

## Developing Program Objectives

Learning outcomes (also called objectives or competencies) describe how students demonstrate that each goal has been met. They describe the knowledge, skills, and values that students display when they complete the program (Allen, 2006, p. 35). One way to think about developing program objectives is referring to the learning goals and asking the following questions:

1. How will we know students have met the learning goal, or
2. What can we observe to know students have learned what we want them to learn? How will we know it when we see it?

Typically one or more learning objectives are developed for each learning goal. Each learning objective is assessed so it should be measurable and performance-based. Therefore, each objective should be written with action verbs to identify specific student activities or tasks that demonstrate what students can actually do.

Bloom's taxonomy is one way to identify depth of learning and is helpful in creating learning objectives (Allen, 2006, p. 38). The six levels are:

- Knowledge – to know specific facts, terms, concepts, principles, or theories.
- Comprehension – to interpret, compare and contrast, explain.
- Application – to apply knowledge to new situations, to solve problems.
- Analysis – to identify the organizational structure of something, to identify parts, relationships, and organizing principles.
- Synthesis – to create something, to integrate ideas into a solution, to propose an action plan, to formulate a new classification scheme.
- Evaluation – to judge the quality of something based on its adequacy, value, logic, or use.

The following are examples for the scientific method:

- Students can define the scientific method (Knowledge).
- Students can explain the scientific method (Comprehension).
- Students can use the scientific method to design experiments (Application).
- Students can identify independent and dependent variables, hypotheses, and results in scientific studies (Analysis).
- Students can review a set of research studies on a given topic and reach a general conclusion about what they demonstrate (Synthesis).
- Students can judge the scientific merit of a research study and its conclusions (Evaluation).