

# 4

**NEW YORK STATE**  
**GRADE 4**  
**ELEMENTARY-LEVEL**  
**SCIENCE TEST**

**Manual for**  
**Administrators and Teachers**

**2010 Written Test**  
**Performance Test, Form A**



The University of the State of New York  
**THE STATE EDUCATION DEPARTMENT**  
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## General Features of the Grade 4 Elementary-Level Science Test

The Regulations of the Commissioner of Education provide that an elementary-level science test is to be administered in Grade 4 to serve as a basis for determining students' needs for academic intervention services in science. The Grade 4 Elementary-Level Science Test is designed to measure the content and skills contained in the *Elementary-Level Science Core Curriculum, Grades K–4*. The core curriculum is based on the *New York State Learning Standards for Mathematics, Science, and Technology (Elementary-Level)*.

The Grade 4 Elementary-Level Science Test consists of two required components: a Written Test and a Performance Test. The Written Test consists of multiple-choice and open-ended questions and requires about one hour to administer. The Performance Test (Form A) consists of hands-on tasks set up at three stations and requires about 75 minutes to administer.

The Department establishes a State-designated level of performance to help schools identify students who must receive academic intervention services. All students who earn a final score on this test in levels 1 or 2 must be provided such services, which must commence in the semester immediately following the administration of the test (see page 12).

The first section of this manual contains information of special interest to administrators. Subsequent sections contain information on test preparations and other guidelines along with directions for administering and scoring the Written and Performance Tests.

**Noteworthy Detail:** To administer the Grade 4 Elementary-Level Science Test, all schools, public, nonpublic, and charter, must obtain answer sheets and scanning services from a Regional Information Center (RIC) or large-city school district and contract with that entity to report data to the Student Information Repository System (SIRS).

## Information for School Administrators

### General Information

All school personnel who will be involved in the administration and scoring of the Grade 4 Elementary-Level Science Test should have a copy of, and be familiar with, the information in this manual. The manual may be photocopied by the school as needed. In addition, please check the Office of State Assessment's web site periodically at: <http://www.emsc.nysed.gov/osa/elintsci.html>. Schools may submit questions concerning the administration of the Grade 4 Elementary-Level Science Test via e-mail to the Office of State Assessment at [emscassessinfo@mail.nysed.gov](mailto:emscassessinfo@mail.nysed.gov).

Pursuant to Section 102.3 of the Regulations of the Commissioner of Education, "Building principals are responsible for administering department examinations and maintaining the integrity of examination content and programs, in accordance with directions and procedures established by the commissioner."

### Test Forms

*Written Test:* The Written Test booklet has two parts and should be administered in one sitting. Part I contains multiple-choice questions, and Part II contains open-ended questions. The test is not timed. Most students will complete the Written Test in approximately 45-60 minutes of working time. In addition, the test administrator will need approximately 15 minutes to give directions to students. The Department will provide a new form of the Written Test each year. All schools must use an answer sheet developed by a Regional Information Center (RIC) or large-city scanning center. Students write their answers to the questions in Part II of the test in the test booklet.

*Performance Test, Form A:* The Performance Test consists of tasks at three stations. Each station requires 15 minutes of testing time, for a total testing time of 45 minutes, plus the time needed to provide instructions to students and for students to move between stations. Allot at least 75 minutes for administration of the Performance Test. The Performance Test is hand scorable only. Students write their answers to the questions in the Performance Test in the test booklet.

### Administration Schedule

The Grade 4 Elementary-Level Science Performance Test must be administered between May 24, 2010 and June 3, 2010. The specific dates when the test is administered are a local decision. The Written Test must be administered on June 7, 2010. Students who are absent on the administration dates must be tested when they return to school, but no later than June 3 for the Performance Test and no later than June 9 for the Written Test. Results for all students must be included on the reports submitted to the Department.

### Students to be Tested

#### *General Education Students*

Except as noted below, all public school students in Grade 4 and all ungraded students who are age equivalent to students in Grade 4 must take the Grade 4 Elementary-Level Science Test. This includes students who have been retained in Grade 4 and Grade 4 students who attend programs operated by the Board of Cooperative Educational Services (BOCES), as well as any other programs located outside the school. Nonpublic schools are strongly encouraged to administer State assessments to their students in accordance with these same provisions.

This test is part of the State’s accountability system under the No Child Left Behind Act (NCLB). The failure of a public school to administer this test and/or to report the test results to the Department can have an impact on the school’s accountability status. The rules below pertaining to the inclusion in this test of English language learners and of students with disabilities apply to students in public and participating nonpublic schools.

### ***English Language Learners***

All English language learners are required to participate in the Grade 4 Elementary-Level Science Test. English language learners may take the test either in an alternative language or in English, whichever would be better for the student. English language learners may also use both an English and an alternative language edition of the test simultaneously. Alternative language editions of the test are provided in Chinese (Traditional), Haitian Creole, and Spanish. Information about administering these translated editions is included on page 16 under “Test Materials.” The test may be translated orally into other languages for those English language learners whose first language is one for which a written translation is not available from the Department. Schools are permitted to offer English language learners specific testing accommodations when taking this test (see page 5).

### ***Students with Disabilities***

The Committee on Special Education (CSE) must decide for each student with a disability, on a case-by-case basis, whether the student will be participating in the Grade 4 Elementary-Level Science Test or will not be participating in this assessment because the student will be participating in the New York State Alternate Assessment (NYSAA) for students with severe disabilities. The CSE’s decision must be documented on the student’s Individualized Education Program (IEP). The criteria that the CSE must use to determine a student’s eligibility to participate in the NYSAA are available at the web site <http://www.vesid.nysed.gov/specialed/alterassessment/home.html>. The Grade 4 Elementary-Level Science Test answer sheets for students participating in the NYSAA should be coded as eligible for the Alternate Assessment.

When determining which students will be participating in this test, be sure to consider those students with disabilities who attend programs operated by the BOCES as well as any other programs located outside the school. For students who are ungraded see Appendix VI to ascertain the appropriate grade-level tests to administer.

*Medically Excused.* A student may be medically excused from testing if documentation from a medical practitioner is obtained and kept on file at the school indicating that the student is too incapacitated to test at the school, at home, or in a medical setting.

### **Testing Accommodations**

#### ***Students Who Incur Disabilities Shortly Before Test Administration***

Principals may provide accommodations when testing general education students who incur an injury (e.g., broken arm) or experience the onset of either a short- or long-term disability (either cognitive or physical) within 30 days prior to test administration. Eligibility for such accommodations is based on the principal’s professional judgment. The principal may confer with CSE/504 Multi-Disciplinary team members, the school physician, or other school personnel in making such a determination. These accommodations must not significantly change the constructs/student skills being tested and are limited to the following:

- extending the time limit for a test,
- administering the test in a special location,

- recording the student’s answers in any manner, and
- reading the test to a student (only for students whose vision is impaired).

Prior permission need not be obtained from the Department for the principal to authorize these testing accommodations for general education students. However, a full written report concerning each authorization must be sent to the Office of State Assessment via fax to 518-474-1989. The report must be on **school letterhead**, must be signed by the principal, and must include the following information:

- the name of the student,
- the title of the test,
- a brief description of the student’s injury or disability, and
- a listing of the accommodations that were authorized by the principal.

If the student is expected to continue to need testing accommodations, the principal must immediately make the appropriate referral for the development of an IEP or a Section 504 Accommodation Plan (504 Plan).

### ***Students with Disabilities***

In general, students with disabilities must be provided with the testing accommodations specified in their IEPs or 504 Plans when taking this test. It is the principal’s responsibility to ensure that this occurs and that those staff who will be providing these testing accommodations are appropriately trained. Please advise proctors to become familiar with the accommodations specific to the particular test being administered. As explained on pages 3 and 4 in this manual, only those testing accommodations that do not alter the constructs measured by the test are permitted on elementary- and intermediate-level State assessments. Students who have been declassified may continue to be provided testing accommodations if recommended by the local CSE at the time of declassification and it is written in the student’s declassification IEP. Plan all necessary arrangements for implementing testing accommodations well in advance of the test dates.

The Department’s Office of Vocational and Educational Services for Individuals with Disabilities (VESID) provides more information on test access and accommodations for students with disabilities on its web site: <http://www.vesid.nysed.gov/specialed/publications/policy/testaccess/policyguide.htm>. You may contact that office via e-mail to [vesidspe@mail.nysed.gov](mailto:vesidspe@mail.nysed.gov) if you have questions on this topic for which you are unable to find answers on the web site.

### ***Use of Scribes or Tape Recorders and Large-Type or Braille Editions***

Instead of using a scribe, the Department encourages the use of a word processor (with dictionary disabled), as most students have some experience with computers, and word processing allows the student more control over his or her environment, fosters independence, and is less labor-intensive than using a scribe. However, the use of scribes and the use of tape recorders are allowable accommodations for the Grade 4 Elementary-Level Science Test. Note the following procedures for scribing:

- The scribe must record word-for-word what the student dictates or records.
- The scribe must use lined paper and must write on every other line.
- The student must read the complete dictation/transcription and indicate on the skipped lines any further changes to be transcribed.
- The scribe must then transfer the student’s completed response into the test book exactly as dictated or recorded and should attach the lined paper with the student’s dictation to the back of the test booklet, preferably by stapling, to ensure against the student’s response being lost.

For students who use large-type or braille editions of the tests, or large-type answer sheets, teachers should transcribe the students' responses onto regular test answer sheets and test books exactly as dictated or recorded.

### ***Format Changes***

Any format changes to the test to be made by the school, such as the re-spacing of questions, enlargement beyond the standard large-type edition provided, colorization, etc., must receive prior written approval from the Department. Note that the reformatting of State assessments may never change the wording of questions, nor may additional examples be included.

In order for the Department to process requests for reformatting by the school, requests for approval should be submitted to the Office of State Assessment at least one week before the first scheduled date of the test administration. Requests should include a letter from the school signed by the school principal. Each request must include the portion of the student's IEP in which the type of reformatting is listed or defined. Requests may be faxed to 518-474-1989. Department approvals will be provided by fax. However, regardless of approval, under no circumstances may the shrink-wrapped test packages of State assessments be opened prior to the morning of the day that the test is to be administered in the school.

### ***English Language Learners***

Schools may provide the following testing accommodations to English language learners:

- ***Time Extension:*** Schools may extend the test time for English language learners. Principals may use any reasonable extensions, such as "time and a half" (the required testing time plus one-half of that amount of time), in accordance with their best judgment about the needs of the English language learners. Principals should consult with each student's classroom teacher in making these determinations.
- ***Separate Location:*** Schools are encouraged to provide optimal testing environments and facilities for all students. They may administer State tests to English language learners individually or in small groups in a separate location.
- ***Bilingual Dictionaries and Glossaries:*** English language learners may use bilingual dictionaries and glossaries when taking this test. The bilingual dictionaries and glossaries may provide only direct translations of words. Bilingual dictionaries or glossaries that provide definitions or explanations are not permitted.
- ***Translated Editions:*** English language learners may be provided with a translated edition of the Grade 4 Science Test. This test is available in Chinese (Traditional), Haitian Creole, and Spanish. In addition, English language learners may use an English and an alternative language edition of this test simultaneously. However, they should be instructed to record all of their responses in only one of the two editions. The alternative language edition used by the student should be indicated on the student's answer sheet.
- ***Oral Translation for Lower Incidence Languages:*** Schools may provide English language learners with an oral translation of this test when there is no translated edition provided by the Department. All translations must be oral, direct translations of the English edition. Written translations are not allowed. No clarifications or explanations may be provided. Translators should receive copies of the English edition of the test one hour prior to administration. The Department's Office of Bilingual Education and Foreign Language Studies (telephone 518-474-8775) and the Bilingual/ESL Technical Assistance Centers (BETACs) can assist schools in locating suitable translators. A list of BETACs is available at: <http://www.emsc.nysed.gov/biling/bilinged>.

- ***Writing Responses in the Native Language:*** English language learners making use of alternative language editions or of oral translations of this test may write their responses to the open-ended questions in their native language. Scoring the tests is the responsibility of the school. However, the Department’s Office of Bilingual Education and Foreign Language Studies and the BETACs can assist schools in locating persons who can translate the students’ responses into English to facilitate scoring of the answer papers.

### ***Former English Language Learners***

Schools may provide the testing accommodations listed above under the heading “English Language Learners” only to those former English language learners who were identified as English language proficient based on their scores on one of the two most recent administrations of the New York State English as a Second Language Achievement Test (NYSESLAT), either Spring 2008 or Spring 2009. These accommodations may not be provided to former English language learners who were identified as English language proficient prior to the 2008 NYSESLAT administration.

