

Action Verbs with Examples

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FOR
WORKSHOP OF COURSE LEARNING OUTCOMES

Using **behavioral verbs** in our **course** and **assessment activities** has a number of benefits for engaging students in the learning process.

- **First**, because they describe an **observable product or action**, we can use them to devise activities that **make the student an active participant** in his or her learning.
- **Secondly** they may be used to **help to translate our course goals and objectives into situations that are more concrete to the student and others**.
- Their use **also** facilitates **assessment** because it allows us to make inferences about student learning through **observable** student behavior or products.

The **first section, PART I**, includes **general definitions** that **describe** only the **observable behavior** and (with a few exemptions) do not attempt to include linkages to any specific content.

Next, in PART II, it follows with **examples in selected discipline areas** (**science, math, social sciences** are provided). Some outcome statements are written **without a stem, i.e., a common initiation expression as: (“The student who successfully completes this course will be able to...”)**, **some others** are more complete with the **stem** (**The student will be able to...**). *At some others some **assessment samples**, with or without ‘course outcomes’, are given.*

The COURSE OTCOME EXAMPLES related to each one of the action verbs are indicated by paragraphs starting with two asterisks **.

Please do read the examples very carefully!

PART I

FIRST-- GENERAL DEFINITIONS OF SOME VERBS

APPLY A RULE (3): To **state** (3) a rule as it applies to a situation, object or event that is being analyzed. The statement must convey analysis of a problem situation and/or its solution, together with the name or statement of the rule that was applied.

CLASSIFY (3): To **place** objects, words, or situations into **categories** according to defined criteria for each category. The criteria must be made known to the student.

COMPOSE (5): To **formulate** a written composition in written, spoken, musical or artistic form.

CONSTRUCT (4): To **make** a drawing, structure, or model that identifies a designated object or set of conditions.

DEFINE (2): To **stipulate** the requirements for inclusion of an object, word, or situation in a category or class. Elements of one or both of the following must be included:
(1) the **characteristics** of the words, objects, or situations that are **included in the class or category**,
(2) the **characteristics** of the words, objects, or situations that are **excluded** in the class or category. To **define** is to set up criteria for classification.

DEMONSTRATE (4): The student performs the operations necessary for the application of an instrument, model, device, or implement.

NOTE: There is a temptation to use demonstrate in objectives such as, "the student will demonstrate his knowledge of vowel sounds." Defined as a verb, this is an **improper use** of **DEMONSTRATE**.

DESCRIBE (3): To **name** all of the necessary categories of objects, object properties, or event properties that are relevant to the description of a designated situation. The objective is of the form, "The student will **describe** this order, object, or event," and does not limit the categories that may be used in mentioning them. Specific or categorical limitations, if any, are to be given in the performance standards of each objective.

DIAGRAM (4): To **construct** a drawing with labels and with a specified organization or structure to demonstrate knowledge of that organization or structure. Graphic charting and mapping are types of diagramming, and these terms maybe used where more exact communication of the structure of the situation and response is desired.

DISTINGUISH (3): To **identify** under conditions when only two contrasting identifications are involved for each response.

ESTIMATE (4): To **assess** the dimension of an object, series of objects, event or condition without applying a standard scale or measuring device. Logical techniques of

estimation, such as are involved in mathematical interpolation, may be used. See **MEASURE**.

EVALUATE (4): To **classify** objects, situations, people, conditions, etc., according to defined criteria of quality. Indication of quality must be given in the defined criteria of each class category. **Evaluation** differs from general classification only in this respect.

IDENTIFY (2): To **indicate** the selection of an object of a class in response to its class name, by pointing, picking up, underlining, marking, or other responses.

INTERPRET (4): To **translate** information from observation, charts, tables, graphs, and written material in a verifiable manner.

LOCATE (3): To **stipulate the position** of an object, place, or event in relation to other specified objects, places, or events. Ideational guides to location such as grids, order arrangements and time may be used to describe location.

Note: **Locate** is not to be confused with **IDENTIFY (2)**.

MEASURE (4): To **apply** a standard scale or measuring device to an object, series of objects, events, or conditions, according to practices accepted by those who are skilled in the use of the device or scale.

NAME (2): To **supply the correct name**, in oral or written form for an object, class of objects, persons, places, conditions, or events which are pointed out or described.

ORDER (3): To **arrange (3)** two or more objects or events in accordance with stated criteria.

