### UNIVERSITY of **HOUSTON**

COLLEGE of NATURAL SCIENCES & MATHEMATICS

# Engaging Students in Large Lecture Classes

Faculty Development Workshop August 16, 2012

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# The "Typical" Lecture

- 1) What is the purpose of lecture?
- 2) What do you expect students to get from lecture and what do you expect them to do on their own to master the material?
- 3) How should a student study for your exam?



## The "Typical" Lecture

- 1) Do students have the skills needed to benefit from attending lectures and do they know how to study for your exams?
- 2) What do you do to teach them the skills they need to study effectively?
- 3) How much impact do you feel your skills lessons are having on student success? What could you do differently to increase the effectiveness of those activities?



### **Learner Centered Courses**

- 1) Define "learner centered course".
- 2) List characteristics of the course.



# Animations, Videos, and Demonstrations

- 1) Why do you use them?
- 2) How do you use them to maximum effect?

Illustrating a Concept:

Phototropism

http://www.youtube.com/watch?v=Ze8NV7cvW8k

Reinforcing concepts by stopping the animation for discussion and reiterating key points or places misconceptions occur:

PCR:

http://www.sumanasinc.com/webcontent/animations/content/pcr.html



### Asking meaningful questions

**Low Cognitive Level**: What do we call the growth of plants toward light?

<u>Higher Cognitive Level:</u> What changes must happen in the plant to allow it to grow toward the light?

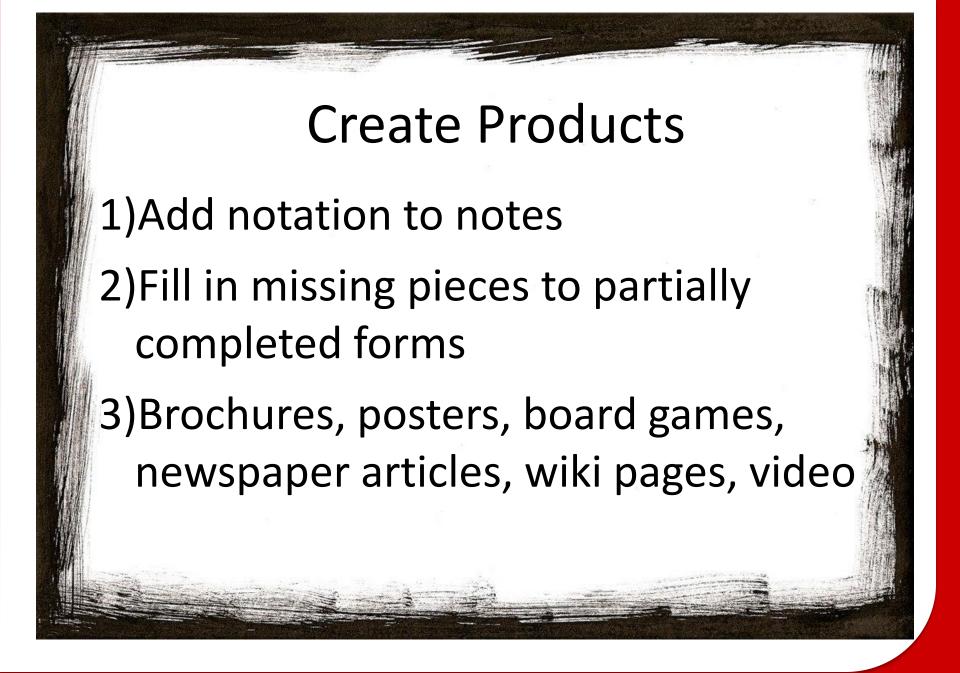
### Asking questions effectively

Wait time

Think-pair-share

Write down your response

Randomly select students: Nerf ball; names in a jar, wander up the aisle and select randomly. Benefits?



### **Preparing for Lecture**

#### Daily Learning Outcomes:

- 1. Who will be doing the learning?
- 2. When and where will the learning be completed?
- 3. What will the students be able to do or know?
- 4. How will you know they learned it?

