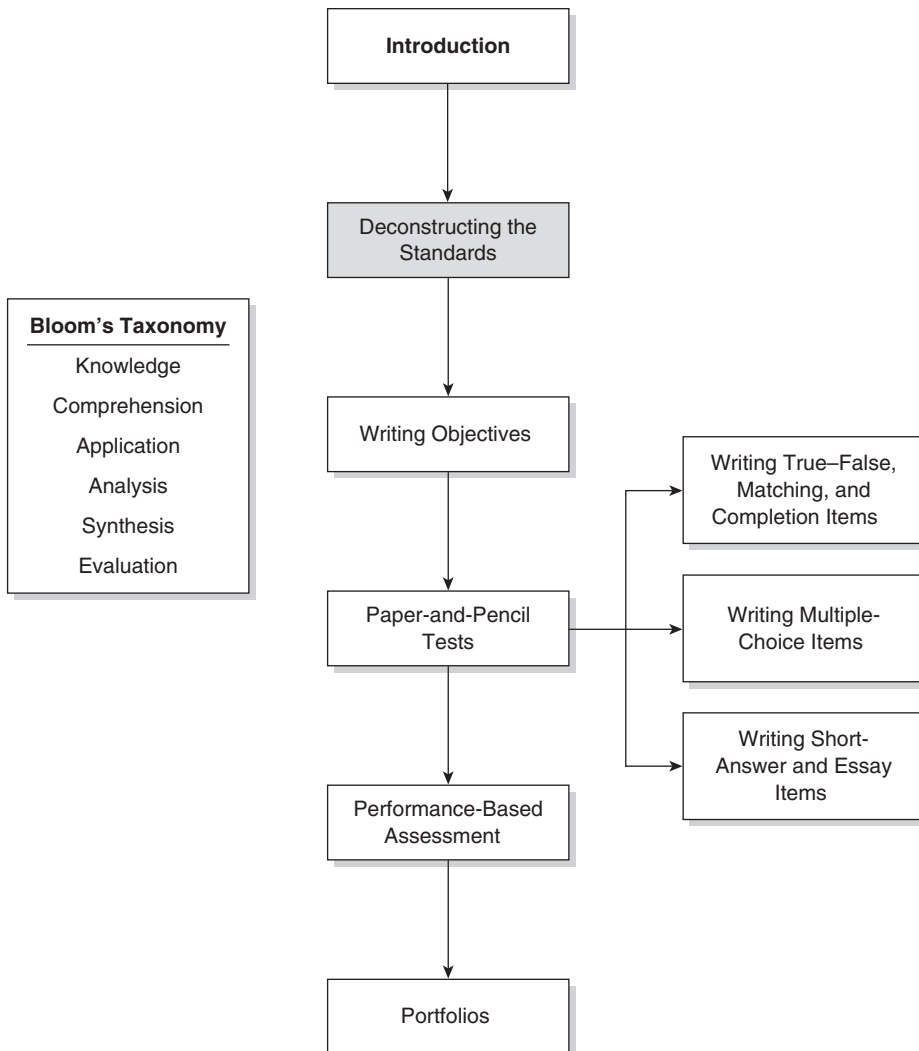


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Deconstructing the Standards



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). The following example is taken from the Measurement Standard for Grades 3–5, a verbatim portion of the actual standard.

National Standard

Apply appropriate techniques, tools, and formulas to determine measurements. (p. 173)

First, we modify this standard to include an *evidenced understanding* of appropriate techniques, tools, and formulas for determining measurements:

Modified National Standard

Students will evidence an understanding of appropriate techniques, tools, and formulas for determining measurements.

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 student performance in determining measurements, through the discovery of means and tools for measuring complex objects.

Unit Plan Objective

Students will evidence an understanding of determining measurements through the discovery of means and tools for measuring complex objects.

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

Given string and rulers, students will determine how to measure the circumference of a clock to the nearest $\frac{1}{2}$ inch.

This daily instructional objective is specific in terms of materials (string and rulers), behaviors (determine, measure), and minimal standards of performance (to the nearest $\frac{1}{2}$ inch). 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 K–4 standard as prescribed in the K–4 Content F: Science in Personal and Social Perspectives from the National Research Council's (1996) *National Science Education Standards*:

National Standard

As a result of activities in grades K–4, all students should develop understanding of personal health, characteristics and changes in populations, types of resources, changes in environments, science and technology in local challenges. (pp. 139–140)

First, we synthesize this segment into a broad but understandable objective that includes an observable student behavior: to demonstrate.

Modified National Standard

Students will demonstrate an understanding of the relationship between personal health and characteristics and changes in populations; types of resources; and changes in environments, science and technology in local challenges.

