Culture Clash

What happens when worlds collide?

An Interdisciplinary Unit for Seventh Grade

Dan Taylor
Elizabeth Sharp
Lindsay Howard
Karen Boisvert

Fall 2006

TABLE OF CONTENTS

Unit Overview……..3

Habits of Mind……6

Concept Map……7

Engaging Activity……...8

Social Studies Overview……..10

Mathematics Overview……..22

English/Language Arts Overview……28

Science Overview……..37

Conflict Resolution Skills……..50

Culminating Activity……52

Unit Overview

Theme Culture clash: Diverse fates of human societies

What happens when societies/cultures collide?

Human civilizations spread and evolve through encounters and conflicts with each other and with the natural environment in order to do more than merely *survive.* They strive to define and preserve their place in the universe over space and time. Why do human societies have such diverse fates?

Rationale

The history of all life on Earth revolves around the taking over of space and resources, as various life forms evolved and found means to move around the planet. From the earliest bacteria four billion years ago to the complex species that inhabit the Earth today, life has shaped and competed for its space on the planet. Understanding changes and movements of species and cultures is critical to understanding the complexity of human history as well. Humans have excelled at traversing the planet, assimilating or pushing aside existing societies, human and non-human, as we seek out every inhabitable part of the globe. Today, culture itself seems to take on the characteristics of life as it adapts to fit different environments and moves around the globe with increasing ease as technology brings even the most remote areas together. As students investigate the theme of this unit, they will be exploring the human experience itself in all its vanity, glory, and barbarism: whether it is watching the habits of other species as they interact and invade each others territory; calculating/investigating the tools and weapons of human movement; the critical examination of our ancestors invading and pushing others off land; or exploring how cultural ideas and trends move from one society to another or from one group to another within a society.

The overarching aim of this unit is to help students understand the dynamics of the clash of civilizations and cultures so that they will be better able to evaluate and mitigate the negative effects that occur when groups come into contact and celebrate the positive effects. Our hope is to help the students, who will be leaders of the future, recognize the vital importance of diplomacy and positive interactions between cultures.

Activities will include

- Student creation of a unique civilization/culture, including maps, models, and documentation;
- Role playing activities and simulations where students will attempt to understand the thoughts of everyday soldiers and civilians on all sides of a struggle for dominance over a piece of land; daily tasks and decisions based on required tasks or chance activities;
- Exploration of the behavior of cultures as they interact (specific activities included in social studies for civilization cultures, and in science for bacteria cultures);
- Investigation of projectile motion, particularly as it relates to medieval machines of siege;
- Simulations of trade, migration, and war;
- Analyzing the history of invasion among human societies;
- Observing how invasive plant species may change an ecosystem;
- Roaming exhibition reflecting timeline of events, student conclusions, artistic representations, and multimedia presentations;
- Student planning and implementation of school “Mix It Up” day

Timeline

- Phase 1: Building/Defining Civilizations (Prosperity Phase)
    - 10 Days
- Phase 2: Cross-Cultural Interaction (Conflict Phase)
    - 10 Days
- Phase 3: Application (The Real World)
    - 5 Days

Promising Practices

1. Inquiry learning
2. Cooperative and student centered learning
3. Flexible scheduling
4. Multiple intelligences and varied learning styles

Goals and Objectives

1. Students will be able to interpret and place meanings on the importance or lack of importance of culture (religion, art, economy, and government).
2. Students will identify what inner forces drive a civilization to be distinct.
3. Students will understand the ways other (outside) civilizations impact a particular culture.
4. Students will make connections between historical events and the real impact cultural invasions have on civilizations.
5. Students will demonstrate knowledge and use of mathematical data analysis to represent scientific data, changes in civilizations, and analysis of simulation events.
6. Students will explore various literature and writing styles in order to evaluate the cultural importance of literature.
7. Students will understand the significance of environment on a civilization and culture.
8. Students will be able to articulate and demonstrate the significance of artifacts, and have the opportunity to display their knowledge in multiple formats.
9. Students will understand how civilizations and cultures maintain dominance and the importance of ensuring that one culture/civilization cannot dominate all others.

Essential Questions

1. What is meant by culture?
2. Why do certain cultures dominate?
3. Why do human societies have such diverse fates?
4. How long can domination be sustained, or can it?
5. What are the benefits to positive interaction of cultures and how can it be achieved?

Culture Clash: Habits of Mind

1. Simplifying Questions/Problems
   - Students will be presented with many different questions during their inquiry learning. The ability to understand the questions in a clear and concise manner will allow the student the ability to define relationships, search for clues, and solve the problems more easily and successfully.

2. Being Attentive
   - This inquiry project will require students to investigate problems from a variety of angles, and gather data throughout the process. Students will need the ability to observe, attend to details, and find evidence in experiences in order to achieve a full and rewarding learning experience.

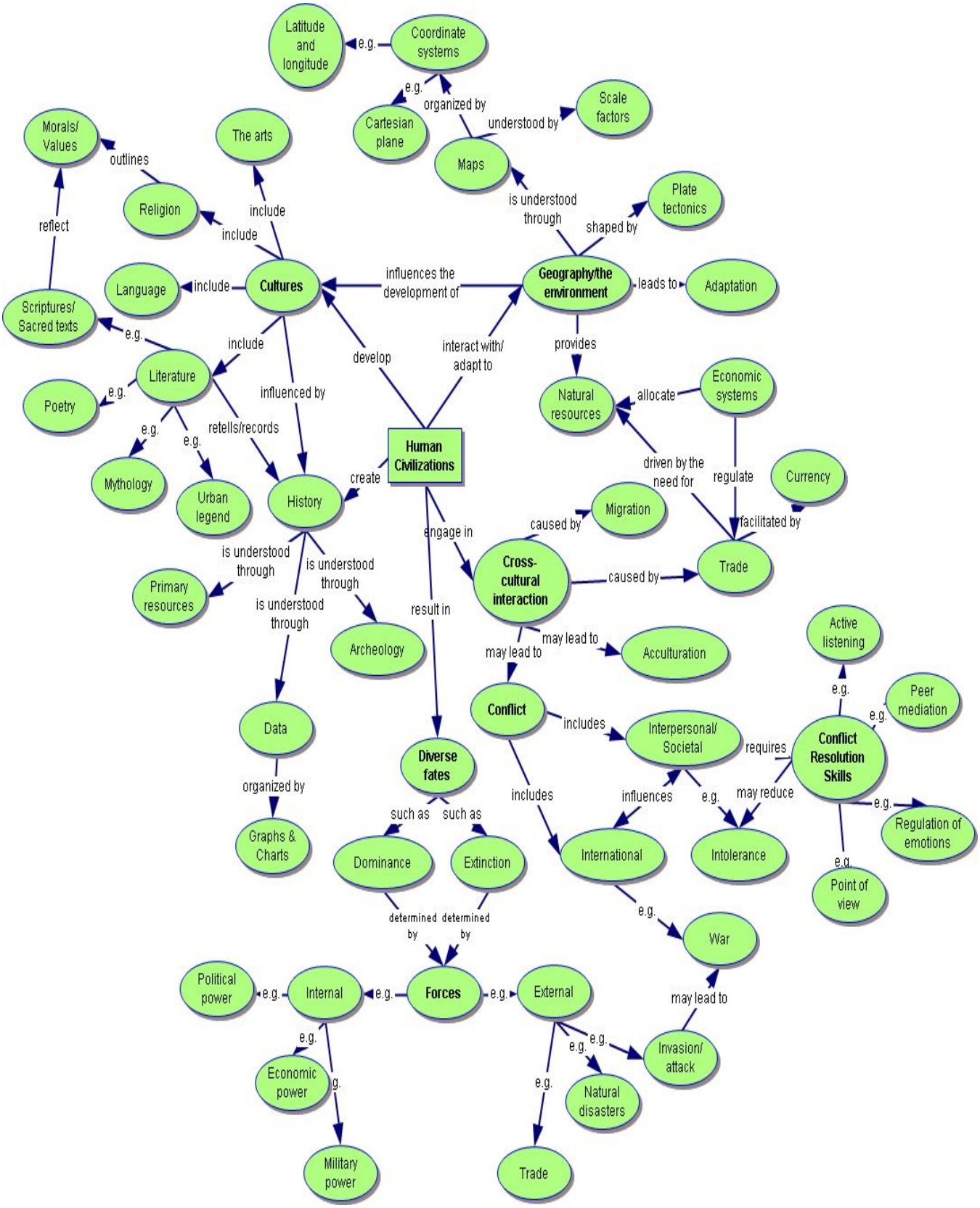
3. Thinking Fluently and Flexibly
   - Students will be involved in creative and open-ended activities throughout this inquiry. The interdisciplinary nature of the inquiry gives students the opportunity to experience tasks through different perspectives. The ability to think in creative and different ways will make for a more enriching learning experience.

4. Cooperating and Collaborating
   - All of the activities in this unit require cooperative work and collaboration by groups of students. The success of the culminating activity, Mix-It Up Day, will be heavily reliant on the abilities of students to work together to plan activities and train other students in conflict resolution.

5. Persevering and Having Self-Discipline
   - There are many activities that will be challenging and maybe even frustrating to some students. But students will need to persevere and work hard to overcome these frustrations. The rewards at the end of the unit will make these students proud of their achievements and know that their hard work was worth the effort.

6. Design Tests and Experiments
   - During various phases of this unit, students will be involved in experiments, both scientific and social. They will need to design the tests, analyze the results, and create activities based on their hypotheses and the actual results.

Culture Clash: Concept Map



Engaging Activity

Our team will introduce our thematic unit about “Culture Clash” by taking our students on a field trip to the 5WITS/TOMB exhibit in Boston. An engaging activity is meant to stimulate an interest in the theme. What better way to stimulate middle school students than to allow them the opportunity to experience a "real-life" archaeological dig site, complete with mystery and excitement. The exhibit is interactive, inquiry based and physical.

5WITS/TOMB is a combination of a haunted house and a museum-type learning experience. The exhibit takes visitors on a tour of an archaeological dig site from ancient Egypt. There are rooms that visitors explore in groups. Visitors are called explorers and the rooms are the inside of a pyramid, complete with hieroglyphic covered walls.

