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ABSTRACT

The National Assessment of Educational Progress (NAEP) has developed a new generation of assessment tasks for evaluating student achievement in music. Using paper-and-pencil and performance formats, these tasks draw on the musical traditions of many cultures and historical periods. This report summarizes results from the 1997 assessment of eighth grade student achievement in the arts. Students were assessed in music and the visual arts using a nationally representative sample of all students, regardless of their background in music or the visual arts. The music sample data included about 2000 public and private school students. The assessment covered content and process. The content included knowledge and understanding of music and perceptual, technical, expressive, and intellectual/reflective skills. The processes included creating, performing, and responding. In 1995 NAEP field tested the assessment tasks for grades four (about 1500 students) and eight (about 1500 students). Twelfth-grade tasks, involving about 1,200 students, were field tested in 1997. The NAEP assessment used two types of tasks in the field tests: paper-and-pencil tasks and performance tasks. Paper-and-pencil tasks required students to respond to multiple choice questions about recordings, musical notation, and other stimuli. The performance tasks covered creating and performing music. The performance tasks were appropriate for students with and without formal music training. The scoring guides used for the paper-and-pencil tasks were inadequate, limited, or adequate. Scoring guides for the performance tasks were inadequate, limited, adequate, and developed. (JEH)

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# NAEP and Music: Framework, Field Test, and Assessment.

by Alan Vanneman

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# Focus on NAEP

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## NAEP and Music: Framework, Field Test, and Assessment

**Abstract:** NAEP has developed a new generation of assessment tasks for assessing student achievement in music. These tasks draw on the musical traditions of many cultures and historical periods, and use both paper-and-pencil and performance formats.

In 1992, the Arts Education Consensus Project, sponsored by the National Assessment Governing Board (NAGB), began an 18-month effort to establish objectives for assessing arts instruction in the nation's elementary and secondary schools. The National Endowment for the Arts, in collaboration with the Getty Center for Education in the Arts, funded the Arts Education Consensus Project, designed to develop the NAEP Arts Education Assessment Framework.

The Consensus Project<sup>1</sup> identified objectives for arts education in general and individually for dance, music, theatre, and the visual arts in the fourth, eighth, and twelfth grades. It also developed Assessment Specifications for each of the four arts, setting forth requirements for the content of the assessments in more detail. NAEP field-tested the music assessment for the fourth and eighth grades in 1995 and for the twelfth grade in 1997. In the spring of 1999, NAEP will publish a Field Test Process Report, on the development, administration, and scoring of arts tasks for the three grades. The report will cover all four arts, including music.

In 1997, NAEP conducted an assessment of eighth grade students' achievement in the arts. NAEP assessed students in music and the visual arts using a nationally representative sample of all students, regardless of their background in music or the visual arts. The sample for the music assessment was about 2,000 students, both public and private, enough to obtain statistically valid results. The theatre assessment was a targeted assessment, limited to students who would have completed at

least 30 class hours in theatre instruction by the end of the 1996-97 school year. NAEP did not conduct a dance assessment, because there were too few dance programs in schools to allow for an adequate sampling of students. Results of the three assessments, together with samples of arts tasks for all four arts, will appear in the NAEP 1997 Arts Report Card, which will be published in the fall of 1998. NAEP had earlier assessed students in music in 1972 and 1978, using a different framework.<sup>2</sup> The next two sections of this *Focus on NAEP* summarize the current music framework as set forth in the *NAEP 1997 Arts Education Assessment Framework*. Following these sections will be a discussion of the field test.



The NAEP Music Framework, Field Test, and Assessment break new ground in the assessment of the musical achievement of students, particularly student performance.

NOTE: For reasons of confidentiality, the student shown in this picture is not a NAEP participant.

PHOTO BY CLAIRE FLANDERS, courtesy Levine School of Music, Washington, DC

**Table 1.—NAEP Guidelines for Music Assessment**

Music assessment shall

- Affirm music as a way of knowing with a unique capacity to integrate the intellect, emotions, and physical skills.
- Honor music as a discrete art form, but also encourage students to see the artistic experience as a unified whole.
- Examine and report on developing abilities of students.
- Connect with students' real-life experiences of music.
- Evaluate students through performance.
- Go beyond quantification to include critical judgment.
- Use background variables to recognize differences in school resources (large-scale assessments only).
- Address both the processes and products of music, and expand the public's awareness of the importance of each.
- Produce information useful to a variety of audiences—students, parents, teachers, administrators, policymakers, artists, and other community members.
- Reflect a pluralistic view of music education, both in terms of individual products and the cultural bases of the music.

