Project: Cooking for a Cause Solar Cookers

Performance Criteria	4 Advanced Mastery	3 Mastery	2 Emergent	1 Novice
IPC (5) Science concepts. The student recognizes multiple forms of energy and knows the impact of energy transfer and energy conservation in everyday life. The student is expected to: **(E)** *investigate* and *demonstrate* the movement of thermal energy through solids, liquids, and gases by convection, conduction, and radiation such as in weather, living, and mechanical systems;	Student can *investigate* and *demonstrate* thermal energy and *explain* its movement through solids, liquids, and gases by convection, conduction, and radiation ***And,*** student can apply these concepts to real world situations, including the design, development, and testing of a solar cooker.	Student can *investigate* and *demonstrate* thermal energy and *explain* its movement through solids, liquids, and gases by convection, conduction, and radiation ***And,*** student can apply these concepts to real world situations.	Student can *define* thermal energy and *explain* its movement through solids, liquids, and gases by convection, conduction, and radiation ***And,*** student can apply these concepts to real world situations.	Student can *define* thermal energy and *explain* its movement through solids, liquids, and gases by convection, conduction, and radiation.
Algebra 1 (3) Linear functions, equations, and inequalities. The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. The student is expected to: **(B)** *calculate* the rate of change of a linear function represented tabularly, graphically, or algebraically in context of mathematical and real-world problems	Student can *calculate* slope (total rate of change) both from a graph by hand and by graphing calculator (using technology) ***And,*** student can relate this mathematical process to the real life process of heating rate calculations (specifically, solar cooking) and other real life examples, such as rates of reactions and speed calculations.	Student can *calculate* slope (total rate of change) both from a graph by hand and by graphing calculator (using technology) ***And,*** student can relate this mathematical process to the real life process of heating rate calculations.	Student can *calculate* slope (total rate of change) either from a graph by hand or by graphing calculator (using technology) ***And,*** student can relate this mathematical process to the real life process of heating rate calculations.	Student struggles to *calculate* slope (total rate of change) either from a graph by hand or by graphing calculator (using technology)

Created 2019 by Dr. Kate York and Katie Donaldson