### **Activity - Construct a Prototype**

**Description**

How can you make your vision into reality? Modeling or prototyping is a powerful means of making the solution into reality. This step allows students to test their ideas. While students may need to construct physical models to bring their ideas to life, alternative approaches may be more practical.

Time To Complete: 3-5 Hours

NGSS Assessed:

* HS-ETS1-2, 1-3, 1-4

**I Can Statements**

* I can construct a model or prototype that:
  + Appropriately addresses the software challenge
  + Allows me to test my solution and gather data and feedback
* I will know if my model or prototype is of high quality if it:
  + Appropriately addresses the software challenge
  + Allows me to test my solution and gather data and feedback

**Suggestions for Assessing Student Readiness to Move Forward:**

* Confer with students, asking probing questions about their model or prototype to gauge how well it meets the quality criteria.
* Ask students to describe their prototype and explain (orally or in writing) how it meets the quality criteria for a high-quality prototype.
* Ask students to self-evaluate their work after completing one of the activities below.

Use github and visual code studio to create a prototype of your project. Test the code visual and in the background of the website. Comment sections of the code to make it easier to understand.

Resources

Overview of the prototyping process: <http://home.howstuffworks.com/product-prototyping-process3.htm/printable>

Ideas for creating inexpensive prototypes: <http://bit.ly/1Eg8x57>

Example engineering drawings: <http://bit.ly/10SBcyZ>

Storyboarding as part of the design process: <http://www.fastcodesign.com/1672917/the-8-steps-to-creating-a-great-storyboard>