Source: NAEP 1997 Arts Education Assessment Framework, National Assessment Governing Board

## The Importance of Music

Young people frequently define themselves to an extraordinary degree by the kind of music they prefer. But too often their involvement with music is only passive, or limited to listening to music of a single genre. This short-changes students' experience, which should include creating (composing and improvising) and performing (playing, singing, and conducting), as well as responding (listening, moving, analyzing, and critiquing) to a wide variety of music. Students also need to understand music's relationship to the other arts, and to other disciplines outside the arts.

The NAEP Arts Education Framework is founded on a vision of a society that believes the arts are essential for every child's complete development and education. To be fully educated, students must be able to draw on artistic experiences and knowledge as a means of understanding both themselves and the world around them. They must be able to use the arts as an important vehicle for communicating ideas in our increasingly multimedia society.

Contemporary popular music is both a reflection and an exemplar of this society. It draws on the most "natural" of instruments—the human voice—and on the most recent advances in electronics. It seeks out influences from cultures around the globe. Music education should allow children to understand and participate actively in their entire musical heritage, from past and present, and from all nations.

The expectation is not that all children will become professional musicians, although some will. What is expected is that they will have experienced the discipline, the challenge, and the joy of musical creation and will understand intimately the human significance of all the arts (see table 1 for assessment guidelines).

## The Music Assessment Framework: Content and Processes

Music requires students to understand a unique set of musical

mands the integrated development of intellectual/cognitive, feeling/affective, and psychomotor skills.

The music assessment covers both content and processes. Content includes (1) *knowledge and understanding* of music and (2) *perceptual, technical, expressive, and intellectual/reflective* skills. Processes include (1) *creating*, (2) *performing*, and (3) *responding*. While much of what students know, as well as what they can do, will be demonstrated through performance, the music assessment framework includes a written portion as well. Table 2 sets forth the music assessment framework in brief.

### Content

*Music knowledge* includes the contexts of music, the form and structure of music, and the musical procedures. Knowing musical context includes understanding the historical period, style, and culture within which a work is created; the performance traditions of that time or place; and the appropriate aesthetic criteria for judging the quality of the work and its performance.

Knowing form and structure includes understanding the building blocks of music: the materials, notations, elements, and forms of musical works. Knowing musical procedures includes understanding the sequence and criteria for judgments involved in developing a new work, performing an existing work, or developing an opinion about a work or performance heard.

*Music skills* enable individuals to apply what they know by creating, performing, or responding to music. Technique is students' physical ability to transform their musical ideas into new creations or performances that accurately convey those ideas. Although technique is important to the processes of creating and performing, there are other skills of equal importance. Perceptual skills enable the student to hear and interpret the details that comprise music. These skills allow students to recall music in the mind's ear even when it is not physically present. Expressive skills give the work the meaning and feeling that moves the listener. Such skills also provide the basis for recognizing and responding to expression when it is present in a work or performance.

