Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***6.P.3 Energy Conservation and Transfer***

**6.P.3.1** *SWBAT*illustrate the transfer of heat energy from warmer objects to cooler ones using examples of conduction, radiation and convection and the effect.

**6.P.3.2** *SWBAT* explain the effects of the electromagnetic waves on various materials to include absorption, scattering and change in temperature.

**6.P.3.3** *SWBAT* explain the suitability of materials for use in technological design based on response to heat (to include, conduction, expansion, and contraction) and electrical energy (conductors and insulators).

**Scenario:** Last year you were promoted within your company and relocated to some other part of the world. As the demand for used homes have risen, you were forced to build a home in your new city. After living in the dwelling for a year you are aware of the astronomically large power bills that you have been paying over the last 12 months. What will you do?

**How to Address the Task Within Your Team**

**Step #1:** Define the problem – Clearly state the problems that you are to solve, brainstorm, and tap into your prior knowledge.

Problem:

Brainstorm Ideas and Prior Knowledge:

**Step #2:** Plan a strategy – Define roles for each member of the team, determine what the final product should be, and create a timeline.

Roles:

Ideas about the final product?

Timeline:

**Step #3:** Find information – Determine what information needs to be learned and the resources that your team should use.

What Needs to Be Learned?

Resources:

**Step #4:** Use information – Take notes on the information for future use. This should be done on separate paper.

**Step #5:** Create the “product” – Create the home and gather data. What will you do now?

Original Data:

Changes to consider:

New Data:

**Step #6:** Share your “solutions” and its impact on your problem: