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| NECC_NETS_small | **Lesson Plan for Implementing NETS•S—Template I*(More Directed Learning Activities)*** |
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| Grade Level(s) | 8th grade; Regular Education and Gifted Education |
| Content Area | English Language Arts |
| Time line | Six to Nine Weeks |

**Content Standards**

**ELA8RC2 The student participates in discussions related to curricular learning**

**in all subject areas. The student**

a. Identifies messages and themes from books in all subject areas.

b. Responds to a variety of texts in multiple modes of discourse.

c. Relates messages and themes from one subject area to those in another area.

d. Evaluates the merits of texts in every subject discipline.

e. Examines the author’s purpose in writing.

f. Recognizes and uses the features of disciplinary texts (e.g., charts, graphs, photos,

maps, highlighted vocabulary).

**ELA8R1 The student demonstrates comprehension and shows evidence of a**

**warranted and responsible explanation of a variety of literary and informational**

**texts.**

For **literary texts**, the student identifies the characteristics of various genres

and produces evidence of reading that:

a. Identifies the difference between the concepts of theme in a literary work and

 author’s purpose in an expository text.

b. Compares and contrasts genre characteristics from two or more selections of

 literature.

For **informational texts**, the student reads and comprehends in order to

develop understanding and expertise and produces evidence of reading that:

a. Analyzes and evaluates common textual features (e.g., paragraphs, topic sentences,

 concluding sentences, introduction, conclusion, footnotes, index, bibliography).

b. Applies, analyzes, and evaluates common organizational structures (e.g., graphic

 organizers, logical order, cause and effect relationships, comparison and contrast).

c. Recognizes and traces the development of an author’s argument, point of view,

 or perspective in text.

**NETS\*S Standards:**

**Creativity and Innovation**

Students demonstrate creative thinking, construct knowledge, and develop innovative products and

processes using technology.

a. Apply existing knowledge to generate new ideas, products, or processes

b. Create original works as a means of personal or group expression

c. Use models and simulations to explore complex systems and issues

d. Identify trends and forecast possibilities

**Communication and Collaboration**

Students use digital media and environments to communicate and work collaboratively, including

at a distance, to support individual learning and contribute to the learning of others.

a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

b. Communicate information and ideas effectively to multiple audiences using a variety of media

 and formats

c. Contribute to project teams to produce original works or solve problems

**Research and Information Fluency**

Students apply digital tools to gather, evaluate, and use information.

a. Plan strategies to guide inquiry

b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of

 sources and media

c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks

d. Process data and report results

**Critical Thinking, Problem Solving, and Decision Making**

Students use critical thinking skills to plan and conduct research, manage projects, solve problems,

and make informed decisions using appropriate digital tools and resources.

a. Identify and define authentic problems and significant questions for investigation

b. Plan and manage activities to develop a solution or complete a project

c. Collect and analyze data to identify solutions and/or make informed decisions

d. Use multiple processes and diverse perspectives to explore alternative solutions

**Digital Citizenship**

Students understand human, cultural, and societal issues related to technology and practice legal and

ethical behavior.

a. Advocate and practice safe, legal, and responsible use of information and technology

b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity

c. Demonstrate personal responsibility for lifelong learning

d. Exhibit leadership for digital citizenship

**Overview**

This unit is meant to be taught in association with the reading of John Krakauer’s novel *Into Thin Air*, a personal account of the ill-fated 1996 Everest expedition that resulted in the deaths of six team members. However, due to the unit’s interdisciplinary nature, teachers may also teach this in isolation as well. Throughout the unit, students(in groups) will prepare for their own “climbing expedition” by learning about the geography, the culture, the challenges of the rugged terrain of each of the Seven Summits in the world (one on each continent) to which they are traveling, the environment, and the applicable governmental restrictions accorded to the particular area of study. Students will choose an “occupation” or “job” that will become theirs throughout the entire unit. Students will be assigned certain tasks, based on their responsibility to the group, to complete.

