

**Solar Oven  
Final Project Grading Rubric**

Criteria	<b>← Achievement →</b>		
↓	<b>Meets or Exceeds Expectations 80% - 100%</b>	<b>Approaching Expectations 70% - 79%</b>	<b>Below Expectations 69.9% or less</b>
<p>2<sup>nd</sup> Parabolic Solar Oven Iteration (Whole group grade)</p>	<ul style="list-style-type: none"> <li>- Oven has clearly been improved from its 1<sup>st</sup> iteration</li> <li>- Oven has a focal point or focal line with excellent potential for baking foods</li> <li>- Oven is parabolic in shape: it is clearly a paraboloid/parabolic trough</li> <li>- Overall appearance of the oven shows great attention to detail</li> <li>- The oven has evolved from sketches and digital renderings; has been built to the specifications of drawings, and is pleasing to the eye</li> <li>- The oven is clearly based upon mathematical calculations</li> </ul>	<ul style="list-style-type: none"> <li>- Oven has somewhat been improved from its 1<sup>st</sup> iteration</li> <li>- Oven has a focal point or focal line with good potential for baking foods</li> <li>- Oven is parabolic in shape: it approximates a paraboloid/parabolic trough</li> <li>- Overall appearance of the oven shows attention to detail</li> <li>- The oven has evolved from sketches and digital renderings; has been built to the specifications of drawings, and is fairly pleasing to the eye</li> <li>- The oven is roughly based upon mathematical calculations</li> </ul>	<ul style="list-style-type: none"> <li>- Oven has minimally been improved from its 1<sup>st</sup> iteration</li> <li>- Oven does not have a focal point or focal line</li> <li>- Oven is not parabolic in shape: it does not approximate a paraboloid/parabolic trough</li> <li>- Overall appearance of the oven shows little attention to detail</li> <li>- There is little evidence that the oven has evolved from sketches and digital renderings; it has not been built to the specifications of drawings, and is not pleasing to the eye</li> <li>- There is little to no evidence that the oven has been based upon</li> </ul>

			mathematical calculations
Reflection (Individual grade)	<ul style="list-style-type: none"> <li>- Individual reflection is 1.5 – 2 pages typed (d.s.) or hand written or its recorded duration is 4-5 minutes</li> <li>- Reflection delves into solar oven strengths, growth areas, &amp; potential improvements and the experience of working on a team</li> </ul>	<ul style="list-style-type: none"> <li>- Individual reflection is between 1 and 1.5 pages typed (d.s.) or hand written or its recorded duration is 3-4 minutes</li> <li>- Reflection delves into most of the following: solar oven strengths, growth areas &amp; potential improvements and the experience of working on a team</li> </ul>	<ul style="list-style-type: none"> <li>- Individual reflection is less than a page typed (d.s.) or hand written or its recorded duration is less than 3 minutes</li> <li>- Reflection delves into little of the following: solar oven strengths, growth areas &amp; potential improvements and the experience of working on a team</li> </ul>
Materials Team Member (Individual grade)	<ul style="list-style-type: none"> <li>- Choice in materials was highly logical</li> <li>- Requests for materials were prompt and outlined their price and store location</li> </ul>	<ul style="list-style-type: none"> <li>- Choice in materials was somewhat logical</li> <li>- Requests for materials were provided late yet outlined their price and store location</li> </ul>	<ul style="list-style-type: none"> <li>- Choice in materials was illogical</li> <li>- Requests for materials were not provided or did not outline their price and store location</li> </ul>
Schematics Team Member (Individual grade)	<ul style="list-style-type: none"> <li>- Team includes four to six detailed drawings and two robust digital rendering</li> <li>- Printouts of digital renderings were taken from three perspectives</li> </ul>	<ul style="list-style-type: none"> <li>- Team includes three to four detailed drawings and two digital rendering</li> <li>- Printouts of digital renderings were taken from more than one perspective</li> </ul>	<ul style="list-style-type: none"> <li>- Team includes zero to three drawings and one or two digital rendering but they lacked detail</li> <li>- Printouts of digital renderings were taken from one perspective only</li> </ul>
Coordinator Team Member (Individual grade)	<ul style="list-style-type: none"> <li>- The coordinator clearly gave directives to his or her team members throughout the</li> </ul>	<ul style="list-style-type: none"> <li>- The coordinator gave directives to his or her team members throughout the</li> </ul>	<ul style="list-style-type: none"> <li>- The coordinator gave directives to his or her team members rather infrequently or</li> </ul>

	<p>process</p> <ul style="list-style-type: none"> <li>- The coordinator used nonviolent communication throughout the process and communicated clearly and respectfully with outside experts and the teacher</li> <li>- Synthesis of team members' thoughts was clear and thorough</li> </ul>	<p>process</p> <ul style="list-style-type: none"> <li>- The coordinator primarily nonviolent communication throughout the process and usually communicated clearly and respectfully with outside experts and the teacher</li> <li>- Synthesis of team members' thoughts was incomplete</li> </ul>	<p>erratically</p> <ul style="list-style-type: none"> <li>- The coordinator expressed needs rather violently and rarely communicated clearly and respectfully with outside experts and the teacher</li> <li>- Synthesis of team members' thoughts was not made or attempted</li> </ul>
Recorder/Photographer Team Member (Individual grade)	<ul style="list-style-type: none"> <li>- Thorough notes, observations, and mathematical calculations have been provided that document the build process and outline the final product</li> </ul>	<ul style="list-style-type: none"> <li>- Somewhat thorough notes, observations, and mathematical calculations have been provided that document the build process and outline the final product</li> </ul>	<ul style="list-style-type: none"> <li>- Notes, observations, and mathematical calculations that document the build process and outline the final product were sparse</li> </ul>
Presentation of Project (graded under the 'Formal Critique' assessment)	X	X	X