

Dates	Class Plan
Week 1 Aug 16-Aug 18	Aug 17- Introduction/Syllabus Overview, Icebreakers, building a battery and changing variables Resources: http://scitoys.com/scitoys/scitoys/echem/batteries/batteries.html
Week 2 Aug 21-Aug 25	Aug 24- (Minimum Day) Alternative Energy Lab Form Groups and Start on designing windmill device for competition (highest energy output) Resources: https://www.carolina.com/inquiry-science-natural-resources/inquiries-in-science-examining-energy-resources-kit/251405.pr?question=
Week 3 Aug 28-Sep 1	Aug 31- Testing

<p>Week 4 Sept 4-Sept 8</p>	<p>Sept 7- Give time to finish completing device for competition Hold Competition Hand in design blueprint for your windmill design</p> <p>If time, start HTML & CSS or JavaScript lesson. Resources: https://www.codecademy.com/learn/all</p>
<p>Week 5 Sept 11-Sept 15</p>	<p>Sept 14- (Minimum Day) Start learning HTML & CSS or JavaScript online (depending on students' preferences and past knowledge of coding. For advanced students who already are familiar with coding fundamentals of each, they may choose another coding language to begin learning. Resources: https://www.codecademy.com/learn/all https://www.khanacademy.org/computing/computer-programming/programming https://www.quora.com/What-cool-things-can-I-make-with-JavaScript</p>
<p>Week 6 Sept 18-Sept 22</p>	<p>Sept 21- Continue to learn coding online Take a break and make a fun project, such as a Foxhole Radio Resources: https://www.youtube.com/watch?v=skKmwT0EccE https://www.codecademy.com/learn/all</p>

<p>Week 7 Sept 25-Sept 29</p>	<p>Sept 28- (Minimum Day) Continue to learn coding online Take a break and make a fun project, such as a Tiny Dancer Resources: https://www.youtube.com/watch?v=XilLC0uVCQ0 https://www.codecademy.com/learn/all http://babbledabbledo.com/steam-project-tiny-dancers-homopolar-motor/</p>
<p>Week 8 Oct 2-Oct 6</p>	<p>Oct 5- Make a hydraulic arm! If there's time left over, continue coding program. Resources: https://www.teachengineering.org/activities/view/wpi_hydraulic_arm_challenge https://www.youtube.com/watch?v=P2r9U4wkjcc</p>
<p>Week 9 Oct 9-Oct 13</p>	<p>Oct 12- (Minimum Day) Arduino Lesson 1: Introduction to Arduino and writing our first program Resources: Attached PDF webquest/worksheet</p>
<p>Week 10 Oct 16-Oct 20</p>	<p>Oct 19- Arduino Lesson 2: Using Breadboards Resources: https://www.youtube.com/watch?v=uHUSsSIza24&t=243s</p>

Week 11 Oct 23-Oct 27	<p>Oct 26- Arduino Lesson 3: Loops and Circuits</p> <p>Resources: https://www.youtube.com/watch?v=O4JACbIQX_w</p>
Week 12 Oct 30-Nov 3	<p>Nov 2- Partner up and build an Arduino project from the box. Now, with your partner, improve on the project from the box.</p> <p>Resources: https://store.arduino.cc/usa/arduino-starter-kit</p>
Week 13 Nov 6-Nov 10	<p>Nov 9- Finish up improving the design alteration. Present altered projects to class.</p>
Week 14 Nov 13-Nov 17	<p>Nov 16- Introduce personal/partner final project. Give students time to brainstorm ideas, make list of needed supplies, and start gathering supplies (if available). Have students sign up for final projects on a Google Doc. If students are ready, they may begin final project.</p>

Week 15 Nov 20-Nov 24	No School
Week 16 Nov 27-Dec 1	Nov 30- (Minimum Day) Time to work on personal/partner project
Week 17 Dec 4-Dec 8	Dec 7- Time to work on personal/partner project
Week 18 Dec 11-Dec 15	Dec 14- (Minimum Day) Time to work on personal/partner project

Week 19 Dec 18-Dec 22	Dec 21- (End of Quarter and Semester) Present Final Projects and make something fun such as a DIY Fidget Spinner Resources: https://www.youtube.com/watch?v=2s9qqUrjOlo https://www.youtube.com/watch?v=8fu0N-RKTxE
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