For each English language learner or eligible former English language learner, darken the circles on the answer sheet under the heading "ELL Accommodations" to indicate the testing accommodations provided.

### **Security of the Tests**

#### ***Prior To Testing***

Secure test materials will arrive about one week before testing at the secure facility designated by the principal via the online Examination Request System. Prior to these delivery dates, the principal should make arrangements to be notified when the test materials arrive.

#### ***Safeguarding Test Materials***

The sealed packages of secure test materials must be stored in a secure place at the location indicated on the Examination Storage Plan submitted to the Department. As soon as practical after delivery an inventory of the test materials must be conducted. The sealed packages of secure test materials must be replaced inside the secure location immediately after the inventory is completed. The school principal must notify the Department in writing, via fax at 518-474-1989, if any of the packages of secure test materials are not properly sealed when received. Do not remove the sealed packages of secure materials for the test from the secure location, except for the inventory. The sealed packages of secure test booklets may *not* be opened until the test administration date, and then just early enough to permit the distribution of booklets prior to the scheduled starting time.

All Written Test booklets, both used and unused, all scoring keys and rating guides, and all student answer sheets must be held secure from the date the school receives its shipment of examination materials through June 9. While schools may score the student answer papers before the end of this period, caution raters not to discuss the test content and rating criteria except during scoring sessions. Once the Department designated test administration period has ended, the Written Test materials are no longer considered secure.

All Performance Test materials must be held secure except during the actual administration and scoring of the Performance Test. The same Performance Test (Form A) will be administered for several years. All Performance Test materials *except* used student answer booklets are to be returned to the Department.

To preserve the integrity of the test materials, advise all teachers administering and scoring this test that they are not to discuss test questions or other specific test content online via e-mail or listserv or through any other electronic means.

### **Examination Certificates**

The Examination Storage Certificate, the Deputy and Proctor Certificate, and the **new** Examination Scoring Certificate must be completed and signed by all of the appropriate parties following the administration and scoring of the Performance Test and again following the administration and scoring of the Written Test. Both sets of signed certificates must be retained in the school's files for one year. Copies of these certificates can be found in Appendix V. The **Examination Scoring Certificate** may be copied and **must** be completed for each examination administered. All scorers for each examination are required to sign this form to indicate compliance with all scoring procedures as outlined in the Information Booklet for Scoring, the Directions for Administering and Scoring, and the scoring keys and rating guides for each examination.

### **Emergency Supply of Test Materials**

All shipments of secure test materials should be inventoried immediately after delivery and before being placed in secure storage. After taking inventory:

1. If you determine that an item or items are **missing** from your shipment that are listed on your shipping notice, circle the item(s) and quantity that are missing on the notice and fax the corrected shipping notice to the Department's Operations Group at: 518-474-2021. (No cover sheet is necessary.) The missing item(s) will be sent to your school's storage site.
2. If you require items that were **not originally requested** or items necessary to accommodate students whose needs you were not previously aware of, contact the Department's Operations Group by calling 518-474-8220. Under the direction of the Operations Group, contact your regional center to arrange pickup of test materials. Please note that only Grades 4 and 8 Science Written Tests will be sent to regional centers. Performance Test materials will not be sent to regional centers, only to schools.
  - Before sending an official school representative to pick up the emergency supply of materials, contact the official in charge of your regional center. Information on Regional Centers is available at: <http://www.emsc.nysed.gov/osa/elintgen.html>.
  - The official school representative picking up secure examination material must present to the regional center official a photo ID and a letter of authorization signed by the principal listing the materials to be picked up. This letter, authorizing the school representative to pick up test materials, must be written on school stationery. (**Note:** Secure materials can be obtained from the regional center only on the day that they will be administered.)
  - The school representative must countersign the authorization letter and leave it with the regional center official before the emergency supply of materials can be released.

## Test Preparations and Other Guidelines

### Administration of the Tests

To ensure that the Grade 4 Elementary-Level Science Test provides an accurate measure of student achievement, both students and teachers should be properly prepared for its administration. This manual provides recommendations for preparing students to take the tests. School personnel who administer the Written and Performance Tests must be familiar with the test materials and the directions for administration provided in this manual.

### Orientation of Test Administrators

Everyone who will be administering the tests should become familiar with the detailed directions for administering the tests, which are provided in this manual. *The Manual for Administrators and Teachers* is not secure; copies of this publication should be distributed to teachers in advance of the administration date(s) so they may familiarize themselves with the procedures for administering the test. Schools may make photocopies of this publication if necessary. It can also be found at the Department's web site at <http://www.emsc.nysed.gov/osa>.

In addition, schedule an orientation prior to the testing dates to enable test administrators to become adequately prepared. The orientation should include direct hands-on experience with the Performance Test if the test administrators have not had previous experience with that component of the test. Your regional BOCES or large-city central office may provide assistance for conducting such orientation sessions.

**Note regarding test security:** Allow access to the Performance Test materials only to those who are scheduled to administer the Performance Test, conduct the orientation, or rate the test. **These materials must remain under strict security conditions at all times to preclude access to the test materials by students and other unauthorized persons.**

### Assembling the Test Materials

Assemble all test materials at least one day before the test administration, except for the test booklets for the Written Test and the Performance Test, the scoring keys, and the rating guides.

### Preparation of Students for Testing

The administration of the test should be announced to students before the date that the test is scheduled to be administered. All announcements should be made in such a way as to increase the students' interest in the test without causing them to become overly anxious. In addition, parents should be informed of the dates of testing and the purpose of the tests. Parents should be asked to encourage students to do their best on the test and to ensure that students are well rested on the days of testing. Each student should be familiar with the general types of questions on the test and the procedures that they should follow when recording the answers to the test questions. The previous editions of the test that feature questions similar to those that will be on this year's test may be accessed on the Department's web site at <http://www.emsc.nysed.gov/osa>.

### Selecting the Testing Room(s)

Arrangements for administering the tests should interfere as little as possible with the normal school routine. The Written Test may be administered in the students' regular classroom, or classes may be arranged into smaller or larger groups, at the convenience of the school. The Performance Test need only be set up in one location. For buildings with more than one class of Grade 4 students, classes

should cycle through the testing area one at a time. Suggestions for selecting an appropriate testing site for the Performance Test are in the section of this manual entitled “Administering and Rating the Performance Test” (pages 24–25) and in Appendix II.

### **Preparation of the Testing Room(s)**

The room(s) in which the tests are administered should be well lighted, well ventilated, and quiet. Make preparations before the testing period to keep noise and other distractions to a minimum. Place a “Do Not Disturb” sign on the door to prevent interruptions. If tests are to be administered in a classroom, clear desks and shelves under the desks of all books, papers, and other materials. Completely cover or remove from the walls all charts and blank or completed graphic organizers pertinent to science and all board work. Make arrangements in advance to seat the students so that each student will be clearly visible to the proctor at all times and so that there will be the least possible opportunity for any communication between students. Seating of students in alternate rows is recommended.

### **Supervision of Students**

#### ***Unauthorized Materials***

Students should be under close supervision at all times during the administration of the tests and may not use any unauthorized notes, printed materials, tools or electronic devices that might give them an unfair advantage on the tests. When students enter the testing room, proctors must ensure that students do not bring any unauthorized materials such as those listed above. **Students should be informed that they may not use cell phones or other communication devices during the test.** These must be turned off and put away before the test booklets are handed out. Use of a cell phone during testing invalidates a student's test regardless of the content of the communication. Such student's test result must be reported as "administrative error".

#### ***Aid to Students***

No one, under any circumstances, may interpret or explain test questions to students, nor may anyone review or comment on the answer sheet of a student while the test is in progress. In response to inquiries by students concerning the meaning or interpretation of test questions, proctors should advise students to use their own best judgment. Teachers may give students assistance only in the mechanics of taking the tests, such as understanding where to record their responses.

#### ***Temporary Absence from Testing Room***

No student may be permitted to leave and then return to the testing room during any part of the test unless the student is accompanied by a proctor for the duration of his or her absence from the testing room.

#### ***Emergency Evacuation of a School Building***

Evacuation of a school building during a test may be required because of an emergency such as a fire alarm or bomb threat. In any situation in which the safety of the students is endangered, the principal has full authority to interrupt the test immediately. If it is possible, the students should be kept under supervision during the emergency. Since the Performance Test is timed, if work can be resumed following evacuation then students may make up the remaining time so that they will have the allotted time on the test. Note that the written test is *not* timed. Following the test, a written report of the circumstances should be faxed to the Office of State Assessment. (See "Security Breaches, Administration and Scoring Irregularities and/or Misadministrations" on pages 11-12.)

### ***Student Cheating***

Do not permit students to obtain information from or give information to other students in any way during the test. If you suspect that such an attempt has occurred, warn the students that any further attempts will result in the termination of their tests. If necessary, move the students to another location. If these steps fail to end attempts to obtain or give information, notify the principal immediately and terminate the students' tests. At the conclusion of the test, all suspected cheating must be reported to the principal.

If, in the judgment of the principal, a student has attempted to give aid to or obtain aid from another person during the test, the principal must follow the school's disciplinary procedure for student cheating and invalidate the student's test. Score reports will not be produced for invalidated tests. When reporting student assessment data to the Department under such circumstances, the principal must report the student's test results as "administrative error," with an Assessment Standard Met Code of "97," in the SIRS.

### ***Illness***

If a student becomes ill during a part of the test, the student should be excused until he or she is well enough to continue. For the Performance Test, the principal should estimate the time that the student had remaining to complete that part of the test. When the student is well enough to complete the test (and as long as the testing or makeup period has not ended), the student may be given the remaining time for that part. For the Written Test, the student should be given the time needed to complete the test. When the student goes back to finish the test, the student must be closely supervised so that he or she does not go back to previously finished questions on the test.

### ***Students Absent on the Test Day***

Plan to administer the test at a later date during the test administration or make-up period to all students who were absent when the test was initially given. Do not involve these students in any classroom discussions about the test prior to the time they take it.

### ***Proctoring***

Proctors must circulate periodically around the room during the administration of each session of the test to ensure that students are recording their responses to test questions in the proper manner. While circulating around the room, proctors should point out to students if they have left one or more answers blank, if they have darkened more than one circle for the same multiple-choice question, or if they do not appear to be recording their answers in the proper place (on the answer sheet for multiple-choice questions or in the test book for open-ended questions). **However, proctors may not comment to the student on the correctness or sufficiency of any answer.**

Students must not be given help in interpreting any test questions. They should be advised to independently answer test questions according to their best judgment. Proctors must limit any test-related assistance to students to that required in the mechanics of taking the test, such as filling out the headings on the answer sheet and the answer booklets and understanding where to record their answers.

**No one, under any circumstances, including the student, may alter the student's responses on the test once the student has handed in his or her test materials. Teachers and administrators who engage in inappropriate conduct with respect to administering and scoring State examinations may be subject to disciplinary actions in accordance with Sections 3020 and 3020-a of Education Law or to action against their certification pursuant to Part 83 of the Regulations of the Commissioner of Education.**

### **Security Breaches, Administration and Scoring Irregularities, and/or Misadministrations**

Pursuant to Section 102.3 of the Regulations of the Commissioner of Education, "Building principals are responsible for administering department examinations and maintaining the integrity of examination content and programs, in accordance with directions and procedures established by the commissioner." Accordingly, the building principal is responsible for all aspects of the school's test administration and must take appropriate measures both to prevent, as much as possible, and to investigate all security breaches and irregularities associated with the administration and scoring of the test.

In addition, the principal must report such events in writing to the Office of State Assessment within 24 hours by faxing a description of the incident to 518-474-1989. The fax must be written on school letterhead and signed by the building principal.

