Writing Learning Objectives
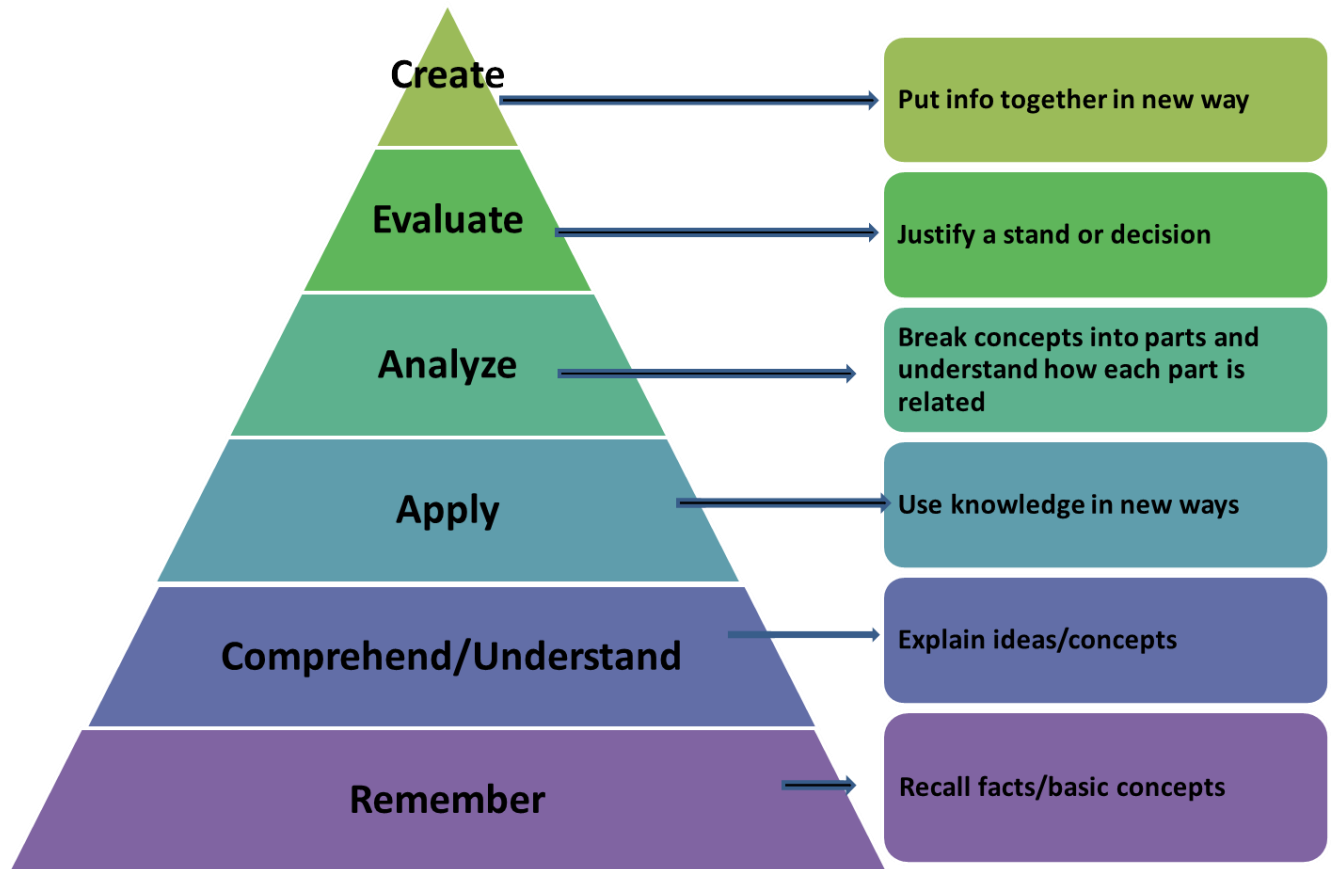
Learning objectives are clear, concise statements that **define** the expected goal of a curriculum, course, lesson or activity, and describe observable skills or knowledge that will be acquired by a student as a result of instruction.