We will take our students on this field trip prior to introducing the thematic unit. Since we study ancient Egypt in the seventh grade, the visit to TOMB is also related to future lessons within social studies. However, for this field trip, the emphasis will be on the interactive nature of the exhibit. Part of the experience includes problem solving and the feel of being in a haunted house/pyramid. Students will be placed in groups of 12 (necessary to get through the exhibit in the time allotted for the field trip). These groups will be from the base groups of 4 that the students are in for social studies. Each group must work together and solve riddles to allow them to progress through the dangers in the pyramid. Because of the interactive nature of this activity, each group could experience a different adventure and outcome.

This exhibit relates to our theme because students are experiencing the remnants of a civilization. The problem solving and riddles could be related to the culture of the time and give the students some interest in the components of other cultures. We will provide students with log sheets to record their experiences while in

the exhibit, and then reflection opportunities for after the exhibit. The questions will be reflective of the essential questions of our unit, such as "Why do cultures/civilizations preserve their place in the universe over space and time?" As students reflect on this question based on the exhibit experience, they should become more curious and excited to explore other civilizations and cultures.

The entire activity is based on choices, teamwork, and problem solving which are integrated with the goals of our unit. The title of the exhibition company, 5WITS, also fits with our unit - common sense, imagination, fantasy, estimation, and memory.

This field trip will be an engaging and captivating activity because it exposes our students to a simulated adventure of examining a civilization/culture while challenging teamwork and cooperation. They will need this knowledge and the skills to succeed with the unit we have planned.

References:

Claflin, L. Jr. (2006, November 24). Test your family's wits at TOMB. *The Eagle Tribune*. Lawrence, MA

www.5-wits.com

Culture Clash: Social Studies

Why do human societies have such diverse fates? The study of geography, economics, and human interaction form the basis of the of the social studies theme: the birth, growth and decline of civilizations/cultures. In order to understand the past and apply its learnings to their future, our students must experience the conflicts of a world larger then themselves. Only when students “live” these types of highs and lows can they attempt to apply their newly discovered answers and solutions to their real world problems.

Students will know and be able to:

- Create and interpret multiple map types including topographic, landform, political, population, and climate.
- Use geographic terms correctly (ie. valley, delta, peninsula etc)
- Construct and interpret charts based on geographical information
- Apply previous knowledge to build an economy based on natural resources
- Analyze the causes and effects of war based on: population totals, monetary contributions, technology, etc.
- Build a system for exchanging currency between civilizations/cultures
- Compare the importance that different civilizations place on religion, art, intellect, and politics.
- Use and apply conflict resolution skills

Massachusetts State Curriculum Frameworks

Themes addressed:

- The effects of geography on the history of civilizations and nations.
- The birth, growth, and decline of civilizations.
- The influence of economic, political, religious, and cultural ideas as human societies move beyond regional, national, or geographic boundaries.

Grade 6 Standards

"In grade 6, students address standards that emphasize physical and political geography and embed five major concepts: location, place, human interaction with the environment, movement, and regions." (Introduction, p. 33)

History and Geography

1. Use map and globe skills learned in prekindergarten to grade five to interpret different kinds of projections, as well as topographic, landform, political, population, and climate maps. (G)

2. Use geographic terms correctly, such as *delta, glacier, location, settlement, region, natural resource, human resource, mountain, hill, plain, plateau, river, island, isthmus, peninsula, erosion, climate, drought, monsoon, hurricane, ocean and wind currents, tropics, rain forest, tundra*, *desert, continent, region, country, nation,* and *urbanization*. (G)

3. Interpret geographic information from a graph or chart and construct a graph or chart that conveys geographic information (e.g., about rainfall, temperature, or population size). (G)

Economics

10. Provide examples of currencies from several countries and explain why international trade requires a system for exchanging currency between nations. (E)

11. Give examples of products that are traded among nations, and examples of barriers to trade in these or other products. (E)

Grade 7 Standards

History and Geography

3. Construct and interpret timelines of events and civilizations studied. (H)

5. Identify multiple causes and effects when explaining historical events. (H)

Human Origins in Africa through the Neolithic Age

7.6 Identify the characteristics of civilizations. (H, G, E)

A. the presence of geographic boundaries and political institutions
B. an economy that produces food surpluses
C. a concentration of population in distinct areas or cities
D. the existence of social classes

E. developed systems of religion, learning, art, and architecture
F. a system of record keeping

<u>Phase I</u>
Prosperity: Building and Defining Civilizations
Time frame: 10 school days

In this phase, the class will be divided into three groups of students who will "build" their own imaginary civilizations. Students will look to examples of previously studied ancient civilizations, such as Egyptian, Greeks, and Romans, in order to shape their understanding of the various forces which shape civilizations and cultures. At this time each student group will be given a map of the civilization's area, but students will not yet see how the three civilizations are geographically related.

Essential Question: What is meant by "culture"?

Subquestions
- What are the characteristics of civilizations?
- How does physical geography shape human civilizations?
- How do we interpret and place meanings on the importance or lack of importance of religion, art, economy and government?
- What inner forces drive a civilization (like the Roman Empire) to be distinct?
- In what ways do other (outside) civilizations impact a particular culture?

Resources/Materials
Large grid chart paper
Student maps, one for each civilization
Art supplies like colored markers, scissors, glue etc
Computers, internet equipped
School library
Trade books, textbooks and picture books about ancient civilizations, governments, economics, etc.
Community members such as bankers, builders, art experts, religious experts

Learning Activities
- Brainstorm and define elements of civilizations/cultures
- Explore the beliefs, the rituals, and the observances of supernatural occurrences of ancient civilizations (i.e. religion)
- Inquire into the monuments to religion, education, art and government of ancient civilizations
- Explore the geographical placement of ancient civilizations
- Examine how ancient civilizations used geographical features to their benefit
- Inquire into the great leaders of ancient civilizations (military, political, etc.)

In groups, students will build civilizations by defining the specific features and characteristics that are common to all civilizations. Some features will be specifically designed in other content areas classes, and some details (such as geography and natural resources) will be assigned to each group by the teacher. In outlining the characteristics of their civilizations, the students may:

- Choose a governmental system and create examples of laws
- Adopt an economic system (including monetary)
- Use geography and natural resources to identify the civilization's main economic activities

- Create and define the civilization's social classes
- Create and define the prevailing religious beliefs of the civilization
- Use the map to place major cities or populations near particular physical features
- Name regions and physical features within their civilizations and label their maps

Once the civilizations have been built:

- Each civilization group will organize a multimedia presentation in order to introduce their civilizations to the rest of the class.
- Each civilization will conduct interviews with students from other civilizations in order to learn about them.
- Students will write newspaper articles (i.e. from the 'travel' section) describing the other two cultures in detail.

Assessment

1.) Multimedia Presentation

	Needs Work **1**	**•Novice** **2**	**Competent** **3**	**Expert** **4**
Content	Presentation leaves out some of the possible characteristics of civilizations and descriptions are not detailed.	Presentation may miss one of the possible characteristics of civilizations. Some may not be described with great detail.	Presentation includes detailed statements about each characteristic of civilizations.	Presentation include detailed statements about each characteristics of civilizations as well as observations and/or connections to ancient civilizations.
Organization	Organization is entirely lacking. No logical flow of information is recognizable.	Presentation is somewhat organized. Flow is present but is confusing or illogical at times.	Presentation is organized. The flow from one topic to another is generally consistent.	**Presentation is well organized and outlined. It flows easily and can be easily followed.**
Neatness	The presentation is poorly formatted and visuals are absent. Grammatical and spelling errors are frequent.	The presentation is clear but not necessarily well-formatted. A few visuals are included. There are many grammatical and spelling errors.	The presentation is clear and there is a minimum of poorly formatted sections or grammatical/spelling errors. Many good quality visuals included. Care was taken about the appearance.	The presentation is well formatted and pleasant to look at. All visuals are of excellent quality. There are no more than a couple of grammatical or spelling errors. Great care was taken in production.
Delivery	The presenters mumble, incorrectly pronounce terms, and speak too quietly for students in the back of class to hear.	The presenters incorrectly pronounce terms. Audience members have difficulty hearing presentation.	The presenters' voices are clear. Students pronounce most words correctly.	The presenters used a clear voice and correct, precise pronunciation of terms.

2.) Newspaper Article

	Needs Work **1**	**Novice** **2**	**Competent** **3**	**Expert** **4**
Complete	Article introduces the other civilization/culture but does not provide details.	Article introduces the other civilization/culture but it may not be described with great detail.	Article introduces the other civilization/culture and provides interesting & in-depth details.	**Article introduces the other civilization/culture and provides interesting & in-depth details as well as parallels to the interviewee's civilization/culture.**
Organization	Article is not organized for newspaper. No clear introduction, main story and summary/ending.	Article is mostly organized for newspaper. Introduction, main story and summary/ ending are present but not necessarily clear.	Article organized for newspaper. Introduction, main story and summary/ ending are evident but may have awkward transitions.	Article is well organized and flows easily from section to section.
Neatness	The article is poorly formatted and difficult or impossible to read. Grammatical and spelling errors are frequent.	The article is readable, but not necessarily well-formatted. There are many grammatical and spelling errors.	The article is easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance.	The article is well formatted and presented so that it is easy to read. There are no more than a couple of grammatical or spelling errors. Great care was taken in production.

3.) Map of civilization/culture (multiple layers)

	Needs Work **1**	**•Novice** **2**	**Competent** **3**	**Expert** **4**
Complete	Map assignment leaves out most of the required layers, only topographical map completed. Labeling is non-existent.	Map assignment leaves out some of the required layers, only topographical map and one other is completed. Labeling is present but lack consistency.	Map assignment is mostly complete only one of the required layers is missing. Labeling is present, clear and consistent.	Map assignment includes all four required layers. Labeling is present, clear and consistent.
Accuracy	Few cities or major geographical representations are accurate and consistent.	Most cities or major geographical representations are accurate and consistent.	All cities or major geographical representations are accurate and consistent.	All cities or major geographical representations are accurate and consistent. Map layers are near replicas of one another.
Neatness	The maps are poorly formatted and difficult/ impossible to read. The maps have little or no color. Spelling errors are frequent.	The maps are readable, but not necessarily well-formatted. At least two maps are in color. There are many spelling errors.	The maps easy to read and there is a minimum of poorly formatted sections or spelling errors. At least three of the maps are in color. Care was taken about the appearance.	The maps are well formatted and entirely in color. There are no more than a couple of spelling errors. Great care was taken in production.