PREDICT (4): To **use a rule or principle** to **predict (4) an outcome** or to infer some consequence. It is not necessary that the rule or principle be stated.

REPRODUCE (3): To **imitate (3) or copy (3)** an action, construction, or object that is presented.

SOLVE (3): To **effect a solution (3)** to a given problem, in writing or orally. The problem solution must contain all the elements required for the requested solution, and may contain extraneous elements that are not required for solution. The problem must be posed in such a way that the student is able to determine the type of response that is acceptable.

****(Course outcome:** The student will be able to **solve (3)** a problem of given elements either in written or oral means.)

STATE A RULE (4): To **make a statement (4)** that conveys the meaning of the rule, theory or principle.

** **(Course outcome:** The student will be able to **explain (4)** the meaning of the rule, theory or principle.) – See examples in **PART II**.

TRANSLATE (4): To transcribe (4) one symbolic form to another of the same or similar meaning.

PART II

Examples of Activities: **Science**

Apply a Rule: The student could be asked to explain why a shotgun "kicks" when fired. His response would include a statement to the effect that for every action there is an equal and opposite reaction (Newton's Law of Motion), and that the "kick" of the shotgun is equal to the force propelling the shot toward its target. The faster the shot travels and the greater the weight of the shot, the greater the "kick" of the gun.

** (**Course outcome:** The student will be able to apply the rule (3) concerning Newton's Law of Motion, *stating the effect that for every action there is an equal and opposite reaction*, to explain (4) and determine (3) the magnitude of the force resulting from the "kick" of a shotgun when fired.)

Classify: Given several examples of each, the student could be asked to classify materials according to their physical properties as gas, liquid, or solid. .

** (**Course outcome:** The student will be able to classify (2) material samples according to their physical properties as gas, liquid, or solid.)

Construct: The student could be asked to construct (4) a model of a carbon atom.

Define: Given several types of plant leaves, the student could be asked to define at least three categories for classifying them. NOTE: Defining is not memorizing and writing definitions created by someone else -- it is creating definitions.

** (**Course outcome:** The student will be able to define (2) at least three categories for classifying define at least three categories for classifying types of plant leaves from given samples.)

Demonstrate: Given a model of the earth, sun, and moon so devised that it may be manipulated to show the orbits of the earth and moon, the student could be asked to demonstrate the cause of various phases of the moon as viewed from earth.

** (**Course outcome:** The student will be able to demonstrate (4) the cause of various phases of the moon as viewed from earth on a given a model of the earth, sun, and moon.)

Describe: The student could be asked to describe (3) the conditions essential for a balanced aquarium that includes four goldfish. (Exercise: Write a course outcome!)

Diagram: The student could be asked to diagram (3) the life cycle of a grasshopper. (Exercise: Write a course outcome!)

Distinguish: Given a list of paired element names, the student could be asked to distinguish between the metallic and non-metallic element in each pair.

** (**Course outcome:** The student will be able to **distinguish (3)** between the metallic and non-metallic ones from a given a list of paired element names.)

Estimate: The student could be asked to **estimate (4)** the amount of heat given off by one liter of air compressed to one-half its original volume. (Exercise: Write a course outcome!)

Evaluate: Given several types of materials, the student could be asked to evaluate them to determine which the best conductor of electricity is.

** (**Course outcome:** The student will be able to **evaluate (4)** different materials to determine which one is the best conductor of electricity.)

Identify: Given several types of materials, the student could be asked to identify those which would be attracted to a magnet.

** (**Course outcome:** The student will be able to **identify (2)** those materials which would be attracted to a magnet.)

Interpret: The student could be asked to **interpret (4)** a weather map taken from a newspaper. (Exercise: Write a course outcome!)

Locate: The student could be asked to **locate (3)** the position (**describe the location (3)**) of chlorine on the periodic table. (Exercise: Write a course outcome!)

NOTE: To locate is to **describe location (3)**. It is not identification of location.

Measure: Given a container graduated in cubic centimeters, the student could be asked to measure a specific amount of liquid.

** (**Course outcome:** The student will be able to **measure (3)** a specific amount of liquid by using a container graduated in cubic centimeters.)

Name: The student could be asked to **name (2)** the parts of an electromagnet.

(Exercise: Write a course outcome!)

Order: The student could be asked to **order (3)** a number of animal life forms according to their normal length of life. (Exercise: Write a course outcome!)

Predict: From a description of the climate and soils of an area, the student could be asked to predict the plant ecology of the area.

