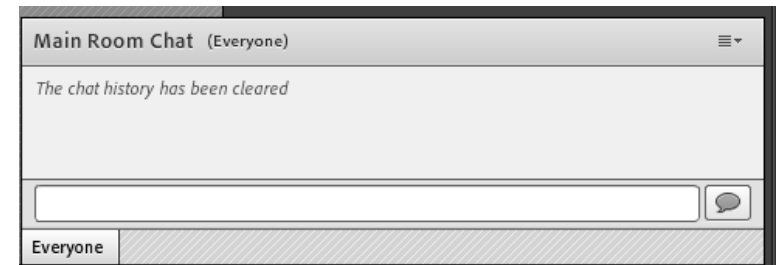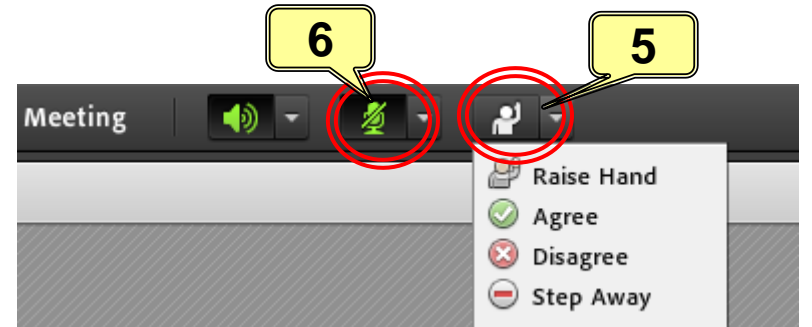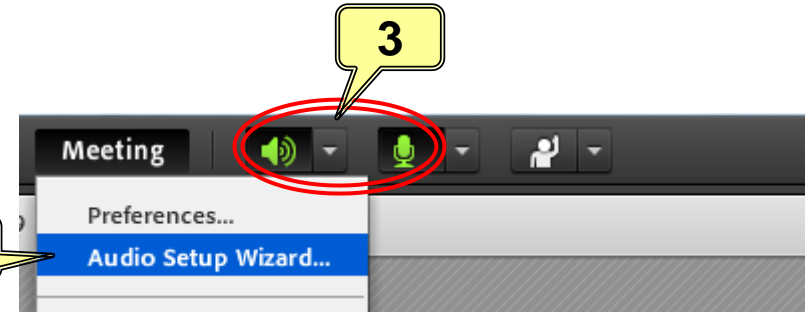# Welcome! As you enter…

1. Plug in your headset (if available).

2. Enable your speakers and mic

3. The top bar icons should be green).

4. Run the audio setup wizard (use "Meeting" menu on top left).

5. "Raise your hand" by clicking the icon to let the hosts know you are ready to test your mic.

6. After testing your mic, mute yourself by clicking the mic icon

7. Feel free to use the chat at any time!

Meeting — 2

Meeting — 3
Preferences…
Audio Setup Wizard… — 4

Meeting — 6 — 5
Raise Hand
Agree
Disagree
Step Away

Main Room Chat (Everyone)
The chat history has been cleared

Everyone

Start Recording

Faculty Virtual Community of Practice
Computer Science & Computer Engineering

Session 3: Student Prior Knowledge

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Today's Agenda

- Welcome and Review (10 min)

- Student's Prior Knowledge (10 mins)

- Breakout Sessions (20 mins)

- Summary

- Next Week's Homework

Rules of Engagement

Create your own bubble of solitude:

- Close your office door

- Use a "do not disturb" sign

- Turn off e-mail

- Silence or forward phone

- Avoid any other potential distractions

- Occasionally check to see whether or not you are muted; review the Chat box to see if there is anything relevant

CSE VCP Review

- The goal is to introduce faculty to research-based instructional practices in order to make a few changes to their teaching this term and more systemic changes next term

- Session 1: Seven Principles of Learning

- Session 2: Learning Outcomes

- Session 3: Student's Prior Knowledge

Poll Question

- Did you read Chapter 1?
  - I meant to but…
  - Skimmed the material
  - Read it closely

Poll Question

Did you submit your homework?

- No, but I had a really good reason
- Yes, but I am not particularly proud of the effort
- Yes, and it is dope!

Summary of Homework

- Many provided expected prerequisites for course
  - Earlier courses
  - Practical experience

- Some provided a general description for the course being started

- Some questions simple multiple choice; some require complex answer

- Responses expected to be verbal, on paper, on survey tool, in discussion group,

Summary of Homework

- How do you assess the student responses?

- How do you use the results?

- How much time do you intend to spend on this exercise?

- What's the benefit?

Student Prior Knowledge

- Prior knowledge can help or hinder learning.
  - Declarative knowledge allows one to state facts and concepts.
    - Knowing *what*
  - Procedural knowledge is knowing how and when to perform tasks.
    - Knowing *how and when*

Poll Question

- Which of the following is the <u>most</u> difficult to correct?
- Inactive knowledge
- Insufficient knowledge
- Misconceptions
- All of the above

Instructor Challenges

- Assess what students already know
  - to build upon accurate knowledge
  - to fill gaps of incomplete knowledge
  - to correct inaccurate knowledge

Effective Strategies

- Talk with colleagues who teach pre-reqs

- Administer a concept inventory

- Assign a concept map activity (Appx B)

- Use clickers in the classroom

- Explicitly link new material to previous material

- Use analogies that relate to everyday knowledge

- Ask students to make and test predictions

Breakout Sessions

- Unmute your mics when you arrive

- Post a chat message along with your group number if you have technical problems

- Some groups will be asked to report out

- Scott and Joe will drop in to each group

- Roles for today
  - Scribe (#2)
  - Reporter (#1)
  - Manager (#3)

Breakout Activity 1

Identify strategies you have used to help students

- build upon previous knowledge

- fill gaps of incomplete knowledge

- The clock is ticking
  - 2 minutes of reflection before you begin your discussion
  - 13 minutes of discussion

Report Outs

Misconceptions

- Students may have incorrect knowledge deeply embedded in their thinking

- For example:

  Result = x;

- Or

  ```
  if (x > y)
      total = total + 1;
  else
      total = total;
  ```

Breakout Activity 2

- Provide examples of student misconceptions and strategies to overcome them
  - 2 minutes of reflection before you begin your discussion
  - 13 minutes of discussion

Report Outs

Summary

- Assess what students already know
  - to build upon accurate knowledge
  - to fill gaps of incomplete knowledge
  - to correct inaccurate knowledge

- Correcting misconceptions takes time, patience and creativity

Poll Question

What additional topics would you like to cover?

- Managing team projects
- Using technology to support classroom instruction
- Building student motivation
- Collaborative learning in the classroom
- Rewarding faculty for improving their instruction
- Peer instruction
- Creating a positive classroom environment
- Using learning styles

Next Week

- Your homework:
  - ?????