

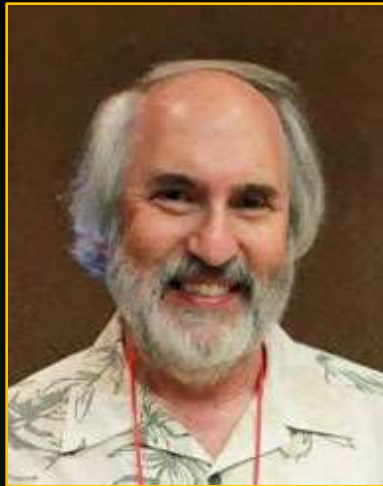
January 18, 2018

Bridging the Gap between Consumers and Products in Rehabilitation
Medicine - Deborah E. Kenney, MS, OTR/L



ENGR110/210

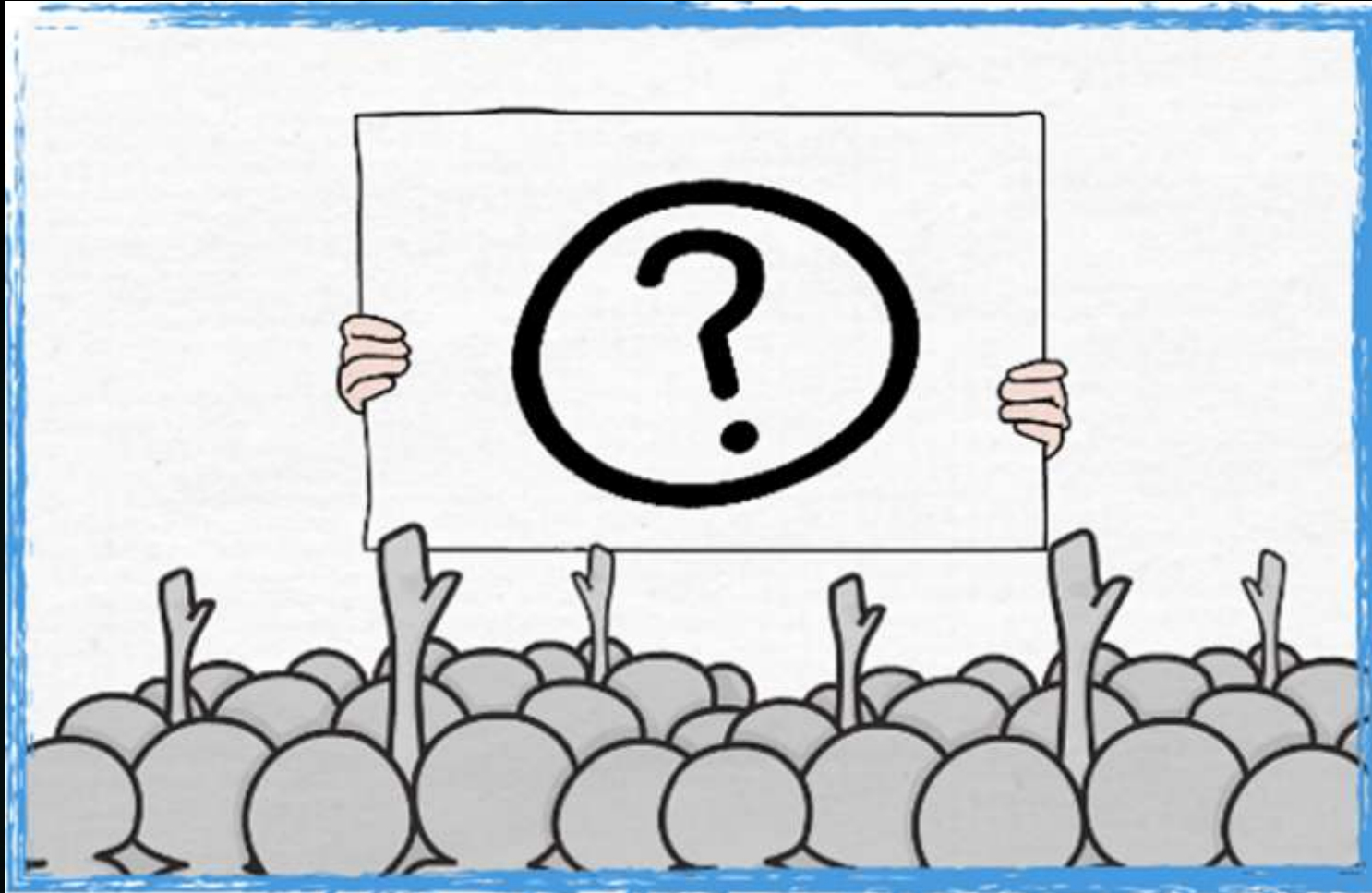
Perspectives in Assistive Technology



David L. Jaffe, MS
Instructor



Questions?