Security breaches and testing irregularities include, but are not limited to, the situations listed below:

- Any instance occurring prior to, during, or after testing where it has been determined that students, teachers, administrators, or paraprofessionals have had access to the specific contents of a test prior to the administration of the test
- All suspected or confirmed cases of teachers, administrators, or paraprofessionals giving aid or impromptu lessons on specific test content to students immediately before or during the test
- All instances of teachers, administrators, or paraprofessionals altering student responses to test questions
- All instances of teachers, administrators, or paraprofessionals providing students with unauthorized/inappropriate testing accommodations or tools
- All instances of teachers, administrators, or paraprofessionals not providing students with the accommodations specified in their IEP or 504 Plans
- All instances of teachers, administrators, or paraprofessionals providing students with other nonstandard test administrations, unrelated to cheating
- All cases in which a school official does not adhere to the Department policy concerning the finality of examination scores as determined by the teacher scoring committees (See "Finality of Teacher Scoring Committee's Scores" on page 39.)
- All student use of cell phones and other communications devices during the test
- All confirmed cases of student cheating
- All interruptions of testing sessions, including those caused by power outages or fire alarms
- All instances in which the test was administered without Department authorization on a day outside the published Statewide administration or makeup schedule

- All instances in which scorers do not score the test in accordance with the scoring materials provided by the Department
- All cases in which student test books or answer sheets are lost prior to either the scoring of the tests or submission of the answer sheets to the RIC or large city scanning center

### **Coding of Invalid Tests**

Any breaches or irregularities described above, except interruptions caused by power outages or alarms, may be determined by the Department to invalidate a student's test results. In cases where a student's test has been invalidated the principal must:

1. Darken the circle on the affected student's answer sheet denoting "administrative error."
2. Notify the RIC or large city scanning center of the administrative error.
3. On the SIRS, in the *Assessment Standard Met Code* field, code each student as administrative error with *Standard Achieved Code* of 97 and in the numeric field enter "999" indicating no valid score. Further details are available at: <http://www.emsc.nysed.gov/irts/SIRS/>.
4. On the verification reports, students for whom administrative errors were made will appear as "not tested."

### **Scanning of Machine-Scorable Answer Sheets**

It is the school's responsibility to make the necessary arrangement for scoring the test. All schools must contract with a RIC or large-city school district for answer sheets, scanning, and reporting services. The school must send answer sheets to the RIC/large-city district office after the rating of the Written Test, Part II, and the Performance Test are completed.

Some schools will have two separate answer sheets, one for the Performance Test and one for the Written Test. If this is the case, both must be sent to the RIC/large-city district office if that is part of their arrangement. Schools may not require students to record their responses for the same multiple-choice questions on more than one answer sheet.

### **Reporting Test Results on the Grade 4 Elementary-Level Science Test**

Data for all schools must be reported through the SIRS. For more information about reporting results, school administrators should contact their local RIC or their large-city school district scanning center. **Schools must not send completed answer sheets to the Department.**

### **Determining the Need for Academic Intervention Services**

Section 100.2(ee)(i) of the Regulations of the Commissioner of Education requires schools to provide academic intervention services to students who score below the State-designated performance level (performance level 3, final test score 65) on the Grade 4 Elementary-Level Science Test. All students who achieve a final score in performance levels 1 and 2 (see Appendix VIII) must receive academic intervention services. These services must commence in the semester immediately following the administration of the test.

## **Evaluating School Results on the Grade 4 Elementary-Level Science Test**

The Rating Guides for the Written and Performance Tests provide summary charts that link each test to the Elementary-Level Science Core Curriculum. The core curriculum is based on the *New York State Learning Standards for Mathematics, Science, and Technology (Elementary-Level)*. The charts provide a reference to these documents for each item on the Written and Performance Tests.

## **Recording Test Scores and Storing Student Answer Papers**

Schools must maintain complete and accurate records of students' test scores. A student's score and the date of administration must be entered on the student's permanent record.

All schools must keep their students' Performance Test answer booklets on file in the school for at least one year. Since the Performance Test booklets remain secure, they must be stored in a secure location. Schools must also keep their students' Written Test answer sheets on file for the same period.

## **Individual Student Reports**

At the school's earliest opportunity after tests have been scored, schools are expected to provide results to each student's parent/guardian.

## **Review of Answer Papers by Students and Parents**

Students and parents/guardians of students who have taken the Grade 4 Elementary-Level Science Test have the right to review student answer papers after the scores have been recorded as described in the preceding section. Answer papers should be reviewed in the presence of the principal, or the principal's designee, to ensure that no changes are made on the answer papers as they are being reviewed.

## **Online Submission of Teacher Evaluations of the Test to the Department**

Suggestions and feedback from teachers provide an important contribution to the test development process. The Department provides an online evaluation form for State assessments where teachers may respond to several specific questions and may make suggestions. Go to <http://www.emsc.nysed.gov/osa/teacher/evaluation.html> to complete and submit your evaluation.

## Return of Tests and Scoring Materials to the Department

*Written Test:* Since the Department will provide a new form of the Written Test each year, schools do **not** have to return Written Test materials to the Department. After the Department-designated test administration period has ended and the test has been scored, schools may use the Written Test as part of the instructional program. Schools may make photocopies of the Written Test if additional copies are needed for this purpose. All schools must keep student answer papers for the Written Test on file in the school for one year. Copies of this manual and the Rating Guide for the Written Test should be kept on file at the school with the students' answer papers for reference. **No school should send answer sheets to the address listed below for the return of certain Performance Test materials.**

*Performance Test:* Principals are required to ensure that the school returns Performance Test materials to the Department as indicated in the chart below.

Return to the Department's Test Distribution Unit	Retain in the School Do NOT return to the Department
<p>All <i>unused</i> Performance Test answer booklets, including regular, large-type, braille, and alternative language editions</p> <p>All used and unused Performance Test Rating Guides</p>	<p>Performance Test answer booklets used by students</p> <p>Test Administrator's Record Sheet</p> <p>Copies of this test administration manual</p> <p>Completed Examination Storage Certificate</p> <p>Completed Deputy and Proctor Certificate</p> <p>Completed Examination Scoring Certificate</p>

Use the return label enclosed with the shipment of test materials to return the Performance Test materials after scoring has concluded but no later than June 17, 2010, to:

Test Distribution Unit  
New York State Education Department  
Cultural Education Center, Room 167  
Empire State Plaza  
Albany, New York 12230

**Note:** New York City public schools should follow the procedures for the return of Performance Test materials provided to them by the New York City Department of Education.

## Department Contacts

Different Department staff are responsible for various aspects of the test. Direct questions to one of the persons or offices listed below.

Do not discuss test questions or other specific test content via e-mail. This is a violation of security, as stated on page 6. Questions about scoring should be addressed by telephone.

Test Administration:	Carolyn Trombe, Test Administration and Communications 518-474-5902 <a href="mailto:ctrombe@mail.nysed.gov">ctrombe@mail.nysed.gov</a>
Rating /Scoring:	Judy Pinsonnault, Test Development Unit 518-474-5900 <a href="mailto:jpinsonn@mail.nysed.gov">jpinsonn@mail.nysed.gov</a>
Requests for Additional Test Materials:	Operations Group Fax a copy of shipping notice with a note itemizing which materials are needed to: 518-474-2021
Content/Curriculum:	Ann Crotty, Office of Curriculum, Instruction and Instructional Technology 518-474-5922 <a href="mailto:acrotty@mail.nysed.gov">acrotty@mail.nysed.gov</a>
Accommodations for Students	Special Education Policy Unit 518-473-2878 <a href="mailto:vesidspe@mail.nysed.gov">vesidspe@mail.nysed.gov</a>
Reporting Results in SIRS	Information and Reporting Services 518-474-7965 <a href="mailto:dataquest@mail.nysed.gov">dataquest@mail.nysed.gov</a>
Academic Intervention Services:	Office of School Improvement 518-474-5923 <a href="mailto:mflanaga@mail.nysed.gov">mflanaga@mail.nysed.gov</a>

## General Test Administration Procedures

### Test Materials

The test materials provided by the Department for administering the Grade 4 Elementary-Level Science Test include:

#### *For the Written Test:*

- test booklets
- directions for administering and scoring the Written Test (pages 18–22 of this manual)
- Scoring Key for the Written Test, Part I (for non-NYC schools)
- Rating Guide for the Written Test, Part II

#### *For the Performance Test (Form A):*

- test booklets
- Station Diagrams (10 sets of each of these Station Diagrams and one Test Administrator’s Record Sheet)
- directions for administering and rating the Performance Test (23–38 of this manual)
- Test Administrator’s Record Sheet (Appendix III of this manual)
- Rating Guide for the Performance Test (Form A)

The Written Test booklet and the test booklet and Station Diagrams for the Performance Test (Form A) are available in large-type and braille as well as in the following alternate language editions: Chinese (Traditional), Haitian Creole, and Spanish. The alternate language editions are direct translations of the English editions. The directions to students on the alternative language test materials are the same as those on the English editions. The Department does not provide separate directions for administering the alternative language editions of the tests. Teachers who speak the language should be able to administer the alternative language editions by using a copy of the test materials in the appropriate language and the directions provided in this manual. If a teacher who does not speak the alternative language administers the tests, the directions on the test materials should enable students to complete the tests by themselves.

The test materials to be provided by the school include pencils for both the Written and Performance Tests and the station materials for the Performance Test.

### Machine-Scoring of Answer Sheets

The answer sheets provided by the RIC or large-city scanning center include several grids containing spaces for recording special codes. The school must develop uniform written instructions about the completion of these grids and provide them to everyone who will be administering the test. Such instructions should be based on careful consideration of the types of student and score information the school needs, as well as on the processing requirements of the scoring center that the school is using.

Schools may not require students to record their responses for the same multiple-choice questions on more than one answer sheet and, except as an accommodation for a student with a disability, may not administer the Written Test with any answer sheet other than one provided by a RIC or large-city scanning center.

## **Test Administration Time**

*Written Test:* The Written Test is not timed. Students should be given as much time as they need to complete it. As a general rule, most students will need 45–60 minutes of working time to complete the Written Test. Some students will need more time and provisions should be made to accommodate these students. In addition, the test administrator will need approximately 15 minutes to give directions to students.

*Performance Test, Form A:* The Performance Test will take approximately 75 minutes to administer, including time needed to provide instructions to the students and for students to move between stations. Field testing has determined that almost all students will complete the tasks at the three stations in this amount of time. Students are allowed 15 minutes at each station.

## Administering and Scoring the Written Test

### Detailed Directions for Administering the Written Test

Make sure that sufficient quantities of all test materials are on hand. The following materials are needed:

*For each student:*

- test booklet
- answer sheet
- No. 2 pencil

*For the test administrator:*

- detailed directions for administering the Written Test (18–22 of this manual)
- test booklet (for demonstration purposes)
- answer sheet (for demonstration purposes)
- extra answer sheets and No. 2 pencils
- instructions for completing the special codes grids on the separate answer sheet

After the desks have been cleared of books and papers and when the students are ready to begin, say:

Today you are going to take a test in science. I will now give each of you a test booklet face up on your desk. Do not open the booklet until I tell you to do so.

Distribute one test booklet, face up, to each student. Then say:

I will now give out the answer sheets. Please do not write on the answer sheet until I tell you what to do.

After the answer sheets have been distributed, give directions for completing the heading of the answer sheet. Provide directions for marking any machine-readable name or number grids. These directions must be developed by the school.

If students do not understand how to mark the answer sheet, explain the appropriate directions until everyone knows what to do. Then say:

Look at the cover of your test booklet. Be sure it says “Grade 4 Elementary-Level Science Test, Written Test, Spring 2010.” If you do not have the correct booklet, raise your hand.

Read the directions on the cover silently to yourself while I read them aloud.

Print your name and the name of your school on the lines above. (*Pause.*)

This test has two parts. Parts I and II are in this test booklet.

Part I contains 30 multiple-choice questions. Record your answers to these questions on the separate answer sheet. Use only a No. 2 pencil on your answer sheet.

Part II consists of open-ended questions. Write your answers to these questions in this test booklet.

You will have as much time as you need to answer the questions.

Now turn to page 2. Read the directions on page 2 silently to yourself while I read them aloud.

### **DIRECTIONS**

There are 30 questions on Part I of this test. Each question is followed by three or four choices labeled A–C or A–D. Read each question carefully. Decide which choice is the best answer. On the separate answer sheet, mark your answer in the row of circles for each question by filling in the circle that has the same letter as the answer you have chosen. Use a No. 2 pencil to mark the answer sheet.

Read Sample Question **S-1** below.

**S-1** Frozen water is called

- A fog
- B ice
- C steam
- D vapor

The correct answer is **ice**, which is next to letter **B**. On your answer sheet, look at the box showing the row of answer circles for Sample Question **S-1**. See how the circle for letter **B** has been filled in.

Now do Sample Question **S-2**. Mark your answer on the answer sheet in the box showing the row of answer circles for Sample Question **S-2**.

