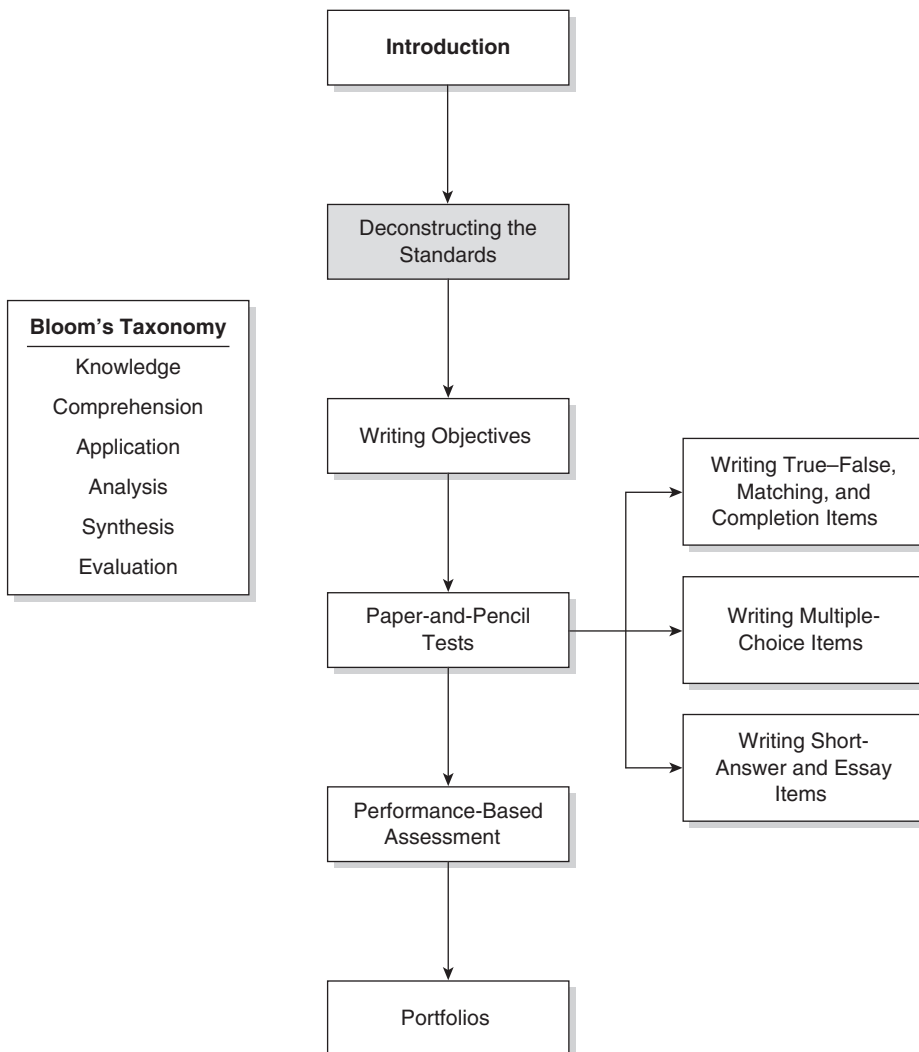


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Deconstructing the Standards



Much of the academic curriculum in today's schools is dictated by the respective state standards, which are frequently based on national standards, such as those from the *Principles and Standards for School Mathematics*, the *National Science Education Standards*, the *National Standards for Social Studies Teachers*, and the *Standards for the English Language Arts*. However, it is often difficult to translate these standards into practical classroom implications because of confusion generated by their broad generality and the absence of sufficient direction for their implementation. Hence teachers often have a negative view of standards per se.

Our goal in this chapter is to help you modify the wording of any standard into performance terminology and then transmit it into unit plan and daily instructional objectives, all within a progressive sequence of specificity. This sequence can serve as a set of blueprints for classroom instruction. As you know, most reputable contractors would not consider building a house without blueprints. Of course, changes may occur after construction has begun, but not without accompanying changes in the blueprints, because they provide a basis for ongoing (formative) and conclusive (summative) assessment, and they also enable the contractor to determine whether corrections are in order. Instructional objectives serve the same purpose for classroom instruction.

The litmus test for any instructional objective is whether it provides for objective assessment. Hence clear language and specific intent should be inherent in every objective at every level. Of course, the level of specificity should increase from national standards to unit plan objectives to daily instructional objectives, and clarity of intent should be vividly present throughout.

Some measurement specialists caution against overadhering to specificity in instructional objectives, fearing that teachers may spend a disproportionate amount of time writing objectives at the expense of preparing for instruction (e.g., Popham, 1995, p. 80). We believe that this is an unwarranted fear.