**Table 2.—Music Assessment Framework**

<b>Processes</b>	
<b>Creating</b>	<b>Performing</b>
<p>When improvising, composing, or arranging music, students:</p> <ul style="list-style-type: none"> <li>• apply historical, cultural, and aesthetic understanding by creating stylistically appropriate alterations, variations, and improvisations;</li> <li>• use standard and/or non-standard notation to express original ideas;</li> <li>• evaluate, refine, and revise successive versions of original work;</li> <li>• demonstrate skill and expressiveness in the choice and use of musical elements; and</li> <li>• present the created work for others</li> </ul>	<p>When singing or playing music with musical instruments, students:</p> <ul style="list-style-type: none"> <li>• select appropriate repertoire;</li> <li>• apply skill by performing with technical accuracy;</li> <li>• read musical notation accurately;</li> <li>• evaluate, refine, and revise the performance;</li> <li>• develop an appropriate and expressive interpretation by applying understanding of structure and cultural and historical contexts of music; and</li> <li>• present the performance for others.</li> </ul>
<b>Responding</b>	
<p>When singing or playing music with musical instruments, students:</p> <ul style="list-style-type: none"> <li>• select repertoire for listening;</li> <li>• analyze the elements and structure of music;</li> <li>• compare and contrast various musical styles;</li> <li>• identify formal and expressive qualities that distinguish a particular style of music;</li> <li>• place music within its cultural and historical context;</li> <li>• make critical judgments about technical and expressive qualities of musical performance and compositions; and</li> <li>• use movement or words to interpret and describe personal responses to music.</li> </ul>	
<b>Content</b>	
<b>Knowledge</b>	<b>Skills</b>
<p>Applying knowledge of:</p> <p>Context</p> <ul style="list-style-type: none"> <li>personal</li> <li>social</li> <li>cultural</li> <li>historical</li> </ul> <p>Aesthetics</p> <p>Form and structure</p> <p>Processes</p>	<p>Applying cognitive, affective, and motor skills, including:</p> <p>Perceptual</p> <p>Intellectual/Reflective</p> <p>Expressive</p> <p>Technical</p>
<p>SOURCE: NAEP 1997 Arts Education Assessment Framework. National Assessment Governing Board</p>	

**Processes**

*Creating* For purposes of this assessment framework, creating refers specifically to improvising and composing new music. When improvising, musicians spontaneously create an original work or variation within certain limits or guidelines established by the particular style in which they are performing. For example, a person improvising the blues operates creatively within the limits of the blues style. When composing music, students usually have the freedom to create what their imagination dictates, including the choice of any style or genre. Students should also evaluate and revise their work before presenting it to the public.

*Performing/Interpreting* All students should be able to sing and to perform on instruments. For purposes of the national assessment, performing refers to the process of singing and playing existing musical works (“repertoire”). The performing process involves a wide variety of critical judgments and sophisticated understandings of musical syntax to develop an interpretation and a performance of that interpretation. As with

all the arts, students are constantly applying and exercising higher order thinking, such as analyzing, synthesizing, and evaluating, while creating and performing music.

*Responding* Although composers and performers respond to the music they are creating and performing, again for purposes of NAEP, the response process focuses on the role of the audience. Students must learn to understand and respond to music. Individuals respond to music in three general ways: physically, intellectually, and emotionally. Physical responses to music involve movement, such as dance or other rhythmic movement. Intellectual responses to music include activities such as labeling, analyzing, classifying, placing a work within a particular context, and making critical judgments about a work or performance. Emotional responses include the entire range of personal and intuitive responses to music. All three types of response play an essential role in making individual judgments about music.

NAEP assessed students’ ability to carry out the processes—creating, performing, and responding—each of which

	<b>Grade 4</b>	<b>Grade 8</b>	<b>Grade 12</b>
<b>Western Art Music</b>	<b>25%</b> Baroque through contemporary	<b>40%</b> Renaissance through contemporary	<b>40%</b> Medieval through contemporary
<b>American Folk and Popular Music</b>	<b>50%</b> <ul style="list-style-type: none"> <li>• Traditional songs</li> <li>• Instrumental music, including dance music, ragtime, and jazz</li> <li>• Contemporary pop</li> </ul>	<b>35%</b> <ul style="list-style-type: none"> <li>• Include grade 4 categories and add</li> <li>• Blues</li> <li>• Gospel</li> <li>• Jazz</li> <li>• Country</li> <li>• Broadway musicals</li> </ul>	<b>35%</b> <ul style="list-style-type: none"> <li>• Include grade 8 categories and add</li> <li>• Hybrid or fusion rock</li> <li>• Historical songs (from e.g., the Civil War or Great Depression)</li> <li>• Reggae</li> <li>• Jazz subcategories</li> </ul>
<b>Music Outside the Western Tradition</b>	<b>25%</b> <ul style="list-style-type: none"> <li>• Native American Indian</li> <li>• Sub-Sahara African</li> <li>• Latin American</li> <li>• Asian</li> </ul>	<b>25%</b> Include grade 4 categories and add greater country-specific content	<b>25%</b> Include grade 8 categories and add greater country-specific content

consists of several essential components or steps. For example, all three processes involve analyzing and evaluating. These three processes also require students to understand the syntax of music as well as cultural and historical contexts.

