

Icy Tiles Poster Project

Due at the end of the Block (9/13 & 9/14)

Overview

You will work individually to develop a model of particles and energy flow in your Icy Tiles lab. Represent your model using a set of particulate drawings that describe the interactions between the ice particles and tile particles, and include arrows to show how energy is moving through the system.

Directions

Complete parts 4 and 5 before beginning work on your poster. In the format of a poster, draw a particulate drawing (using the one on page 11 as a foundation) to show how energy is moving through the system both when the ice is first placed on the tile and after the ice has melted. Use the following questions as a guide for developing your model and answer them as part of your written explanation. Your goal is to **explain how tile A melted ice faster than tile B.**

- How do the particles that make up the ice interact with the particles that make up the tile?
- How does the behavior of the particles that compose the tile change when the temperature of the tile changes?
- Consider the role that energy (heat) plays in your model. How is energy transfer represented in your model? Include a key for particles and energy.
- How can words like *insulator*, *conductor*, *endothermic*, *exothermic* help you to explain this phenomenon.

You will use your responses from parts 4 and 5 of the activity to help you frame your response to the above questions.

To get at least a B

Title

- Highly visible and relevant

Model

- Includes macroscopic (large image) and microscopic (particle model) visuals
 - Particle Model
 - Utilizes arrows to show speed of particle movement
 - Energy Flow
 - Labeled arrows clearly show where energy is coming from and going to
 - Particle model clearly shows where energy is coming from
 - Clearly shows movement of energy through the tiles

Written Explanation

- Shows clear understanding of energy flow as it applies to particle motion.
- Demonstrates understanding that particles interact with each other in various ways
- Shows substantial understanding of how bonds are broken and made that causes changes in energy and how it is measured using support from evidence
- Clearly connects particle and energy behavior to what is observed macroscopically.

Overall Appearance

- Poster clearly communicates information
- Color is used

To get at least an A

- Completes all points in each category and extends the content to other laboratory experiences

To get at least a C

- Missing at least one point in each category

To get at least a D

- Mostly complete the poster or meet at least half the requirements in all categories.