



Frequently Asked Questions Related to Investigations for the Elementary- and Intermediate-level Science Tests

The Investigations for Elementary-level Science (ELS) and Intermediate-level Science (ILS) have been designed to be hands-on, 3-dimensional, learning tasks aligned to the [New York State P-12 Science Learning Standards \(NYSP12SLS\)](#) that can be embedded into curriculum. The Investigations were conceptualized, written, and reviewed multiple times by NYS-certified Science Teachers. The Investigations are not a standardized State test, rather they are performance-based tasks that are a component of the State's strategy for assessing science.

The Investigations will emphasize Performance Expectations (PEs) that will not be measured at the level of proficiency on the written assessment and ensure these PEs are part of instruction. By embedding the Investigations into the locally developed NYSP12LS-aligned curriculum, they aid in facilitating the necessary shift to 3-dimensional teaching and learning and will provide one way that students can demonstrate their science knowledge and skills. Students will think like scientists as they use scientific practices and recognize common themes across science through cross-cutting concepts. The intention of the Investigations is to provoke thoughtful conversations between educators, both at and between grade-levels, in a way that facilitates exposure to science at the elementary-level and beyond.

This resource addresses frequently asked questions related to [Gaining Access / Security, Implementation, Materials, Scoring, Record Keeping and Transfer Students](#), and [The Relationship Between Investigations and Grade 5 and 8 Science Written Tests](#).

In addition, the following memos offer details to support the implementation of the Investigations:

- [May 2022 Required Investigations for the Elementary- and Intermediate-level Science Tests Memo](#)
- [October 2022 Investigations for the Elementary- and Intermediate-level Science Tests Now Available Memo](#)

Gaining Access / Security:

1. How can the Elementary- and Intermediate-level Investigations be downloaded? Who can access them?

The required Investigations are available for schools to download in digital format only as Portable Document Files (PDFs) via the free Adobe Acrobat Reader, either as stand-alone files or in a zipped collection.

In order to access the required Investigations, you must have access to the NYSED Business Application Portal and the Office of State Assessment Online Examination Request System. Access to the request system is available to the school principal or designated testing coordinator. Please see the appendix attached to the [October 2022 memo](#), specifically pages two and three, for a more detailed description of where to find the Investigations. If you do not have access to the Online Examination Request System, please contact your school or district administrator or a designated testing coordinator for assistance in accessing and downloading these files.

2. With whom can the Investigations be shared? Can they be shared digitally?

The school principal or designated testing coordinator who accesses the Investigations can then share them with the teachers in their school district who will be using them for course work and examination preparation. This can be done by distributing either digital or paper copies. All components of the Investigations may be saved on school-controlled drives as long as they are accessible by faculty only. Digital copies of the Student Directions and Student Answer Packet(s) for the Investigations can be shared with students on school-controlled drives, such as Google Drive or Schoology, as long as only teachers and students within the district are able to access the files.

3. Are the Investigation documents considered to be “secure materials”?

The Investigations are distributed through the exam request portal and may not be freely distributed to the public. They are intended for use by New York State teachers for course work and examination preparation in the classroom. It is permitted to reproduce, electronically (i.e., scanned, Google doc/form) if necessary, the Student Directions and the Student Answer Packet(s) in limited quantities for local use in instruction. The Teacher Materials documents are not to be provided to students and should not be reproduced electronically or shared with the public. If the Student Directions and/or Student Answer Packet(s) are reproduced, care should be taken to ensure that no content is lost.

4. Can the Investigations be shared with teacher preparation programs and science supply vendors?

The Investigations are intended for use by New York State teachers for course work and examination preparation in the classroom. The Investigations are not intended to be utilized in teacher preparation programs. Additionally, the New York State Education Department (NYSED) and the Office of State Assessment (OSA) are not providing the Investigations to vendors for the purposes of creating and selling kits.

5. How can translated and Braille versions of the Investigations be accessed?

Translated versions of the Student Directions and Student Answer Packet(s) for the Investigations will be available in Arabic, Bengali, Chinese (Simplified), Chinese (Traditional), Haitian Creole, Korean, Russian, and Spanish in early 2023. In the same way as the English language version, these translated versions will be available on the NYSED Business Application Portal and the Office of State Assessment Online Examination Request System.

Hard copies of these materials in Unified English Braille (UEB) may be requested by contacting the Office of State Assessment (OSA) at emscassessinfo@nysed.gov.