**Available Jobs and their Descriptions:** (written as if speaking directly to the student)

**Environmentalist:** You will be responsible for gathering information, and for becoming an expert on the various aspects of the environment of the Summit to which you will be going, e.g. average temperature for each month of the year, snow forecasts, likelihood for storms, etc. You will be the integral decision maker in determining whether or not your climbing team should attempt the summit, based on weather information you have researched and charted. You will also be responsible for managing appropriate waste disposal for your team, as well as determining the ill effects of improper waste disposal. It will also be your responsibility to find out what regulations are in place for environmental protection within the country to which you are traveling.

**Ozone Expert (Antarctica Only):** You will be responsible for becoming an expert on the Ozone Layer--determining what it is, the purpose it serves, and the dangers involved with its slow depletion, e.g. global warming. You will be in charge of studying the ozone on your expedition and determining the ill effects of ozone depletion on humans. What would happen if we lost our ozone layer? Would we survive? What kinds of things can we do to protect our ozone? What challenges do we have with people's attitudes about environmental protection in general?

 **Government Specialist:** You will be responsible for all international and local law regarding your chosen summit.What are the rules for climbing? What kinds of permits, licenses, training, etc will be required of your team before they make their ascent? What is the cost involved in putting together a climbing expedition? Equipment? Fees? Your job will be to put together a budget of climbing expenses from start to finish.

**Biologist:** You will be responsible for becoming an expert on procedures for handling problems humans might encounter in extreme environmental circumstances, like frost bite, hypothermia, broken bones, oxygen depletion, and food consumption. You will be responsible for budgeting money for food, and for determining how much food your team will require and how you will handle the logistics of getting the food to the various camps for consumption. You will also illustrate and document all plant and animal life found in the region of your summit.

**Geographer:** You will be responsible for becoming an expert about the land, and mapping the various features of your Mountain Summit. You will also be the one to choose the best possible route up the mountain, as well as to decide where to place the base camp, and subsequent camps up to the Summit. You will need to have a working knowledge of the natural resources within the country, and the possible uses of them for your team.

**Historian: Y**ou will be responsible for the history of your chosen Summit’s country (countries), including pertinent exploration attempts and the documented efforts of all notorious climbers. You will also be responsible for learning about the customs of the native mountain people, their spiritual preferences, and any political/economic information you deem important for your group to know and understand. In addition, you will track and record all of the progress of the team. The team may also wish for you to keep track of all team information and be the primary researcher while other members are pulling together different activities.

The desire is that the roles above be intertwined in a way that it would be difficult for one person to accomplish their role effectively without the consultation of at least one other group member. It is also hoped that team members will see that it is to their benefit to share their discoveries with one another and assist one another in their efforts. To facilitate this, it is suggested that a debriefing session be shared at the end of each day, in which each member has a chance to share what was learned in that designated time period. A student log should be used for each student to track his/her progress. That information should be shared with the group and recorded briefly by the historian in a team folder. Then as other members discover answers to questions, they should be recorded as well.

The unit also encourages the teaching and the practice of creativity in the classroom, by offering the students a variety of topics from which to choose, coupled with simulation activities, role plays, opportunities for problem finding, meaningful technology integration, and an interesting selection of culminating products and activities from which students themselves can choose as they choose the role they will play throughout the unit.

The Seven Summits and Locations:

 Mount McKinley Alaska (highest peak in North America)

 Mount Everest Tibet/Nepal

 Mount Elbrus Asia/Georgia

 Mount Aconcagua Argentia/Chile

 Mount Vinson Antarctica

 Mount Kilmanjaro Kenya/Tanzania

 Carstensz Pyramid New Guinea

**Unit Objectives:**

The learner will:

1. Demonstrate an increased knowledge of the colorful cultural histories surrounding each of the Seven Summit countries. Students will look at social, economic, political, and spiritual values of these countries, as well as the geography, environmental concerns and international law as it pertains to the countries involved.