Class Session Evaluation Form



Everyone is welcome to fill out a class session evaluation form

Perspectives in Assistive Technology - 2018
Class Session Evaluation Form

Use a pen with a legible font

Lecture 01a: Course Overview & Introduction to Assistive Technology - David L. Jaffe

Are you an enrolled student? - Yes - No

The purpose of this questionnaire is to help the teaching team assess today's class session. Please rate the following issues:

Speaker's overall presentation: speaking volume, understandability, ease of following concepts and arguments, clarity of explanations, quality of PowerPoint slides, use of supporting media (videos) and presentation aids (Show&Tell items), stage presence, knowledge of topic, preparedness, presentation structure, organization, pace and management of allotted time, opportunity for questioning and class engagement, provided good answers, examples, and demonstrations

Presentation content: topic interest, relevance to the broad scope of assistive technology, presentation of new information, appropriate level of detail and technical content, overall value of presented material

Submit your comments, questions, and suggestions, especially if you found portions of the lecture to be particularly 😊 or ☹️. Supply your name if you want a response and use the back of this form if you need more room.

What one item did you hear, see, or learn that was new, surprising, interesting, or provided a new perspective?

How much did you learn from today's lecture? - a great deal - a lot - a moderate amount - a little - nothing

What is your stress level today? - low - medium - high

How is your stress level trending? - downward - steady - upward

Top half of the page



Pre-lecture Discussion Topics



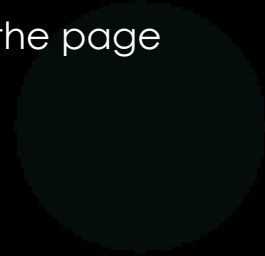
Everyone is welcome to fill out this questionnaire

Pre-lecture Discussion Topics

Select topics of interest

- What is Accessibility?
- Ethical / Moral Dilemmas Related to Disability
- Assistive Robotics - Robotic technology benefitting people with disabilities and older adults
- In the News - New Assistive Technology products and research
- Vintage Assistive Technology - Products from the past
- Ten Commandments of Making - Adam Savage's Maker Faire video
- The Upside of Failure - Learning from prototypes that didn't work
- Who is Disabled? - Making a determination with limited information
- More on the Design Development Process - What's missing from other processes?
- Video Theatre - Watch and discuss videos of new products and prototypes
- Marketing terms - Words matter
- Famous people with disabilities - Focus on TV show characters
- Students' Choice - Class determines topic – specify _____

Bottom half of the page



Miscellaneous

- ▶ Use a pen to fill out evaluation forms
- ▶ Weblinks and photos linked from lecture webpages
- ▶ Meet with Dave Signup Sheet
 - ▶ Individual project approval
 - ▶ Project updates
- ▶ Microphone used with camcorder



Engineering Design Process



- ▶ Understand the problem
 - ▶ Interview the user / project suggestor
 - ▶ Realize that the user / suggestor may not have all the answers
 - ▶ Research what has already been done: articles, research, and products
 - ▶ Consult with experts
 - ▶ Determine why current devices haven't adequately solved the problem
 - ▶ Survey technology
- ▶ Determine the need (a judgment)
- ▶ Brainstorm many possible design concepts
- ▶ Select top concepts
- ▶ Fabricate, test, analyze, redesign, **quickly** repeat
- ▶ Work closely with user / suggestor in testing phase
- ▶ Report and demonstrate your results
- ▶ Reflect on your project experience

Project Documentation

- ▶ Lab notebooks are not required
- ▶ Diary for your Individual Reflection
- ▶ Photos and short videos strongly suggested
 - ▶ Working with a person with a disability
 - ▶ Illustrating your design process
 - ▶ Prototypes



Work with Diligence

- ▶ Time is your team's most precious resource
- ▶ 7 weeks of class left to work on your projects
- ▶ Mid-term team presentations in 4 weeks
- ▶ Get your PRL Shop Pass



Formed Project Team

- ▶ **Lighter Leg Braces Project**
- ▶ **Favorite Fighting Frenchmen**
 - ▶ Evan Long
 - ▶ Oscar Molina
 - ▶ Ben Taylor