<u>Phase II</u>
Conflict: Cross-Cultural Interaction
Time frame: ~10 school days

In this phase, the three civilizations/cultures will attempt to maintain population, resources, treasury, and defense. Students will look to examples of previously studied ancient civilizations, such as Egyptian, Greeks, and Romans, in order anticipate as well as solve potential problems in order to control their civilization/culture and ensure positive outcomes. The majority of Phase II will be comprised of a role playing card game including reactions/reflections/anticipations. At this time the geographical relationship of all student groups will be revealed.

Essential Question: Why do certain "cultures" dominate?

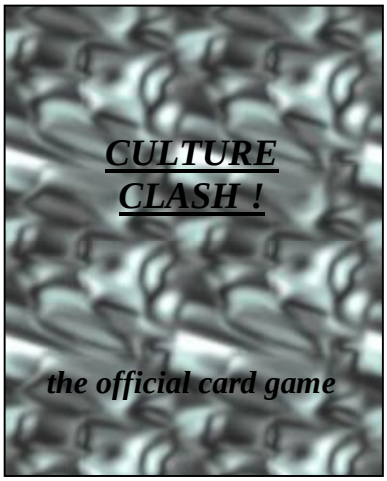
Subquestions
- How do inner forces lead to the disintegration of one civilization and the rise of another?
    - use of autonomous military powers
    - political corruption
    - economic instability
    - political instability
- How do external forces lead to the disintegration of one civilization and the rise of another?
    - shrinking trade
    - attacks
    - invasions
    - weather/natural disasters
    - diseases
- What can be done to minimize the disintegration and do those methods actually work?
- In what ways do civilizations build upon the ashes of other civilizations?

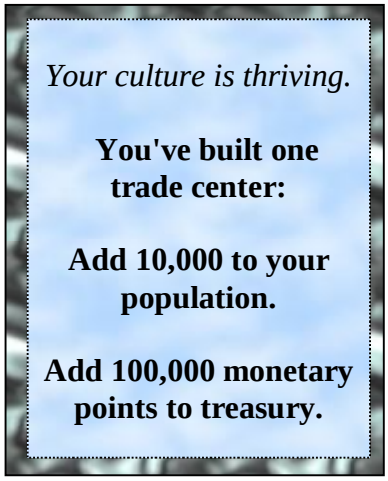
Resources/Materials
Culture Clash! Card Game (previous created by the Anhinga team teachers), including one set of die per civilization/culture
A "World Map" showing the location of each civilization/culture
Art supplies like colored markers, scissors, glue etc
Computers, internet equipped
School library
Trade books, textbooks and picture books about ancient civilizations, governments, economics, etc.
Community members such as economists, ancient civilization experts, lawyers, weather men/women, doctors, members of the armed forces

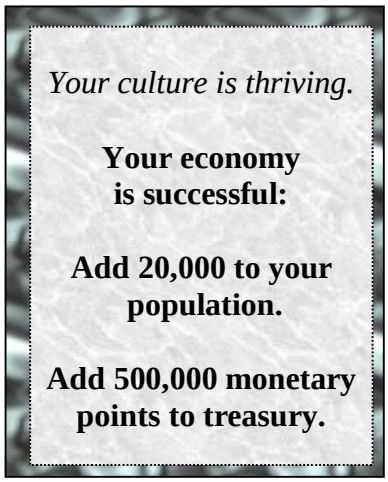
Learning Activities
- Examine recent natural disasters in the US and abroad as well as their effects on people/environment
- Compare/contrast the actions of war through various governments: dictatorship, republican democracy, etc.
- Research ancient methods of defense

- Analyze the affects of disease on troops during war including the presence/absence of medicines
- Examine major impacts on economic production, ie. the Irish Potato Famine, the Great Depression

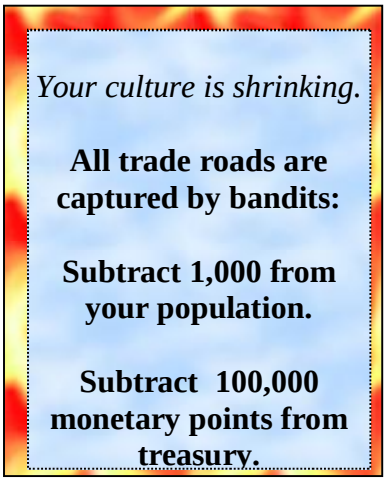
During Phase II, the students must rely on background knowledge AND research in order to have their culture/civilization thrive. The first five school days of Phase II each student culture/civilization will focus on building population, expanding borders, securing resources and trade, maintaining a treasury and managing a defense by playing Culture Clash! (see card examples below).

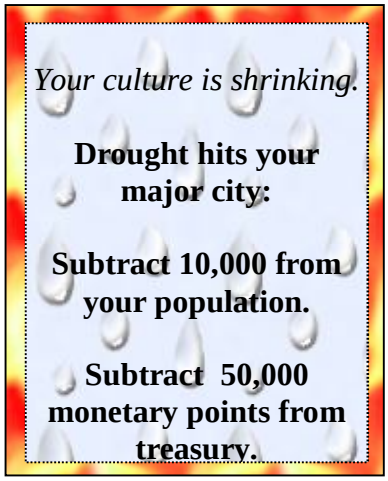






The next three school days will employ the 'conflict' portion of the deck as student civilizations/cultures will be forced to struggle to maintain population, borders, resources and trade, a treasury and managing a defense by playing Culture Clash! (see card examples below).





The last two days of Phase II each student civilization/culture will be presented the option of invading either/both of the other civilizations/cultures. They will have one class period to make a decision; the last day of Phase II students' official declarations will be announced (Declaration of War, Declaration of Peace, Declaration of Treaty). Students will assist in the calculation of the outcome and experience either victory or defeat.

Assessment

1.)Civilization/culture record keeping

	Needs Work **1**	**•Novice** **2**	**Competent** **3**	**Expert** **4**
Complete	Records reflect only a few incidents/interactions from Culture Clash! card game and descriptions are not detailed.	Records may miss a couple of the incidents/interactions from Culture Clash! card game. Some may not be described with great detail.	Records include detailed statements about each of the incidents/interactions from Culture Clash! card game.	Records include detailed statements about each of the incidents/interactions from Culture Clash! card game as well as several anticipatory statements.
Analysis	There is little or no discussion about why the incidents/ interactions effected the civilization in the ways they did..	There is a discussion about why the incidents/ interactions effected the civilization in the ways they did and recognition that there is some similarity with the other cultures.	There is a discussion and speculation about why the incidents/ interactions effected the civilization in the ways they did with some thoughts on how that relates to the other cultures.	There is an in depth discussion and speculation about why the incidents/ interactions effected the civilization in the ways they did and how that might be applied to ancient and current cultures.
Neatness	The records are difficult or impossible to read. Grammatical and spelling errors are frequent.	The records are readable, but not necessarily easily understood. There are many grammatical and spelling errors.	The records are easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance.	The records are well formatted and presented so that it is pleasant to look at and read. There are no more than a couple of grammatical or spelling errors. Great care was taken in creation.

2.)Self-reflection

- Describe in detail one action (or reaction) that you would have changed and why. What is the outcome you expected?
- Explain your role in the group decision-making process.
- If you could change one activity in Phase II, what would it be and why should it be changed?

<u>Phase III</u>
Conflict: Application and Reflection
Time frame: ~5 school days

In this phase, the class will inquire into the idea of dominance as it pertains to their imaginary civilizations and then later as it relates to their everyday lives. Students will look to examples of previously studied ancient civilizations, such as Egyptian, Greeks, and Romans, in order to shape their understanding of the various forces which shape civilizations and cultures.

Essential Question 3: Can domination be sustained? **Do we want it to be?**

Subquestions
- How do civilizations and cultures maintain dominance?
    - force
    - persuasion
    - deportation
    - execution
- What values are most distinct in the world's dominant civilizations/cultures?
- In what ways can we ensure that one culture/civilization **can not** dominate *all* others?

Resources/Materials
Computers, internet equipped
School library
Trade books, textbooks and picture books about ancient civilizations, governments, economics, etc.
Reference materials from Team Time activities (conflict resolution materials)
Community members such as motivational speakers, museum curators/guides, conflict counselors, ancient civilization experts

Learning Activities
- Create a timeline of your civilization/culture and compare the major incidents to that of the other civilizations
- Analyze your civilization/cultures motivations through your "power over/with" glasses
- Research the "power packages" of all three imaginary civilizations/cultures and contrast them to Egypt, Rome, Greece etc.
- Chart the growth and membership of the United Nations (or other world organization of the like)

During Phase III, students will be required consolidate all the information and output from their civilization/culture for the roaming presentations. Groups will need to assess the importance of each output piece and decide when each will be presented and the amount of time dedicated to each. Students will also be asked to synthesize the positive and negative outcomes from Culture Clash! card game as a part of the conflict resolution part of their final presentation to the rest of the school.

Assessment

1.) Roaming Presentation

	Needs Work **1**	**Novice** **2**	**Competent** **3**	**Expert** **4**
Content	Presentation leaves out some of the possible characteristics of civilizations and descriptions are not detailed.	Presentation may miss one of the possible characteristics of civilizations. Some may not be described with great detail.	Presentation includes detailed statements about each characteristic of civilizations.	Presentation includes detailed statements about each characteristics of civilizations as well as observations and/or connections to ancient civilizations.
Organization	Organization is entirely lacking. No logical flow of information is recognizable.	Presentation is somewhat organized. Flow is present but is confusing or illogical at times.	Presentation is organized. The flow from one topic to another is generally consistent.	**Presentation is well organized and outlined. It flows easily and can be easily followed.**
Neatness	The presentation is poorly formatted and visuals are absent. Grammatical and spelling errors are frequent.	The presentation is clear but not necessarily well-formatted. A few visuals are included. There are many grammatical and spelling errors.	The presentation is clear and there is a minimum of poorly formatted sections or grammatical/spelling errors. Many good quality visuals included. Care was taken about the appearance.	The presentation is well formatted and pleasant to look at. All visuals are of excellent quality. There are no more than a couple of grammatical or spelling errors. Great care was taken in production.
Delivery	The presenters mumble, incorrectly pronounce terms, and speak too quietly for students in the back of class to hear.	The presenters incorrectly pronounce terms. Audience members have difficulty hearing presentation.	The presenters' voice is clear. Student pronounces most words correctly.	The presenters used a clear voice and correct, precise pronunciation of terms.