We then refine this encompassing objective into terms of more specific student behaviors that can serve as the basis for an entire unit, without

diluting the original standard. This demonstrates again that although more specific than that of the national standard, the language of the unit plan objective maintains an openness that provides for a series of measurable daily instructional objectives.

Unit Plan Objective

Students will display an awareness of safety rules for school and home and exhibit recognition of good nutrition as well as an understanding of the damaging effects of certain substances.

The behaviors *display* and *exhibit* set the tone for the daily instructional objectives that serve as vehicles for implementing the standard within the actual classroom. As we demonstrate by the following example, the teacher can and should use a variety of specific objectives in the classroom for meeting the goal dictated by the national or state standard and clarified by the unit plan.

Daily Instructional Objective

When presented with poster board and Magic Markers, students in groups of two or three will construct posters depicting one of the following topics: good and bad safety habits for home or school, nutritious and non-nutritious foods, or harmful substances and their consequent results.

This daily instructional objective provides a means for meeting the contents of the original standard through the cooperative construction of posters. It also prescribes when the behavior (*construct*) is to take place (“when presented with poster board and Magic Markers”). Since this daily lesson plan calls for creative efforts, the criterion for acceptable performance is simple fulfillment of the assignment. Again, this would be only one in a series of daily objectives designed to meet the national or state standard.

Social Studies

The scholastic area of social studies, as dictated by the *National Standards for Social Studies Teachers, Volume 1* (National Council of Teachers of Social Studies, 1997), encompasses virtually all of the social science disciplines. The following example is taken verbatim from the Geography Standard of the *National Standards for Social Studies Teachers, Volume 1*. First, we will modify this example and then translate it into unit and daily instructional objectives.

National Standard

Geography: Teacher Expectations

Assist learners to analyze the spatial information about people, places, and environments on Earth's surface.

The inclusion of the term *spatial* makes this national standard more manageable, even though it still provides for a multiplicity of unit and ensuing daily instructional objectives. However, modification is needed to bring the focus onto pupil behavior.

Modified National Standard

Students will demonstrate the ability to analyze spatial information about the Earth's people, places, and environments.

Less confusing than the original standard, this modification focuses on student rather than teacher requirements. Nevertheless, it does allow for great latitude of unit and sequential daily instructional objectives.

Unit Plan Objective

Students will demonstrate an understanding of how the physical environments of southern Mexico and the northeastern United States influence their peoples' respective economic and recreational activities.

As a partial extension of the original standard, this unit plan objective calls for student understanding of how the physical environments of two geographical regions influence specific aspects of their peoples' lives. Much more specific than either the original or the modified standards, this objective still gives the teacher a great deal of freedom in the construction of daily instructional objectives for its fulfillment. The following is one such example.

Daily Instructional Objective

After completing a reading assignment from the textbook, students will list two similarities and two differences between common recreational activities in southern Mexico and the northeastern United States.

Detailed and specific, this daily instructional objective pinpoints when the activity is to take place ("After the completion of a reading assignment

from their textbook”), the particular student behavior (“list”), and the expected outcome (“two similarities and two differences”). Such specificity provides clear understanding for teacher and student.

English–Language Arts

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

National Standard

Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world. (p. 27)

This standard provides the teacher with unlimited options but virtually no margins of content coverage. The following modified standard adds focus and direction by including possible media sources, mentioned in the discussion following the standard (pp. 27–28), without altering or diluting the original.

Modified National Standard

Students will read novels, newspapers, magazines, and Web-based resources and engage in the study and creation of visual texts to develop their understanding of text *per se*, themselves, and cultures of the United States and the world.

By suggesting general printed sources and recommending the study and creation of visual texts, the modified standard serves as a conduit for the sharpened focus of the unit plan objective.

Unit Plan Objective

Students will engage in cooperative group research projects, directed toward enhancing their understanding of selected cultures within the United States, culminating in class presentations.

Through their involvement in cooperative group research projects, students are directed toward the examination of a variety of printed sources, as mentioned in the original standard and specified in the modified standard. Understandably, the latitude of the original standard

would not be covered in a single unit plan. The following daily instructional objective puts this one into lesson plan terms.

Daily Instructional Objective

In groups of three or four, the students will begin to use the Internet, the school library, and accessible out-of-school sources to research selected cultural groups within the United States, for a composite 15- to 20-minute class presentation containing at least three visuals and a narration.

Quite specific, the language transfers the original standard into a direct but open and measurable outcome. This objective fulfills the intent of the original standard's dictate of the student's building "an understanding of texts" and "cultures of the United States," through its focus and the use of various sources. The standard's dictate for the study and creation of visual texts is accomplished through the requirement of at least three accompanying visuals in the students' narrative presentations.

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 copies of the standards for different subject areas (e.g., mathematics, social studies, and English–language arts). Then break into groups of four or five.

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 context 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.