Allow students time to mark the answer to Sample Question S-2 on their answer sheets. If necessary, demonstrate on the chalkboard the correct way of marking answers on the answer sheet. Then say:

**S-2** Which animal has wings?

- A bird
- B frog
- C mouse
- D rabbit

The correct answer is **bird**, which is next to letter **A**. On your answer sheet, you should have filled in circle **A**.

Answer all 30 questions on Part I of this test. Fill in only one circle for each question. Be sure to erase completely any answer you want to change. You may not know the answers to some questions, but do the best you can on each one.

When you finish Part I, go on to Part II. Answer all of the questions in Part II in the space provided for each question.

If students do not appear to understand the sample questions or the marking of the answer sheet, the appropriate directions may be explained until everyone knows what to do. After all questions have been answered, say:

Check your booklet to be sure that it is complete and that no pages are stuck together.

When I tell you to, turn to question 1 and begin work. When you are finished, close your test booklet and place it on top of your answer sheet.

Now turn the page and begin work.

Walk around the room and make sure that all students understand the directions and are marking their answer sheets properly. Explain again the test-taking procedures to any student who appears to be having difficulty.

No one, under any circumstances, may interpret or explain test questions to students, nor may anyone review or comment on any of a student's answers while a test is in progress. In response to inquiries by students concerning the meaning or interpretation of test questions, students should be advised to use their own best judgment.

Students should remain quietly at their desks when they finish the test. The teacher may collect the test materials either as students complete the test or when most of the students have finished.

If the test is administered in a large-group setting, school administrators may prefer to allow students to hand in their test materials as they finish and then leave the room. If so, take care that students leave the room as quietly as possible so as not to disturb the students who are still working on the test.

## Scoring the Written Test

The student's raw score is determined as follows:

**Part I**—All schools administering the Grade 4 Elementary-Level Science Test are required to make arrangements to obtain answer sheets and associated scanning services from a RIC or large-city scoring center. These centers will scan and score the answer sheets according to the following criteria:

1. One credit will be awarded for each correct answer.
2. Credit will not be allowed if two or more answers have been marked for the same question.
3. The raw score for Part I will be determined by counting the number of correct responses.

For information only, correct responses are listed on the scoring key included in the shipment of test materials to all schools except New York City public and charter schools.

**Part II**—assign credits as indicated in the Rating Guide for the Written Test. A list of criteria for rating the open-ended questions on Part II is provided in that guide.

**Machine Scoring.** Schools should be sure to check with their scoring center concerning the procedure to be followed in preparing the answer sheets for machine scoring.

The separate answer sheet containing the multiple-choice answer grids also provides grids for recording a student's Part II and Performance Test scores. When filled in, these grids enable scoring centers to produce student records that include final student scores. Record the Performance Test scores in these grids after the Written Test is administered but before the answer sheets are machine scored. If schools have two separate answer sheets for the Written and Performance Tests, both must be sent to the RIC or large-city school district.

**Determining the Student's Final Test Score.** A chart for converting the student's Written Test raw score and Performance Test raw score to a final score will be provided on the Department's web site: <http://www.emsc.nysed.gov/osa>. Once a final score has been determined for each student, a performance level can be assigned. The Performance Levels Chart is provided in Appendix IX of this manual.

**Note:** The final score corresponding to the raw scores in the conversion chart will change with each year's edition of the test. For this reason, it is crucial that for each test year, teachers use only the conversion chart provided for that edition to determine the student's final score.

## Rating the Written Test, Part II

Approximately one-third of the Written Test will consist of open-ended questions. A group of teachers should rate the Part II open-ended questions on the Grade 4 Elementary-Level Science Test. There must be at least two raters. School administrators decide who can rate Grade 4 Elementary-Level Science Test(s) after review of the teacher's certification and present and past teaching assignment(s). It is estimated that two teachers working as a team should be able to rate all of the open-ended responses for 30 students in approximately one hour.

The Rating Guide for the Written Test, Part II gives detailed directions for rating the open-ended section of the Written Test and specific criteria for rating each question. It is printed on yellow paper and is included in the shipment of test materials from the Department. In rating the students' test booklets, each rater should follow the procedures detailed in the rating guide. The rating should be completed prior to June 17, the date when answer sheets should be submitted to the scanning centers. Copies of the Written Test Rating Guides should be kept on file at the school for reference.

## Organizing the Rating Process

The following is a suggested procedure for managing the mechanics of the rating process.

1. Designate one person as the coordinator of the rating process. The coordinator may be appointed at either the building or the district level. He or she will be responsible for training and supervising raters and may also rate some of the questions in the student test booklets.
2. Set aside one room as a central rating room for collecting, sorting, circulating, and storing test booklets and for preparing and maintaining records.
3. Provide adequate time for rating during the school day.
4. Make sure each rater receives approximately the same number of student booklets.
5. At least two teachers must participate in rating the open-ended questions in Part II. Each should be responsible for rating a selected number of the open-ended questions in each test booklet. No one teacher is to score all the open-ended questions in a student's test booklet.
6. Prior to the rating of students' answers to the open-ended questions in Part II, allow time to provide training for all raters (even if they have received prior training). If possible, select at random 10–15 student test booklets and duplicate them for use as a “warm-up” exercise with the raters for discussion of the questions, the criteria, and the rating of each item. During the training exercise, after three or four complete student test booklets have been rated, ask the raters to indicate, by a show of hands, how many credits they gave each answer. If there is some disagreement about the number of credits to be awarded an answer, ask raters who gave different credits to an answer to explain their rating by citing specific criteria from the rating guide.

## Administering and Rating the Performance Test

### Preparation

#### *Well in Advance of the Test Date:*

Notify teachers and other staff of this test and the role that each will have.

1. Assemble and prepare all equipment according to the directions (pages 23-32) in this manual. The materials listed specify what is needed for a single station. Several commercial and public suppliers have constructed kits that provide the specific equipment for each station. Appendix VII provides a list of these suppliers. Although kits ordered from suppliers should generally be the same, some kits may not be ready for immediate use, and additional time may be needed for preparation. The school will need to provide some miscellaneous materials such as marking pens, tape, or labels.
2. Check the materials well in advance of the test date. Contact the supplier for a replacement if a piece of equipment or material is missing or arrives broken.
3. Check to be sure that the equipment and materials are adequate for the number of students to be tested. Appendix I provides a complete list of materials needed for each station. A supplier's kit of materials usually provides for a maximum of 30 students. Each group of stations will accommodate three students, and students will move to each station within the group. If 30 students are to participate in the Performance Test, you will need 10 groups and equipment for 10 complete setups of each station. Each student will need one test booklet and a sharpened pencil. Check that enough booklets will be available for the number of students to be tested. Test administrators should have a supply of extra sharpened pencils on hand.
4. Select and reserve a testing room. Appendix II provides a comparison of possible Performance Test sites. Once all the equipment has been prepared, it should take three to four person-hours to set up the room, 75 minutes to administer the test (for a class of 30 students), and one hour to disassemble the setup. For larger schools and schools where the test will be given early in the school day, station setup can be done the day before and secured overnight. Do *not* leave test booklets out overnight.
5. **Plan the layout of the room and prepare a diagram of the layout of the stations. This is an essential step in the process of Performance Testing.** The testing room must have flat top student work spaces (student tables, lab tables, library tables, or cafeteria tables) in sufficient numbers for the number of students to be tested. An individual student desk may be too small to accommodate all the equipment for a station plus provide room for the student to write. It may be possible to place two smaller individual desks together to make a larger work area for one station. Determine how many tables will be needed and how they will be arranged in groups of three stations each (see page 25). The room will need to be large enough to accommodate 8–10 groups (24–30 students) comfortably. Students will need to move (either sideways or front-to-back) among stations within their group with as little confusion as possible.
6. One station, the “Ball and Ramp,” needs more space than is available comfortably on a single student desktop for the ball and ramp place mat. If you use single desks, the “Ball and Ramp” station will require two student desks abutted side-by-side. (See diagram on page 32.) Figure out how many desks (tables) will be needed and how they will be arranged in groups so that students will be able to rotate easily from one station to the next with a minimum amount of

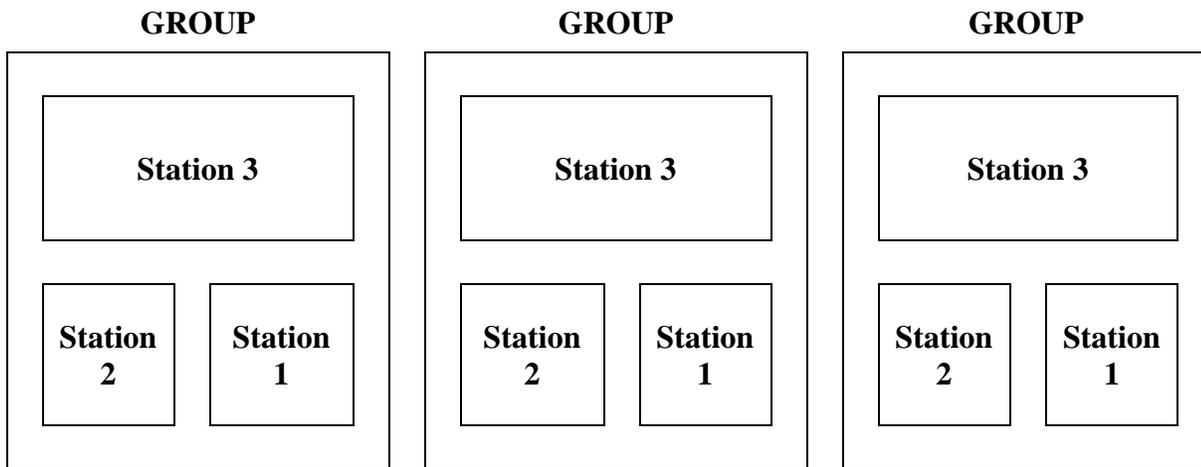
confusion. Give special attention to the placement of the “Ball and Ramp” station, especially if two student desks are abutted. Make a diagram of your testing room setup for reference.

7. Check that all print materials from the Department are ready. These include the student Performance Test booklets, directions for setting up the stations, detailed directions for administering the test, Station Diagrams for Stations 1, 2, and 3, and a Test Administrator’s Record Sheet.
8. Check that at least two adult test administrators (two professionals, or one professional and one paraprofessional) have been trained and are completely familiar with the test protocols and the equipment. These adults will administer the test, direct student movement, and resolve any problems with the equipment. In addition, teachers or aides may be present to provide testing accommodations to students with disabilities pursuant to their IEPs. To minimize possible distractions during the testing, other adults should *not* be invited to attend.

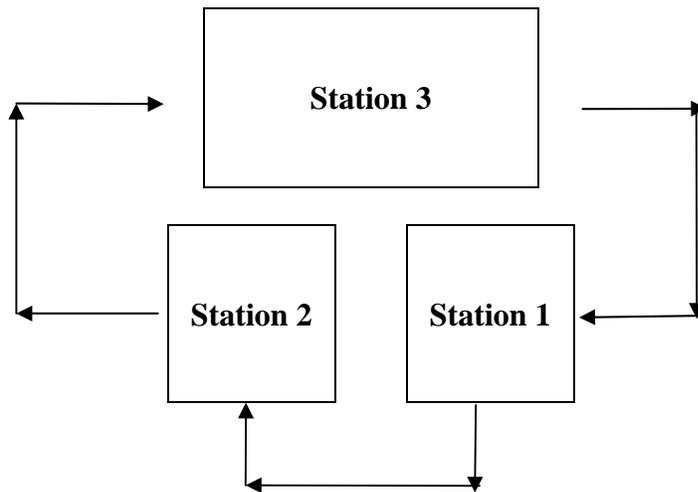
***One Day Prior to the Test or Early Morning on the Test Date:***

1. Arrange the tables into groups of three stations each. Set up each station according to the directions provided in the section of this manual entitled “Preparing Each Station,” on pages 26–32. The materials listed specify what is needed at each station for each group that is being tested. Arrange the equipment exactly as it is shown on the Station Diagram.
2. Place the Station Diagram at the bottom left corner of each station.
3. **Safety:** The Performance Test is to be administered under the supervision of trained test administrators. Staff should exercise the same safety precautions that apply when students engage in performance tasks in a science classroom. Monitor the students closely for safe use of equipment and materials at all times.
4. **Suggestion:** Have a mop or sponge handy for spills at Station 1.
5. Complete the Test Administrator’s Record Sheet. **This information is very important.** It will be used to determine the range of correct answers when rating the students’ tests. Copies are provided in Appendix III of this manual and in the packet of Station Diagrams.

