**Area of Inquiry:**

**I have chosen to focus on the impact STEM (specifically programming and learning about computers) has on people (specifically students/children). I love to teach people, so this project brings together two of my greatest interests.**

**Statement of Innovation:**

**I hope to produce a program for different demographics to use to explore and learn about programming and computers to increase the awareness and interest in STEM. I hope to provide an easy avenue for kids and anyone who is interested to explore STEM and computers. I hope to apply the knowledge I have gained through my time at AHS and with my internship to develop this program.**

**Key Criterion of a Capstone Project:**

* Heavy emphasis on research
  + I will have to do a lot of research on teaching methods, how different generations and demographics learn, and what the best methods are to teach programming and computer systems.
* Heavy emphasis on creation or innovation
  + I will be creating a program to train kids and anyone who is interested. This could be digital, physical, or a combination.
* Can be something that the learner has previous experience in; CANNOT be something that the learner has already completed
  + Example: If you built a solar car in a previous setting, you cannot turn in that car as your Capstone. You can, however, do something new related to your solar car for your project.
  + I completed an internship this summer at a software integration/automation company called Integrity Integration Resources (I2R). I worked on developing a training program for them on Programmable Logic Controllers (PLCs), and want to potentially expand on this by catering it to different age groups and researching the different ways companies teach and onboard their employees.
* Mentor component
  + This may vary by project. Lack of a mentor may not disqualify a specific project.
  + I could work with some of my mentors from my Internship or Mrs Bolton.
* Clear project management demonstrated throughout
  + I will work in stages to break the project up. I will research first, then refine my existing program, then possibly expand it to more subjects and levels of difficulty.
* Employment of the Scientific Method, regardless of project content
  + For those interested in doing a project that does not traditionally correspond to the Scientific Method, we will talk about how you can achieve this
  + Science is simply a method of investigation and understanding. It does not necessarily mean a physical science (e.g. biology)
  + I will potentially send out surveys about learning preferences and levels of interest, as well as do research/an investigation on the interests of different demographics.
* Appropriate scope
  + Your topic should allow you to make significant progress in one year
  + Your topic should be rigorous enough that you will not exhaust your subject or become bored of it prematurely
  + While I have a product already, there is a lot more that I can do to expand on it. I can take it as far as I want or need to, and am passionate about programming, computers, and teaching/helping others.
* Finally, your Capstone should be something that you can be PROUD of! This is not a throwaway project or a way for us to take up time. We truly want this to be something that is valuable to you.
  + I love the idea of uniting my interest in computers and engineering with my love for teaching and helping others. If this project helps get someone interested in STEM or helps a company with training, I will be extremely happy and proud.