



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Practice Test Science Inquiry Task
Test Administrator Manual
2008**

**Grade 8
Rainy Morning**

GRADE 8
PRACTICE TEST SCIENCE INQUIRY TASK
TEST ADMINISTRATOR MANUAL

Introduction

An Inquiry Task is a performance assessment that measures students' knowledge and skills across the Four Broad Areas of Inquiry: 1) Formulating Questions and Hypothesizing, 2) Planning and Critiquing Investigations, 3) Conducting Investigations, and 4) Developing and Evaluating Explanations. The Inquiry Task is structured around grade-appropriate science content. During the Inquiry Task, students work collaboratively and individually to demonstrate their scientific thinking.

The Task Booklet, Student Answer Booklet, *Test Administrator Manual*, and support documents that relate to this task have been posted on the Web sites of the New Hampshire, Rhode Island, and Vermont Departments of Education.

Inventory Test Materials

The investigation materials to complete this task were provided during the May 2007 pilot of the NECAP Science assessment.

Rainy Morning Materials

- 1 placemat
- 1 cardboard ramp
- 1 battery
- 3 washers
- 1 plastic cup
- 1 wood block

You should prepare one set of materials for each group of two or three students in your class. You will also need one set for yourself.

Please also make sure that you have sufficient Task Booklets, Student Answer Booklets, number 2 pencils, and scratch paper for each student.

You should have an additional Task Booklet and Student Answer Booklet for yourself.

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Materials Permitted and Prohibited During Testing

The test administrator is responsible for providing an appropriate testing environment for the assessment. Students may use only the materials permitted for the assessment. Allowable materials are described within the Inquiry Task script.

The test items in the Inquiry Task are designed so that calculators are not required to solve any of the problems; therefore, calculators are not needed for the assessment.

Dictionaries, thesauruses, and textbooks of any type—except for word-to-word translation dictionaries allowed as an accommodation for English Language Learners—are not allowed during this session of the assessment.

Preparing Students and Testing Site

It is important to let your students know what to expect. Your students should be supported and encouraged to do their best on this Inquiry Task.

No students should be either advantaged or disadvantaged by their testing environment. Reference materials, including those on classroom walls, should not be used by students. All science reference materials (printed or attached) on student desks should be removed or covered. Any displayed science materials in the classroom that interfere with proper test administration are not permitted. It is not possible to list all classroom materials that may potentially create an advantage or disadvantage for students during testing; if in doubt, remove or cover the materials or reposition students' desks so the materials cannot be viewed. If there are any questions, see your test coordinator.

Identify students who require an individual administration, additional time, or other accommodations prior to testing. A different location may be needed.

For students to mirror the conditions of the NECAP Science Inquiry Task, the materials must be set up prior to starting the task. Please set out a placemat with materials for each group of two or three students. Inquiry materials should be set up on a smooth, flat surface. Science lab benches, flat-topped desks, and cafeteria tables are good examples of where to perform the Inquiry Task. **Do not use desks or other surfaces that are rough or slanted.**

Students will be working in groups of up to three students. Each group of students must have enough space to work comfortably and efficiently without interfering with other students. Minimally, the work surface should be large enough to accommodate the Inquiry Task materials and each student's Task Booklet. The materials will include an 11-inch x 17-inch placemat. To perform the experiment, students will need a flat surface area that is at least 12 inches x 27 inches.

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Guidelines for Grouping Students for the Inquiry Task

The Inquiry Task in grade 8 involves collaborative work. It has been designed for students to complete the work in pairs or groups of three. The grouping strategy for each class will be the test administrator's decision (see Appendix).

Test Administration

The following pages detail the procedures to be followed for the Inquiry Task. To ensure a consistent and accurate task administration, directions and a script are provided for the Inquiry Task. The script text is printed in bold type inside shaded boxes. Read the script exactly as it is written. In addition to the script text, directions for test administrators are provided; these directions are in regular type. You may repeat directions for your students and pronounce words, if necessary.

Be sure that students clearly understand all directions before they begin the Inquiry Task. During each part of the Inquiry Task, teachers should walk around the room to monitor students. Teachers should make sure students are recording their work in the correct places and are not spending too much time on any one part of the Inquiry Task. Students should be reminded to take the task seriously.

Teachers should

- check that students are using materials appropriately and working effectively.
- encourage students to work cooperatively in their groups.
- remind students to record their data in their Task Booklet.
- remind students that they may use a diagram or labeled drawing to help explain an answer.

Teachers must not

- comment on students' work.
- help students in any way, except as indicated in the script or directions.
- prompt students to revise or edit any of their responses during or after testing.
- allow students to read science-related materials after they complete any part of the task.

Test administrators may

- repeat directions as needed.
- pronounce words for individual students.

Estimated Total Time: 90 minutes

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Materials Needed for Each Student

- Task Booklet
- Student Answer Booklet
- number 2 pencil
- scratch paper

Materials Needed for Each Group of Students

- one assembled Inquiry Task Kit

Each Inquiry Task Kit for grade 8 should include

- 1 placemat,
- 1 cardboard ramp,
- 1 battery,
- 3 washers,
- 1 plastic cup, and
- 1 wood block.