## Diagram of Typical Classroom Setup



## Student Rotation within Groups



## Preparing Each Station

A list of the materials needed for one station is provided below, along with specific directions for preparing the materials and setting up the station. Refer to the diagram of the setup for your testing room to determine how many individual station setups you will need. For example, if you plan to have 10 groups (30 students), you will need 10 setups for each station.

### Station 1 – Measuring Objects and Liquids

#### Materials Needed for *One* Station:

- 1 equal-arm balance
- 1 set of gram masses (mixture of two 20-g, three 10-g, four 5-g, and ten 1-g for a total of 100 g)
- 3 clear plastic jars, approximately 125-mL capacity
- 2 screw tops to fit jars
- 1 large plastic cup, approximately 300-mL capacity containing about 150 mL of water
- 1 measuring container (beaker), 100-mL capacity with clearly marked gradations
- 1 rough-cut rock (about 1" cube) that will fit easily into the beaker and sink completely in the water without causing the water to overflow
- 1 resealable plastic bag, large enough to hold the set of gram masses
- 1 ruler with units for metric (30 cm) and for standard (12 inches) measurement, neither with indented zero points
- 2–3 paper towels
- Station Diagram for Station 1 (see next page)

#### Teacher Materials:

- 1 black, permanent, fine-line marker
- supply of water for 10 Station 1 setups
- medicine cup or other tool to measure 25 mL of water as accurately as possible

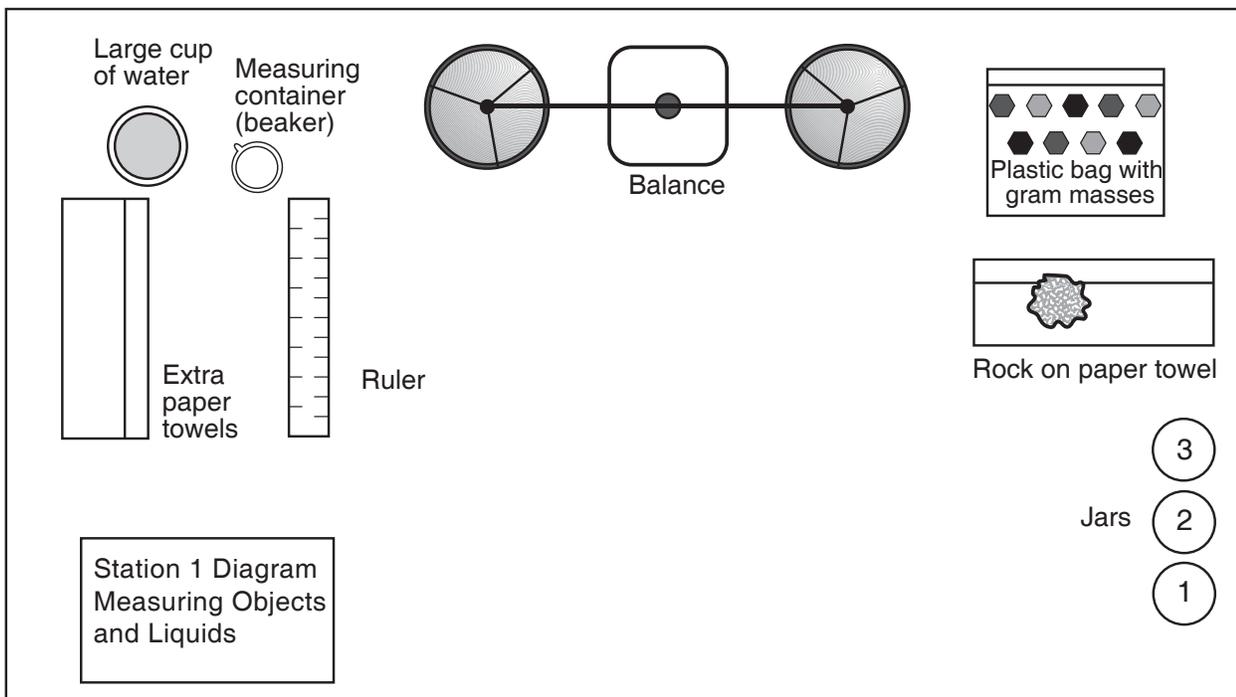
#### Preparation:

1. Check that all Jar 1s are approximately the same width, height, and mass so that the acceptable range for scoring question 1 will be correct for all of them.
2. On Jar 1, draw a thin line all the way around the outside surface with a permanent black marker so the inside volume to the line is 65 mL. On opposite sides of the jar, affix a label or print “1.” (This jar will *not* have a screw top.)
3. Check that the volume of water to the line on all Jar 1s is approximately the same, so that the acceptable range established for scoring question 2 will apply to all of them. **The volume to the line should be 65 mL.**
4. Use the medicine cup to measure exactly 25 mL of water. Pour this water into Jar 2 and secure it with a screw top. On opposite sides of the jar, affix a label or print “2” and “DO NOT OPEN.” When measuring the water, be as precise as possible, so that the acceptable ranges established for scoring question 4 will apply to all Jar 2s. Do not use the student beaker for this measurement. Make sure that each Jar 2 contains exactly 25 mL of water.
5. Secure Jar 3 with a screw top. On opposite sides of the jar, affix a label or print “3” and “DO NOT OPEN.”

6. On the plastic bag, affix a label or print “GRAM MASSES” with black permanent marker on one side. Place the set of gram masses inside the bag.
7. Set up the equal-arm balance as shown in the Station Diagram for Station 1 below.
8. On the plastic cup, affix a label or print “WATER” on opposite sides. Add approximately 150 mL of water to the plastic cup.
9. Complete the table for Station 1 on the Test Administrator’s Record Sheet for Station 1 (see Appendix III).
10. Tape the Station Diagram for Station 1 at the bottom left corner of the station.
11. Place all the materials at the station as shown in the Station Diagram for Station 1.
12. On the ruler for Station 1, be sure that both scales, metric and standard units, are not taped over but are available for student use.

**Note:** For Station 3, the ruler will *not* have standard units visible. Therefore, once prepared for use, these two sets of rulers cannot be used interchangeably.

### Station Diagram Station 1 — Measuring Objects and Liquids



## Station 2 – Electrical and Magnetic Testing

### Materials Needed for *One* Station:

- electrical tester:
  - 1.5-volt “D” cell battery
  - 1.5-volt bulb and bulb holder
  - battery holder (plastic or metal recommended)
  - 3 insulated wires with clips
- bar magnet (approximately 1.5 cm x 7 cm)
- resealable plastic bag containing eight objects and labeled “Test Objects”
  - penny  
(**Note:** Penny must be new and shiny. Oxidized pennies will not conduct electricity.)
  - rubber band (at least 1/4 inch wide)
  - paper clip (all metal)
  - plastic spoon (small)
  - nickel (United States five cents)
  - wooden stick (like Popsicle stick or tongue depressor)
  - aluminum foil (heavy duty, about 5-cm square)
  - colored ceramic disk (magnetic)  
(**Note:** Ceramic materials are nonmetallic, even if they are magnetic.)
- Station Diagram for Station 2 (see next page)

### Teacher Materials:

- 1 black, permanent, fine-line marker
- extra batteries and bulbs for the electrical testers

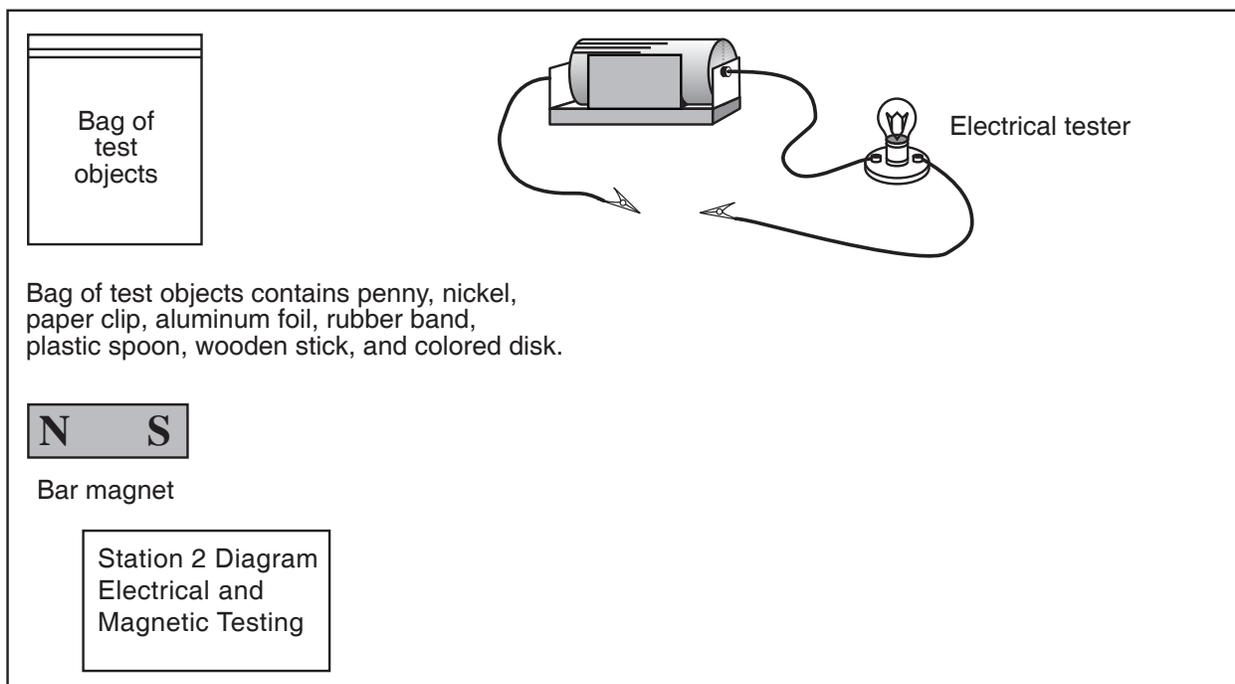
### Preparation:

1. Make the electrical tester using the equipment listed above for the “electrical tester.”  
Check to be sure that it will work.
2. Affix a label or print “Test Objects” on the resealable plastic bag with a permanent black marker.
3. Place the eight objects in the bag labeled “Test Objects.”
4. Tape the Station Diagram for Station 2 at the bottom left corner of the station.
5. Place all the materials at the station as shown in the Station Diagram for Station 2.

**Safety:** Be sure the students do not leave the electrical tester hooked up when it is not in use. When storing the tester, make sure that the batteries are separated from the conductors, so that they cannot come in contact and cause a short circuit. Carefully monitor the use of equipment by the students. Students should not put any of the objects in their mouths.

## Station Diagram

### Station 2—Electrical and Magnetic Testing



### Station 3 – Ball and Ramp

#### Materials Needed for *One* Station:

- Wood block (preferably a cube) to serve as the ramp support (total height: 5–6 cm)
- 1 ruler, 30-cm plastic without an indented zero mark and with a grooved center that can accommodate a golf ball
- 1 transparent, round, plastic deli container about 12-cm diameter, 1 pint in volume, and approximately 15 grams in mass
- 1 golf ball in a resealable, clear plastic bag labeled “Golf Ball”
- 1 Ping-Pong ball in a resealable, clear plastic bag labeled “Ping-Pong Ball” (Do *not* put the Ping-Pong ball at the station.)
- 1 Place Mat (see Appendix IV for template if needed)
- Station Diagram for Station 3 (see page 32)

#### Teacher Materials:

- 1 black, permanent, fine-line marker
- 1 pair of scissors or craft knife
- 1 roll double-sided carpet tape or duct tape
- 1 set of self-adhesive colored dots for top of the containers (one dot for each container)
- 1 roll of masking tape

#### Preparation:

1. Cut a hole (about 6 cm x 6 cm) on one side of the plastic cup to allow enough room for either ball to roll inside. (See the diagrams below.)
2. Place a colored dot sticker on the top center of the cup. You may also make the dot with a colored permanent marker:



3. The grooved plastic ruler serves as the ramp for rolling the balls. On the ruler, allow only the metric units to show. Cover the standard units (inches) with black permanent marker, masking tape, or electrical tape. Be sure the tape does not get into the groove of the ruler, as it may interfere with the roll of the balls. If necessary, place tape on the backside of the ruler to ensure that the metric units are legible.
4. Reproduce enough Place Mats for the number of stations you will need. They must be 8½" x 11", preferably laminated. Appendix IV provides a master copy that can be reproduced and laminated. (Most suppliers will include these in their kits.)
5. Obtain enough blocks of wood to act as the ramp support for each of the ten stations.