2.)Self-reflection

- Describe how your input will positively impact our Mix It Up Day.
- What was your favorite part of our Culture Clash! unit and why?

Culture Clash: Mathematics

Overview

How can we grasp the magnitude of vast empires? How can we show what ancient monuments look like if we cannot travel to see them for ourselves? How can we make sense of the hundreds of different factors – geographic, cultural, religious, political, economic – which have pushed and pulled at the fates of human civilizations for millennia?

Well, we can use the tools of mathematics.

Objectives

- Students will use appropriate data analysis tools, such as organized tables, diagrams, and graphs, to organize information about their simulated civilizations.
- Students will use proportional reasoning and scale factors to calculate actual and scaled distances/lengths.
- Students will apply ratio and proportion to social studies concepts such as currency exchange and population density.
- Students will use scale factors in hands-on applications involving maps, scale drawings, and scale models.
- Students will apply both coordinate and plane geometry concepts to calculate distance, area, and perimeter of regions on a map.
- Students will investigate problem solving using multiple modalities and representations as they experience the movement of people and identify associated patterns.

Massachusetts State Curriculum Frameworks

Number Sense and Operations
7.N.2 Use ratios and proportions in the solution of problems involving unit rates, scale drawings, and reading of maps.
7.N.8 Determine when an estimate rather than an exact answer is appropriate and apply in problem situation.

Patterns, Relations, and Algebra
7.P.1 Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and when possible, symbolic expressions.

Geometry
7.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane.

Measurement
7.M.3 Demonstrate an understanding of the concepts and apply formulas and procedures for determining measures, including those of area and perimeter/circumference of parallelograms, trapezoids, and circles. Given the formulas, determine the surface area and volume of rectangular prisms and cylinders.
Data Analysis, Statistics, and Probability
7.D.1 Select, create, interpret, and utilize the following tabular and graphical representations of data: circle graphs, Venn diagrams, stem-and-leaf plots, tables, and charts.

Central Questions and Learning Activities

Central Question #1: How can civilizations' extremely large physical spaces and distances be represented accurately so that individuals can understand them?

Subquestions

- How can proportions and scale factors help people model actual distances?
- How do coordinate systems work and why are they used for navigation?
- How can maps to be used to estimate actual distances between locations?
- How can we determine the size of a region shown on a map, especially if it is irregularly shaped?
- How is mathematics used to create scale drawings and models of historical places and objects?

Resources/Materials

A collection of different maps and atlases, including world, region, country, and city
World Almanacs
Museum visit
Resource books on artifacts and ancient civilizations
Poster-sized maps of Culture Clash regions
Student handouts of Culture Clash regions
Large chart paper
Large grid paper
Blank coordinate grid sheets (four quadrant)
Graph paper
Measuring tools, including rulers, protractors, and compasses
Calculators
Formulas for finding various measures (for special education students).
Foam, clay, paper mache, and other materials which can be used to build a model or artifact.

Learning Activities

- Students draw stick figures on graph paper, then use a variety of scales to draw enlargements and reductions of those figures.
- Students take measurements of the classroom, determine an appropriate scale, and create a detailed scale drawing of the classroom.
- Student groups take on the role of travel agents, using maps to plan a detailed brochure for a multi-stop bus tour, outlining travel distances.
- Students play the game "Coordinate Battleship" to increase fluency with locating points on a coordinate plane.
- Students create Venn diagrams comparing/contrasting the elements of the coordinate plane with the latitude/longitude system.
- When provided with irregular polygons drawn on graph paper, students develop strategies to estimate their area and perimeter.
- Student teams design and build a scale model of an artifact from their Culture Clash Civilizations, following maximum dimension guidelines.
- When provided with outline maps of various countries, students use their strategies to estimate the land area of each country, then check their estimates for accuracy in the World Almanac.

- When assigned coordinates of a region for the Culture Clash simulation, student teams use scale and area estimation skills to determine their region's land area, perimeter, and distance from point to point. Students repeat this process any time their coordinates change over the course of the simulation.
- Student teams use scale drawings to plan exhibit layouts for culminating activity.

Central Question #2: What are the most effective strategies for classifying, organizing, and displaying data in the social sciences (geography, economics, history, etc.)?

Subquestions

- What types of graphs effectively represent change over time?
- What types of graphs effectively represent classifications within a group?
- How can graphs be used to determine relationships between different variables in a civilization?
- What determines the value of a particular currency?
- What is population density and how is it determined?
- What conclusions can you make about patterns of movement of people when forced to move?

Resources/Materials

Internet research on various currencies and exchange rates.
Museum visit
World Almanacs
World population density maps
Computer access for spreadsheets and data processing
"Rush Hour" game
Graph paper
Poster-sized maps of Culture Clash regions
Student handouts of Culture Clash regions

Learning Activities

- Civilization groups will research how currencies are created and what determines the value of a currency.
- Civilization groups will design how their civilization's currency will look and create a table of exchange rates for their currency to other currencies.
- Students will play the Rush Hour game in three modalities. After each version, they will work in groups to find a pattern and predict movement based on number of people.
- Assigned two countries and a World Almanac, students will create line graphs, bar graphs, circle graphs, and other visual tools to represent geographic and economic information.
- Students will use population density maps to create a chart of the top 10 most and least populated areas in the world.
- Students will use internet or World Almanac data to calculate the population densities of various cities and countries.
- Over the course of the Culture Clash simulation, a rotating pair of Mathematician/Statisticians will record daily changes in their civilization's land area, total population, population density, natural resources, monetary resources, and any other relevant data.

- After the Culture Clash simulation, civilization groups will organize data, create graphs and charts to represent their data, and write analyses which identify patterns, trends, and relationships in their data.

References:

www.nctm.org for traffic jam activity and artifacts project

Culture Clash: Mathematics
Activity Sequence Chart

Locale:	**Phase I** Building/Defining Civilizations	**Phase II** Cross-Cultural Interaction	**Phase III** Application and Reflection
Math classroom	• Calculating with scale • Navigating the coordinate plane • Finding distances using map scale • Estimating land area and perimeter • Calculating population density • Begin creation of artifact scale model	• Developing currency/currency exchange • Calculating population density • Using charts and graphs to represent data • Traffic jam activity to explore patterns and movement • Continue artifact scale model project	• Graph and analyze civilization data • Complete artifact scale model. • Assist with planning roaming civilization exhibition
Social Studies classroom/simulation	• Determine land area and other measures of Culture Clash region	• Record and organize civilization data daily	• Integrate artifact and completed graphs/charts into roaming civilization exhibit
Time frame:	Approx. 2 weeks	1-2 weeks	1 week

Cultural Artifact Project

Task: You and your group will design a cultural artifact from your society. It can be any format that you want, just be sure that it is based on something real. This may require research of artifacts from other civilizations/cultures before you begin your design.

After you have identified what you want to create, you need to plan the actual "construction" of the artifact. What types of materials will you need? How long will it take to create? When will you begin so that it will be done by the due date?

After your artifact is complete, you need to create a report on it from a mathematical perspective. What types of mathematics can be found or are part of your artifact? Think about various strands in mathematics that you have previously studied (patterns and relations, number operations, geometry, statistics and probability). You will also need to create several word problems based on your artifact.

Create a report/poster about your findings on the artifact and its connection to math. Include a description on why your group chose the artifact, what significance it has to your civilization, and detail all of the mathematical connections.

Assessment:

	Needs Work **1**	**Novice** **2**	**Competent** **3**	**Expert** **4**
Content	Presentation leaves out some of the possible mathematical connections and descriptions are not detailed.	Presentation may miss one of the possible connections between the artifact and mathematics. Some may not be described with great detail.	Presentation includes detailed statements about the connection between the artifact and mathematics.	Presentation includes detailed statements about many connections between the artifact and mathematics, as well as observations and/or connections to ancient civilizations.
Organization	Organization is entirely lacking. No logical flow of information is recognizable.	Presentation is somewhat organized. Flow is present but is confusing or illogical at times.	Presentation is organized. The flow from one topic to another is generally consistent.	Presentation is well organized and outlined. It flows easily and can be easily followed.
Neatness	The presentation is poorly formatted and visuals are absent. Grammatical and spelling errors are frequent.	The presentation is clear but not necessarily well-formatted. A few visuals are included. There are many grammatical and spelling errors.	The presentation is clear and there is a minimum of poorly formatted sections or grammatical/spelling errors. Many good quality visuals included. Care was taken about the appearance.	The presentation is well formatted and pleasant to look at. All visuals are of excellent quality. There are no more than a couple of grammatical or spelling errors. Great care was taken in production.
Delivery	The presenters mumble, incorrectly pronounce terms, and speak too quietly for students in the back of class to hear.	The presenters incorrectly pronounce terms. Audience members have difficulty hearing presentation.	The presenters' voice is clear. Student pronounces most words correctly.	The presenters used a clear voice and correct, precise pronunciation of terms.

Culture Clash: English Language Arts

Why do we remember The Pledge of Allegiance or the moral of The Tortoise and the Hare instead of the lyrics to a Barney song or page one of John Grissom's first book? Some pieces of literature become iconic while others quietly fade from memory. In this unit, students will evaluate various types of literature and their cultural importance. As they experience the entire life cycle of literature, from research to conception to unveiling, students will gain perspective into the immortality of literature.

Students will know and be able to:

- Define the characteristics of myths and legends, specifically creation myths and urban legends
- **Interpret multiple perspectives of pieces of literature based on author and audience**
- **Use Greek and Latin prefixes, roots and suffixes to understand the meaning of words and build new words**
- Compare the importance that different civilizations **place on literature based on religion, fiction, knowledge, and politics**
- **Categorize the presentation modes of literature based on audience (formal, informal, etc)**
- **Recognize the elements of an epic poem in order create one**
- **Write an effective persuasive argument**
- **Analyze the cause and effects of human interaction and movement on language**
- **Relate ancient as well as modern literature to their everyday lives**
- **Demonstrate effective presentation skills**

Massachusetts State Curriculum Frameworks

3.12: Give oral presentations to different audiences for various purposes, showing appropriate changes in delivery *(gestures, vocabulary, pace, visuals)* and using language for dramatic effect.

