

4: OBJECTIVES

Establish what students will accomplish through this lesson.

THE
LESSON
DESIGN
TOOLKIT

How does this lesson fit into the trajectory of the course?

What if the lesson was magic? If it just worked, what would it do?

What do you want students to know/think/be able to do at the end of the lesson?

What ideas from the previous meeting are being built upon or are being reinforced?

EXPLORE & DEFINE

Designers explore a problem's context and define the challenge before making plans of action. By understanding the context of the problem space and describing a preferable future state, we can avoid developing solutions to the wrong problems.

This process can be applied to teaching to avoid developing activities that do not support student learning.

- What's the lesson about? Are there hidden or unacknowledged aspects?
- What's it not about? What's the opposite of that?
- What's one important thing for students to get out of this class?
- How will these objectives motivate and inspire students?
- What will matter once the course is over?
- What is the desirable future state that you hope to achieve?

Write some ideas on notes and set aside.

If you don't know, guess about what might be important. These do not have to be complete thoughts.

PROTOTYPE

When a problem isn't fully understood, designers often create a rough prototype. Making something at a basic level can help establish what's important and provide a tangible object to learn from and react to, which can later be assessed and improved.

Lesson designers can prototype by writing informal objectives. These are starting points from which to later refine. Create several possible objectives using the format below. For now, focus on the meaning and not the language. Make sure to include all four parts in each completed objective.

At the end of this lesson, students should

Audience

be able to list at least three common data sources

Verb

Standard

used to characterize health status of a community.

Condition

Adapted from Effective Adult Learning: A Toolkit for Teaching Adults, developed by Northwest Center for Public Health Practice, University of Washington.

These lesson objectives may be informed by the course objectives, but will not be identical. A single lesson cannot effectively serve all of the course objectives, but can concentrate on one or two of them and accomplish a subset of those goals.

Write the objectives on notes and place on the lesson plan canvas.

ALTERNATIVE GENERATION

The first solution to a problem is seldom the best option.

Bloom's Taxonomy is a framework for better understanding the lesson's goals and generating alternative ways to describe the objectives. It is a research backed pedagogical framework for classifying and exploring different types of thinking and learning.

Each of the six verbs in the materials at right describes a category of learning. There are many verbs that can be used in an objective, but they tend to fall into one of these categories. For example, "analysis" could include verbs like "compare," "infer," and "verify."

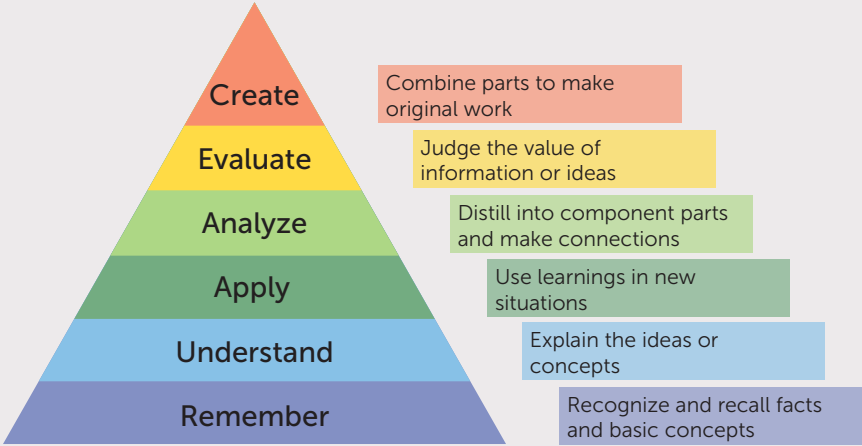
Explore the examples and consider how your own objectives might be rephrased.

- What level of learning is appropriate for these students? While there's room for each level of the hierarchy in any lesson, introductory courses generally focus more on lower order verbs like remember and understand, with advanced courses emphasizing higher order modes of learning.
- How might higher order verbs be used in place of lower order verbs?
- What's most important for your students to know, think, and be able to do at the end of the lesson? Are these priorities reflected in the objectives?

Use Bloom's Taxonomy to Generate alternatives to each existing objective.

Partial sentences and incomplete ideas are OK. These alternatives will later be assessed and improved.

BLOOM'S TAXONOMY



Level	Key Verbs	Example Learning Objective
Create	Design, compose, modify, generate, create, develop	By the end of this lesson, the student will be able to design an original homework problem dealing with the principle of conservation of energy.
Evaluate	Determine, judge, support, justify, argue, convince, evaluate, select	By the end of this lesson, the student will be able to determine whether using conservation of energy or conservation of momentum would be more appropriate.
Analyze	Classify, break down, categorize, diagram, illustrate, criticize, associate	By the end of this lesson, the student will be able to differentiate between potential and kinetic energy.
Apply	Calculate, predict, solve, illustrate, use, demonstrate, determine, model, present	By the end of this lesson, the student will be able to calculate the kinetic energy of a projectile.
Understand	Describe, interpret, explain, paraphrase, give examples, contrast, discuss	By the end of this lesson, the student will be able to describe Newton's three laws of motion in their own words.
Remember	List, recite, define, name, match, recall, identify, recognize	By the end of this lesson, the student will be able to recite Newton's three laws of motion

Adapted from *Using Bloom's Taxonomy to Write Effective Learning Objectives*, TIPS Center, University of Arkansas. <https://tips.uark.edu/using-blooms-taxonomy/>

ASSESS & CONVERGE

Working from many diverse alternatives, designers assess the strengths of each option, select the best alternatives, and converge on a specific plan of action.

Consider the draft lesson objectives and decide which options to develop and which to abandon.

- What's the most important objective? The least?
- Do these objectives apply multiple levels of Bloom's Taxonomy?
- Are some of these objectives better served as part of another lesson?
- Do they all really matter, or can some be removed?
- If someone were to criticize these objectives, what would they say?
- What do you most want to avoid?

Taking the best parts from each alternative, reduce to 2-4 objectives and set the others aside.

INTEGRATE

Integrate these lesson objectives with the other components of the lesson.

- How might these objectives be assessed? How will you know if a student has met the objectives?
- How does the content inform the objectives? Is the required content represented in the objectives?
- How do the activities inform the objectives? Is there a planned activity that suggests the lesson's true priorities?
- What's the lesson about? Why does it matter? How has its purpose changed as your understanding has grown?

Revisit the other components of the lesson and make adjustments.

ITERATE

Use the insights from the assessment and integration sections to inform changes to the objectives.

Working from the earlier objectives, use the table below to refine and add specificity. Write the revised objectives on new sticky notes and place them over the previous versions on the lesson plan canvas. These still won't be perfect, but they can now inform other parts of your plan.

Poorly defined learning objectives

After completing this lesson, students will be able to:

- operate a phone
- know how to greet callers
- understand call transferring procedure

These objectives do not indicate observable behaviors, making assessment of their mastery impossible. How does one know if someone knows or understands something? What does it mean to operate a phone?

Well defined learning objectives

After completing this lesson, students will be able to:

- place a caller on hold
- activate the speaker phone
- list three elements of a phone greeting
- transfer a call to a requested extension

These objectives are built around discrete tasks. Specific objectives let the student know what is expected for successful operation. Importantly, these behaviors are observable.

Adapted from Effective Adult Learning: A Toolkit for Teaching Adults, developed by Northwest Center for Public Health Practice, University of Washington.

Develop 2-4 well defined objectives and add them to the lesson plan canvas.