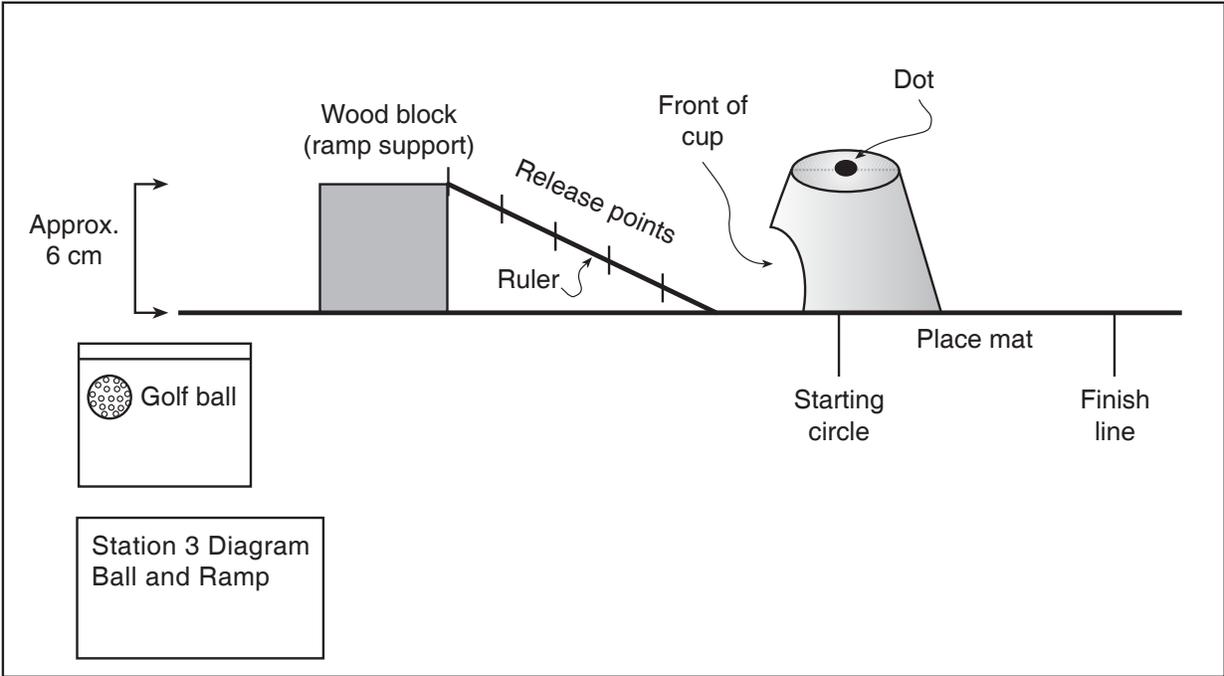
## Station Setup Sequence:

1. The student materials for this station can be set up:
  - on a large table
  - on two single student desks pushed together so that the ramp crosses over the gap between the two desks

### **DO NOT TAPE DOWN ANY EQUIPMENT UNTIL EVERYTHING HAS BEEN PUT IN PLACE AND TESTED.**

2. Place the ramp support to the back and far left of the desk/table so that the ruler will slope down from left to right. Place the ramp back far enough on the desktop so that the student has plenty of room to write in the test booklet. The ruler's numbers must be closest to the student's side of the desk (even if the numbers are upside down). If the numbers are not closest to the student's side, reverse the ramp position to the right of the desk.
3. Place the ruler's 29-cm mark at the edge of the ramp support and the ruler's zero mark on the table. Slip the place mat under the ruler so that it is aligned with the "End of Ruler Placement" mark (about 1 cm inside the edge of the mat).
4. When the golf ball is released from the top of the ramp, it must be able to push the cup significantly farther than the Finish Line on the place mat. Try one setup first to be sure that the cup is not too heavy.
5. Place the cup on the place mat's Starting Circle (1 cm away from the end of the ruler, with the cup's opening toward the ruler). Try rolling the golf ball from the 20-cm and the 15-cm marks. The ball must push the dot on the cup past the Finish Line each time. Try again from the 5-cm mark. The dot must **not** reach the Finish Line. From the 10-cm mark, the golf ball may either push the dot on the cup either too far or not far enough, but the dot must **not** stop on the Finish Line from the 10-cm release point. From any of the release points, 20, 15, 10, or 5-cm, the dot should not stop on the Finish Line. If any of these causes the dot to stop on the Finish Line, slightly adjust the slope of the ramp so that it would be necessary to have a release point someplace between the 15-cm and 10-cm point or between 10-cm and 5-cm point to have the dot stop on the Finish Line. Do not make the ramp too steep as it will become more difficult to keep the ball in the groove of the ruler, or the ball will bounce at the bottom of the ramp, producing inconsistent results. (As a laminated place mat is used more over time the laminate becomes smoother and has less friction which may cause the distances the cup will travel to change slightly.)
6. Once you have determined the correct height of the ramp, tape down the ramp support with double-sided carpet tape or duct tape. Tape the ruler to the place mat. Roll duct tape back on itself so that there are two sticky sides. Place duct tape or masking tape **under** each end of the ruler to fasten it securely to the block and the place mat. Place masking tape across the ruler above the 29-cm mark and tape it down to the supports. Tape down the place mat.
7. Tape the Station Diagram for Station 3 to the bottom left corner of the station.
8. Place all materials at the station as shown in the Station Diagram for Station 3.

**Station Diagram**  
**Station 3 — Ball and Ramp**



## Detailed Directions for Administering the Performance Test

Make sure that sufficient quantities of all test materials are on hand. The following materials are needed:

*For each student:*

- test booklet (Form A)
- pencil

The appropriate test booklet should be placed at each station.

*For the test administrator:*

- detailed directions for administering the performance test (pages 33–36)
- Test Administrator’s Record Sheet (Appendix III)

Several groups with three different stations are set up in the testing room. Each of the three stations contains different tasks. The stations are numbered from 1 to 3. Each student will rotate through all three of these stations. Students will have 15 minutes to complete the tasks at each station. Check each station before the students are admitted to the testing room to determine that each station has the required materials and that they are properly arranged (see diagram on page 25).

Place a blank test booklet and a sharpened pencil at each station *before* each new class enters the room. Recheck each station *before* each new class enters the testing room to assure that *all* materials are available and are in order.

Before the test session begins, write a sample heading on the chalkboard. The information should include the student name, school name, city, teacher’s name, and today’s date.

Complete the Test Administrator’s Record Sheet (Appendix III). This information is *very important*. It will be used to determine the range of correct answers when rating the test.

You must use an accurate timing device, such as a stopwatch or a clock with a sweep-second hand, to accurately provide time splits of 10, 13, and 15 minutes. Note the start time and intervals on a piece of paper, the chalkboard, or in this administration manual. The table below provides a sample of the information that will be needed for *each session*. A blank table is provided on page 35.

	<b>ACTUAL TIME</b>		
<b>Time</b>	<b>First Station</b>	<b>Second Station</b>	<b>Third Station</b>
<b>Start</b>	9:00	9:25	9:50
<b>+10 minutes</b>	9:10	9:35	10:00
<b>+13 minutes</b>	9:13	9:38	10:03
<b>+15 minutes</b>	9:15	9:40	10:05

Students should have an opportunity to visit the restrooms and wash their hands just before the testing period.

Students should be assigned to the stations as they enter the room, filling the seats in an orderly fashion so that all stations in a group are full. Have the first three students take seats at the group of stations farthest from the door, the next three students at the next group, etc.

Instruct students *not* to open the test booklet or touch the equipment until they are told to do so.

When students are at their first station and ready to work, read the following information to them. This direction-reading stage is *not* to be counted as part of the 15 minutes for completing the first station. Say:

Good morning [afternoon]. Today, you will be taking a science skills test. I think you will enjoy it because you will get to use science equipment to help you answer the questions on the test. Please listen carefully, follow directions closely, and do your best work.

You should have a test booklet and a pencil at your station. If you don't, raise your hand. (*Pause.*)

Now, on your test booklet, print your first and last name. (*Pause.*) Print the name of your school, your city, your teacher's name, and today's date. I have put that information on the chalkboard. (*Pause for students to finish.*)

Keep this test booklet with you throughout the test. It will be collected at the end of the test. Read the directions on the cover silently to yourself while I read them aloud.

Your booklet contains three science performance tasks. At each station you will have 15 minutes to finish your work. Continue working at each station until you see the word **STOP!** at the bottom of the page or until the time is up. Please wait quietly and patiently if you finish before the time is up. **Please leave the station the way you found it.**

Do *not* help other students or ask others to help you. There must be no talking between students during this test.

Read the directions for each station carefully. All of your answers must be written in this test booklet. You will be given directions on how and when to move to the other stations. Please listen carefully to all of the directions.

Do *not* go on to the next page until you are told to do so.

Do not try to explain at this time how the students will be moving from station to station. Leave that information until after the completion of the first task.

**The directions that follow will be repeated three times during the testing session.**

Say:

At the bottom left edge of your table, there is a Station Diagram with the name and station number where you will be working. Open your test booklet and find that station number.

Look around to be sure that everyone has found his or her place. Say:

Now, read the directions for that station number in the box at the top of the page in your test booklet. (*Pause for 15 seconds.*) Then check that all of the materials are at your station. Use the Station Diagram to make sure that your equipment is set up correctly. Be sure that you have all the equipment. (*Pause for about 1 minute.*) If anyone is missing equipment, raise your hand. (*Pause.*) At Station 2, check to be sure that the electrical tester works. If the electrical tester does not work, raise your hand. (*Pause.*)

Once all of the students complete their equipment check, say:

You may begin work.

Begin timing the 15 minutes now. **Complete the table below for each session.** You will need to make additional copies if you are testing students in more than one session.

	<b>ACTUAL TIME</b>		
<b>Time</b>	<b>First Station</b>	<b>Second Station</b>	<b>Third Station</b>
<b>Start</b>			
<b>+10 minutes</b>			
<b>+13 minutes</b>			
<b>+15 minutes</b>			

Most student questions should be answered with “Read it again,” “Sound out the word,” or “Do your best.” If students are not sure about the names of specific objects or equipment, you may refer them to the Station Diagram. All materials are labeled and clearly identified on these diagrams.

Do **not** give students assistance on how to conduct the procedure. You should **not** acknowledge that the student is engaged in a correct or an incorrect process. No one, under any circumstances, may interpret or explain test questions to students, nor may anyone review or comment on the answer paper of a student while this test is in progress. Exceptions to this would be safety concerns (short circuiting the electrical tester, a student putting an object in his or her mouth, etc.), lost or broken equipment, or specific provisions in a student’s IEP for allowable testing accommodations.

**Station 3 – Ball and Ramp:** While at this station, the students will raise their hands to get a Ping-Pong ball from the test administrator.

After 10 minutes, say:

You have 5 minutes left. Continue working until you see the word **STOP!**

After 13 minutes, say:

You have 2 minutes left. Continue working until you see the word **STOP!**

After 15 minutes, say:

Stop work. Please put everything back the way it is shown on the Station Diagram.

At Station 1, pour the water from the beaker back into the large cup and place the rock on the paper towel.

At Station 2, make sure all the objects are placed back in the bag and the bar magnet is left outside of the bag.

At Station 3, raise your hand to return the Ping-Pong ball.

Collect all the Ping-Pong balls from the students at Station 3. Before the students rotate within groups, make sure that the equipment at all stations is placed correctly so that it corresponds with the station diagrams.

Then say:

You are now going to move to the next station. I will show you how it is done.  
***Be sure to take your test booklet and pencil with you.***

Because stations have been arranged in groups, student movement can be kept to a minimum. It is recommended that the test administrator take one group and demonstrate for the whole class how students will move to the next station. Then let each group rotate one at a time and provide help when necessary.

When rotation is complete, repeat the directions beginning on page 34

until the testing session is complete. When the students have completed all three stations, say:

The science skills test is over. Thank you for being so attentive and cooperative during the test. Please wait quietly until you are dismissed.

Be sure to collect a test booklet and pencil from each student before the students leave the testing room.

## **Rating the Performance Test**

The entire Performance Test will require rating by elementary-level teachers. It is estimated that a team of three teachers should be able to rate the responses to all three stations for about 30 students in one hour. This scoring can be most quickly accomplished if one teacher rates all students' responses to Station 1 while another rates all students' responses to Station 2 and a third rates all students' responses to Station 3.