As we mentioned in the Introduction, virtually all statewide assessment tests are based on state standards, which stem from the national standards. These high-stakes tests are criterion referenced, and aligning your lesson plans with them using our process can certainly enhance your students' performance on these critical examinations: Your comfort in implementing the standards into your instruction and assessment will result in higher student scores.

WRITING INSTRUCTIONAL OBJECTIVES FOR NATIONAL STANDARDS

We begin with sample items drawn from the national standards of the major content areas, break them down to behavioral terms, and transfer

them into unit and finally, daily instructional objectives. This conversion process can be easily applied to the standards of any particular state. We now demonstrate this process for each of the major content areas.

Mathematics

Many of the examples used here are paraphrased or taken directly from the *Principles and Standards for School Mathematics* (National Council of Teachers of Mathematics, 2000). This important document, originally released in 1989 by the National Council of Teachers of Mathematics (NCTM), has been adopted in most states. The following example is taken from the Algebra Standard for Grades 6–8, a verbatim portion of the actual standard.

National Standard

Use mathematical models to represent and understand quantitative relationships.

This standard is relatively clear and accessible. However, we can make it more meaningful by including observable evidence of the students' abilities.

Modified National Standard

Students will evidence the ability to use mathematical models to represent and understand quantitative relationships.

We use the term *evidence* to indicate that students must show that they have met predetermined criteria for fulfilling the standard through observable behaviors. This term is used again in the unit plan objective for continuity and to ensure the observable proof that students are able to use mathematical models to represent and understand quantitative relationships.

Unit Plan Objective

Students will evidence the ability to use graphs, charts, and diagrams to show the relationship between various units of distance and volume.

As you can see, this unit plan objective includes the original standard while providing for a diversity of means for its fulfillment through daily instructional objectives. The following objective illustrates how a high level of specificity can still include the components of the original standard.

Daily Instructional Objective

Presented with a chart displaying six different distances in yards, the students will shade in the metric equivalent of each, with a 1/10 margin of error.

Adhering to the unit plan objective, this daily instructional objective is specific in terms of media (“a chart displaying six different distances in yards”), observable behavior (“shade”), and minimal standards of performance (“with a 1/10 margin of error”). Through this specificity, it provides a means for addressing the task dictated by the original standard, the modified standard, and unit plan objective. Remember, this daily instructional objective is but one component within the unit plan that is directed toward the achievement of the national standard.

Science

As with any other discipline taught in Grades K–12, adherence to the respective state standards or *National Science Education Standards* is imperative for any teacher of science. Let us demonstrate how broad national and state science standards can be stated in specific terms appropriate for unit and daily objectives.

Here is a progression using an actual standard as prescribed in the 5–8 Content F, Science in Personal and Social Perspectives from the National Research Council’s (1996) *National Science Education Standards*.

National Standard

All students should develop understanding of personal health, populations, resources, environments, natural hazards, risks and benefits, and science and technology in society.

The complex and disjointed content of this standard makes translation into a single and understandable modified standard difficult—a standard like this makes clear why teachers often view standards negatively. However, these translations are easily possible when you follow our steps of conversion. Here is an example of how to deconstruct such standards into logical and understandable guidelines for instruction.

Modified National Standard

Students will demonstrate an understanding of the interrelationships among personal health, populations, resources, environments,

natural hazards, risks and benefits, and science and technology in society.

The verb *demonstrates* is a precursor of observable pupil performance in the forthcoming objectives. Then the term *interrelationships* serves as a connector that brings the disjointed components of the original standard into an understandable whole while still providing for a plethora of unit plan objectives, such as the following.

Unit Plan Objective

Students will demonstrate an understanding of the interrelationships between the personal health of the members of urban environments and those from rural environments within the eastern section of the United States.

In adherence to the modified standard, this objective uses the verb *demonstrate* and then specifies and refines some of the previously mentioned relationships. As shown in the following daily instructional objective, you can use a variety of specific activities for meeting the goal dictated by the national standard and refined by this unit plan objective.

Daily Instructional Objective

Following a class discussion and an out-of-class reading assignment, students will list three similarities and three differences between the general health of urban residents over the age of 55 and that of their rural counterparts.

Continuing the pattern of increasing specificity, this daily instructional objective is detailed in its partial fulfillment of the original standard. It specifies how the students are to engage in the observable behavior (“list”), and it is clear in stating exactly what is expected (“three similarities and three differences”). Again, however, this is only one in a series of daily instructional objectives that can be used to meet the prescribed national standard.

Social Studies

In 1994, the National Council for the Social Studies released ten broad strands that became the basis for the subsequently published national standards. As dictated by the *National Standards for Social Studies Teachers* (NCSS) Volume 1 (1997), social studies is not a single discipline but rather

a multidimensional collection that encompasses virtually all of the social science disciplines. Understandably, such a broad sweep can be intimidating to teachers who may be puzzled as how to transfer these overarching standards to unit plans and daily instructional objectives in a comprehensible and measurable progression. In the following example based on one of the NCSS standards, we provide direction for an easy and understandable progression through this sequence.

