**E. Vlachos Grade 5 Gifted and Talented Scope and Sequence 2018-2019**

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| **Dates** | **Topic/ Concepts** | **Essential Understanding/Big Idea** | **Essential Questions** | **Skills** | **Overview** |
| **September-January** | Invention Convention | \*In the world, change is inevitable.  \*Change has positive and/or negative consequences.  \*Inventions are created to solve a need or problem for society (change impacts the need for new or revised technology). | \*Why does change happen?  \*Is change necessary?  \*What are the consequences of change?  \*Does technology drive new technology or do people drive new technology? | \*Problem solving  \*Creative thinking  \*Real world problems  \*Research skills  \*Collaboration  \*Communication  \*Collaboration  \*Designing an original product. | Students find a real world problem and have to devise a solution including the pros and cons of their solution, test their solution and present their ideas to the class.  They will develop a prototype, marketing plan and create a website about their invention. The National Science Education Standards will be incorporated into this unit. |
| **February -March** | Simple Machine STEAM Challenges (Science, Technology, Engineering, Art, Mathematics | \*Technology may result in new inventions and innovations.  \*Technology influences society. | \*How do new innovations advance our knowledge?  \*Does STEAM impact the future?  . | \*Creative problem solving (CPS)  \*Critical thinking  \*Real world problems \*Collaboration \*Communication  \*Reflect  \*Construct | During the Simple Machines STEAM unit, science, technology, engineering, art, and mathematics, will be incorporated into collaborative activities.  Students will work in teams to troubleshoot a problem, design a solution, create their own design, and test it out.  Students will reflect on their experiences, learning, and applications to the real world. This focuses on creativity and exploration through learning. The use of simple and complex machines are infused throughout this unit |
| **April-May** | Forensic Science | \*Scientific Inquiry-developments through questions, data collection, analysis, and interpretation. | \*What is forensic science?  \*How is evidence used to solve a problem? | \*Evidence collection  \*Data analysis  \*Crime scene analysis | Students will participate in a variety of experiments to learn about forensic science, i.e.: fingerprinting, DNA extraction, handwriting analysis, teeth, footprints, etc. Students will use their learning to solve a mystery and reflect on their findings |
| **May-June** | Leadership Unit | \*Leaders bring about change and have the ability to influence and motivate others. | \*What are the qualities of great leaders?  \*Can conflicts be resolved?  \*Does our perspective affect the outcome? | \*Communication  \*Debate  \*Research Skills  \*Critical Thinking Skills  \*Real World Problems  \*Leadership skills  \*Reflect | Students will learn about the characteristics of great leaders and analyze these traits to gain a deeper understanding of the qualities that great leaders share and that they possess themselves.  Students will engage in Socratic Seminar debates on various topics to gain a deeper understanding of complex ideas through a rigorously thoughtful dialogue.  The students will incorporate higher order comprehension, thinking skills and communication skills through various leadership challenges and class discussions. |