## The Field Test Samples

The field test of the NAEP music assessment tasks for grades four and eight were conducted in 1995, while the twelfth-grade tasks were tested in 1997. A general population of students participated in the fourth- and eighth-grade field tests. Students in these field tests were not required to have taken any music instruction. In the twelfth-grade field test, students were sampled from school music band, orchestra, choir, or general music classrooms. In all, about 1,500 fourth-grade students, 1,500 eighth-grade students, and 1,200 twelfth-grade students participated in the field tests. The twelfth-grade field tests were held to evaluate the validity of the music tasks, even though NAEP had determined that it would not conduct an assessment for twelfth-grade students.

## Music Tasks

NAEP used two types of assessment tasks in the field tests: paper-and-pencil tasks and performance tasks. Assessment tasks were prepared by the Educational Testing Service, under the guidance of a committee of experts in music education. The fourth-grade field test devoted 40–50 minutes to the paper-and-pencil tasks and 15–25 minutes to the performance task. The eighth-grade field test devoted 40–50 minutes and 15–20 minutes, respectively, while the twelfth-grade field test devoted 45–60 minutes and 20–30 minutes. In all cases, times are approximate only, depending on the specific tasks involved.

The performance tasks assessed creating or performing, while the paper-and-pencil tasks assessed students' abilities to respond to music. To ensure coverage of all aspects of musical knowledge, and to lighten the burden on a given student, NAEP developed a number of different task "blocks," for both the paper-and-pencil and performance tasks. Students in the

sample were assigned at random to several paper-and-pencil blocks and one performance block.

The musical subject matter included compositions by long-recognized composers like Bach and Mozart, as well as contemporary composers regarded as working in the classical tradition, like Aaron Copland. Students also responded to folk music, drawn from both western and non-western sources, as well as American jazz and contemporary popular music. (See table 3 for a breakdown of the kinds of music used in the field tests, taken from the Consensus Project's Assessment Specifications.) NAEP plans to make available to the public all tasks, both paper-and-pencil and performance, that are not covered by copyright.

NAEP performance tasks are designed to be as authentic as time and resources permit. However, the assessment tasks also must offer the same opportunities and the same challenges, in the same circumstances, for all the students assessed. No comparison across students is possible without such standardization.

### 1. Paper-and-Pencil Tasks

Paper-and-pencil tasks required students to respond to recordings and musical notation, as well as other stimuli. The questions students answered were multiple choice, short constructed-response, and extended constructed-response. Students could receive partial credit on both short and extended written response questions (see table 4). Some tasks required students to write musical notation themselves.

The knowledge asked of students could be quite formal—the proper use of musical terminology such as *ostinato*, *legato*, and *staccato*—or informal. For example, one question asked students "What kinds of emotion do you think the composer was trying to convey?" In some cases, students listened to specially recorded performances that contained intentional faults, and were asked to identify and comment on errors in areas such as pitch, dynamics, rhythm, tempo, and tone quality.

## 2. Performance Tasks

The field test performance tasks covered both creating and performing music. Some tasks involved creating only, or performing only, while some involved both. For example, students might be asked first to sing a song and then improvise on the melody. Some tasks also required students to respond to their own performances by listening to a tape made as they sang or played and then evaluating their performances on the tape.

Performance tasks had to be appropriate for students both with and without formal musical training. Often, students performed on MIDI electronic keyboards. Some performance tasks expected students who had received musical training to bring their instruments and perform on them. Students without instruments sang the exercises.

Scoring guides for the performance tasks provided four possible levels of performance: inadequate, limited, adequate, and developed (see table 5). This reflected the intent of the framework to assess the abilities of exceptional students as well as average ones.

## Field Test Issues

The NAEP field tests in music provided several challenges in item development and test administration. Training materials and procedures had to be developed to ensure that all of the field tests were conducted in a standardized fashion. Scripts and stimuli used with performance tasks had to include alternate versions of music selections and repertoire in order to accommodate a wide variety of student instruments and voices. Test developers and field test administrators worked together to create assessment scripts and task formats that encouraged less experienced students to attempt to engage in the full range of musical activities that were assessed.

Scoring of field test items proved challenging as well. Among other things, the field tests required scoring rubrics that would accommodate the widely diverse types of student responses to creating/performing items. The scoring guides also had to be able to describe the full range of student responses generated during the field tests.

