4 Day Project Overview		
Name of Project:	Thermal kitchen	**Teach Dates:** 7th period on March 17th, 18th, 21st and 22nd
Subject:	Transfer of Energy	**Teachers:** Mrs. Arceneaux, Ms. Muñoz and Ms. Schwenke
Driving Questions:	In what ways could we design a billboard that incorporates and utilizes thermal energy to present to home builders in your community?	
Summary and format of Entry Document – Submit a copy	Entry document is a letter written to 6th grade students inviting them to enter a kitchen building contest. At the top is the heading of a home building company, a paragraph about the company and inviting them to join, then requirements and date.	

Anticipated "need to knows" from entry document – include logistics and content	· Definition of thermal energy, convection, conduction, radiation · Date that presentation is due · Rubric/grading guide · Billboard
Project Launch Summary of how you will launch the project – include anchor video link and purpose	We will be showing the following video: https://www.youtube.com/watch?v=7Y3mfAGVn1c This is a fun and interactive video that will engage the students and draw their attention to the entry document.
Student Products/Assessment:	Students will create a poster billboard of a kitchen appliance that uses thermal energy and create a presentation to go along with it. (There will be a DIY to explain how to make a poster/model to the students.)
Objectives: SWBAT	Students will be able to investigate all forms of thermal energy, including conduction, convection, and radiation.
Content Standards to be taught and assessed**:**	(6.9A) Investigate methods of thermal energy transfer, including conduction, convection and radiation.
Safety: Include any safety issues and *how*	Students need to be careful with scissors, glue, and online safety.

they will be addressed.		

4 DAY PROJECT CALENDAR		
Project: Thermal Kitchen	**Teach Dates:** 7th period on March 17th, 18th, 21st and 22nd	
DAY 1 Thursday, Mar 17	DAY 2 Friday, Mar 18 DAY 3 Monday, Mar 21	DAY 4 Tuesday, Mar 22
Before Class: - Teachers will prepare the launch activity as described above. The teachers will prepare enough entry documents for each group and one for themselves. Also, the social contract copies will be made for each group. **Launch: (5-10 minutes)** - The teachers will introduce themselves to the class and their new groups - A rap video will be played to introduce them to the PBL lesson they will be completing in the next four days **Entry Doc: (5-10 minutes)**	***Workshop and DIY will be given today*** **Before Class:** - Teachers will bring in limited art supplies, poster board, microwave, and other DIY/workshop **During Class: (40-45 minutes)** - The students should be starting and finishing research on the different kinds of thermal energy and how they are applied to kitchen appliances and where thermal energy may be found in the kitchen - The students will be creating a	***Presentations will be done today*** **First 15 minutes of class:** - Students will be given time to finish preparing for the presentation. - The students will be equally presenting their project and presentations to the class. Students will be evaluated using a rubric. **Last 5 minutes of class:** - Students will be given

- The entry document will be passed out to the group and the teacher will go over it in detail **Social Contract: (5-10 minutes)** - The students will be given a Social Contract and must complete it with their group - The students will receive their name tags and be assigned into groups and jobs. **Knows/Need to Knows: (5-10 minutes)** - The students will create a "Need to Knows"/"Knows" chart with their group and turn it into the teacher when they are done - The students will be given a Project Rubric at the beginning of class so they know what is expected of them.	billboard of a kitchen appliance that uses thermal energy using poster board, cardboard and art supplies. - Students should be starting to construct or drawing up plans - The workshop will also be run with each of the teachers during this day. There will be live examples and the students will be taking notes. Each student in this group will be attending the workshop at different times. _____ ***Crit Session will be given today*** - The students will be finishing up their billboard and creating a powerpoint of presentation. - There will be a matching DIY that all students will complete. The students will follow the DIY schedule in order to complete the DIY. - "Need to Knows"/"Knows" chart will be revisited.	a peer assessment sheet to fill out.

Supplies needed: - Laptop - Access to the internet - Entry documents - Social Contracts - Knows and Need to Knows worksheet	Supplies needed: - Laptop - Access to the Internet - Supplies for their models (if they are making their models of paper and such)	Supplies needed: - Laptop - Access to the internet - Supplies for their models (if they are making their models of paper and such)

REFLECTION QUESTIONS		
What scaffolds, workshops, or learning support will you provide for students? - **We are going to do a DIYs and a workshop on what conduction, convection, and radiation is. In order to leave the students must have the DIY completed and checked off** **- We plan on doing a workshop on what the three aspects of thermal energy are doing.**	**How will you get to know your students and foster a sense of community?** - **When the students are working we will facilitate their learning. We will ask them questions about their plan and where they stand with the project. We will do crit session and get them to elaborate how it relates to the community.** **- The students will be given name tags that are color coordinated and animal coordinated with their assigned**	**What do you see as the biggest challenge in implementing this lesson and how do you plan to address that challenge?** - **Having the students create an billboard out of poster board within the time period. We plan to address this by continuously facilitating them through their project and giving them check points.**

	positions	