

## Integration of Expeditions across Content Areas<sup>1</sup>

Kuumba Academy

### 6<sup>th</sup> Grade – Fall Expedition

#### “Those Who Came Before Us” and “The First American: Kennewick Man and the Settlement of North America”

(adapted from Expeditionary Learning expedition “The First Americans: Kennewick Man and the Settlement of North America”)

In this 12 week, two part expedition, students learn about the First Americans in a piece titled, “Those Who Came Before Us” and conduct a case study on the very controversial Kennewick Man and the debate over his remains. Students learn mapping skills, developing their capacity for identifying locations mentally. Students investigate prehistoric culture, and compare it to the world they live in today. During this investigation, students discover how people use land, and how the choices they make about how to use the land result in patterns of functional regions. As students learn more about Kennewick Man, they begin to form an opinion on who should have rights to the remains; scientists, the government, or Native American tribes. Students will convey their beliefs about this controversy in a persuasive writing piece. Students will also write historically-accurate lyrics to a modern song explain Kennewick Man’s journey. Students will leave complete this expedition with a better understanding of our history, culture, geography, and what it takes to truly stand up for who/what you think is right.

Science Kits <sup>2</sup>	Social Studies <sup>3</sup>	ELA	Math	Visual Arts	Performing Arts
<p><b>Earth History</b> Through studying the Grand Canyon’s sedimentary rock layers, student will gain the tools to make inferences about what the Earth looked like when Kennewick Man first came to America. Investigating types of rocks, rock formations, sequences, and how to interpret the information fossils (specifically the</p>	<p><b>Building Global Mental Maps</b> Within this expedition, students will build a capacity for creating more in-depth mental maps that extend farther than locations familiar to them. Student will create a map of the Northwest region of America, including all essential map elements. The students will use these maps to better</p>	<p><b>Take a Stand (essay)</b> During this expedition, students will craft a persuasive essay that requires them to take and defend a stance on where they believe Kennewick Man’s remains belong. Regardless of whom they choose to advocate for, the government, scientists or Native American tribes, students must address</p>	<p><b>Singapore Math Units:</b> Speed and Rate  Ratio and Proportion  Students will apply the mathematical formulas for speed and rate to estimate the length of the supposed journey across the land bridge. Students will estimate how long travels lasted and what a comparable journey would look like</p>	<p>Within this expedition, students have created maps displaying two possible arrival routes. Expanding on these detailed maps, students will use colors and shading to represent specific regions discussed in the unit.  Incorporating three-dimensional material, and piecing maps together from</p>	<p>After listening to the song, “History of Everything” by The Barenaked Ladies, students will begin identifying and analyzing what each stanza of the song means. Students will then write lyrics to a short song of their choice, detailing the events they believe lead to the discovery of Kennewick Man.</p>

<sup>1</sup> This map articulates the content to be integrated during each of the fall and spring expeditions. Content will also be taught to students when they are “off expedition” at the beginning and end of the school year and during “intercession,” which is the time between expeditions in December – January each school year. A full curriculum map for each content area (excluding science and social studies) is included in the application.

<sup>2</sup> The science kits will be taught as outlined by the Science Coalition. Connections to other contents areas will be additive and deepen students’ knowledge of the science content

<sup>3</sup> The social studies units will be taught as outlined by the Social Studies Coalition. Connections to other contents areas will be additive and deepen students’ knowledge of the social studies content.

