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| NECC_NETS_small | **Lesson Plan for Implementing NETS•S—Template I*(More Directed Learning Activities)*** |
| ***Template with guiding questions*** |
| Teacher(s) Name | Heather Brown |
| Position | Teacher |
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| Phone | (229)891-0652 |
| Grade Level(s) | 7th Grade |
| Content Area | Mathematics |
| Time line | 1 week |

**Standards** (What do you want students to know and be able to do? What knowledge, skills, and strategies do you expect students to gain? Are there connections to other curriculum areas and subject area benchmarks? )

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| Content Standards | . MCC7.RP.2 Recognize and represent proportional relationships between quantities.   |
| NETS\*S Standards: | 1. Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.a. Apply existing knowledge to generate new ideas, products, or processesb. Create original works as a means of personal or group expression2. 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 media3. Students apply digital tools to gather, evaluate, and use information.b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and mediac. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks4. Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.b. Plan and manage activities to develop a solution or complete a projectc. Collect and analyze data to identify solutions and/or make informed decisions5. 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 technologyb. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity6. Students demonstrate a sound understanding of technology concepts, systems, and operations. a. Understand and use technology systemsb. Select and use applications effectively and productivelyc. Troubleshoot systems and applications |

**Overview** (a short summary of the lesson or unit including assignment or expected or possible products)

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| During the lesson, the students will scan QR codes that contain two videos and WebPages with information on ratios and proportions. The students will use vocabulary terms from the videos or information to create a video presentation using a variety of Web 2.0 tools. For this presentation, the students must write and produce a song about ratios and proportions. The students will be required to record the song and create a music video. The presentations will be uploaded to Edmodo for all the students in the class to view. |

**Essential Questions** (What essential question or learning are you addressing? What would students care or want to know about the topic? What are some questions to get students thinking about the topic or generate interest about the topic? What questions can you ask students to help them focus on important aspects of the topic? What background or prior knowledge will you expect students to bring to this topic and build on?)

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| What are proportions and ratios and how do they relate to rate and unit rate?The students will be writing a song about proportions, so they need to know the meaning of the vocabulary terms. The students learned about ratios and proportions in the sixth grade, so some of the vocabulary terms should be familiar to the students. |

**Assessment** (What will students do or produce to illustrate their learning? What can students do to generate new knowledge? How will you assess how students are progressing (formative assessment)? How will you assess what they produce or do? How will you differentiate products?)

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| Before the assignment is started, the students completed a summative assessment over ratios and proportions. The assessment was used to check for understanding of solving ratios and proportions with a emphasis in scaling up or down. From the information presented from the QR codes, the students will write a song with their group members that contains two verses and a chorus. The song must include seven to ten vocabulary terms. For the formative assessment, the students must comment to a post on Edmodo and include any vocabulary words mentioned from the QR codes. Each group has to respond to the post. The post will check for students understanding in searching for the use of the appropriate terms. After the song is written, the students will use Audacity to record their song, Flickr for Creative Common pictures, and Windows Movie Maker to create a video with the audio or record the song as a video and upload the final product to the teacher/s private YouTube account. The students will upload their final product to Edmodo and present their video to the class. The presentations will be used for a summative assessment and will be graded based on criteria from a rubric. |

**Resources** (How does technology support student learning? What digital tools, and resources—online student tools, research sites, student handouts, tools, tutorials, templates, assessment rubrics, etc—help elucidate or explain the content or allow students to interact with the content? What previous technology skills should students have to complete this project?)

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| The students will use Edmodo to view the assignment and answer a post. The post will serve as a formative assessment for the lesson. The students will then use Audacity, Flickr, and Windows Movie Maker to create the presentation of their song. The presentation will be uploaded to Edmodo.  |

**Instructional Plan**

**Preparation** (What student needs, interests, and prior learning provide a foundation for this lesson? How can you find out if students have this foundation? What difficulties might students have?)