2. Develop research, problem solving, and other skills necessary to work effectively and achieve goals in a group setting. Students will learn to bring in their acquired expertise gained from intensive research and share that expertise with their climbing team as well as other climbing teams with like expertise.

3. Collect and analyze historic and current information from a variety of sources, including internet interactive sites, books, magazines, resource materials, and encyclopedias in order to formulate and propose a fiscally sound plan for initiating and maintaining a simulated exploratory climbing team for each of the world’s Seven Summits.

4. Use a variety of technology skills to enhance learning and communicate collaboratively.

**Expected Products**:

**Weekly:**

Student will be required, regardless of his/her position on the team, to maintain a “travel log” of his/her activity and research each week. This travel log will be in the form of a **Wiki**, and will be due each Friday. A minimum of three entries (max 5) are required each week, one of which can be a picture or a collage of students’ work (consider trying **Glogster** for this). Student is to document his/her research findings as well as frustrations and triumphs! At the end of the project, students will turn in this activity log Wiki, documenting the “journey through your research”.

Remember, that students’ **Wiki** will belong to the entire group. It is a way that students can collaborate throughout the project, discuss ideas, share insights and resources, and communicate honestly with respective teammates. It is important that students keep the **Wiki** well-organized. (handout with requirements to set up Wiki) Students will want to make sure that each member of the group has his/her own “page” in the **Wiki**, as there will be several individual items that each person will be asked to produce on the group **Wiki**. These individual tasks must go under each student’s name and page to facilitate assessment. Remember also that students can embed audio and video in a **Wiki**, so students must be sure to look for these resources as well.

A note about sources: Students will need to use a variety of sources for this project. Internet sources will come in handy as the research becomes more specific, e.g. finding details about the cost of climbing one’s particular mountain. However, there are other excellent sources available in

the library, and students will be expected to show a total of 3 different kinds of sources in the research (per individual), of which the internet may only be one.

Wiki logs will be graded individually on quality of content, thoroughness, variety of sources (articles, video, audio, etc) color, elaboration, originality, and appropriateness. Each weekly grade will be the equivalent of a quiz grade, and the final “travel log” **Wiki** will be a major summative grade.

**Team Summit Tasks:** (written as if speaking directly to the student)

Each member of the team will be responsible for producing the following tasks, which will be graded individually. Each individual’s grade will then be averaged with the other team members’ grades for an overall summative team grade.

NOTE: You will be allowed to create your own products, deviating from those proposed below with teacher approval, if you so desire.

**Environmentalist:**

* Create charts and graphs depicting average temperature, snowfall, rainfall, and any other climate information you deem important over a 3 year period. From this information, create a chart forecasting the weather for the year 2014. You will also be able to determine the best possible month for your climb. After you have compiled this information, create a **screencast** of your work, describing your findings. Place your **screencast** on your group **Wiki** site.
* Find documentation from three different sources regarding waste, waste disposal, and overall waste management as it pertains to mountain climbing. What kind of effect can waste management have on the natural resources of the mountain environment? Confer with the Geographer for information regarding natural resources. From the information you gather, create a radio Public Service Announcement **Podcast** outlining the pros and cons of proper waste management.

**Ozone Expert (Antarctica Only):**

* Create charts depicting the process of ozone depletion/thinning over the past 30 years, and indicate your predictions for the future. What will it look like in 10 years? 50 years? 100 years if we continue our current behaviors? After you have compiled this information, create a **screencast** of your work, describing your findings. Place your **screencast** on your group **Wiki** site.
* Devise a lesson plan for students (you choose age group…can be middle or high school) displaying things that students can do to protect the ozone layer. This can be a lesson taught on Earth Day each year. Lesson must include predictions of what could happen without intervention. Be sure to include a physical activity (planting trees, skit) recorded by way of video and uploaded to **VoiceThread,** and an audio representation done through use of **Audacity**. This audio representation will include a favorite song playing in the background with a voiceover recording of an original poem relating to the lesson and capturing what you want students to know and remember about the importance of protecting our environment.

**Government Specialist:**

* Create a spreadsheet displaying the necessary expenses for your climbing expedition. Be sure to include cost of clothing, equipment, climbing fees, and any other category of expenses you deem necessary and/or important. You will also need to confer with the Biologist to obtain the budget for food to include in your overall assessment of financial need. After you have compiled this information, create a **screencast** of your work, describing your findings. Place your **screencast** on your group **Wiki** site.
* Write a one page summary of the rules for climbing, along with any international and local laws that pertain to your climbing expedition. Ensure that this information is also uploaded to your **Wiki** site.

**Biologist:**

* Create a videotaped Public Service Announcement about safety to include what one should do in the event of frost bite, hypothermia, broken bones, and oxygen depletion. In your PSA, you must have a first aid kit that you would be taking with you on your expedition. You will discuss the items in your kit and their importance to mountain climbing during your presentation. Be sure to confer with the Geographer regarding the “lay of the land” to make sure you have what you need for the mountain you will be climbing. This PSA will be uploaded to both your **Wiki** and **Voicethread** for additional student input and collaboration with your own group (via **Wiki**) and with biologists from other groups (via **Voicethread**).
* Develop a spreadsheet for food budget and write a brief recommendation of various foods that should be brought and why. Also include your plan for handling food delivery to the various camps. After you have compiled this information, create a **screencast** of your work, describing your findings. Place your **screencast** on your group **Wiki** site.

**Geographer:**

* Design a 3-D model of your mountain and the proposed route you recommend for ascent. Use a key to define the various features of your mountain, e.g. camps, natural resources, altitudes, terrain, etc. Be sure to confer with the Historian to ensure you are complying with local customs as you design your route up the mountain. (in case you need sherpa assistance from local people)
* As you develop your 3-D model, take digital pictures of your progress (ie: show a picture of raw materials you will use to create your model, then take a picture of the structure/foundation, then take a picture of the building of your mountain [using paper mache, magic modeling clay, etc.], etc.) The idea is to show your model in various stages of construction all the way to the finished product. Load these digital pictures to **Flickr** then create a **Slideshow**. Embed this Slideshow into your group **Wiki**.

**Historian:**

* Create a **Glogster** scrapbook or poster outlining the history of your country (countries), customs of the native peoples, spiritual preferences, as well as political and economic information. Remember that in **Glogster**, you can embed audio and video files, so please be sure to include a variety of expressions when highlighting your country’s history and culture.
* Choose one aspect listed above and write a National Geographic article about your findings. This article will explain your **Glogster** poster/scrapbook, and will educate the reader about what makes your country and its culture unique and fascinating. This article will be uploaded to your group **Wiki** under your name.

The individual information will be compiled into one group “portfolio **Wiki**” upon completion. Your team will decide what kind of presentation looks best, and what order makes the most sense for you. What cannot be included in the portfolio will be presented in class. The only requirements are that you document your sources and that you have a table of contents outlining who did what, and where it is located in the body of the portfolio.

Again, your overall products will be graded on professional appearance (e.g. neatness, legibility, thoroughness, color, elaboration, originality, and appropriateness)

**Essential Questions:**

1. Why explore? Why climb?

2. How does exploration generate progress?

3. When is exploration independent? Interdependent?

4. How does exploration bring people together? How does it separate people?

5. How has technology changed human interdependence with nature in relation to exploration? Or has it?

6. What drives a man/woman to undergo such physically, emotionally, and mentally taxing feats?

7. What can a person hope to gain from such an experience?

8. Is it selfishly motivated or for the good of mankind? Can it ever be both?

**Assessment:**

Students will have a variety of “products” to produce, based on the “job” that they choose (built in differentiation for choice) As students read from the novel (which is very specific the culture and general information relating to Mount Everest, and explore the various tasks that they are to complete, they will generate new and updated knowledge about their own regions of research. Because they will be asked to communicate their research in specific ways, they will be approaching their research from a place of synthesis at the very beginning.