Why bother?

1. Writing effective learning objectives will
   a. Help *you* clarify the goals and objectives of your course
   b. Help the student understand what is important and valued by the course director.
   c. Facilitate objective and effective evaluation of students

2. The LCME requires it. "The faculty of a medical school define its medical education program objectives in outcome-based terms that allow the assessment of medical students' progress in developing the competencies that the profession and the public expect of a physician."

Tips for writing learning objectives:

1. Focus on *student* performance, not teacher performance.
2. The ABCD method of writing Learning objectives
   a. A is for Audience — who are the students?
   b. B is for Behavior — what is the observable and measurable behavior the learner is expected to attain?
   c. C is for Condition — what is the context or situation in which the learning will occur? What do they need?
   d. D is for Degree — what is the extent or level of expected performance? How well will the learner need to perform the learning objective?
3. Use active verbs—see handout next page
   a. Special attention to replacing "understand"—ask yourself, "What should the student be able to do if the students understands the content?"
      i. Describe the mechanism
      ii. Determine the correct method to evaluate
      iii. Identify the pertinent positives and negatives
      iv. Explain the pros and cons of
4. Think about where you are aiming on Bloom's taxonomy. Aim for higher order thinking.

Create → Put info together in new way

Evaluate → Justify a stand or decision

Analyze → Break concepts into parts and understand how each part is related

Apply → Use knowledge in new ways

Comprehend/Understand → Explain ideas/concepts

Remember → Recall facts/basic concepts

Adapted from: *Bloom, B.* *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive Domain. 1984.*

Helpful References:

Webb EM, Naeger DM, Fulton TB, Straus CM. Learning objectives in radiology education: why you need them and how to write them. Acad Radiol. 2013 Mar;20(3):358-63.

Bloom's Taxonomy Action Verbs

Level	Definition	Sample verbs					Sample behaviors
KNOWLEDGE	Student recalls or recognizes information, ideas, and principles in the approximate form in which they were learned.	arrange define describe duplicate	identify label list match	memorize name order outline	recognize relate recall repeat	reproduce select state	The student will define the 6 levels of Bloom's taxonomy of the cognitive domain.
COMPREHENSION	Student translates, comprehends, or interprets information based on prior learning.	explain summarize paraphrase describe illustrate classify	convert defend describe discuss distinguish	estimate explain express extend generalized give example(s)	identify indicate infer locate paraphrase predict	recognize rewrite review select summarize translate	The student will define the 6 levels of Bloom's taxonomy of the cognitive domain.
APPLICATION	Student selects, transfers, and uses data and principles to complete a problem or task with a minimum of direction.	use compute solve demonstrate apply construct	apply change choose compute demonstrate discover dramatize	employ illustrate interpret manipulate modify operate	practice predict prepare produce relate schedule	show sketch solve use write	The student will write an instructional objective for each level of Bloom's taxonomy.
ANALYSIS	Student distinguishes, classifies, and relates the assumptions, hypotheses, evidence, or structure of a statement	analyze categorize compare contrast separate apply	change discover choose compute demonstrate dramatize	employ illustrate interpret manipulate modify operate	practice predict prepare produce relate schedule	show sketch solve use write	The student will compare and contrast the cognitive and affective domains.
SYNTHESIS	Student originates, integrates, and combines ideas into a product, plan or proposal that is new to him or her.	create design hypothesize invent develop arrange assemble	categorize collect combine comply compose construct create	design develop devise explain formulate generate plan	prepare rearrange reconstruct relate reorganize revise	rewrite set up summarize synthesize tell write	The student will design a classification scheme for writing educational objectives that combines the cognitive, affective, and psychomotor domains.
EVALUATION	Student appraises, assesses, or critiques on a basis of specific standards and criteria.	Judge Recommend Critique Justify Appraise Argue	Assess Attach Choose Compare Conclude Contrast	Defend Describe Discriminate Estimate Evaluate	Explain Judge Justify Interpret Relate	Predict Rate Select Summarize Support Value	The student will judge the effective-ness of writing objectives using Bloom's taxonomy.