

TABLE 3 Scoring rubric for the invention poster (Module 6).

Scoring level	Material explanation	Reducing all types of heat transfer	Application of thermoelectric effect	Sketch	Presentation
6: Exceptional	Lists all materials and completely explains the reasons why each was used and why it was located in that position. Also add justifications with regard to using the materials, e.g., availability, price.	Clearly explains the three types of heat transfer and details ways that the lunch box reduces each type. Also explains a higher level of science concepts such as the conservation of energy.	Features the technology we explored in class and gives explanation of how it makes the lunch box more effective. Explains why placing the Peltier tiles in that position minimizes heat transfer.	A neat, accurate, and scaled model of the lunch box that includes color, labels, and dimensions furthering the audience's understanding.	Shows complete understanding of the lunch box and presents major points clearly. Includes extensions to the content, aspects of the lunch box that need further improvements, and next iteration plan.
5: Accomplished	Lists all materials and completely explains the reasons why each was used and why it was located in that position.	Clearly explains the three types of heat transfer and details ways that the lunch box reduces each type.	Features the technology we explored in class and gives explanation of how it makes the lunch box more effective.	A neat and accurate model of the lunch box that includes color and labels furthering the audience's understanding.	Shows complete understanding of the lunch box and presents major points clearly. Includes extensions to the content.
4: Competent	Lists all materials and explains some of the reasons why each was used and why it was located in that position.	Clearly explains the three types of heat transfer and details some of the ways that the lunch box reduces each type.	Includes the technology we explored in class and gives explanation of how it makes the lunch box more effective.	A neat and accurate model of the lunch box that includes some color and labels.	Shows complete understanding of the lunch box and presents major points clearly.
2 or 3: Developing	Lists most of the materials and explains some of the reasons why each was used and why it was located in that position.	Somewhat explains the three types of heat transfer and details some of the ways that the lunch box reduces each type.	Handwritten text is present that is partially helpful to the understanding of the reader.	A messy but accurate model of the lunch box that includes some color and labels.	Shows some understanding of the lunch box and presents most of the major points clearly.
0 or 1: Beginning/Not Present	Lists some materials and poorly explains some reasons why each was used. Does not explain location.	Poorly explains the three types of heat transfer and details few of the ways that the lunch box reduces each type.	Hand written text is present that is not helpful to the understanding of the reader. No text present.	A messy and inaccurate model of the lunch box that includes some color and labels.	Shows little understanding of the lunch box and presents few of the major points clearly.