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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 | Tara Whittington | |
| Position | Math Teacher | |
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| Grade Level(s) | 9th | |
| Content Area | Math | |
| Time line | One 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 | The students are really utilizing all of the standards from coordinate algebra, which is quite a few. The general areas are writing equation, solving systems of equations and inequalities, characteristics of functions, summary statistics, transformations of geometric figures on the coordinate plane, and using geometric properties on the coordinate plane. [I am linking to all of the standards](https://www.georgiastandards.org/Common-Core/Common%20Core%20Frameworks/CCGPS_Math_9-12_CoordinateAlgebra_Standards.pdf). The students will be utilizing their results from a practice EOCT to pick the standards that they focus on. |
| NETS\*S Standards: | Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.(Students will utilize Khan Academy, purple math, and other resources to synthesize topics)  Evaluate and select information sources and digital tools based on the appropriateness to specific tasks. (Students will use the internet to find resources appropriate for a specific topic and embed a QR code in shared google document)  Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media (students will use a shared google document to collaborate with each other and create a single document with many resources available for use)  Demonstrate personal responsibility for lifelong learning (students are learning how to use the internet to find resources for topics that they struggled with) |

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

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| Students will take a practice EOCT and using the results will create helpful links from resources available on the internet. The students will look through all of the problems on the practice EOCT and pick the one that they had the most trouble with and the one that they had the least problem with. Once this is decided, the students will create QR codes that send students to resources that will help them with each topic. When everyone has completed their assignment and found their resources, the class will make a Google Document and share all of the resources in one place with the QR codes. Students will also answer a google form where they will grade themselves based on a rubric. |

**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 domain (Algebra, Geometry, or Statistics) did I score the least on and what am I going to focus on to change that? How can I use the internet to find helpful resources when I don’t understand a topic? What topics from each of the six unit reviews do I still have questions about? What are the key words from my weak topic that I need to utilize to get information on the internet? |

**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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| Students will use the internet to create a QR code that links to a resource they found on the internet. They will find resources based on analyzing their performance on a practice EOCT and picking the topic they judge to be their strength and the topic they judge to be their weakness. Students will be assessed based on a rubric and will complete a Google form that asks them to self-assess. I can monitor how students are progressing by looking at what they are picking and sharing on the google document. Students will complete different products based on their weakness on the practice EOCT. |

**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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| Students will be using instructional technology in order to help them with a topic they are struggling with. Students will access a google presentation on the google drive that will walk them through the steps of the projects. Students will use online resources like Khan Academy, open math reference, YouTube, etc. to find helpful websites. Students will then create a QR code to help students access the material quickly. The students will also complete a google questionnaire about the project and also to self-assess their work. Students should know how to access their google account and google drive in order to fully participate with the google documents. |

**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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| Students have been completing a review session for two weeks on the 6 units from Coordinate Algebra that had been taught. Students will complete a full-length practice EOCT over two days. I will be able to pull the averages for the entire class in order to pinpoint exact weaknesses. Students will be given their scores and the breakdown based on their performance. Students might have difficulty picking just one topic that they struggled with. I am going to scaffold for these students by providing them with more limited options and highlighting their 5 lowest topics so that they can pick from there. |

**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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| Students will complete the assignment using their own personal technology that they are allowed to bring to school because of our Bring Your Own Technology (BYOT) policy. Not every student has technology to bring with them to school, so students will be paired up with students who do have technology or they can use the computers located in the computer lab. Students might not be able to access the internet; in that case we would have to postpone the lesson until internet is available. If students can’t get into their accounts because they have never used them, I will have to help them log in for the first time, or find another way for them to participate without logging in to their account. |

**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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| I will use research-based instructional strategies while presenting this lesson to my students. I will be modeling an example of what students are expected to complete. I will be scaffolding for students who are new to technology or struggling to find the topics they should focus on. The students will be engaged on independent practice of skills by learning how to find resources to help them when they are stuck, which can be used in the future if they struggle with a topic. I will also use ongoing assessment to make sure that students are understanding the assignment and what is expected of them and if they are on the right track. I will serve as the facilitator by monitoring the students, guide by modeling what is expected of the students in the project, and co-learner by also finding helpful resources for the students. The students will serve as explorer by finding new resources on the internet, teacher by creating products for other students to use, and producer by creating a database of helpful resources for all students to use. Students will be creating a usable product, which is ensuring higher order thinking skills. The technology can support my teaching by showing different, hands-on resources available that can help students visualize a concept. Students will complete an authentic task of utilizing the internet to help them find resources for a topic they may be struggling with. The task is relevant because using the internet to find information is a necessary skill in today’s society. While learning this meaning skill, the students will also participate in a meaningful learning activity that will help them prepare for the EOCT. The students will build knowledge and skills by using their results from their practice EOCT to pinpoint their weakest topic and then build skills on how to find resources on the internet about a topic that will help them to strengthen their weakness. Students will also be collaborating with the other students in their class and using their resources. The students will be using a shared google document in order for everyone’s resources to be in one accessible place. Google documents allows you to track any revisions that have been made, which will be explained to the students so that they will keep the discussion to appropriate topics. |

**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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| Students will be given choice in the resources that they decide to use and link to. This allows students with different learning styles to pick various websites, videos, and online manipulatives that will help them learn a topic. They could pick songs that help them to remember topics or flash applications that visually show a math topic. Students who struggle to know where to start will be given their results with the lowest topics highlighted so that those students will know where to start. Students will be given specific instructions of what is expected of them and the consequences on not following directions and acting inappropriately. I will also model what behavior is expected of them. Students who finish early, will be allowed to explore multiple resources for a single topic and help students by finding resources for other topics. I have students who have learning disabilities in reading and will require reading software that helps them to read the material on websites. |

**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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| Students will complete a closing google questionnaire that will ask them about their experience doing the project and ask them to reflect on their own work and if they met the requirements of the rubric. The students will be able to submit recommendations about the assignment of things they liked and things that they think would make the project better. I have exposed my students to QR codes in the past, so that helped to make that part go easier when implementing the lesson. However, many students didn’t have computers of their own to use and I need to do some more research on how to have the students collaborate using their mobile devices, which the students are much more likely to have. I would like to have more technology available when I teach this again, so that I can implement technology and have students use these resources all year long so that they are more familiar with collaborating using the technology. |

**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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| From implementing this lesson with my students I learned that my students really need more exposure to technology because they are almost clueless about how to use simple things such as a google search or how to access their google student account that was set up for them. I also learned that my school is lacking in technology for the students to use and many of our computers in the computer lab are not equipped for the students to watch videos. I would suggest that anyone who wants to implement the lesson should make sure that the computer labs are equipped with the right equipment. I will also be recommending to my principal that the school purchase more mobile devices for use in the classroom with the students. |