<p>remains of Kennewick Man found in Washington state) lend scientists in creating a vivid picture of what the Earth looked like in prehistoric times. By studying changes in to the Earth, students will begin to develop theories and draw conclusions about the exact origin and history of early Native American people.</p>	<p>comprehend the possible travels of prehistoric man, along with building a point of reference as to where these events took place in relation to modern America and the rest of the world. Creating and reflecting on the maps will solidify understanding of Kennewick Man's life and his journey, developing mental images students can reference throughout the expedition.</p> <p><b>Culture &amp; Civilization</b> Within this expedition, students will study the places where civilization began, how civilization started in those places, and how unique patterns of culture are formed in those places. By studying prehistoric man and the changes in the Earth, students understand why culture is important. Further, students will make connections between cultures and recognize cultural difference. Students will gain insight to the ownership controversy that has made Kennewick Man a</p>	<p>the traditions and beliefs of death and burial according to Native Americans. They must also address reasons for and the effects of the Native American Graves Protection. Students will identify and summarize the sequence of events following the discovery of Kennewick Man in 1996. Students will incorporate transitions words, such as <i>then</i>, <i>next</i>, <i>after</i>, <i>finally</i>, in order to effectively build a case as to who should have ownership of the remains.</p> <p><b>Reading Non-fiction</b> Within this expedition, students will read several informational texts, identifying main ideas and citing supporting details. Students will make connections and respond to historically and culturally significant works of literature such as Ancient Encounters: Kennewick Man and the First Americans and Across Atlantic Ice: the Origin of America's Clovis Culture.</p> <p><b>Character Sketch</b></p>	<p>today.</p> <p><b>Singapore Math Units:</b> Circles</p> <p>Triangles and Quadrilaterals</p> <p>During this expedition, students will create maps that accurately depict the Americas, detailing the two theories of possible arrival to North America. The map will be drawn to scale, clearly labeled with a key and with all major bodies of land and water identified. The map will be accompanied by short written description of each theory.</p> <p><b>Singapore Math Units:</b> Percentage</p> <p>Data Handling</p> <p>Students will conduct a survey of an established sample group, analyzing what stance the general public takes on the ownership controversy. Armed with their knowledge and research-based data students will briefly educate a sample group with the discovery of Kennewick Man.</p>	<p>classmates, students will create a topographic model of a region.</p>	
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	<p>world-wide celebrity. During the expedition, students will take on the role of either a United States Government representative, a scientist, or a member of a Native American tribe, building a strong, data-based case for why they should be granted ownership of the remains.</p> <p><b>Reason for Regions</b> Students learn how people use land, and how the choices they make about how to use the land result in patterns of functional regions. Students will picture walk through several books that illustrate regions in our world, specifically North America. During a Think-Pair-Share activity, students will discuss how specific regions are identified, zoned, labeled, and utilized. Using comparing and contrasting strategies, students will complete a Venn Diagram listing several attributes to North American regions in both prehistoric and present times. Interpreting their</p>	<p>Based on the information presented during this expedition, students will create a historically accurate, fictional character sketch that addresses controversial issues surrounding Kennewick Man from the viewpoint of a Native American, and their specific encounters during this time.</p>	<p>Participants in the survey will report back to the students, which party they believe had rights to the remains. Students will write mathematical statements reflecting this data in the form of percentages and displaying the information in the form of a pie chart.</p>		
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	graphs, students will be able to create an opinion on why regions are important, citing precise examples from resource material.				
<b>6<sup>th</sup> Grade – Fall Expedition</b> <b>Skatepark Science</b> <b>(adapted from Expeditionary Learning expedition “Skatepark Physics”)</b>					
<p>During this expedition, students will investigate the principles of physics and motion through the lens of an extreme athlete. Students will learn about body systems and function, and how these systems work together to keep our bodies healthy. Students will determine which body system they find to be most important to an athlete, specifically a skateboarder. Conducting experiments using Fingerboards as models, students will investigate force and motion. Students will add a number of variables to the equations measuring how outside factors, such as friction, affect force and/or motion. By observing skateboards both stationary and in motion, students will discover how simple machines lend themselves to everyday toys. Students will craft a skateboard prototype that contains at least one simple machine, improving the skateboard’s functionality. Students will research and write a biography of an extreme sports icon, making connections between the individual and the popularity of the sport. Further, students will research the importance of helmets and report out on their findings via public service announcement. Students will design a skatepark using precise angle measurements and painting methods. Ultimately, students will make connections between the recreational activities they enjoy and the science behind them, gaining an appreciation for science in everyday life.</p>					
<b>Science Kits<sup>4</sup></b>	<b>Social Studies</b>	<b>ELA</b>	<b>Math</b>	<b>Visual Arts</b>	<b>Performing Arts</b>
<b>My Body and Me</b>  Within this expedition, students will be learning about body systems and discussing why each system is necessary for humans. Students learn about the major organs and systems in the human body and their functions. Students examine the relationship between structure and function and how circulatory, respiratory and digestive systems interact to support life		<b>Info Cars</b> Within this expedition students will write product cards outlining differences in wheels. Based on data from investigations and their research, students will determine how to convey information and educate customers about board wheels. The explanatory cards will be displayed at local skate shops.  <b>Skate Safety</b> Students will analyze	<b>Singapore Math Units:</b> The Four Operations of Fractions  Algebra  Within this expedition, students will craft algebraic equations derived from formulas learned earlier in the expedition in science. Using these formulas, students will create Variable Cryptograms, coding a relevant secret message.	Using CreateASkate.org as a resource, student will design a blueprint of a skatepark. Students will include specific elements of art and principles of design on their blueprint.  Displaying multiple painting techniques, students will use a skateboard as their canvas, imitating the style of a previously-studied artist; students will display an understanding of	Students will compose a musical piece to play during a skate-run of the icon they researched earlier in the expedition.  Students will use the footage of the run and beat as an introduction to their own run. Student may execute this run live, virtually, modeled, or in the form of video clips. Students will provide a vocabulary sheet, outlining their run and what units of learning