Administration Directions and Script

1. Prior to beginning the task, make sure that Inquiry Task materials have been assembled. Seat student groups with one set of Inquiry Task materials and placemat.
2. You will read aloud to the students the directions, scenario (story), and materials on pages 1 through 3 of the Task Booklet as they read along.
3. Say to the students:

You are now going to start the Science Inquiry Task. During this task, you will work with a partner or partners to complete a science investigation. After you have finished the task and recorded your data, you will work individually to answer the questions in the Student Answer Booklet. Please turn to page 1 in your Task Booklet. (Pause.) Read along as I read the directions aloud. (Read the directions.) Are there any questions? (Answer any questions the students have about the directions.)

Please turn to the story on page 1 and read along as I read aloud. (Read the story to the students.)

Please turn to page 3 for the list of the materials you will use in your investigation. These materials are set up in front of you. Please look at me while I show you each of the materials.

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(Hold up and identify each item.) **Raise your hand if you are missing any of these materials.**
(Give students any missing materials.)

4. Say to the students:

Please turn to “Making Predictions” on page 2 and read along as I read aloud. (Read “Making Predictions” to the students.) **Follow the directions for “Making Predictions.” When you are finished with “Making Predictions,” put your pencils down and wait for further instructions.** (Once all students have completed “Making Predictions,” go to step 5.)

5. Say to the students:

Please turn to “Setting Up and Conducting Your Investigation” on page 3 and read along as I read aloud.

Now turn to page 4 and read along as I read “Setting Up the Model.” Once your model is assembled, please continue by following the procedures for “Conducting Your Investigation and Collecting Data” on pages 5 through 7 in your Task Booklet. (Pause.)

Remember, each partner must write the data collected in the investigation in the Data Tables on page 7 in his or her own Task Booklet. Once everyone has completed the investigation part of the task, you will clean up the materials. Are there any further questions? (Answer any questions the students have.)

6. Say to the students:

Begin working on the task on page 5 with your partner(s). Make sure that you copy the data you collect from the investigation into your own Task Booklet. When you are finished, sit quietly and read.

7. Circulate around the room during the investigation to make sure all students are actively engaged in the process. Ensure that students who have finished sit quietly and read so they will not disturb those students who require more time.
8. When all students are finished (approximately 30 minutes), instruct them to clean up the materials and reassemble the classroom for individual work. Students should keep their own Task Booklets.

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9. Pass out the Student Answer Booklets to each student.
10. Say to the students:

Please copy the data from the Data Tables on page 7 in your Task Booklet to the Data Tables on page 2 in your Student Answer Booklet. (Pause. Check that all students have correctly copied their data into their Student Answer Booklet.)

Now you will work individually to answer questions about the investigation in your Student Answer Booklet. You cannot talk with your partner(s) about the investigation or your data. If you have a question, please raise your hand. Turn to page 2 in your Student Answer Booklet. (Wait for all students to turn to page 2.)

Answer questions 1 through 8 as completely as you can. You may include labeled drawings, diagrams, or bulleted lists to help explain your answers. Please write your answers so they fit only inside the answer spaces in your Student Answer Booklet. You may use your scratch paper to plan your answers and make notes, but only what you write in the answer spaces in your Student Answer Booklet will be scored. When you have finished, please insert your scratch paper into your Student Answer Booklet for collection and sit quietly and read until everyone is finished.

Are there any questions? (Answer any questions the students have about the directions.)

You may begin.

11. When the students are finished, collect all Task Booklets, Student Answer Booklets, and scratch paper.

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Appendix

Guidelines for Grouping Students for Inquiry Task

The Inquiry Task of the NECAP Science practice test involves collaborative work at grades 4 and 8. It is designed for students to complete in pairs or groups of three. **Prior to testing, schools need to determine the student groupings for the Inquiry Task.**

Structure of Student Groups for Inquiry Tasks in Grade 8

Inquiry Task	Work Type
<ul style="list-style-type: none">• Making a prediction• Setting up and conducting an investigation• Collecting data	<p>Students make predictions and record them in their own Task Booklet. Students work in collaborative groups to collect experimental data.</p> <p>All students record data in their own Task Booklet for use in the individual portion of the task.</p>
<ul style="list-style-type: none">• Organizing and presenting data• Analyzing and using results	<p>Students copy data from the Task Booklet into their Student Answer Booklet. Students work individually with data collected from the investigation to answer questions in their Student Answer Booklet.</p>

Below are some ideas, in no particular order, that schools may use to determine Inquiry Task groupings.

Possible Grouping Strategies

- Use student groups you have used in the past for science class.
- Randomly pair students for the test.
- Have the science teacher recommend pairings of students by science groups regardless of where they are taking the test or what teacher is administering the Inquiry Task.
- Have students grouped by the teacher administering the Inquiry Task.
- Students who have access issues due to mobility or physical issues may be paired with students who do not have these same issues. **All students should have the opportunity, to the degree possible, to interact with the Inquiry Task materials.**
- Students with Limited English Proficiency may be paired with English-proficient students.

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- Students requiring special accommodations and assistance for scribing of observations should not be paired with other students who require the same assistance.
- Students who require an individual administration should be identified prior to testing. Extra materials and a different location may be needed.
- Special accommodations with regard to grouping or administration of the Inquiry Task should be determined prior to testing. Consult the Table of Standard Test Accommodations for specific rules and codes.

If you still have questions or concerns about grouping students for this task, please contact your state department of education.