4.21: Determine the meaning of unfamiliar words by using knowledge of common Greek and Latin roots, suffixes, and prefixes.

4.22: Determine pronunciations, meanings, alternate word choices, parts of speech, or etymologies of words using dictionaries and thesauruses.

5.22: Describe the origins and meanings of common words, as well as of foreign words or phrases used frequently in written English.

8.25: Interpret a character's traits, emotions, or motivation and give supporting evidence from a text.

8.26: Recognize organizational structures and use of arguments for and against an issue.

8.27: Identify evidence used to support an argument.

9.5: Relate a literary work to artifacts, artistic creations, or historical sites of the period of its setting.

12.4: Locate and analyze elements of plot and characterization and then use an understanding of these elements to determine how qualities of the central characters influence the resolution of the

conflict.
13.20: Identify and use knowledge of common organizational structures *(logical order, comparison and contrast, cause and effect relationships).*
16.10: Identify and analyze similarities and differences in mythologies from different cultures *(ideas of the afterlife, roles and characteristics of deities, types and purposes of myths).*
19.20: Write poems using poetic techniques *(alliteration, onomatopoeia, rhyme scheme),* figurative language *(simile, metaphor, personification),* and graphic elements *(capital letters, line length, word position).*

24.4: Apply steps for obtaining information from a variety of sources, organizing information, documenting sources, and presenting research in individual projects:

- ***differentiate between primary and secondary source materials;***

<u>Phase I</u>
Prosperity: Building and Defining Culture Through Literature
Time frame: ~5 school days

Essential Question: Why is language indicative of culture?

Subquestions
- Why does language exist in the first place?
- How is language fluid?
- Does language change over time? How or why not?

Resources/Materials
Dictionaries
Thesauruses
Bartlett's Quotes Reference Guide
Handouts and other materials on Greek & Latin prefixes, roots, suffixes
Textbooks, trade books or picture books on ancient civilizations
Community members such as linguists, college professors, war/invasion experts

Learning Activities

During Phase I student groups will briefly examine the history and evolution of the English language in preparation for creating new words and phrases that represent their imaginary culture. Students may:

- Examine the need and uses for communication and then, specifically, language
- Compare and contrast the English language (Old English, Modern English, Slang English) as it evolves over time
- Research the causes of language change/evolution
- Distinguish between the modes of language presentation (ie. oral storytelling, newspapers, books)
- Create new slang words or “hip” phrases for their culture based on Greek and Latin prefixes, roots and suffixes

Assessment
1.)Slang/Phrase Creation

	Needs Work **1**	**•Novice** **2**	**Competent** **3**	**Expert** **4**
Complete	Slang words/phrase is not original.	Slang words/phrases is mostly original but relies on current words/phrases for meaning.	Slang words/phrases are original but no explanation to origins is presented.	Slang words/phrases are original and a clear, detailed explanation is offered.
Accuracy	Greek/Latin prefixes, roots and suffixes are used incorrectly. Definition provided is wrong.	Greek/Latin prefixes, roots and suffixes are mostly used accurately but not consistently. Definition provided is approximately correct.	All Greek/Latin prefixes, roots and suffixes are used accurately and most often consistently. Definition is almost perfect.	All Greek/Latin prefixes, roots and suffixes are used accurately and consistently. Definition is correct.
Neatness	Slang words/phrase document is difficult/ impossible to read. It does not follow dictionary formatting. Spelling errors are frequent.	Slang words/phrase document is readable, but not necessarily well-formatted in dictionary style. There are many spelling errors.	Slang words/phrase document easy to read and there is a minimum of poorly formatted sections or spelling errors. Care was taken about the appearance to mimic a dictionary entry.	Slang words/phrase document is well formatted and entirely clear. There are no more than a couple of spelling errors. Great care was taken in production to mimic a dictionary entry.

2.)Self Reflection

- Would you rather research the history of English or the impact of other languages (like French or Spanish) on English? Why?
- If you had your choice, would you like to have created your own slang instead of creating it with your group? Provide two reasons behind your choice.

<u>Phase II</u>
Conflict: Commonality and Cross-Cultural Interaction of Literature
Time frame: ~15 school days

Essential Question: In what ways does the use of language impact culture in terms of intellect, morals, values and ideals?

Subquestions

- What common pieces of literature do all cultures share?
- What types of literature address: intellect, values, morals and ideals?
- Does the impact of culture effect vital pieces of literature and their origins?

Resources/Materials
Dictionaries
Thesauruses
Bartlett's Quotes Reference Guide
Handouts and other materials on Greek & Latin prefixes, roots, suffixes
Textbooks, trade books or picture books on ancient civilizations
Encyclopedia of Urban Legends
Copies of speeches: Elizabeth I's, JFK
Copies of political cartoons
Copies of comic strips like 'Calvin and Hobbes'

Copy of 'War of the Worlds' audio or access to the internet; paper copies of the script
External speakers
Community members such as linguists, college professors, war/invasion experts, writers (fiction and non, poetry, storybooks etc)

Learning Activities

During Phase II students will build upon their knowledge of language origins in order to formulate literature that is vital to the pervasiveness of their imaginary culture. Students may:

- **Define literature common to most or all cultures (ie. myths, poetry, religious material, etc.)**
- **Compare and contrast creation myths from ancient civilizations**
- **Compose a creation myth based on their culture's religious doctrine**
- **Design and deliver a representation (ie. storybook, picture book, powerpoint presentation, video, recording, song, rap, etc) of their creation myth**
- Appraise the prized morals and ideals of ancient civilizations as represented in their literature
- Establish a common set of values, morals and ideals that represent your culture
- Choose one value or ideal and create an urban legend based on that value or ideal
- Examine famous speeches about patriotism and loyalty (ie. Elizabeth I's, JFK's “Ask not what your country can do...” etc.)
- Compare and contrast pictorial and written propaganda
- Design a comic that positively reflects your culture
- Outline the elements of persuasive arguments
- Construct a persuasive argument (speech, pamphlet, letter, etc) about your culture in order to increase or decrease your population
- Evaluate and appraise fear and paranoia that arise during war/conflict
- Listen & read excerpts from 'War of the Worlds' as read by Orson Welles
- Write/design/illustrate an epic poem in response to your (**OR** to your witnessed) conflict from Social Studies Phase II

Assessment
1.)Creation Myth and Presentation

	Needs Work **1**	**•Novice** **2**	**Competent** **3**	**Expert** **4**
Content	Presentation leaves out some of the basic religious tenants or ideas and descriptions are not detailed.	Presentation may miss one of the basic religious tenants or ideas. Some may not be described with great detail.	Presentation includes detailed statements about the basic religious tenets or ideas .	Presentation include detailed statements about each religious tenet or idea as well as observations and/or connections to ancient civilizations.
Organization	Organization is entirely lacking. No logical flow of information is recognizable.	Presentation is somewhat organized. Flow is present but is confusing or illogical at times.	Presentation is organized. The flow from one topic to another is generally consistent.	**Presentation is well organized and outlined. It flows easily and can be easily followed.**
Neatness	The presentation is poorly formatted and visuals are absent. Grammatical and spelling errors are frequent.	The presentation is clear but not necessarily well-formatted. A few visuals are included. There are many grammatical and spelling errors.	The presentation is clear and there is a minimum of poorly formatted sections or grammatical/spelling errors. Many good quality visuals included. Care was taken about the appearance.	The presentation is well formatted and pleasant to look at. All visuals are of excellent quality. There are no more than a couple of grammatical or spelling errors. Great care was taken in production.
Delivery	The presenters mumble, incorrectly pronounces terms, and speaks too quietly for students in the back of class to hear.	The presenters incorrectly pronounce terms. Audience members have difficulty hearing presentation.	The presenters' voice is clear. Students pronounce most words correctly.	The presenters used a clear voice and correct, precise pronunciation of terms.

2.)Urban Legend

	Needs Work 1	Novice 2	Competent 3	Expert 4
Complete	Urban legend has little or no plot; no twist in the story evident. Character(s) are not clearly defined. No lesson or ideal (moral) enforced.	Urban legend has a weak plot; twist is present but doesn't fit well. Character(s) are defined but backstory is absent. Lesson or moral implied.	Urban legend has a definite plot; twist is reasonably placed and adds to the plot. Character(s) are believable with backstory. Lesson or moral clear.	**Urban legend has a definite plot; twist is well placed and enhances the plot. Character(s) are believable and sympathetic with backstory. Lesson or moral obvious.**
Organization	Urban legend is not organized or follow standard path of a story. It has no clear beginning, middle or end.	Urban legend is mostly organized like a story. There is a beginning, middle and end but are not necessarily clear.	Urban legend organized like a story. There is a definite beginning, middle and end but may have awkward transitions.	Urban legend has a definite beginning, middle and end which enhance the quality of the story. The flow is smooth, clear and makes the story readable.
Neatness	The urban legend is poorly formatted and difficult or impossible to read. Grammatical and spelling errors are frequent.	The urban legend is readable, but not necessarily well-formatted. There are many grammatical and spelling errors.	The urban legend is easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance, illustration is present.	The urban legend is well formatted and presented so that it is easy to read. There are no more than a couple of grammatical or spelling errors. Great care was taken in production, illustration is present and adds to the story.

3.)Comic strip

	Needs Work 1	•Novice 2	Competent 3	Expert 4
Complete	Comic strip doesn't contain five separate panels. No effort is maintained to positively reflect the culture.	Comic strip leaves out some of the required panels. Effort to positively reflect the culture is present but lacks consistency.	Comic strip is mostly complete. Effort to positively reflect the culture is present, clear and consistent.	Comic strip all five required panels. Effort to positively reflect the culture is effective, clear and consistent; negativity about other cultures is absent.
Accuracy	Few representations of culture are accurate and consistent.	Most representations of culture are accurate and consistent.	All representations of culture are accurate and consistent.	All representations of culture are accurate and consistent while employing descriptive language to enhance.
Neatness	The comic strip is poorly formatted and difficult/ impossible to read. It has little or no color. Spelling errors are frequent.	The comic strip is readable, but not necessarily well-formatted. At least two panels are in color. There are many spelling errors.	The comic strip is easy to read and there is a minimum of poorly formatted sections or spelling errors. At least three of the panels are in color. Care was taken about the appearance.	The comic strip is well formatted and entirely in color. There are no more than a couple of spelling errors. Great care was taken in production.