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<p>processes. Students will trace a classmate's body and sketch each system in the outline, highlighting the system they find most important to athletes by critically evaluating each system's function.</p> <p><b>Force and Motion</b> This unit allows students the opportunity to explore the physics of force and motion as it applies to skateboarding. Students will conduct several experiments, determining what means of force cause the most motion. Using Fingerboards which are 96 millimeters in length, students will create a scale model of a hill, and conduct several experiments, incorporating outside factors to both calculating and interpreting motion. Students will conduct an initial investigation as a control, dropping the Fingerboard down the hill. Students will repeat this experiment adding outside factors, resulting in changes in data. Students will use a variety of items to</p>		<p>skateboard safety and the importance of wearing helmets. Students will create Public Service Announcements to be shown at local skateparks and skate shops, educating the public on why helmets are necessary. Supporting their PSA, students will display a first-aid brochure, accompanied by an interview with a local doctor on skate safety that the students conduct.</p> <p><b>Awesome Athlete</b> Students research the importance of Tony Hawk to the popularity of extreme sports. Students identify other people in modern history who contributed to the growth in popularity of extreme sports, and will complete a biography on one of those people.</p>	<p><b>Singapore Math Units:</b> Volume of Prisms and Cylinders</p> <p>Angles</p> <p>Within this expedition, students design a skatepark. Expanding on their designs, students will use protractors to measure exact angles of the parks they've designed. Students will use three-dimensional shapes, adding perspective to their designs.</p> <p><b>Singapore Math Units:</b> Probability</p> <p>Fractions and Decimals</p> <p>Students will investigate a variety of skateboard tricks. Students will calculate the probability a trick will be executed successfully in a given sampling. Student data will be depicted graphically.</p>	<p>different painting methods.</p>	<p>are exemplified within this expedition.</p>
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<p>produce imitation friction, such and sandpaper and grass. Students will also record what happen when the Fingerboard is pushed, dropped, left to fall under its own force, and how these means of force affect the motion of the skateboard.</p> <p><b>Simple Machines</b>  Within this unit, students will investigate the simple machines utilized in designing skateboards. Using K'NEX and rubber bands, students will construct at least three different simple machines, such as levers, pulleys, and inclined planes. Students will report on how they constructed each machine and how the machine transfers energy, reducing the amount of force it takes to move a given object. Students will then observe a skateboard both stationary and in motion. Applying their knowledge, students will identify simple machine that are used in the design of a skateboard, such as a wheel and axle. Using</p>					
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K’NEX, students will construct a skateboard proto type that contains at least one simple machine system that will improve the skateboard’s functionality.					
<b>6<sup>th</sup> Grade – Intercession</b>					
<b>Science Kits</b>	<b>Social Studies<sup>5</sup></b>	<b>ELA</b>	<b>Math</b>	<b>Visual Arts</b>	<b>Performing Arts</b>
<b>Electric Energy</b> After a review of simple circuits, students are guided to an understanding of a series and parallel circuits from an energy perspective. Using light bulbs, circuits, and batteries students will build several simple circuits with circuit kits following specific parameters. Students will demonstrate an understanding of the transfer of energy, how electricity flows, and	<b>Economic Systems</b> This unit explores the characteristics of different economies (traditional, command, market, and mixed) and how each economy makes production, exchange, and distribution decisions based on cultural values, resource availability, and use of technology.  Students will participate in a classroom market place activity. Students will take on the role of		<b>Singapore Unit:</b> Negative Numbers		

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what happens to this energy in a system; where does this energy come from, how is it changed within the system, and where does it ultimately go?	both producers and consumers. Using previously written “circumstance cards,” the teacher will prompt students with several situations. Students will come up with an economic plan to manage each circumstance.				
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**7<sup>th</sup> Grade – Fall Expedition  
Through the Eyes of Our Veterans**

(adapted from Expeditionary Learning expedition “Through the Eyes of Our Veterans”)

Middle school students begin to examine themselves and the people they are becoming. Students investigate genes and heredity. Students ponder the debate around nature versus nurture, thinking about veterans and what makes them choose a life of service. Students examine the world around them and think critically about the factors that determine outcomes that affect their lives. Students analyze the complexities of our modern world and the conflicts of the 20th and 21st centuries. They identify the causes and effects of conflict. Students compare/contrast various perspectives of conflict. Through art and music, students interpret and reflect on war and what our veterans mean to them. Using local veterans as interview subjects and experts, students will solidify their thinking about war and the importance of the on the ground players. Finally, these skills lead them to honor the sacrifices that others have made in the past and continue to make as we move forward.

Science Kits <sup>6</sup>	Social Studies <sup>7</sup>	ELA	Math	Visual Arts	Performing Arts
<b>Our Genes; Our Selves</b> Within this expedition, students discover how they came to be the young adults they are today. Students collect and present individual and group data about human traits. Student will develop an opinion of whether or not human traits are inherited from	<b>Historical Research of War</b> Within this expedition, students investigate causes & effects of 20th & 21st century conflicts.  Students analyze the social studies topics of WWII, Cold War conflicts (Korea & Vietnam), the Persian	<b>Primary Sources</b> This expedition focuses on recognizing various perspectives through reading interviews with fictional characters versus real people, such as characters from <i>The Wizard of Oz</i> and the play, <i>Wicked</i> . Students develop interview skills and questioning	<b>New Elementary Mathematics Units</b> Whole Numbers  Fractions, Decimals and Approximations  Rate, Ration and Percentage  Introducing Geometry	As a class, students examine Picasso’s <i>Guernica</i> . Students will interpret his pain and write a reflection.  Replicating abstract art techniques, students will create a piece based on their feelings about war.  Art students experiment with photography,	Students investigate Jazz and Blues as they relate to the events of the time period.  The Terazin Concentration camp and its role in WWII are studied. Students also analyze protest songs, civil rights music, and movie soundtracks.