National Standard

Geography: High School Teacher Expectations

Enable learners to describe the process, patterns, and functions of human settlement.

Written in terms of teacher actions, this standard is easily transmitted into pupil performance.

Modified National Standard

Students will describe the processes, patterns, and functions of human settlement.

While maintaining the literal components of the original standard, the modified standard puts it into student behaviors that can become progressively more specific with the unit and daily instructional objectives. We begin this progression with the following unit plan objective.

Unit Plan Objective

Students will select an ethnic group, explain some of the reasons for its movement across the country, and describe specific influences it has had on regional cultures during its migration.

As a refined extension of the original and modified standards, this unit plan objective specifies students' focus. Although much more specific than the original and the modified standards, the openness of this unit plan objective provides for a multiplicity of daily instructional objectives, such as the following.

Daily Instructional Objective

Continuing individual in-class research projects, students will use the library and Internet to select an ethnic group, determine its U.S.

point of origin, provide at least one reason for its movement, trace its state-by-state journey, and include at least three influences that this group has had on regional cultures, for inclusion in a three- to five-page report.

This objective carries the original standard to a high level of specificity. Although it allows students their choice of ethnic groups to research, it states precisely what is to be covered in the report: the U.S. point of origin, at least one reason for the group's movement, its state-by-state journey, at least three influences it has had on regional cultures, and the length of the report. Such detail provides the students with an understandable explanation of the requirements of the report, and it also serves as the basis for a set of rubrics, the criteria upon which the papers will be assessed (more about rubrics in Chapter 5).

English–Language Arts

The following example is taken word for word from Standard Eight of *The Standards for the English Language Arts* (National Council of Teachers of English and International Reading Association, 1996).

National Standard

Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

This standard is especially broad and sweeping, devoid of restrictions or guidelines, giving practically unlimited options to the teacher regarding what to teach. Students are given equal freedom in their choice of resources.

Modified National Standard

Students will use a variety of information resources to gather and synthesize data and to create and communicate knowledge.

The redundancy of the original standard increases its ambiguity. Our shortening of it enhances its clarity.

Unit Plan Objective

Since the original standard and the modified standard have no content boundaries, the following unit plan objective focuses on a sample objective that adheres to the use of information resources.

Students will use printed and technological resources to research selected topics from the Elizabethan era.

Far more specific than the loosely written standards, this unit plan objective still provides for a variety of daily instructional objectives. The lone dictates are that the students must use both printed and technological resources, and their topics must pertain to the Elizabethan era.

Daily Instructional Objective

Continuing a series of in-class projects conducted within small cooperative groups, students will use printed and technological resources to gather basic information preparatory to constructing a four- to six-page report for an eight- to ten-minute class presentation on a self-selected topic pertaining to the Elizabethan era.

We have used a high degree of specificity here, in compliance with the mandates of the original standard, which are to use “technological and informational resources” and “to gather and synthesize information and to create and communicate knowledge.” This series of daily instructional objectives directs the students to use printed and technological resources to amass information that they will use in subsequent days to write papers to be presented to the class.

SUMMARY

In this chapter, we have taken you through the process that can connect and align the national standards, the unit plans, and daily instructional objectives in the major content areas. Like an engineer or an architect, you, the teacher are allowed virtual freedom within predetermined guidelines. Your guidelines are the national or state standards and the ensuing unit plan objectives, and your freedom is in your creative construction and implementation of your daily instructional objectives. Like the engineer and the architect, however, your daily instructional objectives should be specific and measurable.

PROFESSIONAL DEVELOPMENT ACTIVITIES

Make certain that you have a copy of the state standards for the course or courses that you teach. Then break into groups of four or five according to subjects taught.

Together, select a standard and copy it verbatim. Next, modify it by making it more understandable and student focused. Be sure to include an action verb (e.g., *demonstrate*) as a precursor of the description of student performance in your unit and daily instructional objectives. Remember not to change the content of the original standard by deleting from or adding to it.

Keeping in mind that a number of unit plan objectives can stem from a modified standard, cooperatively construct a unit plan objective from any part of your modified standard. Be sure to use at least one action verb and present a general description of what you will expect of your students. You can use the content area samples in the chapter as templates.

Next, construct a daily instructional objective, selecting a portion of your unit plan objective (always remembering that many daily instructional objectives constitute one unit plan objective).

Be sure to include an action verb depicting observable pupil performance and mention configuration (e.g., in groups of three or four) and context or preparation (e.g., presented with an unlabeled diagram). Also, it is very important to specify exactly what you expect of your students (e.g., with an error margin of plus or minus five miles).

After you have completed this process, each group can put its four components (national standard, modified standard, unit plan objective, and daily instructional objective) on the board or on the overhead for discussion.