4.)Persuasive Argument (self evaluation shown below)

	Needs Work 1	•Novice 2	Competent 3	Expert 4
Complete	I saw the prompt and I tried to respond to it. I did not take a stand on the issue. I presented some information but it still is not clear how I stand on the issue.	I have taken a stand but I may not have made my position very clear. I tried to support it with some details but I may not have done a very good job. The details may not be the best ones I could have chosen or they might not even support my stand.	I have taken a clear stand and I give it some support. The information is presented clearly.	I have taken a clear stand on an issue and I fully support it with appropriate personal or factual information.
Organization	I have no real organization. I did not try to write for the audience. I did not use any language choices to help influence the reader to agree with me.	I tried to have an organization but I did not do a good job with it and it tends to jump around. I tried to understand the audience I was writing for. I did not use good language choices to help influence the reader to agree with me.	I have an organization that is logical but it strays a little. I understand the type of audience I am writing for. I make some good language choices to help influence the reader to agree with me.	I have an organization that is logical and does not jump around. I understand the type of audience I am writing for and I use language and arguments that they will understand. I make good language choices to help influence the reader to agree with me.
Neatness	My argument piece is difficult or impossible to read. I made frequent grammatical and spelling errors.	I tried to make my argument piece readable, but it is not necessarily easily understood. I made many grammatical and spelling errors.	I made my argument piece easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. I took care about its appearance.	I formatted my argument piece well and presented it so that it is pleasant to look at and read. I made no more than a couple of grammatical or spelling errors. I took great care in its creation.

5.)Epic Poem

	Needs Work 1	Novice 2	Competent 3	Expert 4
Complete	Epic has little or no scale; it is one paragraph long. Hero and villain are not clearly defined. No supernatural or superhuman deeds present.	Epic has minimal scale; it is about two paragraphs long. Hero and villain are defined but back story is absent. Brief supernatural or superhuman deeds.	Epic has definite scale; it is about one page long. Hero and villain are believable with back story. Supernatural or superhuman deeds prominent.	**Epic has world or universe scale; it is about two pages long. Hero and villain are believable with back story and have basis in culture. Supernatural or superhuman deeds affect outcome.**
Organization	It doesn't follow standard path of an epic. It has no clear beginning, middle or end.	It is mostly organized like an epic. There is a beginning, middle and end but are not necessarily clear.	It is organized like a epic. There is a definite beginning, middle and end but may have awkward transitions.	It has a definite beginning, middle and end, which enhance the quality of the epic. The flow is smooth, clear and makes the story readable.
Neatness	The epic is poorly formatted and difficult or impossible to read. Grammatical and spelling errors are frequent.	The epic is readable, but not necessarily well-formatted. There are many grammatical and spelling errors.	The epic is easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance, illustration is present.	The epic is well formatted and presented so that it is easy to read. There are no more than a couple of grammatical or spelling errors. Great care was taken in production, illustration is present and adds to the poem.

<u>Phase III:</u> Application and Reflection
Time frame: ~5 school days

Essential Question: How do we ensure that a culture's literature persists over space and time?

Subquestions
- Why read ancient literature?
- Does literature from the past shed light on the future?
- How will our modern culture be remembered in terms of great works of literature? Should they be?

Resources/Materials
Dictionaries
Thesauruses
Bartlett's Quotes Reference Guide
Textbooks, trade books or picture books on ancient civilizations
Copies of various “great books”
Community members such as college professors, writers (fiction and non, poetry, storybooks etc), conflict resolution experts, members of our school committee, principle/ assistant principle

Learning Activities

- **Rate the importance of several "great books" based on your own culture's values and ideals from Phase II**
- **Propose additions to a list of "Must Read" literature for seventh graders**
- Predict the importance of current popular literature (ie. Harry Potter) in the future
- Evaluate the seventh grade reading list according to the values from Phase II

During Phase III, students will be required consolidate all the information and output from their civilization/culture for the roaming presentations. Groups will need to assess the importance of each output piece and decide which two will be presented and the amount of time dedicated to each. Students will also be asked to synthesize the positive and negative roles propaganda can play as a part of the conflict resolution part of their final presentation to the rest of the school.

Assessment

1.)Roaming Presentation

	Needs Work 1	**•Novice 2**	**Competent 3**	**Expert 4**
Content	Presentation leaves out some of the possible characteristics of chosen literature piece and descriptions are not detailed.	Presentation may miss one of the possible characteristics of chosen literature piece. Some may not be described with great detail.	Presentation includes detailed statements about each characteristic of chosen literature piece.	Presentation includes detailed statements about each characteristic of chosen literature piece as well as observations and/or connections to ancient civilizations.
Organization	Organization is entirely lacking. No logical flow of information is recognizable.	Presentation is somewhat organized. Flow is present but is confusing or illogical at times.	Presentation is organized. The flow from one topic to another is generally consistent.	**Presentation is well organized and outlined. It flows easily and can be easily followed.**
Neatness	The presentation is poorly formatted and visuals are absent. Grammatical and spelling errors are frequent.	The presentation is clear but not necessarily well-formatted. A few visuals are included. There are many grammatical and spelling errors.	The presentation is clear and there is a minimum of poorly formatted sections or grammatical/spelling errors. Many good quality visuals included. Care was taken about the appearance.	The presentation is well formatted and pleasant to look at. All visuals are of excellent quality. There are no more than a couple of grammatical or spelling errors. Great care was taken in production.
Delivery	The presenters mumble, incorrectly pronounces terms, and speaks too quietly for students in the back of class to hear.	The presenters incorrectly pronounce terms. Audience members have difficulty hearing presentation.	The presenters' voice is clear. Student pronounces most words correctly.	The presenters used a clear voice and correct, precise pronunciation of terms.

2.)Self Reflection

- Describe how your input will positively impact our Mix It Up Day.
- **What was your favorite part of our Culture Clash! literature unit and why?**

Culture Clash: Science

Purpose

The overall purpose of the science portion of this unit is to help students understand how factors, natural and human-created affect the creation and evolution and clash of cultures. Human beings are vastly different from other life forms on Earth in the level to which we try to engineer our environment and our own evolution. We may not be as successful as we would like to think we are, but there is no doubt that we approach our interaction with the world and each other with an introspection that is not present in other life forms (as far as we can tell anyway). And so it is important to understand all the forces that are at work so that we can best make use of, counter act, and/or adapt to those forces.

In this unit we will be exploring:

- the forces that shape the Earth and the physical environment around us;
- the forces that encourage or discourage people from living in particular areas;
- what happens when species (cultures) collide, trying to occupy the same space;
- the mechanics of medieval catapults; and
- how we communicate in this age when world cultures are colliding, mixing, and interacting like they never have before.

Throughout the unit we will be applying scientific methods, inquiry skills, and habits of mind including (Martinello & Cook, 2000) (www.doe.mass.edu):

- Formulate a testable hypothesis;
- Design and conduct an experiment specifying variables to be changed, controlled, and measured;
- Select appropriate tools and technology (e.g., calculators, computers, thermometers, meter sticks, balances, graduated cylinders, and microscopes), and make quantitative observations;
- Present and explain data and findings using multiple representations, including tables, graphs, mathematical and physical models, and demonstrations;
- Draw conclusions based on data or evidence presented in tables or graphs, and make inferences based on patterns or trends in the data;
- Communicate procedures and results using appropriate science and technology terminology;
- Offer explanations of procedures, and critique and revise them;
- Asking good questions;
- Taking risks;
- Searching for patterns;
- Being attentive and keeping focus;
- Cooperating and collaborating with other students; and
- Finding patterns.

Following is the detail of the science activities to be implemented as part of the unit.

PHASE I: What Factors contribute to determining a society or culture?

Focus #1: How do the movements of a Planet's layers shape the surface of the planet?

Focusing Questions

- Why are the Himalayas so different from the Appalachians?
- Why are there so many volcanoes in Hawaii? And Iceland?
- Why are there so many stories/movies about Earthquakes in California?

State Frameworks

Earth Science #36: Describe the layers of the earth, including the lithosphere, the hot convecting mantle, and the dense metallic core.
Earth Science #39: Describe how the movement of the earth's crustal plates causes both slow changes in the earth's surface (e.g., formation of mountains and ocean basins) and rapid ones (e.g., volcanic eruptions and earthquakes).

Students will be able to:

- Describe the activities that can occur at tectonic plate boundaries and how those activities shape the surface of the planet; and
- Discuss how different materials affect the interaction of boundaries.

Activities

- Students will simulate some of the movement of tectonic plates by exploring the motion of sheets of clay, modeling clay, and play dough on a surface of cornstarch fluid. They will be directed to make and record very thorough observations in their exploration journals. After the exploration groups will share their results with one other group and then with the class as a whole.
- Students will research the theory of plate tectonics in a jig saw fashion, with each group studying one of the three types of tectonic plate border conjunctions or hot spots in the mantle. The class will then break into mixed groups with one member from each study group teaching the others about their findings. Students will be asked to write a short story (2-3 pages) about someone who lives at the border of tectonic plates (or over a hot spot) and experiences some event as a result.

Assessment

**** Science Observation Journals**

Students will be given a grade for their observation journals based on the completeness, neatness, and quality of analysis in their journals. A rubric follows.

	Needs Work 1	**Novice 2**	**Competent 3**	**Expert 4**
Complete	Observations leave out some of the possible interactions among materials and descriptions are not detailed.	Observations may miss one of the possible interactions between materials. Some may not be described with great detail.	Observations include detailed statements about each possible interaction between materials.	Observations include detailed statements about each material independently and each possible interaction between materials as well as observations about the fluid.