A group of at least two teachers should rate the Grade 4 Elementary-Level Science Performance Test. School administrators determine who may rate the Grade 4 Elementary-Level Science Performance Test upon review of teachers' certification, and current and past teaching assignments.

The Rating Guide for the Performance Test, Form A, gives detailed directions for rating the Performance Test and specific criteria for rating each item. It is printed on yellow paper and was included in the shipment of test materials from the Department. In rating the students' test booklets, each rater should follow the procedures in the rating guide. The rating should be completed as soon as possible after the administration of the Performance Test and prior to June 17, the date when answer sheets must be submitted to the scanning center.

## **Organizing the Rating Process**

The following is a suggested procedure for managing the mechanics of the rating process.

1. Designate one person as the coordinator of the rating process. The coordinator may be appointed at either the building or the district level. He or she will be responsible for training and supervising raters and may rate some of the students' responses.
2. Set aside one room as a central rating room for collecting, sorting, circulating, and storing test booklets and for preparing and maintaining records.
3. Provide adequate time for rating during the school day.
4. Make sure each rater receives approximately the same number of student booklets.
5. Provide a copy of the completed Test Administrator's Record Sheet (Appendix III) to each rater.
6. At least two teachers and preferably three should participate in rating the questions on the Performance Test. Each should be responsible for rating all of the questions for one station. No one teacher is to score all the open-ended questions in a student's answer booklet.
7. Prior to the rating of the students' answers to the Performance Test, allow time to provide training for all raters (even if they have received prior training). If possible, select at random 10–15 student test booklets and duplicate them for use as a "warm-up" exercise with the raters for discussion of the questions, the criteria, and the rating of each item. During the training exercise, after three or four complete student test booklets have been rated, ask the raters to indicate, by a show of hands, how many credits they gave each answer. If there is some disagreement about the number of credits to be awarded for an answer, ask raters who gave different credits to an answer to explain their rating by citing specific criteria from the rating guide.
8. Raters should have a set of stations available to check the accuracy of questionable student answers by actually performing the task for which the answer was given.

**Note:** Some schools may elect to administer the Performance Test prior to the Written Test. If this is the case, it is recommended that schools do *not* record the students' Performance Test scores on their scannable answer sheets until after the students have taken the Written Test and completed their portion of the answer sheet. This way, students will not be distracted by seeing their Performance Test scores on the answer sheets. This will also prevent students from altering those scores.

## Finality of Teacher Scoring Committee's Scores

When the teacher scoring committee completes the scoring process, test scores must be considered final and must be entered onto students' permanent records.

Principals and other administrative staff in a school or district do not have the authority to set aside the scores arrived at by the teacher scoring committee and rescore student examination papers or to change any scores assigned through the procedures described in this manual and in the scoring materials provided by the Department. Any principal or administrator found to have done so, except in the circumstances described below, will be in violation of Department policy regarding the scoring of this test. Teachers and administrators who violate Department policy with respect to scoring State examinations may be subject to disciplinary action in accordance with Sections 3020 and 3020-a of Education Law or to action against their certification pursuant to Part 83 of the Regulations of the Commissioner of Education.

On rare occasions, an administrator may learn that an isolated error had occurred in arriving at a final examination score for a student or in recording the student's score in the permanent records. For example, the final examination score may have been based on an incorrect summing of the student's raw scores for parts of the test or from a misreading of the conversion chart. When such errors involve no more than five students' final examination scores and when such errors are detected within four months of the test date, the principal may arrange for the corrected score to be recorded in the student's permanent record. However, in all such occurrences, the principal must advise the Office of State Assessment in writing that the student's score has been corrected. The written notification to the Department must be signed by the principal or superintendent and must include the names of the students whose scores have been corrected, the name of the examination, the students' original and corrected scores, and a brief explanation of the nature of the scoring error which was corrected.

If an administrator has substantial reason to believe that the teacher scoring committee has failed to accurately score more than five student answer papers, the administrator must first obtain permission in writing from the Office of State Assessment before arranging for or permitting a rescoring of student papers. The written request to the Office of State Assessment must come from the superintendent of a public school district or the chief administrative officer of a nonpublic or charter school and must include the examination title, date of administration, and number of students whose papers would be subject to such rescoring. This request must also include a statement explaining why the administrator believes that the teacher scoring committee failed to score appropriately and, thus, why he or she believes rescoring the examination papers is necessary. As part of this submission, the school administrator must make clear his or her understanding that such extraordinary re-rating may be carried out only by a full committee of teachers constituted in accordance with the scoring guidelines presented in this manual and fully utilizing the scoring materials for this test provided by the Department.

The Department sometimes finds it necessary to notify schools of a revision to the scoring key and rating guide for an examination. Should this occur after the scoring committee has completed its work, the principal is authorized to have appropriate members of the scoring committee review students' responses only to the specific question(s) referenced in the notification and to adjust students' final examination scores when appropriate. Only in such circumstances is the school **not** required to notify or obtain approval from the Department to correct students' final examination scores.



## Appendix I

### Materials Needed to Administer the Performance Test, Form A

The Department will provide the test booklets, rating guides, and other printed administration materials. Schools are responsible for obtaining the materials needed for the performance tasks. Schools can either prepare these materials or purchase the materials in a complete kit from one of several suppliers. A list of approved suppliers is provided in Appendix VII. A list of materials that will be needed for *one* setup for each of the three stations appears below.

#### Materials Needed for *One Station 1 – Measuring Objects and Liquids*:

- 1 equal-arm balance
- 1 set of gram masses (mixture of two 20-g, three 10-g, four 5-g, and ten 1-g for a total of 100 g)
- 3 clear plastic jars, approximately 125-mL capacity
- 2 screw tops to fit jars
- 1 large plastic cup, approximately 300-mL capacity containing about 150 mL of water
- 1 measuring container (beaker), 100-mL capacity with clearly marked gradations
- 1 rough-cut rock (about 1" cube) that will fit easily into the beaker and sink completely in the water without causing the water to overflow
- 1 resealable plastic bag, large enough to hold the set of gram masses
- 1 ruler with units for metric (30 cm) and for standard (12 inches) measurement, neither with indented zero points
- 2–3 paper towels
- Station Diagram for Station 1

#### Teacher Materials:

- 1 black, permanent, fine-line marker
- supply of water for 10 Station 1 setups
- medicine cup or other tool to measure 25 mL of water as accurately as possible

#### Materials Needed for *One Station 2 – Electrical and Magnetic Testing*:

- electrical tester:
  - 1.5-volt “D” cell battery
  - 1.5-volt bulb and bulb holder
  - battery holder (plastic or metal recommended)
  - 3 insulated wires with clips
- bar magnet (approximately 1.5 cm x 7 cm)
- resealable plastic bag containing eight objects and labeled “Test Objects”
  - penny  
(**Note:** Penny must be new and shiny. Oxidized pennies will not conduct electricity.)
  - rubber band (at least 1/4 inch wide)
  - paper clip (all metal)
  - colored ceramic disk (magnetic)
  - plastic spoon (small)
  - wooden stick (like Popsicle stick or tongue depressor)

## **Station 2 (continued)**

- nickel (United States five cents)
  - aluminum foil (heavy duty, about 5-cm square)
- (**Note:** Ceramic materials are nonmetallic, even if they are magnetic.)

- Station Diagram for Station 2

### **Teacher Materials:**

- 1 black, permanent, fine-line marker
- extra batteries and bulbs for the electrical testers

## **Materials Needed for *One Station 3 – Ball and Ramp:***

- Wood block (preferably a cube) to serve as the ramp support (total height: 5–6 cm)
- 1 ruler, 30-cm plastic without an indented zero mark and with a grooved center that can accommodate a golf ball
- 1 transparent, round, plastic deli container about 12-cm diameter, 1 pint in volume, and approximately 15 grams in mass
- 1 golf ball in a resealable clear plastic bag labeled “Golf Ball”
- 1 Ping-Pong ball in a resealable clear plastic bag labeled “Ping-Pong Ball” (Do *not* put the Ping-Pong ball at the station.)
- 1 place mat (see Appendix IV for template)
- Station Diagram for Station 3

### **Teacher Materials:**

- 1 black, permanent, fine-line marker
- 1 pair of scissors or craft knife
- 1 roll double-sided carpet tape or duct tape
- 1 set of self-adhesive colored dots for top of the containers (one dot for each container)
- 1 roll of masking tape

## Appendix II

### Comparison of Possible Performance Test Sites

<b>SITE: CLASSROOM</b>	
<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> <li>▪ Ease of station preparation</li> <li>▪ Furniture already at site</li> <li>▪ Good station-to-station movement</li> <li>▪ Only classroom teacher and students will be disrupted</li> <li>▪ Secure location</li> </ul>	<ul style="list-style-type: none"> <li>▪ Need to relocate the teacher and students whose room is being used for the duration of the testing</li> <li>▪ Individual student desks may be too narrow for the ball and ramp station unless they are at least 36 inches wide</li> </ul>
<b>SITE: LIBRARY</b>	
<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> <li>▪ Large space</li> <li>▪ Tables and chairs at site</li> <li>▪ Secure location</li> </ul>	<ul style="list-style-type: none"> <li>▪ May disrupt more teachers and students than classroom site</li> <li>▪ Library unavailable for other uses during testing</li> </ul>
<b>SITE: CAFETERIA</b>	
<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> <li>▪ Large space</li> <li>▪ Tables and chairs at site</li> </ul>	<ul style="list-style-type: none"> <li>▪ May disrupt large numbers of teachers and students</li> <li>▪ Unavailable for other uses during testing</li> <li>▪ Poor security</li> <li>▪ Breakfast/lunch program may interrupt the testing</li> <li>▪ Poor acoustics and high noise levels</li> <li>▪ May need to disassemble and reassemble stations before and after lunch</li> </ul>
<b>SITE: SCIENCE ROOM</b>	
<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> <li>▪ Large space</li> <li>▪ Tables and chairs at site</li> <li>▪ Secure location</li> <li>▪ Science materials on site</li> </ul>	<ul style="list-style-type: none"> <li>▪ May disrupt more teachers and students than classroom site</li> </ul>
<b>SITE: GYMNASIUM</b>	
<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> <li>▪ Large space</li> </ul>	<ul style="list-style-type: none"> <li>▪ May disrupt large numbers of teachers and students</li> <li>▪ Need to move tables or desks and chairs into space</li> <li>▪ Poor security</li> <li>▪ Poor acoustics</li> <li>▪ Not a familiar testing site for students</li> <li>▪ May need to disassemble and reassemble stations to accommodate physical education classes</li> </ul>



## Appendix III

### Test Administrator's Record Sheet Grade 4 Elementary-Level Science Performance Test, Form A

This record sheet should be completed by the person(s) administering the Performance Test. At the conclusion of the test administration, return this completed record sheet with the student answer sheets to the person in charge of the testing program for the school. This record sheet is very important because it will be used to determine the range of correct answers when rating the test. It should be kept with the test booklets.

Test Administrator(s) \_\_\_\_\_ Date \_\_\_\_\_

School Name \_\_\_\_\_ School District \_\_\_\_\_

#### Station 1 – Measuring Objects and Liquids

Complete the measurements and calculate acceptable ranges in the table below according to the directions for each item to be measured. There will be up to ten Station 1 setups in the testing room. It is important that the directions for preparation (pages 23–24) be followed carefully so that the acceptable ranges will apply to all ten setups.

Location in Student Booklet	Item to be Measured	Actual Measurement by Administrator During Set-up	Directions for Calculating Acceptable Range	Acceptable Range for Student Responses
1a	Jar 1 inside width	_____ cm (to the nearest 0.1 cm)	$\pm 0.5$ cm For example, the acceptable range for a measurement of 5.2 cm is 4.7–5.7 cm.	_____ to _____ cm
1b	Jar 1 inside height	_____ in (to the nearest 1/8 inch)	$\pm \frac{1}{4}$ in For example, the acceptable range for a measurement of $2\frac{5}{8}$ inches is $2\frac{3}{8}$ – $2\frac{7}{8}$ inches; the acceptable range for a measurement of $2\frac{1}{2}$ inches is $2\frac{1}{4}$ – $2\frac{3}{4}$ in.	_____ to _____ in
2	Volume of water to line on Jar 1 (must be 65 mL)	_____ mL	The acceptable range is the 10-mL interval on the beaker in which the actual measurement falls. For example, the acceptable range for a measurement of 63 mL is 60–70 mL. <b>Note:</b> Do <i>not</i> use $\pm 5$ mL as the acceptable range. The gradations on the beaker do not allow this much precision.	_____ to _____ mL
4a	Mass of Jar 2 with cover and water	_____ g	$\pm 3$ g	_____ to _____ g
4b	Mass of Jar 3 with cover (empty jar)	_____ g	$\pm 3$ g	_____ to _____ g



**Test Administrator's Record Sheet**  
**Grade 4 Elementary-Level Science Performance Test, Form A (page 2)**

**Note:** If any materials used during the test administration were different from those specified in Appendix I or if the administration directions were not followed exactly as written, note these differences below. Be specific. These variations can be important when scoring the students' test booklets.

