2016

1.1.b Question Bank Sensation of Heat and Cold

Chris Bauer

University of New Hampshire, chris.bauer@unh.edu

Follow this and additional works at: https://scholars.unh.edu/day1

Part of the Educational Methods Commons, Scholarship of Teaching and Learning Commons, and the Science and Mathematics Education Commons

Recommended Citation
https://scholars.unh.edu/day1/13

This Report is brought to you for free and open access by the Fire and Ice at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in Day 01 by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact nicole.hentz@unh.edu.
Research questions

- What is the evolutionary benefit of feeling pain when temperatures become extreme?
- If the temperatures experienced were more extremely different, how would that feel?
- What degree of change induces discomfort? Does the direction of change matter?
- Why is it that some people complain about their hands feeling cold all the time, but not other people?
- Why does one temperature seem more dominant?
- Did the temperature of one’s hand affect the perception of the water into which it was put?
- What is the reaction time to sensing hot or cold?
- What is the temperature threshold in order to feel a difference?
- If you know what you are going to feel beforehand, does that change the perception of what you feel?
- How does using water as the medium differ from just using air as the medium? How does that affect the sensation?
- Does the sensation change if more than just a finger experiences the temperature (e.g. a bath)?
- What’s more painful? Freezing or burning?
- How does the body maintain homeostasis?
- What parts of the body react most to temperature?

Technical Issues

- The three cups were chosen to have a certain temperature. Why were those temperatures chosen?

Consequences and Applications

- For treating burns, it is not recommended that you apply ice because of concerns about frostbite. What is the perceptual concept behind this recommended treatment and an appropriate treatment?
- When is it appropriate to apply ice vs heat to an injury and why?
- How long does it take someone to adapt to a climate change (when they move to different parts of the world)?
- Why does glass break when experiencing a drastic temperature change?