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Day 20 Apr 07 Heat transfer application

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20.0.A Daily Outline

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Purpose:

- Process readings about heat movement in areas of application
- Extend ideas with an additional challenge
- Presentation to class
- Set up rest of semester activity

Board

Sit with your group from last Thursday. (groups of 5)

Folders contain last recorder reports.

(Just put nametags out without saying make them. See if they do.) [forgot to check]

DON'T FORGET TO CLAPMaterials

Name tags (5 per table) – **note, did they put them on?**

Poster paper, markers

Returns

- Recorder reports in folders, indicated by name cards. Shuffle the tables.

Addison	Frost	Joncas	Price	Tamposi	
Arsenault	Koester	Sneedden	Witkiewicz	Graves	
Bouchard	Colaw	Sidney	Dwyer	Reisert	
Butler	Zukowski	Cappetta	Closson	Pettis	King

DistributionsStarting Comments _____ 1 minute max

- Select someone to clap
- Review upcoming schedule quickly
- Get them to work

Assignment

- You already have an assignment for Thursday

Assign Roles:

- a) Spokespersons first. Identify the two people who have the least experience with this role. These people will present your poster to the class.
- b) Recorder: Of the remaining people, identify the person who has the least Recorder experience. That person will summarize notes on Recorder Report.
- c) Manager: Of the remaining people, choose one person to be manager, with two primary roles. First, watch the clock. Second, watch conversations and explicitly invite those who are quiet or can't get a word in to provide a comment or observation.

Anyone can contribute to the poster design.

Discuss heat movement applications from readings and create a summary poster

- Discuss the reading your group was primarily responsible for. Make note of important features that should appear in the poster. (Recorder Report)
- Make note of any questions that arise from the readings. (Recorder Report)
- Create a poster that summarizes what you read about, and how the principles of heat movement apply.
- You will also be given information to extend your discussion. You may include this in your poster, or you will be asked to share your group's thoughts about this extension separately.

Firewalking	Provide them thermochromic papers, sand, water. Challenge to demonstrate some of the criticisms.
Ice production	Provide information on the thermal properties of water relative to other materials
Windows	Apply what you learn here to the issue of global warming. Try PhET global warming simulation.
Space Station	Provide information on heat exchangers and heat sinks

Loose ends

- 1) Get out Magic Thaw and aluminum pan. Isolate from table. Measure temp of the metal using IR gun. Have two groups do that. Hyp: the mass of object matters
- 2) Dunking bird. Measure temp of heads. Then dunk in water and measure temp of heads using IR gun.

Summary: Heat movement