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| In the sixth grade, the students were introduced to ratios and proportions and have prior knowledge of the meaning of the vocabulary terms needed for the assignment. Some of the students have previously used the types of technology tools in the other classrooms. The foundation for the prior knowledge and technology tools are visible during the discussion on Edmodo and how the students navigate the technology devices and tools.  |

**Management** Describe the classroom management strategies will you use to manage your students and the use of digital tools and resources. How and where will your students work? (small groups, whole group, individuals, classroom, lab, etc.) What strategies will you use to achieve equitable access to the Internet while completing this lesson? Describe what technical issues might arise during the Internet lesson and explain how you will resolve or troubleshoot them?

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| For this assignment, the students will work in groups of three to four students. The project will be completed in the classroom with the use of the student’s cell phones, tablets, and the classroom computers. All groups will have access to two to three devices for each group to work with. If more devices are needed, the students can use the computers in the media center. Students could encounter possible technical issues when using Audacity and Windows Movie Maker. To resolve these issues, I will help the groups trouble shoot through the issues and provided the groups with access to another device that works properly.  |

**Instructional Strategies and Learning Activities** – Describe the research-based instructional strategies you will use with this lesson. How will your learning environment support these activities? What is your role? What are the students' roles in the lesson? How can you ensure higher order thinking at the analysis, evaluation, or creativity levels of Bloom’s Taxonomy? How can the technology support your teaching? What authentic, relevant, and meaningful learning activities and tasks will your students complete? How will they build knowledge and skills? How will students use digital tools and resources to communicate and collaborate with each other and others? How will you facilitate the collaboration?

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| From the QR codes, the students will identify vocabulary terms from the videos and reading. The students in groups must choose seven to ten of the vocabulary terms and explain why they chose each term. The groups must then create a song that includes the vocabulary terms in their songs. Based on their song, the students will select Creative Commons photos from Flickr to be included in their video produced through Windows Movie Makers. The students will also use Audacity to record their song to include in their video. During the discussion on Edmodo, I will facilitate the discussion and provide comments to the students during class. I will provide hints for the groups and check for each groups understanding during the discussion. The final assignment will be uploaded to the class Edmodo page for the entire class to view and critic.  |

**Differentiation** (How will you differentiate content and process to accommodate various learning styles and abilities? How will you help students learn independently and with others? How will you provide extensions and opportunities for enrichment? What assistive technologies will you need to provide?)

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| To differentiate the assignment, the students will be able to work in groups to complete the assignment. The groups were created by the teacher to insure that all learning styles were included in each group. From the QR codes, the students who are auditory learners will be able to watch and hear during the presentation of the two videos. The students will be able to enrich their project with their creativity of writing their song. I will not need to provide any assistive technologies for this activity. The students will also be able to choose which technological tool they wish to complete the assignment with. The students have the choice of filming the video or creating the movie using Windows Movie Maker. |

**Reflection** (Will there be a closing event? Will students be asked to reflect upon their work? Will students be asked to provide feedback on the assignment itself? What will be your process for answering 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?)

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| At the end of the assignment, they students will be able to view the other group’s final video and critic the production. The critic will be turned into the teacher and distributed to the group. The critics will not reflect the students’ grades. I was not able to finish the assignment for a final project due to time constraints. Some of the groups were able to get to the final step of using Windows Movie Maker, but the other groups were not. Based on the verbal feedback from the students, they really enjoyed this activity. They liked being able to bring their own technology and use creativity to write and record a song. The students were able to provide many great ideas for their group members and create good meaningful songs that relates to the content. I was pleased with how well the students responded to the activity. Based on the access to devices the groups were able to complete all parts of the assigned assignment. There were no issues in finding the information needed or any issues in operating the tools. The students and I were happy with the activity and will be used in the future. Time did not corporate with the assignment. The students were not able to complete the final assignment in the time allotted. The students have asked when the assignment will be completed and I have told them that we will try to finish it up before we leave for Christmas break. To use this activity in the future, I will have the students complete this activity in sections and stretch the time over several weeks, in hopes of not interfering with my normal lesson plans. |

**Closure:** Anything else you would like to reflect upon regarding lessons learned and/or your experience with implementing this lesson. What advice would you give others if they were to implement the lesson?

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| If the assignment had a final product, I believe I would have great results. I believe the students really enjoyed this lesson and were very enthusiastic about their product. In the future, I would definitely take the time restraints into consideration. This activity could also be adapted to any subject area. |