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<p>parents or acquired.</p> <p>After learning about hereditary diseases, students evaluate benefits and trade-offs that accompany genetic testing.</p> <p>Through multiple experiments and laboratory investigations, students will gain understanding of genetic outcomes, as displayed on Punnett Squares. Utilizing critical think skills, students will analyze the benefits and concerns that surround genetic testing, and form an educated opinion on how much of ourselves is nature and how much is nurture. Students supply this data as support for taking an educated stance on which influences humans more?</p>	<p>Gulf War, and the current conflicts in Iraq &amp; Afghanistan. For each conflict, students identify the causes, consequences, and sacrifices made.</p> <p><b>Conflict and Cooperation</b> During this unit, students use a variety of resources to gain an understanding of the various perspectives involved in each conflict in order to better understand the complexities of modern conflicts in our world. Students create maps depicting expansion and change over time. Students identify this as a factor in many world conflicts.</p> <p><b>Expansion and Freedom</b> Examining the ideals of being an American, democracy, and the notion of majority rule, students interview veterans, hoping to detect similarities that drive these men and women to make the ultimate sacrifice in honor of our country. Students also analyze the sacrifices made by</p>	<p>strategies in order to obtain and categorize information. Students apply their interview findings to first person narratives from the perspective of the veteran they interview.</p> <p>Students learn the difference between editing and revising in order to enhance their narratives. Students apply rubric elements to provide peer/self-feedback that will enhance narrative writing.</p> <p>Ultimately, students honor New Castle County's veterans with original narrative performances, to be displayed with a picture on a memorial wall.</p>	<p>Solving Problems Involving Financial Transactions</p> <p>Similarity and Congruence</p>	<p>creating photo portraits of their veterans for the memorial war.</p> <p>Students engage in a Memorial study, familiarizing themselves with the memorials and statues that exist within the state of Delaware. They will do field trips or photo studies of the Veteran Memorials in Dover, Odessa, Newark, New Castle and the multiple Wilmington sites.</p>	<p>Students honor sacrifice through dramatic performance.</p>
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	<p>individuals and groups of people in the last century and what it means to be free.</p> <p>In the end, students learn to value the importance of honoring veterans and those who have made sacrifices</p>				
<p><b>7<sup>th</sup> Grade – Spring Expedition</b>  <b>Our Own: Delaware’s Bays</b>  <b>(adapted from Expeditionary Learning expedition “Indy’s Own”)</b></p> <p>In this expedition, students study the preservation of the Delaware Bay from multiple angles. They research the organisms of the watershed’s ecosystem, study water cycles, and map water pathways on a quest to determine what life is. Students discover how to be an engaged citizen and what a citizen can do to better society, focusing on local problems. Student will identify local environmental issues and propose possible solutions to them. Students will create an informational class calendar that will be sold, donating all proceeds to a conservation group. This multi-faceted approach to learning about the bay will strongly motivate students to work to preserve it. The students’ work is directly benefitting the DNREC.</p>					
Science Kits <sup>8</sup>	Social Studies <sup>9</sup>	ELA	Math	Visual Arts	Performing Arts
<p><b>Diversity of Life</b>  In this unit, students will consider characteristics of all living organisms and develop an operational definition of life. Students learn that organisms in ecosystems have dependent and independent relationships and that natural and human-made events can disturb</p>	<p><b>Project Citizen</b>  This instructional unit examines how citizens can participate in solving community problems. Referencing the State of Delaware online history, as well as local historians and rangers, students will document the changes of the Bay, both positive and negative throughout time.</p>	<p><b>Species Cards</b>  During their study of the Delaware ecosystem, students become experts on one species that lives in the Bay area. They work with wildlife experts, conducted fieldwork, and research to create information cards about their species, which they present to inform younger students of all the species they share</p>	<p><b>New Elementary Mathematics Units</b>  Arithmetic Problems</p> <p>Real Numbers</p> <p>Polygons</p> <p>Symmetries and Nets of Solid Figures</p> <p>Area and Perimeter</p> <p>Volume, Surface Area and Density</p>	<p>Enhancing the calendars the students are creating in ELA, students will illustrate pictures to accompany the content of the calendar. Students will explore a variety of means to include such as drawing, painting, photographs, clippings, computer searches, and primary sources ensuring an accurate, appealing depiction.</p>	<p>Students will listen to Ottis Reading’s <i>Sitting on the Dock of the Bay</i>. While viewing the lyrics, students will write what message they believe he was trying to convey. Interpreting the lyrics, students will make connections between the song and their lives. Student will identify a song that is reflective of a peaceful time in their lives.</p>