Formative assessments will take place several times a week by the teacher checking into the Wiki pages for updates from each student and each group. Since the Wiki will be organized first by group then by individual, grading will be a snap. No more heavy research notebooks to lug home!

Class periods will be devoted to training students on technologies they may not understand, and ensuring understanding. Class periods with computer access (either via laptop carts or computer labs…whichever is available) will consist of students updating their research and working on their products.

Their final assessments (the class Wiki) and other items they may be individually responsible for will be graded on rubrics. There will be a rubric developed for each expectation. Rubrics will cover the following: professional appearance (e.g. neatness, legibility, thoroughness, color, elaboration, originality, and appropriateness), content, task fulfillment, depth, and complexity.

Product differentiation is built in to the job descriptions. Students will choose their jobs according to what content interests them and what kind of work they want to produce. It is laid out for them to decide prior to the commencement of the project (more about differentiation under “differentiation heading”).

**Resources:**

The technology piece in this whole unit supports student learning in several ways:

* It engages students in meaningful, authentic analysis of research data
* It assists students in communicating and collaborating both inside and outside of school (which is often a challenge using conventional methods)
* It facilitates an engaging and creative dissemination of information which is novel enough to ensure long term information retention.

The digital tools, already highlighted above are:

* Wikis (foundational piece for entire unit)
* Podcasting
* Screencasting
* Glogster
* Voicethread
* Audacity
* Flickr
* Slideshow
* Edmodo (for communication and counseling between teacher and students on-going)

The nice thing about each of these tools is that they can all be embedded into the groups’ Wikis, and easily assessed for progress (formatively) as well as the final product (summative).

Students will be given an overview handout, which outlines the scope of the project, the context in which the project is to take place, the student “invitation” for the project, job descriptions, essential questions, and task outlines. This will help them to understand the scope of the project and the level of expectation to which they will rise. There will also be a variety of handouts which will assist them with directions in how to do things like screencasts, voicethreads, and the like. Students will also have rubrics for each activity they are expected to produce, which will be helpful in providing them the direction they need to meet the anticipated expectations of the unit. Students will also have an opportunity to research in the library and they will also have access to Cobb Virtual Library’s databases, on-line encyclopedias, and other websites which will be marked ahead of time (like NationalGeographic.com, History.com, discoveryeducation.com, etc.) It is not an expectation that students come with any prior knowledge of technology use other than the basics like research skills in databases, word, spreadsheets, etc. The rest of the technology skills (such as those listed above) will be taught in mini-lessons throughout the unit. There will be screencasts created for each of the new skills for slower students to review as many times as necessary to master the concept.

**Instructional Plan:**

**Preparation:**

Students will be placed in ***mixed ability groupings.*** This is done to ensure that there is an equitable distribution of ability across the board. These mixed ability groupings will be based on reading levels. While some students’ reading levels are not as strong as others, oftentimes these “weaker students” excel and can make a contribution in other ways to the group. It is not an expectation that students come with any prior knowledge of technology use other than the basics like research skills in databases, word, spreadsheets, etc. The rest of the technology skills (such as those listed above) will be taught in mini-lessons throughout the unit. Those students who are not equipped with the technology skills listed above will get extra coaching from the teacher as well as others in the group who are stronger in this particular area. By the time this unit will be offered to students (mid-year), the teacher will already have a very good idea of the skill level of each student in the classroom. The greatest amount of difficulty will come with the new technology that will be taught this this unit. Strong technology students will emerge, and if necessary, those students can assist other students, along with the teacher, in working with struggling students. Also, screencasts can be created by the teacher to assist in remediating students who are slower in grasping the concepts.

**Management:**

Because we have limited access to computer labs and computer laptop carts, we have to plan the unit with this in mind. So for times that students do not have access to computer, we will be reading and discussing the book **Into Thin Air** and working on activities related to the work they will need to produce with technology. We will also discuss some of the skills they need to learn related to Literature and reading standards. When we DO have access to the computers, students will work either in the classroom with the laptop carts, or in the computer labs. Access is always a challenge, so it’s important to have lessons in place that can be done without the computer as well. Also, general informational articles are excellent pieces to discuss and work through to enforce mastery of reading standards.