Analysis	There is little or no discussion about why the different materials behave as they do.	There is a discussion about why each material behaves the way it does and recognition that there is some similarity with the movements of the crust of the Earth.	There is a discussion and speculation about why each material behaves the way it does with some thoughts on how that relates to the Earth's crust.	There is an in depth discussion and speculation about why each material behaves the way it does and how that might be applied to other materials & the Earth.
Neatness	The work is poorly formatted and difficult or impossible to read. Grammatical and spelling errors are frequent.	The work is readable, but not necessarily well-formatted. There are many grammatical and spelling errors.	The work is easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance.	The work is well formatted and presented so that it is pleasant to look at and read. There are no more than a couple of grammatical or spelling errors. Great care was taken to produce the work.

** Short Short Stories about an event at the border!

Students will be asked to write a very short story (2-3 pages) about a child who lives near the border of two tectonic plates (or over a mantle hot spot). Following is the assessment rubric.

	Needs Work 1	**Novice 2**	**Competent 3**	**Expert 4**
Story	Story is barely recognizable as a story and the events discussed are irrelevant or show a poor understanding of the science involved.	Story is clear, but uninteresting and shows a knowledge of what events may occur, but not with a great depth of understanding.	Story shows careful thought and a good understanding of the relevant science.	Story shows great creativity and builds in an excellent scientific understanding of the events discussed.

**** Plate Tectonics Quiz**

Students will take a piecemeal quiz (flexibility in choosing questions to answer) about plate tectonics.

Focus #2: How do geography and resources affect where people choose to live?

Possible Focusing Questions

- Why are most cities in the world along bodies of water?
- What makes a safe place to live?
- Why did California fill up with people so fast in the latter part of the 19th century and 20th century?

State Frameworks

Earth Science #35: Recognize, interpret, and be able to create models of the earth's common physical features in various mapping representations, including contour maps.

Earth Science #40: Describe and give examples of ways in which the earth's surface is built up and torn down by natural processes, including deposition of sediments, rock formation, erosion, and weathering.

Students will be able to:

- Name factors that may affect individuals and communities choices about where to live, farm, work, and play;
- Discuss how technology and access to it affects living space choices.

Activities

- Students will be presented with a map that shows terrain, bodies of water, elevation, vegetation, and forestation. Imagining themselves to be forward scouts for a community of colonists, they will work in groups to determine where they would set up a village. They are charged with producing a report to present to the elder council of the community.

Assessment

**** Scouting Reports to the Elder Council**

Students will be given a grade on their reports based on the completeness, neatness, and quality of analysis. A rubric follows.

	Needs Work 1	**•Novice 2**	**Competent 3**	**Expert 4**
Complete	Observations leave out many or most of the features shown in the maps given..	Observations include detailed statements about most of the features shown in the maps given.	Observations include detailed statements about all of the features shown in the maps given.	Observations include detailed statements about all of the features shown in the maps given. Student speculates about possible features not shown on the map.
Analysis	There is little or no discussion about how the various features are benefits or burdens on colonists.	There is a sometimes weak discussion about how most of the various features provide benefits or burdens to the colonists.	There is a thoughtful discussion about how all of the various features provide benefits or burdens to the colonists.	There is an in depth discussion about how all of the various features provide benefits or burdens to the colonists as well as possible methods for improving the situation over time.
Neatness	The work is poorly formatted and difficult or impossible to read. Grammatical and spelling errors are frequent.	The work is readable, but not necessarily well-formatted. There are many grammatical and spelling errors.	The work is easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance.	The work is well formatted and presented so that it is pleasant to look at and read. There are no more than a couple of grammatical or spelling errors. Great care was taken to produce the work.

PHASE II: Clash!

Focus #3: When cultures collide: What happens when multiple species try to occupy the same space?

Focusing Questions

- When species are competing for resources, who wins?
- Can multiple species exist dependent on the same resources?
- What caused the natives to die in such large numbers soon after Europeans arrived in America?

State Frameworks

Life Science #17: Classify organisms into the currently recognized kingdoms according to characteristics that they share. Be familiar with organisms from each kingdom.
Life Science #18: Recognize that all organisms are composed of cells, and that many organisms are single-celled (unicellular), e.g., bacteria, yeast. In these single-celled organisms, one cell must carry out all of the basic functions of life.
Life Science #25: Compare sexual reproduction (offspring inherit half of their genes from each parent) with asexual reproduction (offspring is an identical copy of the parent's cell).
Life Science #28: Relate the extinction of species to a mismatch of adaptation and the environment.
Life Science #29: Give examples of ways in which organisms interact and have different functions within an ecosystem that enable the ecosystem to survive.
Life Science #33: Identify ways in which ecosystems have changed throughout geologic time in response to physical conditions, interactions among organisms, and the actions of humans. Describe how changes may be catastrophes such as volcanic eruptions or ice storms.

Students will be able to:

- Name factors that may affect individuals and communities choices about where to live, farm, work, and play; and
- Discuss how technology and access to it affects living space choices.

Activities

- Students will grow carefully chosen bacteria in a controlled environment in three petri dishes. After the first bacteria are established a second strain will be introduced. Students will introduce more of the same bacteria again into one of the dishes and a new strain into a second dish. A non-living substance that will not grow will be placed in the third dish. They will make careful observations and write up a data report and analysis discussing the results in the three dishes.
- Students will go on a trip in the field to observe the interaction between native species and recently introduced species of plants. They will identify and take a census of the plants in a given area. Digital photographs or alternatively drawings will be made and entered in their exploration notebook.
- Students will watch a video on Killer Bees!

- In groups (of 4), students will choose an invasive species in the U.S., such as kudzu, the zebra mussel, Japanese beetle, water chestnuts, etc., and create a short report to present to the class. Students will use time in and outside class to do the necessary research.

Assessment

**** <u>Data Report & Analysis: The Behavior of Bacteria under Competition</u>**

Students will be given a grade on their reports based on the completeness, neatness, and quality of analysis. But first students will evaluate the reports of other members of their group and provide constructive feedback, using a checklist to determine the completeness. Students will have a chance to rewrite their reports based on the peer feedback. A rubric follows to be used on the final product for a grade.

	Needs Work 1	**•Novice 2**	**Competent 3**	**Expert 4**
Complete	Observations are few and with little detail.	Observations are stated in general terms with only a little detail.	Observations include detailed descriptions and measurements of the growth of each culture. Drawings and/or pictures may be included.	Observations include well written detailed descriptions and measurements of the growth of each culture. Quality drawings and/or pictures are included.
Analysis	There is little or no discussion about the interaction of the cultures.	There is a sometimes weak discussion about how the cultures interacted.	There is a thoughtful discussion about how the cultures interacted with some speculation about further investigations.	There is a thoughtful well written discussion about how the cultures interacted with some speculation about further investigations.
Neatness	The work is poorly formatted and difficult or impossible to read. Grammatical and spelling errors are frequent.	The work is readable, but not necessarily well-formatted. There are many grammatical and spelling errors.	The work is easy to read and there is a minimum of poorly formatted sections or grammatical/spelling errors. Care was taken about the appearance.	The work is well formatted and presented so that it is pleasant to look at and read. There are no more than a couple of grammatical or spelling errors. Great care was taken to produce the work.

**** <u>Field Trip Observations</u>**

Students will turn in their science exploration books with their carefully made notes about this activity.

**** <u>Quiz on Invasive Species</u>**

<u>Focus #4: The Science of Projectiles</u>

- How can you maximize the flight distance of a bullet from a gun?
- How did armies shoot things before gun powder was invented/discovered?

State Frameworks

Physical Science #11: Explain and give examples of how the motion of an object can be described by its position, direction of motion, and speed.
Physical Science #13: Differentiate between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa.

Students will be able to:

- Describe strategies to maximize the distance traveled by a projectile.
- Use mathematical formulas to calculate the theoretical distance a projectile will travel.

Activities

- Students will explore how the angle of projection affects the distance traveled by a projectile.
- Students will build working small scale replicas of medieval trebuchets and explore what features of the trebuchet affect its ability to hurl objects. Students will design and implement experiments to test a particular feature of their models.

Assessment

** Graph and Analyses of Projectile Motion

Students will be graded on the accuracy of their graphs and the analysis of the results.

	Needs Work 1	**•Novice 2**	**Competent 3**	**Expert 4**
Accuracy	Points are not plotted properly and/or graphs are mostly incomplete.	Some points are incorrectly plotted. Most graphs are complete.	Graphs are fairly well presented with mostly accurate units. There are no more than a few minor errors in plotting points.	Graphs are neatly presented and properly labeled. Units are used correctly and there are no significant errors in plotting points.
Analysis	The language, grammar, and writing style make it difficult to read. Conclusions, if they exist, are not well supported.	The language is understandable, but the discussion is weak and does not support a clear conclusion about the factors that affect projectile motion.	There is a thoughtful, well written discussion with a few grammatical or stylistic errors. The discussion usually follows a logical process to determine and support a conclusion about the factors that affect projectile motion.	There is a thoughtful, well written discussion with no significant grammatical or stylistic errors. The discussion follows a logical thought process to determine and support a conclusion about the factors that affect projectile motion.

PHASE III: How do we apply have learned?

Focus #5: The Science of Communication

Focusing Questions

- How has the communication revolution affected previously isolated developing nations?
- Teenagers from opposite sides of the globe can now see each other face to face and easily share information. How has that changed the interaction of cultures?
- How does governments' control of communications infrastructure affect the interaction of cultures?
- How does it all work?!?

State Frameworks

Technology/Engineering 3.1: Identify and explain the components of a communication system, i.e., source, encoder, transmitter, receiver, decoder, storage, retrieval, and destination.

Technology/Engineering 3.3: Identify and compare communication technologies and systems, i.e., audio, visual, printed, and mass communication.

Technology/Engineering 3.1: Identify and explain how symbols and icons (e.g., international symbols and graphics) are used to communicate a message.

Students will be able to:

- Describe in general how global communications – telephones/internet work; and
- Discuss the path of information as it travels around the country/globe.

•**Activities**

- Students will link up with internet pals around the globe and trade cultural information.
- Students will draw a schematic that describes how they were able to communicate with their internet pal, i.e. how did the pictures/audio/text get from one place to the other.
- Students will take a field trip to a local communications facility to learn about one link in the global information network.

Assessment

**** Journal on internet pal meeting and Field Trip**

Students will be given a grade on their journals based on the quality of their questions and answers.