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<p>an ecosystem. Through laboratory investigations, hands-on discover, and data collection, students develop comprehensive, scientifically-based answers to the question, “What is Life?” Field journals and lab data sheets will reflect each step of understanding needed to develop this answer.</p> <p><b>Delaware Watersheds</b>          Within this unit students will participate in many field experiments and laboratory investigations of water and water cycles.</p> <p>Students will accurately map a path water travels throughout the water cycle. Working in groups, on site, students will investigate how sediment determines the rate at which water moves.</p> <p>Lab groups will be provided with Water Quality Data Sheets. Taking on the role of scientific researchers, students will analyze this body of water. Lab groups will organize their findings in a scientific data report</p>	<p>Within this expedition, the class will create a calendar that will raise awareness about the environmental issues that threaten the Delaware Bay. Proceeds from the sale of the calendar will be donated to the Delaware Department of Natural Resources and Environmental Control.</p>	<p>their resources with.</p> <p>Groups work together to place their species into a class-wide food web that illustrates the relationships of various species in the water.</p> <p><b>Calendar</b>          Students brainstorm a list of what they want others knew about the Delaware water systems, watershed, ecosystems, and development. From this list they organize and design their class calendar, assuring that every class member has a role to play and the support needed to enable students to produce a high quality calendar.</p>			
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that explains water quality parameters and the indigenous creatures of that particular body of water.					
<b>7<sup>th</sup> Grade – Intercession</b>					
<b>Science Kits<sup>10</sup></b>	<b>Social Studies</b>	<b>ELA</b>	<b>Math</b>	<b>Visual Arts</b>	<b>Performing Arts</b>
<p><b>Property of Matter</b> Within this unit, students use the particle model to describe solids, liquids, and gases in terms of the packing and motion of particles. Students show an understanding of physical properties by relating a change in the phase of matter to the increase or decrease of energy in the system.</p> <p>In this unit, students will design and conduct an investigation to separate the components of a homogeneous or heterogeneous mixture, and investigate the effect of temperature and surface area on the rate of solubility of a substance.</p> <p>Students will craft display boards reflecting the properties of matter.</p>			<p><b>New Elementary Mathematics Units</b> Simple Algebraic Expressions</p> <p>Open Sentence Equations</p>		

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<b>8<sup>th</sup> Grade – Fall Expedition</b> <b>Spark of Liberty</b> (adapted from Expeditionary Learning expedition “Sparks of Liberty”)					
The expedition kick-off involves a day immersion in colonial crafts, games and food. Students and outside visitors will share in the festivities. This expedition had one major project – the creation of a realistic, fictional character from colonial times. Students will learn about America’s history and the principles that have shaped our country. They will investigate the Boston Massacre and develop a theory about what really happened. As students gain a clearer understanding of colonial times, they will begin to illustrate their character. Students will use Delaware State archives as primary source materials to research Revolutionary War records. In their research of both primary and secondary document sources, students will extend and localize their understanding of the Revolutionary War by studying DE’s role in it in terms of the loyalty divisions that existed in the state of DE, as well as the famous Battle at Cooch’s Bridge, epitomizing the bravery of those living here who fought for independence. In culmination of their learning, students will perform a dramatic presentation of the research they’ve conducted and the character they’ve created. This expedition helps students to better understand what daily life was like in colonial times, the events that led up to the first shots of the Revolution, and how historical fiction can communicate accurate historical information.					
Science Kits <sup>11</sup>	Social Studies <sup>12</sup>	ELA	Math	Visual Arts	Performing Arts
	<b>Federalism and The American Revolution</b> Students examine letters from John Adams and highlight information about daily life as well as references to historical events. They also did the same activity with historical fiction exemplars of diary entries and letters developed by the teachers. Students begin to better understand the people and the time period. Students then work to develop their character for their writing and portrait, by	Each student select a colonial role from a list of 20 options (blacksmith, lawyer, slave, apothecary, indentured servant). Students will have 10 minutes to trade roles if they wished to do so. Students will learn research skills, how to access and utilize primary sources, and follow guided independent research of their character role.  Each student will complete at least three diary/journal entries or	<b>New Elementary Mathematics Units</b> Word Problems  Congruent and Similar Triangles  Motion Geometry  Statistics I	Students will complete a portrait of their historical character, with special attention paid to accurate facial proportions and the use of background to convey something about that character’s personality or interests. All portraits must display appropriate clothing and settings.	In the expedition, each student selected a section of their writing to use in a dramatic presentation of the “spark” that they studied. On stage, student will stand in a frozen position until they are cued. One by one each “character” will come to life, share a piece of their story and return to their position to freeze again. Through careful ordering, each group of students will share the story of their “spark” with the audience. Colonial