**Instruction and Activities:**

Please refer to the Overview, Available Jobs and Descriptions, Unit Objectives, Expected Products, and Team Summit Tasks above. The instruction and activities are already embedded in the information there. Answers to the following questions can be located above:

* What instructional strategies will you use with this lesson?
* How will your learning environment support these activities?
* What engaged and worthwhile learning activities and tasks will your students complete?
* How will they build knowledge and skills?
* Will students be expected to collaborate with each other and others?
* How will you facilitate the collaboration?

Basically, the role of the teacher is as a facilitator, and the students take on roles of their own. Again, the technology supports the learning by engaging students in meaningful, authentic analysis of research data, assisting students in communicating and collaborating both inside and outside of school (which is often a challenge using conventional methods), and facilitating an engaging and creative dissemination of information which is novel enough to ensure long term information retention. The teacher facilitates student collaboration by requiring that facilitation take place, embedding facilitation into the activities that students must do, and providing a platform (wikis) for collaboration to take place.

**Differentiation:**

Differentiation is built into the unit with plenty of choice in activities and “jobs” the students can do. There are a variety of audio, visual, and kinesthetic activities for which students can opt. This unit also embraces differentiation based on Sandra Kaplan’s model by building in depth and complexity. The dimensions of depth include:

* Language of the discipline
* Details
* Patterns
* Trends
* Unanswered questions
* Rules and Ethics (cultural differences)
* Big ideas

The dimensions of complexity include:

* **Over time** refers to the understanding of time as an agent of change and recognition that the passage of time changes our knowledge of things.
* **Points of view** refer to the concept that there are different perspectives and that these perspectives alter the way ideas and objects are viewed and valued.
* **Disciplinary connections** refer to both integrated and interdisciplinary links in the curriculum. Disciplinary connections can be made within, between, and among various areas of study or disciplines.

Extensions for enrichment can include making connections through e-Pals to actual climbing groups, or connecting with classrooms from the culture and place students are researching. Contacting climbing schools here locally and asking for information related to the project would also add a piece of authenticity that would prove to be beneficial.

**Closure and Reflection:**

Closure would consist of students sharing their finished wikis with the rest of the class. Each student from the group could pick some aspect of the wiki they liked best and present it. Presentations would be more of a celebration for the students, as the teacher has access to the wikis for grading purposes. During the course of the presentation (or in preparation for it) students would be asked to reflect upon the work they did, like:

* What they learned about another culture
* What they learned about working and organizing in a group, how their experiences relate to the experiences the climbers in the book *Into Thin Air* had?
* What they learned about technology and applications of their learning in other subject disciplines or other activities in their lives

Then perhaps a written reflection by each student would be appropriate to answer the following questions:

Did students find the lesson meaningful and worth completing?

In what ways was this lesson effective?

What went well and why?

What did not go well and why?

How would you teach this lesson differently?

I always enjoy receiving this kind of anonymous feedback from my students because it helps me to tweak my unit for the next year. I have not had an opportunity to use this lesson yet, however, I have used a lesson similar to this with role playing and group collaboration, but with less technology. I feel the technology will both facilitate and complicate things for me initially. I like the idea of having access to wikis and being able to monitor student progress. And the fact that they are creating wikis seems to bring a degree of authenticity to the project because it is globally accessible. However, since these technologies are relatively new to me, too, it will perhaps be difficult to organize the due dates, the computer access, etc. I do feel, however, that in the long run, it will be beneficial and much more practical once the glitches are worked out.

Over time, I would like to embed even more choice for students in each of the “job responsibilities” they have. Perhaps developing a matrix of things students could pick from would be where I would like to take this unit over time. For now, I think I have bitten off way more than I can chew, so I’m hoping for a bite of chocolate and not peas.