** (**Course outcome:** The student will be able to **predict (5)** the plant ecology from a description of the climate and soils of an area.)

Solve: The student could be asked to solve the following: How many grams of H₂O will be formed by the complete combustion of one liter of hydrogen at 70 degrees C?

** (**Course outcome:** The student will be able to **solve (3)** a problem involving determination of the amount of water resulting from a complete combustion of one liter of hydrogen with oxygen at a given temperature.)

State a Rule: The student could be asked to **state a rule (3)** that tell what form the offspring of mammals will be, i.e. they will be very similar to their parent organisms.

** (**Course outcome:** The student will be able to **state a rule (3)** that tell what form the offspring of mammals will be. The answer will be “very similar to their parent organisms.”)

Translate: The student could be asked to **translate (4)** 93,000,000 into standard scientific notation. (Exercise: Write a course outcome!)

Examples of Activities: Mathematics

Apply a Rule: Given a pair of equations such as $2 + 4 + 7 = 13$, and $7 + 2 + 4 = \underline{\quad}$, the student could be asked to **apply a rule (3)** that (*the order of addition makes no difference in the solution of the equations*) would give him the solution to the second equation of the pair without adding the factors. His response should include a statement to the effect that the same numbers are to be added in each equation, but in different order (analysis) and that the order of addition makes no difference in the solution of the equations. Therefore, the sum of both equations is the same.

Classify: Given a series of numbers drawn at random from 1 - 1000, the student could be asked to classify them into categories of even divisibility by 2, 3, 4, and so on.

** (**Course outcome:** The student will be able to **classify (3)** a given series of numbers drawn at random from 1 - 1000 into categories of even divisibility by 2, 3, 4, and so on.)

Construct: Given a straight edge, compass, and paper, the student could be asked to **construct (4)** an equilateral triangle.

** (**Course outcome:** The student will be able to **construct (4)** an equilateral triangle by using a straight edge and compass on a given paper.)

Define: Given an assortment of various kinds of coins, the student could be asked to **define (2)** some categories into which the coins could be classified. His response would include definitions such as, "All of the pennies, all of the nickels, all of the dimes, etc., could be put in separate piles. Or all the coins containing silver could be put in one pile and those that don't into another pile." (Exercise: Write a course outcome!)

Demonstrate: Given a sufficient number of concrete objects and an equation such as $3 \times 4 = 12$, the student could be asked to **use (3)** *the objects to demonstrate (4) that multiplication is repeated addition.* His response would include placement of twelve objects in three groups of four each, or four groups of three each. He may also be asked to **describe (3)** how the demonstrations show repeated addition. (Exercise: Write a course outcome!)

Describe: The student could be asked to **describe (3)** a method of determining a number of groups of five objects in a collection of 45 objects. The response would include a statement that groups of five members would be counted out and then the number of groups could be counted. The student *may* also be asked to demonstrate the process he described. (Exercise: Write a course outcome!)

Diagram: The student could be asked to **graph (4)** the equation $y = 2x^2 - x + 3$.
(Exercise: Write a course outcome!)

Distinguish: Given pairs of numbers, one number of each pair a prime number, the student could be asked to **identify** the prime number in each pair.
(Exercise: Write a course outcome!)

Estimate: Given multiplication examples with three-digit numerals in both the multiplier and multiplicand, the student will be able to **estimate (4)** the products to the nearest thousand. (Exercise: Write a course outcome!)

Identify: The student could be asked to **point (2)** to the numeral ninety-four on a numeration chart. (Exercise: Write a course outcome!)

Interpret: Given a bar graph showing the per unit cost of food products when purchased in various size packages, the student **interprets (5)** it by stating the lowest and highest per unit cost and by describing the relationship between increased package size and per unit cost of the product. (Exercise: Write a course outcome!)

Locate: The student could be asked to **locate (3)** a particular desk in his classroom by stating the row it is in and the ordinal position from the front of the room. The reply may be, "John's desk is the fourth one from the front, in the second row, from the east wall."
(Exercise: Write a course outcome!)

Name: What is the **name (2)** of this collection of objects? Answer: "A set." What is the name of this type of equation? Answer: "A quadratic equation."
(Exercise: Write a course outcome!)

Order: Given a number of objects of different lengths, the student **orders (2)** them from lesser to greater length. (Question: A number of objects of different lengths are given as shown, **oder (2)** these objects from lesser to greater length.)

Predict: The student could be asked to **predict (4)** the next term in an increasing arithmetic series such as 2, 5, 9, 14, 20, ____, etc...___. (Exercise: Write a course outcome!)