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	<p>completing a graphic organizer; this will give them a structure for thinking about the personality, color, class, context, and culture of their fictional character.</p> <p><b>American Principles</b> While working in pairs, students think about some principles to which the American people appear, or claim, to be committed. Student pairs will create webs that identify the principles associated with the American people.</p> <p>Students will examine the principles civics education experts (e.g., authors of national and Delaware standards) have associated with the people of the United States. The list is drawn from major American state papers, including the Declaration of Independence and the Constitution. Using sentence strips as bridges, students will make connections from the Bill of Rights, to the Constitutions, to the American Principles on a bulletin board. Students will identify</p>	<p>letters written from the perspective of their fictional historical character, based research of colonial times.</p>			<p>music between each scene and colonial costumes will add to the historical atmosphere of the show.</p>
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	<p>the connection by writing on the sentence strip.</p> <p><b>The “Boston Massacre”</b>          This unit uses the “Boston Massacre” as a case study to uncover reasons for different interpretations of the same event. Students will analyze primary source materials to construct their own interpretations of what happened on March 5, 1770, and then critique interpretations advanced by others. Using clues and factual evidence, students will piece together the events, determining what they believe happened. Students will illustrate the events in a sequenced sketch.</p> <p>Students will also study the divisions that existed in Delaware in terms of Patriots and Loyalists during the Revolutionary War, analyzing the geography of where loyalties lied. Students will also engage in a study of the Battle at Cooch’s Bridge, as well as the near battles and history</p>				
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	of the Revolutionary War's path through DE.				
<b>8<sup>th</sup> Grade – Spring Expedition</b> <b>Kuumba's Carbon Footprint</b> <b>(adapted from Expeditionary Learning expedition "Reducing the Carbon Footprint of Vergennes Union Middle and High School")</b>					
<p>Within this expedition students are engaged in critical examinations of the pollution issue. The first investigation involves measuring the volume of the school and completing an inventory of all the items in the school that require electricity. This information, along with the students' estimation of the amount of heating fuel consumed, will be used to calculate the actual carbon footprint of Kuumba Academy. The second investigation focuses on the changing climate of the earth as emission levels in the atmosphere continue to increase. The final investigation of the expedition requires students to travel to various sites in Delaware to investigate systems employed and/or sold to reduce the use of fossil fuels. During these visits, students will meet with building managers and interview them about the process of implementing their alternative energy source and the impact it has on their business. This investigation will help students to draw conclusions about how choices within an economic system can affect the environment in their community and the world.</p>					
Science Kits <sup>13</sup>	Social Studies <sup>14</sup>	ELA	Math	Visual Arts	Performing Arts
<b>Delaware's Ecosystems</b> Within this expedition, students will survey the diversity of organisms in a local or model ecosystem, like the watersheds. Students will categorize populations of organisms according to their role in the ecosystem (producer, consumer, decomposer). Based on their finding, students will explain ways that the number of organisms in an ecosystem can be limited, and why some organisms may not be thriving. By collecting and analyzing	<b>How Markets Work</b> In a market economy, prices of goods and services along with quantities demanded and produced continually change. Changes in supply and demand occur because of many factors. Understanding the market forces and situations that cause supply and/or demand to change is essential to understanding how prices are determined.  How is the current environmental conservation, the "Green Movement" affecting market	<b>Alternative Energy</b> During this expedition, students will break into groups, based upon their interests, in order to begin in-depth research into one of four alternative energy sources: wind power, solar power, biomass power, or methane power. Each group will complete a report that includes the science behind the technology, the advantages and disadvantages of the energy source, the monthly and installation costs, the benefit for the environment, a cost benefit-analysis, including the return on	<b>New Elementary Mathematics Units</b> Graphs  Simultaneous Linear Equations  Congruent and Similar Triangles  Statistics II  Algebraic Manipulations	Students will create a comic strip displaying their understanding of a carbon footprint and the effects it has on generations to come. Each comic strip must have dialogue and be illustrated.	Within this unit, students engage in a fishbowl exercise, listening to specific songs with lyrics available; the inside circle discusses what they think the thesis of the song might be, using evidence from the lyrics to support his or her view. The outside circle students evaluate the use of evidence. Then circles switch roles.  Bob Marley's <i>Redemption Song</i>  Merle Haggard <i>Mama Tried</i>

<sup>13</sup> The science kits will be taught as outlined by the Science Coalition. Connections to other contents areas will be additive and deepen students' knowledge of the science content.

<sup>14</sup> The social studies units will be taught as outlined by the Social Studies Coalition. Connections to other contents areas will be additive and deepen students' knowledge of the social studies content

<p>population data, students will infer possible cause effect relationships between limiting factors and population changes. Students will design food webs and trace the flow of matter and energy through the food chain. Students will hypothesize what will happen within that chain if pollutants continue to grow. Students will investigate how pollution has impacted Delaware's ecosystems by comparing lab records from prior years to current data.  <a href="http://delaware.sierraclub.org/waste">http://delaware.sierraclub.org/waste</a></p> <p><b>Transforming Energy</b>  Knowing that kinetic energy is the energy an object has because of its motion and that kinetic energy depends upon the object's speed and mass, students design and carry out investigations to determine how changing the mass of an object or changing its speed changes its kinetic energy. They will accurately construct, interpret, and analyze</p>	<p>conditions? Students specifically research gasoline and oil prices, hybrid vehicles, and solar-powered homes. Students conduct interviews with home, appliance and furniture store owners/managers, examining if there has been a shift in goods purchased in response our Planet's failing health. Students will also conduct on-site interviews with individuals or groups utilizing systems used to reduce our carbon footprint.</p>	<p>the investment over time, and the financial support available from the state and federal government. Working as a group to compile the report, the class will pool all their group reports into one collective piece to be presented to the school board along with class recommendation for the best alternative energy source to reduce the carbon footprint at Kuumba Academy.</p> <p><b>Climate Indicator Postcards</b>  Within this expedition, students learned about the <i>nine identified indicators</i> that scientists use to determine if climate change is occurring over time. Students will choose one of these indicators and write a persuasive postcard that provides information about the significance of this indicator of climate change. The postcards may be mailed to anyone they know in the state of Delaware, hoping to raise awareness about the importance and the impacts of climate</p>			<p>Gillian Welsh <i>Annabelle</i></p> <p>Cyndi Lauper <i>True Colors</i></p>
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<p>tables, diagrams and graphs, showing relationships between two variables relating to energy. After conducting several simple investigations, students will determine the total amount of energy used by Kuumba Academy. Taking a series of small steps, students recognize that many large problems may be solved using deductive reasoning. First, students will work in small groups to measure the volume of the school and conduct an energy audit of all of the electrical appliances used in the building. Students present their learning with scale drawings showing the mathematical approach they used to determine the volume of their assigned space. Based on this information, students will then complete an energy audit in which they present the total KWH of electricity used per product in the school, and the total amount of heating fuel used to heat the school. Within this expedition, students will also explore the causes</p>		<p>change.</p>			
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<p>of global warming and investigate changes in Delaware’s climate over the past decade. Students study the impact of increased carbon emissions and other greenhouse gases on the temperature of the earth’s atmosphere and oceans, and then wrote an informative postcard to educate their selected audience about the changes in Delaware’s climate. Students identified a cause and an effect associated with global warming in their home state.</p> <p><b>Weather</b>          Within this expedition students will observe and study weather and document possible changes in global weather due to the Greenhouse Effect. Working in teams, students observe and measure atmospheric properties such as wind speed and direction, cloud cover and type, temperature, dew point, air pressure, and relative humidity. By accurately recording and interpreting daily weather measurements</p>					
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<p>over an extended period of time, students will gain the skills to predict and to identify weather patterns. Students will construct tables, diagrams and graphs, showing relationships between current weather patterns and those from, years past.</p> <p>Students develop their background knowledge of global warming by identifying what they already know about the subject and then using expert texts and videos to further develop their knowledge. Students will watch and read Al Gore’s <i>AnInconvenient Truth</i>, as well as Elizabeth Colbert’s <i>Field Notes of aCatastrophe</i>, then identify the relative importance of new information and develop questions for further study. With this background knowledge as a base, students conduct laboratory experiments to simulate global warming and to explain the science behind the phenomenon.</p>					
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**8<sup>th</sup> Grade – Intercession**

Science Kits <sup>15</sup>	Social Studies	ELA	Math	Visual Arts	Performing Arts
<p><b>Planetary Science</b>            Within this unit students will learn how to collect and analyze data on sunrise and sunset times to describe patterns. Students will examine the planets and the moon, explaining why the Moon's appearance changes in a repeating cyclical pattern. Using models, students will describe how the relative positions of the Sun, Moon, and Earth account for Moon phases, eclipses, and tides. Student will use models to explain how variations in the amount of Sun's energy hitting the Earth's surface results in seasons.</p>			<p><b>New Elementary Mathematics Units</b>            More Algebraic Manipulations</p> <p>Indices</p> <p>Inequalities</p> <p>Mensuration</p> <p>Pythagoras' Theorem and Trigonometry</p>		

<sup>15</sup> The science kits will be taught as outlined by the Science Coalition. Connections to other contents areas will be additive and deepen students' knowledge of the science content.