## **Appendix IV**

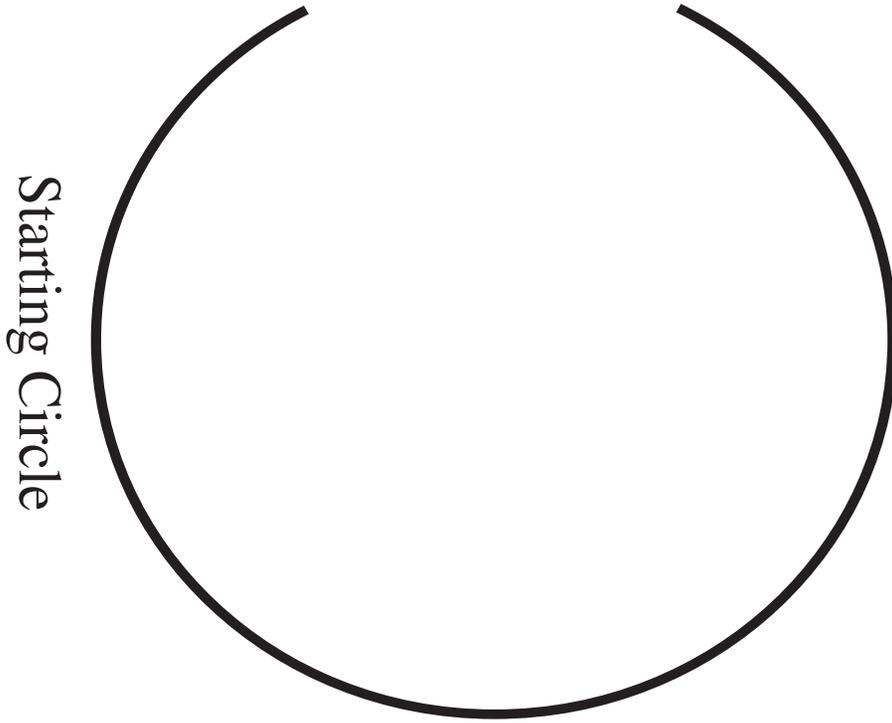
### **Station 3–Ball and Ramp Place Mat**

The place mat on the next page should be reproduced on 8½" x 11" paper and laminated. In most cases, these place mats will be supplied in the performance test kits.

End of Ruler Placement



End of Ruler Placement



Starting Circle

**Place Mat**

Finish Line





## **Appendix V**

**Examination Storage Certificate**

**Deputy and Proctor Certificate**

**Examination Scoring Certificate**



## EXAMINATION STORAGE CERTIFICATE

### Grade 4 Intermediate-Level Science Test

School Name \_\_\_\_\_

City or Town \_\_\_\_\_ Examination Date \_\_\_\_\_  
(Month/Year)

I, the undersigned principal of the school named above, do hereby declare that each of the security procedures listed below was fully and faithfully observed for the current administration of the Grade 4 Intermediate-Level Science Test.

1. The sealed packages of secure test materials were stored in a secure place at the location agreed to on the online Examination Storage Plan submitted to the Department for the above examination period.
2. The secure place was maintained under strict security conditions.
3. An inventory of the test materials was conducted as soon after delivery as was practical. The State Education Department was notified if any of the packages of secure test materials were not properly sealed when received. The sealed packages of secure test materials were replaced inside the secure location immediately after the inventory was completed.
4. The sealed packages of secure materials for the test were not removed from the secure location, except for the inventory of test materials shipped to the school, until the day on which the test was scheduled to be administered.
5. The sealed packages of secure materials for the test were not opened until the day on which the test was scheduled to be administered.

Name of Principal (print or type) \_\_\_\_\_

Signature of Principal \_\_\_\_\_ Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**After completion, retain in school files for one year.**



The University of the State of New York  
THE STATE EDUCATION DEPARTMENT  
Office of State Assessment  
Albany, New York 12234

**DEPUTY AND PROCTOR CERTIFICATE**  
**Grade 4 Elementary-Level Science Test**

School Name \_\_\_\_\_

City or Town \_\_\_\_\_

Examination Date \_\_\_\_\_  
(Month/Year)

We, the undersigned deputies and proctors who assisted in the administration of the Grade 4 Elementary-Level Science Test, hereby declare our belief in the correctness of the following statement:

The rules and regulations for administering the test were fully and faithfully observed, and in particular:

1. The rules for administering the test were read to or read by each person who assisted in administering the test.
2. The test was held within the prescribed dates.
3. The tests were kept in the sealed packages until the administration date.
4. The students were given appropriate instructions and orientation before beginning the test.
5. The students were so seated as to prevent collusion.
6. Adequate supervision was maintained throughout the administration of the test.
7. The answer papers were collected from the students immediately at the close of the test.
8. All test booklets and scoring materials for the test were collected and returned to the principal.

- |           |           |
|-----------|-----------|
| 1. _____  | 11. _____ |
| 2. _____  | 12. _____ |
| 3. _____  | 13. _____ |
| 4. _____  | 14. _____ |
| 5. _____  | 15. _____ |
| 6. _____  | 16. _____ |
| 7. _____  | 17. _____ |
| 8. _____  | 18. _____ |
| 9. _____  | 19. _____ |
| 10. _____ | 20. _____ |

(Attach additional sheets when necessary.)

**After completion, retain in school files for one year.**



**EXAMINATION SCORING CERTIFICATE**

**Grade 4 Elementary-Level Science Test**

School Name \_\_\_\_\_

City or Town \_\_\_\_\_

Examination Date \_\_\_\_\_  
(Month/Year)

We, the undersigned raters who participated in the scoring of the Grade 4 Elementary-Level Science Test (*each* participating rater *must* sign below), hereby declare our belief in the correctness of the following statement:

The procedures for rating the examination were fully and faithfully observed, and in particular:

1. Raters were trained using the procedures and materials described in the Grade 4 Elementary-Level Science Test Manual for Administrators and Teachers, Rating Guide for the Written Test Part II, and Rating Guide for Performance Test.
2. The rating committee included the required minimum number of raters as specified in the Grade 4 Elementary-Level Science Test Manual for Administrators and Teachers, 2010 Edition.
3. Test questions were assigned to teachers for rating according to the procedures described in the Grade 4 Elementary-Level Science Test Manual for Administrators and Teachers, 2010 Edition.
4. The examination booklets were safeguarded while scoring was occurring.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
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11. \_\_\_\_\_
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15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_

**After completion, retain in school files for one year.**



## Appendix VI

### Information on Ungraded Students

Students who are graded must take the State examination for the grade level in which they are enrolled. The chart below is to be used solely to ascertain the appropriate grade-level tests to administer to ungraded students with disabilities.

#### Age Ranges for Testing on the NYSAA and General Assessments for Ungraded Students with Disabilities at the Elementary and Middle Levels in 2009–2010

Assessment	Birth Date	Reaches Age Given Between September 1, 2009 and August 31, 2010
Grade 3 English Language Arts, Mathematics	September 1, 2000–August 31, 2001	9
Grade 4 English Language Arts, Mathematics, Science	September 1, 1999–August 31, 2000	10
Grade 5 English Language Arts, Mathematics, Social Studies	September 1, 1998–August 31, 1999	11
Grade 6 English Language Arts, Mathematics	September 1, 1997–August 31, 1998	12
Grade 7 English Language Arts, Mathematics	September 1, 1996–August 31, 1997	13
Grade 8 English Language Arts, Mathematics, Science, Social Studies	September 1, 1995–August 31, 1996	14



## Appendix VII

### Suppliers for Grade 4 Elementary-Level Science Performance Test Kits

The Grade 4 Elementary-Level Performance Test, Form A, will be given during the designated test administration period. This is the same performance test that has been given since 2004. A new kit will not be needed. The suppliers below can be contacted if replacement materials or additional kits are needed. Schools should contact these suppliers directly for information about costs and procedures for purchasing kits.

Kathleen MacNaughton  
Director of Professional Development  
and Instructional Support  
65 Parrott Road  
West Nyack, New York 10994  
Phone: 845-627-4855  
Fax: 845-623-3343

Rod Gusman  
Frey Scientific  
80 Northwest Blvd  
Nashua, NH 03063  
Phone: 800-225-3739 x 169  
Direct: 908-578-5901  
[Rod.gusman@schoolspecialty.com](mailto:Rod.gusman@schoolspecialty.com)

Doug Brucker  
Monroe #2 BOCES  
Elementary Science Program  
38 Turner Drive  
Spencerport, NY 14559  
Phone: 800-832-8011 or 716-352-1140

Geof Smith  
Science Kit & Boreal Laboratories  
777 East Park Drive, P.O. Box 5003  
Tonawanda, NY 14151  
Phone: 800-828-7777  
[Gsmith@vwreducation.com](mailto:Gsmith@vwreducation.com)  
<http://www.sciencekit.com>

John Ringelberg or Jim Crawford  
Black Creek Industry/Cyntech  
10 Mill Street  
Cuba, NY 14727  
Phone: 585-968-3213  
Phone after 5PM: 716-372-5999  
Fax: 585-968-2222  
Email: [john@blackcreekmachinery.com](mailto:john@blackcreekmachinery.com)  
Website: [www.blackcreekmachinery.com](http://www.blackcreekmachinery.com)

Neo/SCI  
80 Northwest Blvd  
Nashua, NH 03063  
Phone: 800-526-6689  
Fax: 800-657-7523  
<http://www.neosci.com>

## **Appendix VIII**

### **Performance Levels Chart New York State Grade 4 Elementary-Level Science Test**

The chart on the next page defines the four performance levels for this test. Once a final score has been determined for each student, a performance level can be assigned. The state-designated level of performance for this test is a final score of 65 or higher (level 3 and 4). Students scoring below 65 (levels 1 and 2) must be provided with academic intervention services according to section 100.2(ee)(i) of the Regulations of the Commissioner of Education. The chart provides the final score range and a brief description of student performance for each level.

## Performance Levels for Final Score Grade 4 Elementary-Level Science Test

Level	Final Test Score Range	Description of Student Performance
4	85–100	<p style="text-align: center;"><b>Meeting the Standards with Distinction</b></p> <ul style="list-style-type: none"> <li>• A student demonstrates superior understanding of elementary-level science content and concepts for the learning standards and key ideas being assessed.</li> <li>• The student demonstrates superior elementary-level science skills related to the learning standards and key ideas being assessed.</li> <li>• The student demonstrates superior understanding of the science content, concepts, and skills required for an elementary-level academic environment.</li> </ul>
3	65–84	<p style="text-align: center;"><b>Meeting the Standards</b></p> <ul style="list-style-type: none"> <li>• The student demonstrates understanding of elementary-level science content and concepts for the learning standards and key ideas being assessed.</li> <li>• The student demonstrates elementary-level science skills related to the learning standards and key ideas being assessed.</li> <li>• The student demonstrates understanding of the science content, concepts, and skills required for an elementary-level academic environment.</li> </ul>
2	45–64	<p style="text-align: center;"><b>Not Fully Meeting the Standards</b></p> <ul style="list-style-type: none"> <li>• The student demonstrates only minimal understanding of elementary-level science content and concepts for each of the learning standards and key ideas being assessed.</li> <li>• The student demonstrates minimal elementary-level science skills related to the learning standards and key ideas being assessed.</li> <li>• The student demonstrates minimal understanding of the science content, concepts, and skills required for an elementary-level academic environment.</li> </ul>
1	0–44	<p style="text-align: center;"><b>Not Meeting the Standards</b></p> <ul style="list-style-type: none"> <li>• The student is unable to demonstrate understanding of elementary-level science content and concepts for the learning standards and key ideas being assessed.</li> <li>• The student is unable to demonstrate elementary-level science skills related to the learning standards and key ideas being assessed.</li> <li>• The student is unable to demonstrate understanding of the science content, concepts, and skills required for an elementary-level academic environment.</li> </ul>