Creating and administering a national assessment was very challenging. The NAEP Music Framework, Field Test and Assessment provide useful models for future assessments, at the state and local level, as well as nationally. Several important problems were confronted during the development and scoring of the assessment. Among these were how to create tasks suitable for a variety of students with a variety of educational backgrounds, while also making distinctions among levels of student proficiency. These issues, among others, will be explored in the upcoming arts reports.

**Table 4.— Twelfth-Grade Music Field Test Scoring Guide for Paper-and-Pencil Task**

Both short and extended constructed-response questions in the NAEP music field test allowed for partial credit. The scoring guide for a question requiring students to provide musical notation would set a standard similar to the following:

**Inadequate:** Student's notation does not indicate the correct number of notes in the measure.

**Limited:** Student's notation does indicate the correct number of notes, but contains inaccurate note values, or contains only one rhythmic note value that is accurate.

**Adequate:** Student's notation gives the correct rhythmic values for all the notes, using standard musical notation.

## Footnotes

1. For details on the Arts Education Consensus Project, see the *Arts Education Assessment Framework for the 1997 National Assessment of Educational Progress (1994)*, the National Assessment Governing Board.

2. For the 1972 music assessment, see *The First National Assessment of Musical Performance (1974)*, Report 03-MU-01, Education Commission of the States, Denver, CO, ERIC # ED155126.

For the 1978 music assessment, see *Music 1971-1979: Results from the Second National Music Assessment (1981)*, National Center for Education, National Institute of Education, Washington, DC, ERIC # ED210226.

## For Further Information

*Arts Education Assessment Framework for the 1997 National Assessment of Educational Progress*. Single copies available free from the National Assessment Governing Board, 800 North Capitol Street, NW, Suite 825, Washington, DC 20002-4233. Copies may also be obtained on the World Wide Web at <http://www.nagb.org/pub.html>.

*National Standards for Arts Education*. Copies are available for \$20 from the Music Educators National Conference, 1806 Robert Fulton Drive, Reston VA 20191, 800-336-3768.

*Arts Education in Public Elementary and Secondary Schools*, NCES 95-082, provides data obtained from questionnaires sent to the principals of nationally representative samples of public schools. It is not in print, but is available over the NAEP web site at <http://nces.ed.gov/NAEP/>.

**Table 5.— Twelfth-Grade Music Field Test Scoring Guide for a Performance Task**

The four levels of the scoring guides for the performance tasks on the NAEP music field test covered the full range of possible student performance. The guide for students' ability to sing with appropriate pitch/intonation set levels similar to the following:

**Inadequate:** The student sings in a monotone, or an unstable or unclear tonality during more than half of the performance (or the student sings in an incorrect key throughout the performance.)

**Limited:** The student follows the general contour or shape of the melody, although many pitches are inaccurate. The overall intonation of the performance is inaccurate in many places.

**Adequate:** The student sings almost all of the notes correctly, in the correct key with a stable tonal center throughout most of the performance. There are some execution flaws in the performance.

**Developed:** The student sings all notes correctly, in the correct key with a stable tonal center throughout the performance. There are few if any execution flaws in the performance.

The following Focus on NAEP publications are also available free from the National Center for Education Statistics, U.S. Department of Education, Washington, DC 20208-5653. Copies may also be accessed over the World Wide Web at <http://nces.ed.gov/NAEP/>.

*The NAEP Arts Education Framework, Field Test, and Assessment*, NCES 98-527

*NAEP and Dance: Framework, Field Test, and Survey*, NCES 98-459

*NAEP and Theatre: Framework, Field Test, and Assessment*, NCES 98-528

*NAEP and the Visual Arts: Framework, Field Test, and Assessment*, NCES 98-526

The Focus on NAEP series briefly summarizes information on the ongoing development and implementation of the National Assessment of Educational Progress (NAEP). The series is a product of the National Center for Education Statistics (NCES), Pascal D. Forgione, Jr., Commissioner, and Gary W. Phillips, Associate Commissioner for Education Assessment. This Focus on NAEP was written by **Alan Vanneman**, of the Education Statistics Services Institute, in support of NCES, **Scott Shuler** of the Connecticut Department of Education, and **Brent Sandene** of the Educational Testing Service. To order other NAEP publications, call Bob Clemons at 202-219-1690, or e-mail [bob\\_clemons@ed.gov](mailto:bob_clemons@ed.gov).

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