on how to interpret what the graph represents using the scientific notational knowledge they will have now learned.



## GUIDED PRACTICE (WE DO)

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✦ We will work together as a class through more scientific notation conversions, but this time within the context of word problems centered around the Black Plague.

✦ I will remind the students of the steps we learned when analyzing word problems and help them identify the key pieces of data within the paragraphs.

✦ As we work through the problems, I will ask for student volunteers to provide me with their answers.





## GUIDED PRACTICE (WE DO)

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- ❖ I will ask the students to tell me why our answers make sense in the context of the problems.
- ❖ The final problem we work on together will require the students to interpret a linear graph of plague statistics and I will repeat the questioning and summarizing process with them once again.



## INDEPENDENT PRACTICE (YOU DO)

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- ❖ Students will be given practice worksheets to work on and apply their new knowledge of scientific notation and linear graphing.
- ❖ As the students work independently I will go around the classroom to check on their work and ensure they are each applying the concepts and strategies they learned appropriately.
- ❖ Students will be encouraged to ask questions if any area still confuses them within the lesson.



# ASSESSMENT

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- ❖ A formative assessment will be used to help gauge their learning and monitor the progress.
- ❖ The students will be given an Exit Ticket that includes:
  - ❖ An opportunity to apply the concepts they've learned.
  - ❖ A chance to reflect on how they feel the lesson went.



# ASSESSMENT

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## ❖ CONCEPTS:

- ❖ Students will need to plot statistical data in a linear model
- ❖ Students will need to label the graph using scientific notation.

## ❖ REFLECTION:

- ❖ Students will be asked to summarize in writing what the use of scientific notation can do to assist them when discussing the Black Plague.
- ❖ Students will be asked if they think it is beneficial for there to be a tool that allows them to write large quantities in shorthand.





# FINAL PROJECT: PERFORMANCE ASSESSMENT



# PERFORMANCE ASSESSMENT

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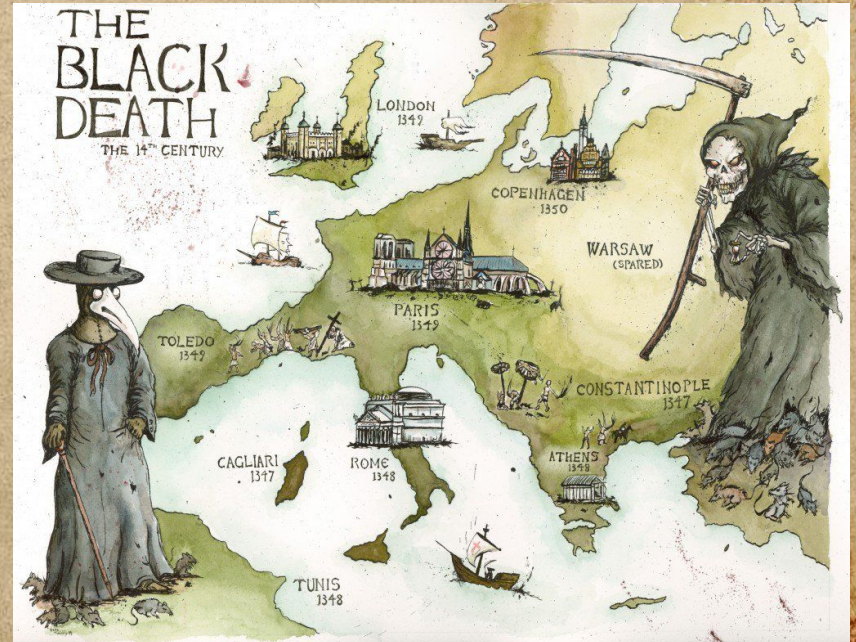
*Students will present one topic from the Bubonic Plague that they found most interesting to a panel of teachers.*

- ❖ In this project, they will have the choice of:
  - ❖ Writing a Petrarchan sonnet explaining the Bubonic Plague and its implications to Medieval life
  - ❖ Writing a short story on the Bubonic Plague and how it affected Medieval Life
  - ❖ Creating a powerpoint, video, and 3D presentation about the Bubonic Plague.



# PERFORMANCE ASSESSMENT

- ❖ Students must show learning of all four core subjects in their presentation.
- ❖ Additionally, all projects will have a written reflection on the students' experiences working in an interdisciplinary setting and their experiences working on their project.
- ❖ Parents and friends of students will be allowed to sit as audience members to each student's presentation.







# CELEBRATION



# PARTY!

