

## HEAT ENERGY RUBRIC

Name: \_\_\_\_\_

4	3	2	1
Fully meets the outcome while demonstrating complete understanding of the skill/concept.	Mostly meets the outcome with limited mistakes and/or minor/insignificant omissions while demonstrating nearly complete understanding of the skill/concept.	Partially meets the outcome with several mistakes and/or some significant omissions while demonstrating limited understanding of the skill/concept.	Does not meet the outcome. There are numerous mistakes and/or significant omissions/ errors. Understanding of skill/concept is not demonstrated.

SCIENTIFIC COMMUNICATION:				
<b>Schematic Diagrams:</b> The student creates a diagram that clearly illustrates their thoughts. The locations and types of heat transfer are evident throughout the drawing. The effect of heat energy on molecular activity is also evident.	1	2	3	4
<b>Speaking:</b> Demonstrates effective oral communication skills (eye contact, enunciation, organization of ideas, pace of speech)	1	2	3	4
<b>Writing:</b> Writing is clear, detailed and logical. Student uses proper grammar, vocabulary, and spelling.	1	2	3	4
KNOWLEDGE AND APPLICATION OF CONCEPTS RELATED TO ENERGY:				
<b>Conduction:</b> Student offers a plausible <b>explanation</b> of how conduction transfers heat into and out of the model ** Heat, collide, energy transfer, vibration, temperature, tightly packed, spread apart, conduction, chain reaction **	1	2	3	4
<b>Insulation:</b> Student thoroughly defends the placement (location) of insulation in the model. * Heat, collide, energy transfer, vibration, temperature, energy, tightly packed, spread apart, conduction, chain reaction *	1	2	3	4
<b>Convection:</b> Student offers a plausible explanation of how convection takes place in the model. There is a clear understanding of how heat is lost or gained due to convection. * Heat, low density, high density, energy transfer, temperature, energy, current, flow, tightly packed, spread apart *	1	2	3	4
<b>Radiation:</b> Student offers a plausible explanation of how radiation transfers heat into and out of the model. * Heat, empty space, waves, vibration, temperature, radiate, energy, reflect, transmit, absorb *	1	2	3	4