Implementation:

6. Are districts required to implement the Investigations during the 2022-23 school year?

The Investigations are designed to be embedded into classroom instruction and can be offered any time during the school year, depending on when teachers cover the particular Learning Standards assessed. Although there are benefits to completing all Investigations in the school year leading up to the written test, this is not required and the decision on when to complete the Investigations is left to local discretion. For example, if a school chooses to teach life science

during Grade 7, students may complete "It's Alive?" that year rather than during Grade 8 if the school determines this to be the appropriate approach. It is recommended that educators look closely at the alignment documents associated with each Investigation in order to make the most informed decision as to when and where to embed the Investigations. At the elementary level, schools choosing when to administer a particular Investigation should consider the level of the primary Performance Expectation (PE) addressed in the Investigation as well as the related PEs. In many cases these cover several grade levels.

In order to accommodate the Grade 4 and 7 students in the 2022-23 school year, a school district may need to develop a short-term plan for the implementation of the four required Investigations prior to the first written test in spring 2024. Additionally, a long-term plan for the 2022-23 Grade 3 and 6 students and subsequent cohorts could be developed. Below are examples of the options that districts have for implementation:

Grade 4 and 7 students in the 2022-23 school year who will take the written assessment in Spring 2024:

- Administer Investigations in Grades 4 and 5 / Grades 7 and 8, based on the coverage of the Learning Standards
- Administer all Investigations in Grade 5 / 8

Grade 3 and 6 students in the 2022-23 school year who will take the written assessment in Spring 2025 and subsequent cohorts:

- Administer Investigations in Grades 3, 4, and 5 / Grades 6, 7, and 8, based on the coverage of the Learning Standards
- Administer all Investigations in Grade 5 / 8

The strategy that a district adopts for the 2022-23 school year does not have to remain the approach used for later cohorts.

7. Does NYSED propose specific grade level(s) for students to complete the required Investigations?

No, the Investigations are designed to be embedded into instruction and can be offered any time during the school year, depending on when teachers cover the particular Learning Standards assessed. Although there are benefits to completing all Investigations in the school year leading up to the written test, this is not required and the decision on when to complete the Investigations is left to local discretion. For example, if a school chooses to teach life science during Grade 7, students may complete "It's Alive?" that year rather than during Grade 8 if the school determines this to be the appropriate approach. It is recommended to look closely at the alignment documents associated with each Investigation in order to make the most informed decision as to when and where to embed the Investigations. At the elementary level, schools choosing when to administer a particular Investigation should consider the level of the primary Performance Expectation (PE) addressed in the Investigation as well as the related PEs. In many cases these cover several grade levels.

8. Are the required Investigations intended for a particular grade level?

The Investigations use vocabulary and rigor found in the language of the NYSP12SLS for each science domain at the level of the written assessment, Grade 5 and Grade 8, respectively. As with the written tests in the New York State Testing Program, the New York State Education Department employed the principles of Universal Design in developing the Investigations. In order to develop 3-dimensional performance tasks suited for the appropriate grade level, NYS-certified teachers experienced with elementary- and intermediate-level students reviewed and provided feedback on all of the materials associated with the Investigations.

9. Can students be provided with assistance during the administration of the Investigations?

The Investigations were designed to be hands-on, 3-dimensional learning tasks aligned to the NYSP12SLS that can be embedded into curriculum. As such, instruction associated with the Investigations should be consistent with the practices and teaching strategies used in the classroom during daily science learning tasks. Like any other classroom activity, students must be provided with supports and accommodations as detailed in their Individualized Education Program (IEP) or Section 504 Accommodation Plan while completing the Investigations.

10. Can the Investigations be changed to reflect students' needs? Can a district choose to not administer specific questions/portions of the Investigations?

The use of supplemental materials, such as adding graphic organizers or creating task cards to scaffold procedural steps, is acceptable if this practice is consistent with instruction during other science hands-on activities. Like any other classroom activity, students must be provided with supports and accommodations, as detailed in their Individualized Education Program (IEP) or Section 504 Accommodation Plan, while completing the Investigations.

All parts of the Investigation should be administered in order for students to properly experience hands-on learning aligned to the NYSP12SLS. Removing portions or specific questions from the tasks has the potential to disrupt the 3-dimensional design of the activities within the Investigations.

11. Can the Investigation tasks be pre-recorded for students to watch?

The Department strongly discourages pre-recording portions of the Investigations as it limits student discovery and takes away the authentic, hands-on laboratory experiences that the Investigations are intended to provide and that are required by the NYSP12LS.

