

The ABCs of Course and Lesson Design

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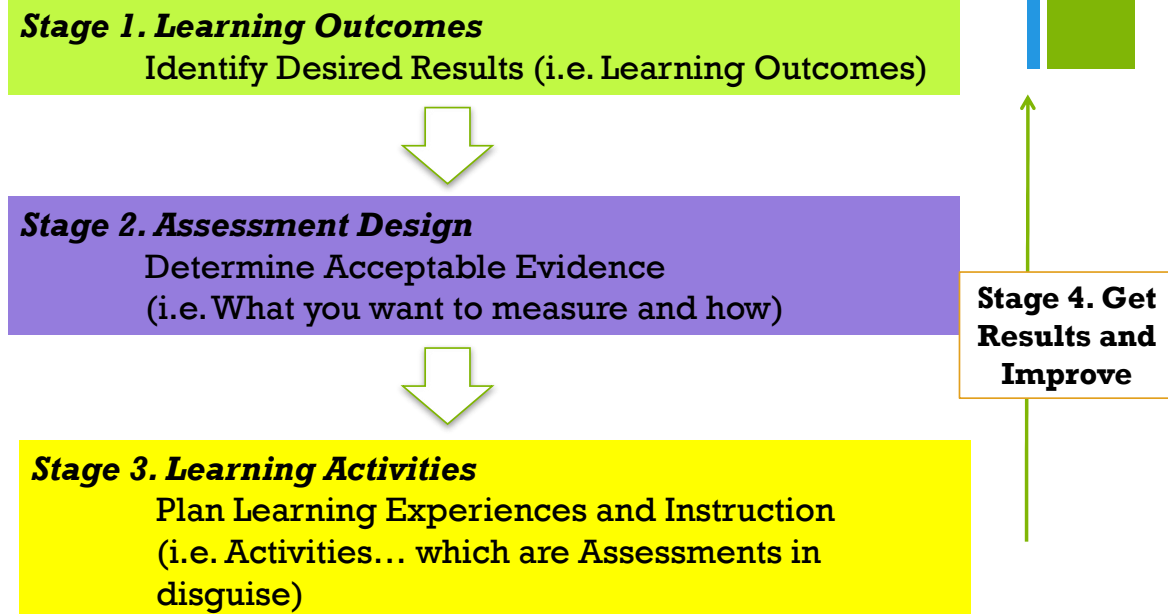
Learning Outcomes: By the end of this session, you will be able to:

- Identify the main components of backwards design
- Devise learning outcomes for your course
- Develop activities and assessments that align with your learning outcomes

Course Design Steps

1. Curriculum mapping
2. Classroom environment
- 3a. Learning outcomes
- 3b. Course content
4. Assessments
5. Activities
6. Lecture plans

+ Backwards Design



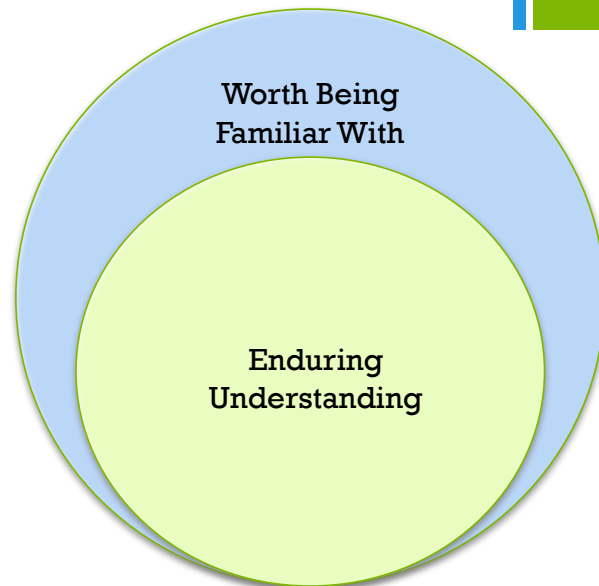
Backwards Design

- *Worth Being Familiar With:*
 - What should students hear, read, view, explore, encounter?
- *Enduring Understanding:*
 - What are big ideas and important understandings students should retain?
 - What knowledge and skills should students master?

+ Backwards Design Activity

Worth Being Familiar With:

Enduring Understanding:



Wiggins and McTighe

1. **Develop Learning Outcomes**

- Learning outcomes “articulate the knowledge and skills you want students to acquire by the end of the course or after completing a particular assignment” (How Learning Works)
- Learning Outcomes:
 - student-centered
 - break down task and focus on specific cognitive processes
 - use action verbs
 - measurable

+ Learning Outcomes Activity

- Target Group: _____
- Level of Mastery: _____
- Bloom’s Taxonomy Verb: _____
- Targeted Learning (content or skill): _____

*Combine the above to form a learning outcome:
Target Group will be able to Bloom’s Taxonomy Verb +
Targeted Learning.*

- Learning Outcome: *By the end of this course:*



2. Assess Student Learning

- How will students and instructor know that students “got it?” What is acceptable evidence of understanding?
- What tasks will support students in developing understanding?

Learning Happens With:

Practice -> Feedback -> Performance

3. Develop Active Learning Activities

- How will students be engaged (e.g., through inquiry, research, problem solving, and experimentation)?
- When will students have opportunities to revise, reflect and refine their work based on feedback?

Activity List

- Think-pair-share
- Clickers
- ABCD by fingers on chest
- Group work
- Quick write
- 2 minute paper
- Muddiest point
- Debates
- Problem solving at the board
- Student teaching
- Presentations

Pedagogical Steps to Implementing Activities

- 1) Determine your learning outcomes (skills / knowledge)
- 2) Think about what you want to use the activity for (participation, feedback, peer work, individual response)
- 3) Introduce your class to the activity (get buy-in)
- 4) Follow up (reporting out, submit something)

Want to Learn More?

- Course Design Short Course for Grad Students / Post-Docs, October-November
- One-on-One CTLO consultations and observations jweaver@caltech.edu
- Resources:
 - www.teachlearn.caltech.edu/resources/courses
 - omerad.msu.edu/chmeducator/documents/Yelon-Syllabus_Checklist.pdf