**Subject area/course**: Mathematics/Algebra 2

**Grade level/band**: 9-12

**Task source**: Summit Public Schools; Author: Hai Tran

**Cooling Project**

**STUDENT INSTRUCTIONS**

1. **Task context**:

Do you ever wish your hot drink would stay hot? A new product, Joulies, claims to help you with this and keep your drink at the perfect temperature for longer. In this task you will be using your knowledge of Algebra 2 in order to build a mathematical model of a cooling object. A mathematical model is when you are able to write an equation that represents a physical phenomenon.

1. **Final product**:

Use the “Cooling Project Student Guide” document for detailed instructions to help guide you through a series of videos and activities.

**Additional Information**

1. **Knowledge and skills you will need to demonstrate on this task:**
* Ability to design an experiment to investigate a phenomenon
* Ability to create and interpret graphs of data
* Ability to use technology to model data mathematically
* Ability to analyze and interpret a mathematical model
* Ability to write a convincing argument based on data
1. **Materials needed:**
* Cooling Project - Student Guide
* “Joulies Sales Pitch” video
* “No Joulies” video
* “Joulies” video
* Desmos online graphing tool - https://www.desmos.com/
1. **Time requirements:**

This task will take approximately one week to complete. Your teacher will provide you with a detailed timeline.

1. **Scoring:**

Your work will be scored using the Summit Public Schools Cooling Project Rubric. You should make sure you are familiar with the language that describes the expectations for proficient performance.