Solve: The student could be asked to **solve (3)** the following: $2 + 3 = \underline{\quad}$. In this example, the type of operation is clearly indicated. Or, he could be asked to **solve (3)** the following: "Jimmy, John, Bill, and Sam each had three marbles. John gave Bill two of his

marbles. How many marbles did Jimmy and Sam have together then?" In this example, the operation to be performed is not specified, and extraneous factors are introduced.

State a Rule: In response to the question: "Why is the sum of two numbers no different if the order of adding them is reversed?" The student answers: "Because of the commutative principle," or "Because the order makes no difference in addition." (State the rule (4) concerning the sum of two numbers no different if the order of adding them is reversed.)" (Exercise: Write a course outcome!)

Examples of Activities: **Social Studies**

Apply a Rule: Given population data that illustrates the principle that the standard of living decreases if population increases without corresponding increase in production, the student could be asked to analyze (4) the data and explain (4) determining the effects of population changes upon the standard of living.

Classify: Given photographs of various people and definitions of racial classes, the student could be asked to classify (3) the photographs according to the races of the people portrayed.

Construct: Given appropriate materials, the student could be asked to construct (4) a model of a city water system.

Define: Given a filmed or taped situation in which several forms of communication are portrayed, the student could be asked to define (3) several categories of communication (including verbal, non-verbal, pictorial, visual, auditory, or any of several other classes or categories of communication). His response could include definitions for verbal, non-verbal, pictorial, visual, auditory, or any of several other classes or categories of communication.

– Note: *The expression in parenthesis is added to properly structure the course outcome.*

Demonstrate: The student could be asked to demonstrate (4) the use (3) of calipers to determine (3) the measurements for obtaining cephalic indices. Or he could be asked to demonstrate (4) use of a compass to determine direction.

Describe: The student could be asked to describe (3) the culture of a particular Indian tribe.

Diagram: The student could be asked to diagram (4) the steps involved in the passage of a bill through the legislature.

Distinguish: Given the names of ancient Greek and Roman gods paired according to function, the student could be asked to distinguish between them.

** (Course outcome: The student will be able to distinguish (4) between the ancient Greek and Roman gods paired according to function.)

Estimate: Given the day of the year and the latitude, the student could be asked to estimate the length of daylight at a particular place.

** (**Course outcome:** The student will be able to estimate (4) the length of daylight at a particular place when the day of the year and the latitude are given.)

Identify: Given the name of one of the U.S. presidents, and photographs of several, the student could be asked to identify the picture of the one which was named.

** (**Course outcome:** The student will be able to identify (2) the picture of one particular U.S. president whose name is given from several given names and pictures.

Interpret: Given a bar graph that shows production of steel in the U.S. during the last fifty years, the student could be asked to interpret (4) the graph. His response could include references to times of production increases or decreases, total amount of decreases or increases, and differences in production between the years.

** (**Course outcome:** The student will be able to interpret (4) a bar graph that shows production of steel in the U.S. for a given period of time by indicating the references to times of production increases or decreases, total amount of decreases or increases, and differences in production between the years.)

Locate: The student could be asked to locate, in time, the first battle of the American Revolution.

** (**Course outcome:** The student will be able to locate (3), in time, the first battle of the American Revolution.)

Measure: Given a string and a globe with a scale of miles, the student could be asked to measure (4) the scaled distance between any two given points.

Name: The student could be asked to name (2) the factors that contribute to natural population increases.

Order: Given the names of the declared wars in which the U.S. has engaged, the student could be asked to order them according to the time of occurrence.

** (**Course outcome:** The student will be able to order (2) the names of the declared wars in which the U.S. has engaged according to the time of occurrence.)

Predict: The student could be asked to predict (5) the type of economy that could be supported in described geographic regions.

Solve: Given tables of prices and costs, the student could be asked to solve (3) problems related to the law of diminishing returns.

State a Rule: In response to the question: "What controlled the inheritance of family property in the European Middle Ages?" the student would respond (4) with a statement that indicated that property was inherited by the eldest son (and that is the statement of a rule for this case!).

NOTES:

1. In the above some assessment suggestions are made instead of giving the course outcomes. In these cases, you must exercise on these to turn the assessment tasks into outcome statements.
2. For those action verbs with! Course Outcome' examples given, exercise transferring them into an assessment task (a question, an assignment, project, etc.)
3. Apply the same to your discipline and to your courses.