## Integration of Expeditions in Visual and Performing Arts

Grade 6 Fall "Those Who Came Before Us" and "The First American: Kennewick Man and the Settlement of North America"		
Visual Arts	Performing Arts	Extensions
<ul style="list-style-type: none"> <li>• Costume Design-identify the tribes/people from others</li> <li>• Preparation of Meals and Native American foods</li> <li>• Making Arrows and Bows</li> <li>• Creating cave art</li> <li>• Study and Create fossils as evidence of migration</li> <li>• Make teepees</li> <li>• Identifying and drawing edible and medicinal plants by creating a "Still Life"</li> <li>• Create Mosaics</li> </ul>	<ul style="list-style-type: none"> <li>• Dance Presentation -who are the Lenapes</li> <li>• Native American songs and chants</li> <li>• Fencing and Archery</li> <li>• Battle Dance –Students will choreograph movements that depict sequence the defense techniques</li> <li>• Create a skit about various forms of evolution</li> </ul>	<ul style="list-style-type: none"> <li>• Visit Iron Hill</li> <li>• Visit Hagley museum</li> <li>• Camping Trip</li> <li>• Horseback riding trip –Bellevue State Park</li> <li>•</li> </ul>

Grade 6 Spring Skate park Science		
Visual Arts	Performing Arts	Extensions
<ul style="list-style-type: none"> <li>• Make a skateboard (crafting boards) wood shop</li> <li>• Architectural blue print of a skate park</li> <li>• 3-D representation of skate park</li> <li>• Create a graphic design for skate board art</li> <li>• Building ramps</li> </ul>	<ul style="list-style-type: none"> <li>• Yoga and Pilates (importance of balance)</li> <li>• Pro-athletes – modeling the connections of balance and relationship to their sport</li> <li>• Introduction of gymnastics and acrobatics</li> <li>• Dramatize cultural differences and myths associated with a skate boarders life style</li> </ul>	<ul style="list-style-type: none"> <li>• Traveling exhibit of cadavers-the study of Anatomy and Physiology</li> <li>• Skype with club from California that developed a similar park in an urban neighborhood</li> <li>• Build skill and techniques of balance through rolling skating, inline skating, and ice-skating</li> </ul>

<b>Grade 7 Fall Through the Eyes of Our Veterans</b>		
<b>Visual Arts</b>	<b>Performing Arts</b>	<b>Extensions</b>
<ul style="list-style-type: none"> <li>• Create a mural tribute to vets</li> <li>• Track family (Family Tree)</li> <li>• Make swords</li> </ul>	<ul style="list-style-type: none"> <li>• Learn and Perform National Anthem</li> <li>• Choreograph a dance</li> <li>• Fencing</li> <li>• Re-enact the Color Guard process</li> <li>• Mini Boot camp</li> <li>• Dramatize the Capturing of the Flag</li> </ul>	<ul style="list-style-type: none"> <li>• Interview a Veteran</li> <li>• Visit VA Hospital</li> <li>• Visit from recruiters</li> <li>• Visit Arlington or the Veteran Memorial</li> </ul>

<b>Grade 7 Spring Our Own: Delaware Bay</b>		
<b>Visual Arts</b>	<b>Performing Arts</b>	<b>Extensions</b>
<ul style="list-style-type: none"> <li>• Create a food chain</li> <li>• Build a Terra</li> <li>• Build a diorama of the local eco system</li> <li>• Build a dam</li> </ul>	<ul style="list-style-type: none"> <li>• Role play (inter) dependent relationships of form of life</li> <li>• Interpret the meaning of as song (translate song into Spanish)</li> <li>• Learn Rain Dance</li> <li>• Choreographed dance on the cycle of Life</li> </ul>	<ul style="list-style-type: none"> <li>• Nature Observation at the Riverfront</li> <li>• Cape Henelopen State Park</li> <li>• Overnight trip to Ashland</li> <li>• Brandywine Creek State Park</li> </ul>

<b>Grade 8 Fall Spark of Liberty</b>		
Visual Arts	Performing Arts	Extensions
<ul style="list-style-type: none"> <li>• Quilting</li> <li>• Costumes for Role Play</li> <li>• Set design</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Choreograph dance to SSB</li> <li>• Re-enact the Battle</li> <li>• Swimming towards Lady Liberty</li> <li>• Perform monologues about “the war ending differently”</li> </ul>	

<b>Grade 8 Spring Carbon Footprint</b>		
Visual Arts	Performing Arts	Extensions
<ul style="list-style-type: none"> <li>• Creating/building a house as a community “house raising”</li> <li>• Create a comic strip</li> <li>• Make carbon footprints</li> </ul>	<ul style="list-style-type: none"> <li>• Songs about pollution (Bob Marley)</li> <li>• Students create poems about the sources of power: wind power, solar power, biomass power or methane power</li> <li>• Act out a skit about carbon footprint from the eyes of the earth</li> <li>• Create a product that will improve your environment, script a commercial about it</li> </ul>	<ul style="list-style-type: none"> <li>• Visit Dupont</li> <li>• In-house expert from Delaware Lung Association</li> <li>• Recycling- Visit a (City Recycling Plant) Students help recycling in Wilmington-</li> <li>• Survey Community-Who recycles</li> <li>• *Back to Basics Day- no synthetic chemicals used all day</li> <li>• Building our own community garden</li> <li>• NATURE WALK at a park (how pollution affects the environment)</li> </ul>