Formed Project Team

- ▶ **Magical Bridge Playground Project 1**
- ▶ **The Trolls**
 - ▶ Amanda Guerra Arci
 - ▶ Mini Racker
 - ▶ Chloe Rosen



Formed Project Team

- ▶ **Hybrid Body-Powered Harness**
- ▶ **The First Team with No Name**
 - ▶ Eric Dancu
 - ▶ Brice Dudley
 - ▶ Kelsey Pian



Formed Project Team

- ▶ Creative Expression for Danny
- ▶ **The Second Team with No Name**
 - ▶ Jean-Marc Nugent
 - ▶ Israel Sanchez
 - ▶ Tristan Vanech



Formed Project Team

- ▶ **Magical Bridge Playground Project 2**
- ▶ **The Third Team with No Name**
 - ▶ Alex Casas
 - ▶ Amy Kouch
 - ▶ Rachel Wallstrom



Formed Project Team

- ▶ **Fernanda's Wheelchair Work Tray**
- ▶ **The Fourth Team with No Name**
 - ▶ Jacob Barrus
 - ▶ Akash Modi
 - ▶ Heidi Poppe



Form your Project Teams this Week



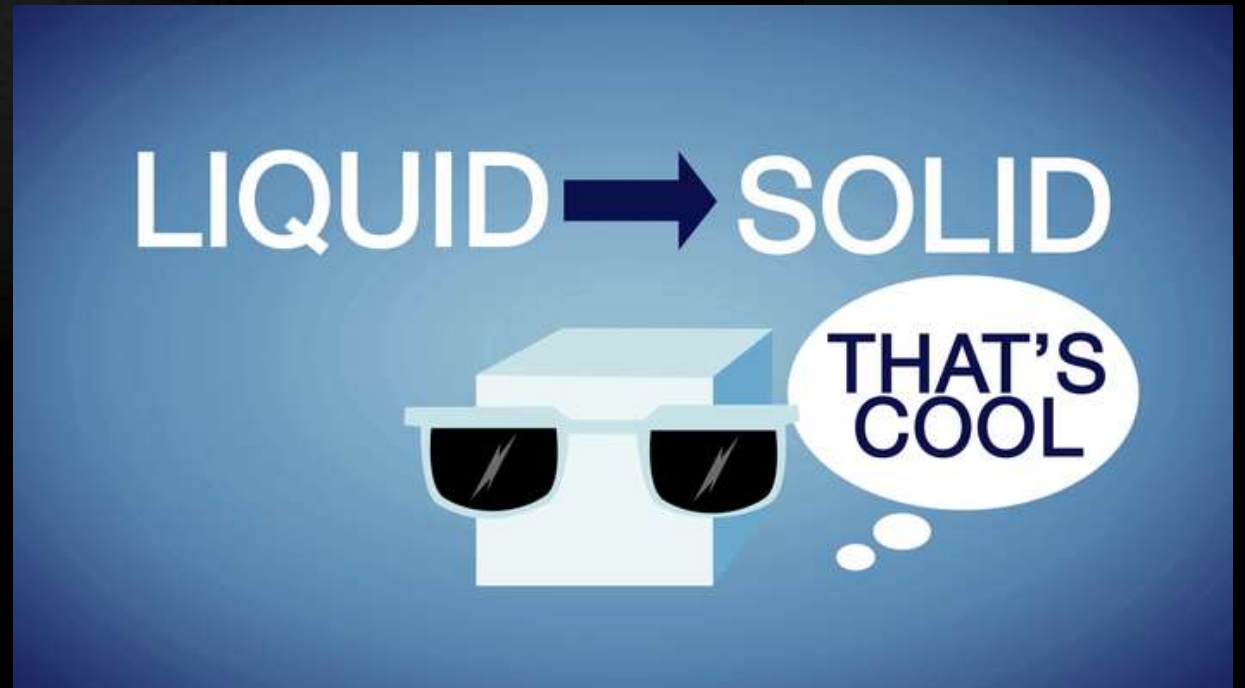
- ▶ **Project**
- ▶ **Team Name**
 - ▶ Student 1
 - ▶ Student 2
 - ▶ Student 3