	Needs Work 1	Novice 2	Competent 3	Expert 4
Questions	Questioners show little interest and maybe even contempt for their internet pal. Questions are trite and only require one-word answers.	Some questions are not the type to invoke a rich response. Some are better. Questioners do not appear to be truly interested in their internet pal's culture.	Questions are mostly well thought out, but there may be a few trivial questions. Questions show a good understanding of different cultures and cover a variety of subject areas.	Questions are well thought out and show a genuine curiosity and an understanding about the factors that distinguish cultures. Questions cover a wide variety of subject areas.

Answers	Questions from internet pals are answered with a single word (or as few as possible). Students show little interest in the process and want to get done as quickly as possible.	Most or all questions are answered with with one word or one sentence answers. Student sometimes but not always shows interest in sharing cultural ideas.	Some questions are answered with with one word or one sentence answers, but others answered more thoroughly. Student is excited about sharing cultural ideas.	Questions are answered with care, go beyond a one sentence answer, and demon-strate genuine interest and excitement about sharing cultural ideas.

**** Quiz on Communication Technology**

References

Martinello, M.L. & Cook, G.E. (2000). *Interdisciplinary Inquiry in Teaching and Learning*. New Jersey: Prentice Hall.

Meier, D. (2002). *Habits of Mind*. Retrieved November 24, 2005, from, http://www.essentialschools.org/pub/ces_docs/about/phil/habits.html

"Culture Clash" Science Timeline – Phase I

WEEK 1	Focus #1: How do the movements of a Planet's layers shape the surface of the planet? Day 1: In a Think-Quad-Share format, students will create a concept map of the Earth's Interior as a review of the layers of the Earth. They will share their maps with group members and come up with a single map for the group. Maps will be posted and shared with the class as a whole.	Day 2-4: Students will make a cornstarch fluid in a large dish pan and roll out flat layers of clay, modeling clay, and play dough. They will explore how the sheets move and interact with each other when placed on top of the corn starch fluid. They will make and record careful observations during this exploration. Students will introduce some variation to their "plates" system and make further observations. Findings will be shared with the class in a full class discussion. Students will research the different interactions that occur among Earth's tectonic plates in a jig saw fashion and teach each other about their interaction.	Day 5: This day may be used for overflow if necessary. We will read aloud some of The War of the Worlds by H.G. Wells.
WEEK 2	Focus #2: How do geography and resources affect where people choose to live? Day 1-3: Present class with hypermedia maps and descriptions of a hypothetical world which they will "scout" for colonization purposes. In groups they will discuss, analyze, and create a "scouting" report for the elder council of their community.	Day 4: Groups will present their "scouting" reports and discuss how it relates to their work in the overall project activity (creating their cultures).	Day 5: This day may be used for overflow if necessary. We will continue to read aloud The War of the Worlds which will later be part of the English strand. Further readings will be included in the following phase as time permits.

"Culture Clash" Science Timeline – Phase II

WEEK 3	Focus #3: When cultures collide: What happens when multiple species try to occupy the same space?			
	Day 1: Students set up initial bacteria cultures. While cultures are growing students will begin research of invasive species. They will have access to the school library and the internet during this time.	Day 2: Students will record observations of initial bacteria cultures and introduce further cultures. Further time will be available to continue invasive species research.	Day 3: Students will record observations of bacteria culture clash. Class will watch Killer Bee video.	Day 4-5: Field Trip to see invasive species in action??

	Focus #4: The Science of Projectiles			
	Day 1:	Day 2-4:		

“Culture Clash” Science Timeline – Phase III

WEEK 5	Focus #5: The Science of Communication			
	Day 1:	Day 2:	Day 3:	Day 4-5:
	Students will prepare questions for their internet pal. Groups will split into two pairs of two. One pair will begin to research how internet communication works. The other pair will research telephone communications.	Students will link up with “internet pals” from other countries. They will have 10 minutes to meet and share questions.	Field trip to communications facility.	Prepare for culminating activity.

Conflict Resolution Skills

During the team time block, our students will be engaged in various conflict resolution activities which will help them to become familiar with techniques and skills necessary for a successful Culture Clash Project and culminating activity. We will use William Kreidler's book "Conflict Resolution in the Middle School" as the basis for all activities during this time frame. Each activity will be for 1-2 days of team time periods and will include all students on the team, working in their respective homerooms. These activities will take place over the first 3 weeks on the unit.

1. Conflict Journaling
Students will be introduced to the concept of conflict resolution by beginning to keep Conflict Journals. During their team time activities, a different journal assignment will be presented. For example, the first class will ask students to keep a record of conflicts they see, hear about, or are involved in. Their journal entries should reflect who was involved, describe the conflict, analyze the actions of each person (how did he/she feel?), and what was the outcome. We will use the "Keep a Conflict Journal" handout (page 33) from ESR to introduce the Conflict Journals.

2. Conflict Escalators
There are many activities listed in the ESR book related to Conflict Escalators. The importance of these activities is for students to recognize how conflicts escalate and the feelings/emotions surrounding the escalation. Activities from chapters 3. 4 and 5 will be used over the course of 3 class meetings.

3. Active Listening
In order for students to be able to handle conflicts and potentially resolve those conflicts, they need to be familiar with many strategies. The first important task is learning how to actively listen, or reflect on the speaker's messages. As a follow-up to active listening, students need to have an understanding of "communication potholes" and strategies to help de-escalate a conflict. Activities from the ESR book in chapters 8, 9, and 10 will be used over 3 class periods. There are also journaling activities which will be presented for students to do as outside assignments.

4. Power Struggles
Since part of the unit's theme is on power and the resulting conflicts, it is important for students to be involved in conflict resolution skills related to power struggles. Recognizing the difference between "power over" and "power with" will help students understand types of power and the positive and negative uses of power. Activities from chapters 14, 15, and 16 will be valuable for students to understand power struggles.

5. Negotiating Skills
As part of resolving conflicts, students need negotiating skills to work out power struggles and conflicts. Negotiating allows both parties to compromise and come out with a win-win situation. The skills students will learn during activities in chapters 19, 20 and 21, will be skills they will use directly during the Culture Clash unit

activities and the culminating “mix-it-up” activity. Journal activities will reinforce the concept of understanding and using negotiation.

6. Understanding Culture and Clout
The activities in chapters 25 and 26 are directly related to the theme of our unit. It will be very helpful for students to work on the activities which help them identify how cultural differences can affect conflicts, and understand ways different cultures can live in harmony together. Also, working on the activities about clout will help students make decisions during the role play portion of the unit because they will be familiar with the concepts of power, influence, and economic status which are introduced.

There are many other activities in the Kreidler book which could be used as follow up activities after the unit is completed. The goal of these conflict resolution activities is to give students more information and tools needed to understand conflict, deal with conflict, and help others maintain peaceful relationships.

References:

Kreidler, W. (1997). Conflict resolution in the middle school. Cambridge, MA: Educators for Social Responsibilty.

Culture Clash: Culminating Activity

"Respect for All: Breaking the Cycle"

By the end of the unit's three classroom-based phases, students will be well versed in the various possible outcomes of cultural interactions. Not only will they have produced a rich variety of materials about simulated civilizations during the unit, they will also have better developed their understanding of cultures and conflicts at the community level. In order for students to synthesize what they've learned, they will engage in an extended culminating activity that uses lessons about large-scale cooperation and conflict to kick off activities in more familiar territory - the school cafeteria.

The culminating activity will serve as a catalyst, encouraging students to draw a link between their academic understanding and personal experiences. By looking at their school as a world unto itself, the students will complete their unit by applying knowledge of cross-cultural interaction in history to cross-cultural interaction in the lunchroom, hallways, and classrooms of their school. Following the completion of the civilization simulation, each student group will develop a roving museum exhibition, showcasing the "historical events" and artifacts native to their created cultures. The exhibition will include many of the products students worked on during the unit, including the scale artifact or model, timelines, maps, myths or urban legends, artwork, and graphs. At the same time, the students will undertake the planning of the school's first Mix It Up Day. Mix It Up Day, a national event promoted by the Teaching Tolerance organization, is a day where students and staff are encouraged to step outside of their usual social groups, particularly during lunch. The goal of Mix It Up day is to help

students in diverse communities dispel myths and break social barriers in order to create more inclusive communities.

To begin, the class will take the roving exhibition show on the road, visiting each classroom in the school to display exhibitions, telling the story of each created civilization and its ultimate fate. The purpose of the visit, however, is not simply show-and-tell. The students will also discuss their conclusions about the interaction of cultures to their peers, using various engaging methods to outline the negative and positive effects of cross-cultural contact. Drawing a parallel to the many social and cultural groups within the school, the students will make comparisons that show how their fellow students act like great cultures and civilizations: sometimes clashing, sometimes melding, sometimes existing obliviously in their own spheres. Ideally, the class will be able to outline several reasons why positive cross-cultural interaction was beneficial to great civilizations of the past, and could also be valuable to modern day middle school kids. They will ultimately use the roving exhibition and presentation to introduce the upcoming Mix It Up Day to their peers.

Once the school has been told about Mix It Up Day, students will develop pre-event programs to help other classes get excited and ready. Pairs of students will be assigned as Mix It Up advisors to each homeroom, making several visits to do role plays, teach conflict resolution skills, suggest conversation starters, and generally drum up student enthusiasm. On the day of the event, the class will take an active presence at all lunches to contribute to the event's success. Depending on skills and talents, some students might act as peer facilitators, while others (photographers, journalists, videographers) document the day's happenings. In following up on Mix It Up day, the class will conduct a survey seeking feedback from the rest of the school. Other follow-

up activities could also take place, depending on the students' interest, including writing a newsletter or report, planning another related event, or making a short documentary.

In planning and carrying out a school event like Mix It Up Day, the students will have the opportunity to develop a multitude of leadership, collaborative, and organizational skills. They will conclude the integrated unit very much the way they began: by orchestrating a "culture clash." Rather than simulating with civilizations, however, the culminating activity will be real and (ideally) positive, drawing a vital parallel between the familiar world of the school and the faraway world of great empires. The students will have the opportunity to show their friends and classmates that when different cultures and groups interact, they don't have to clash – they can have a blast.

Reference

www.tolerance.org