

BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES

Objectives state what we want our students to learn and be able to do. A statement of an objective contains a noun (type of knowledge) and a verb (type of cognitive process using the knowledge).

General form of a learning objective: Students will be able to *verb* **noun phrase**.

Examples: Students will be able to *design* **an experiment to test a hypothesis**.
 Students will be able to *distinguish* among **confederal, federal, and unitary systems of government**.
 Students will be able to *differentiate* between **rational and irrational numbers**.

The Knowledge Dimension

	Factual	Conceptual	Procedural	Metacognitive
DEFINED	The basic elements students must know to be acquainted with a discipline or solve problems in it	The interrelationship among the basic elements within a larger structure that enables them to function together	How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods	Knowledge of cognition in general as well as awareness and knowledge of one's own cognition
SUBTYPES	Terminology Symbols Specific details Specific elements	Classification Categories Principles Generalizations Theories Models	Skills Algorithms Techniques Methods Criteria for judgment	Strategies for learning Knowledge about cognitive tasks Self-knowledge
EXAMPLE	Works by an artist Historical events Components of a cell	Periods of geologic time Models of government Theory of evolution	Skills to paint a watercolor Skills to analyze an injury Methods of literary criticism	Use of mnemonic strategies Use of organizing techniques Knowing one's understanding of and motivation for a task

Taken from Anderson and Krathwohl; *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, New York: Longman, 2001.

The general form for writing a learning objective: **Students will be able to** *verb* noun phrase.
 An example of a learning objective: **Students will be able to** *write* a learning objective that is clear and specific.

The Cognitive Dimension

	Remember	Understand	Apply	Analyze	Evaluate	Create
	Retrieve relevant knowledge from long-term memory	Construct meaning by connecting “new” to “prior” knowledge	Use a procedure to perform exercises or solve problems	Break material into its constituent parts and relate parts to whole	Make judgments based on criteria or standards	Put elements together to form a coherent whole
VERBS	Remember Recognize Identify Recall Retrieve	Understand Interpret Clarify Paraphrase Illustrate Classify Categorize Summarize Generalize Infer Conclude Explain Predict Compare Contrast Map	Apply Execute Carry out Use Implement	Differentiate Analyze Discriminate Focus Distinguish Select Organize Outline Integrate Structure Attribute Deconstruct	Evaluate Check Coordinate Detect Monitor Test Critique Judge	Create Generate Hypothesize Plan Design Produce Construct
QUESTIONS	What happened after .. How many .. What is .. Who did .. Where did .. occur?	How would you explain .. Who do you think .. Why did .. How would you graph .. Which .. corresponds to .. What are examples of .. How could you group ..	How would you solve .. How would you do .. What would you say to .. How would you work a case of ..	What was the turning point? How is .. similar to .. Why did .. occur What is needed to .. What were some of the motives for ..	Is there a better solution to .. What do you think about .. and why? Do you think .. is a good thing and why?	What are possible solutions to .. How would you design an .. What would happen if .. How many ways can you ..
ACTIVITIES	Make a list showing .. Make a time line Make a chart showing ..	Write a summary of .. Prepare a flow chart of .. Write an explanation of .. Make a taxonomy of .. Draw a map/model of .. Draw a graph of .. Write possible outcomes of Retell an event	Solve a problem Write a response to a case study Perform a lab experiment	Write a biography Make a map showing interrelationships Write an analysis of .. Write an essay examining bias in .. Construct a chart to organize related data	Conduct a debate (or a mock trial) Write a critique Prepare a case Write an opinion piece	Design an experiment Create a new product Plan a marketing campaign Create art Design a building