Question about temperature



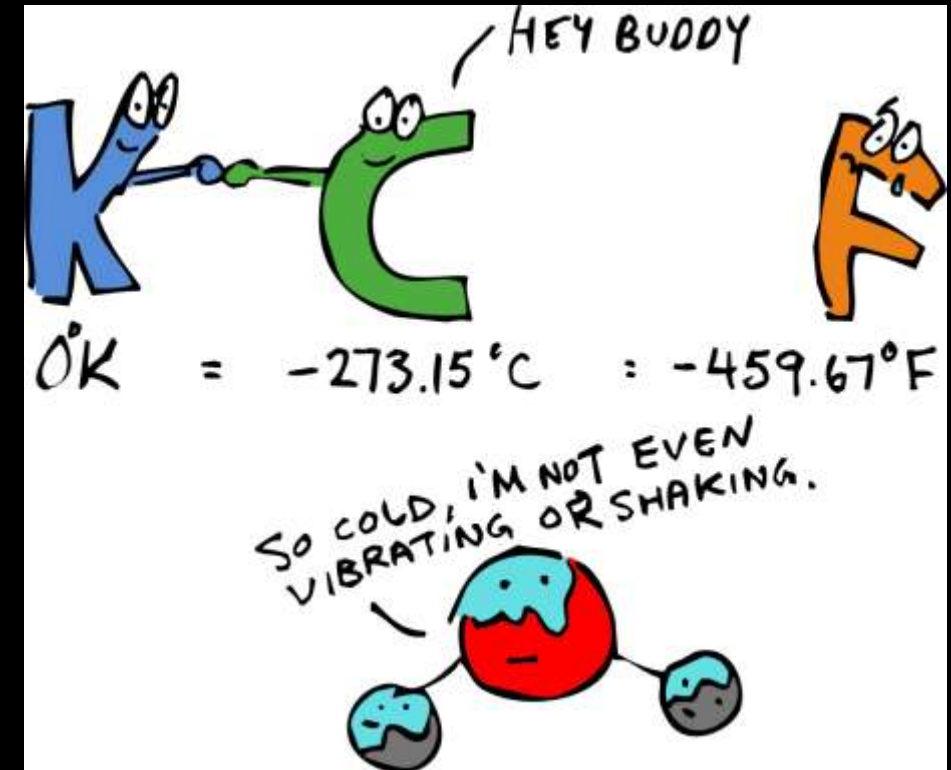
- ▶ **What is double the freezing point of water?**
- ▶ The freezing point of water is 0° Celsius / 32° Fahrenheit
- ▶ Twice 0 is 0 and twice 32 is 64
- ▶ But 64° F is 17.8° C
- ▶ What's wrong here?



Question about temperature



- ▶ **You must reference Absolute 0**
- ▶ Absolute 0 = -459.67°F and -273.15°C
- ▶ Use Kelvin where 0° is indeed zero temperature
- ▶ Freezing = 273.15°K = 0°C = 32°F
- ▶ Twice = 546.30°K = 273.15°C = 523.67°F



Dr Martin Luther King Jr.



How might the teachings of Dr Martin Luther King Jr. relate to people with disabilities?

“I have a dream that **my four little children** will one day live in a nation where they will **not be judged by the color of their skin** but by the **content of their character.**”



Dr Martin Luther King Jr.



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Disability and advanced age do not represent a weakness of character.



Tuesday, January 23rd



Perspectives of Stanford Students with a Disability

Zina Jawadi, Bryce Connor Tuttle, Evan Feinberg,

Today



Bridging the Gap between Consumers and Products in Rehabilitation Medicine

Deborah E. Kenney, MS, OTR/L

Stanford University

VA Palo Alto Health Care System

Foothill College



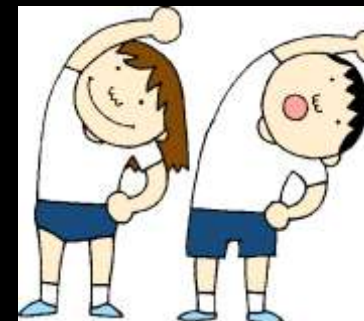
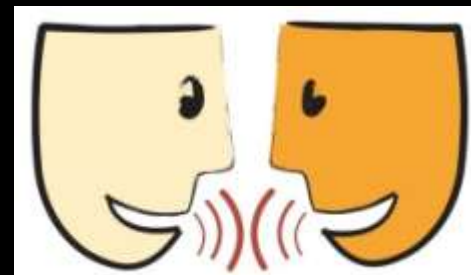
Short Break



Break Activities



- ▶ Sign attendance sheet
- ▶ Grab a cookie
- ▶ Stand up and stretch
- ▶ Take a bio-break
- ▶ Text message, web-surf, email
- ▶ Talk with classmates
- ▶ Reflect on what was presented in class



Short Break



THANK YOU FOR



YOUR ATTENTION.