12. Approximately how much time is needed to conduct each Investigation?

The actual times needed to complete the required Investigations may vary depending on the length of scheduled laboratory periods, specific classroom set-ups and student groups, whether lab questions are to be completed in class or outside of class as homework, and if teachers choose to supplement the Investigations with additional instruction or activities.

Instead of prescribing specific time allotments, many of the Investigations are broken up into different sessions or tasks. These sessions or tasks could vary greatly in time for different teachers and classes. For example, the Intermediate-level Investigation "All Mixed Up" is broken up into three sessions so that students can plan their experiment, carry out their experiment, and then use their experimental results to draw conclusions. Between the middle and last sessions, enough time must pass for water to evaporate as a separation process. With so many variables playing into exactly how each session will run in classrooms across NYS, it is not possible to provide a time estimate for each Investigation.

Materials:

13. Where can schools/districts obtain materials/kits for the Investigations?

The New York State Education Department is a non-endorsing state agency and thus does not approve local school district curriculum or endorse vendors. As a reminder, many of the necessary materials for the Investigations are either re-used from the earlier Grade 4 and 8 Performance Tests or available locally at dollar, hardware, and pet stores or at online science education supply companies. Some BOCES are able to provide materials and/or kits. Schools should reach out to their BOCES directly with questions about obtaining materials for the Investigations.

14. Are the materials/equipment for the Investigations secure?

The materials/equipment for the required ELS and ILS Investigations do not have to be treated as 'secure' testing materials and therefore can (and often should) be used throughout the year for other investigations/activities. However, it is strongly discouraged to mirror the Investigation tasks/activities in a way that limits student discovery in the Investigations themselves.

15. How were the Investigation materials chosen? Was student safety considered?

The lab equipment, materials, and procedures that are listed in each Investigation are what NYS science teachers recommended as the best choices for safety, reliability, and cost. Safety was prioritized when developing the Investigations. For example, the matches in "Cloud in a Bottle" are not to be handled by students, and the water in "Cool It!" is not at a boiling temperature.

16. To what extent can substitutions be made in the lab materials/equipment used in the Investigations?

In some cases, there is flexibility with some materials/equipment to ensure schools are not disadvantaged based on what they can procure. For example, a 4-ounce container could be plastic or glass, filter paper could be lab grade or coffee filters, but there are some materials that cannot be substituted, such as the *Paramecium* slides. Specific questions may be directed to the Office of State Assessment Science Team at emscassessinfo@nysed.gov.

Scoring:

17. Can a classroom teacher score their own students' completed Investigations? Is there a recommended point value for each question/data table? Do scores need to be reported to the NYSED?

Teachers may score their own students' Investigations. Although a Scoring Key and Rubric have been provided for each Investigation, all aspects of grading the required Investigations and their use in course grades are at the discretion of the teacher.

Scores on the Investigations will not be reported to the State or included in the students' final test scores. The Investigations themselves are not considered a state test; rather, they are locally administered performance-based tasks that are one of multiple components of the strategy for assessing science learning.

18. Should teachers review the Investigations with their students after they have been completed/scored?

The method of offering feedback to students on the SAP is left to teacher discretion. Teachers may use any method that provides students with the opportunity to demonstrate their growth in science knowledge and skills. The chosen feedback method would also depend on how the Investigation is being used, e.g., formative assessment versus lab activity.

19. Is there a description of what is deemed “successful completion”?

The definition of “successful completion” is left to the discretion of the teacher. The rubric for each Investigation is perhaps the best tool to guide teachers in determining student success. The Investigation Rubrics were created to allow teachers to assess where individual students are on a continuum of skills and knowledge embedded in the PE. As a result, teachers will be able to identify areas for remediation and determine that Investigations have been successfully completed.

Record Keeping and Transfer Students:

20. If a student transfers from one NYS district to another, how should records of complete Investigations be transferred?

A copy of the Student Answer Packets (SAPs) for all completed Investigations can be transferred to the student’s new district, if applicable. Alternatively, a written attestation of successful completion that includes the signatures of both the teacher who administered the Investigation and the building principal could be sent in lieu of the completed SAPs. If a district does not receive such documentation when a student transfers from another NYS school district, a guidance counselor, administrator, or teacher from the new district should contact the previous district to request evidence or confirmation of successful completion of the Investigations.

21. Are the Investigations an “entry ticket” to sit for the written tests? That is, if a student does not have the four Investigations completed (or records cannot be found that prove they have done the Investigations in other districts), may they sit for the Grade 5 Elementary-Level Science Test or the Grade 8 Intermediate-Level Science Test?

Although the Investigations are not an “entry ticket” to sit for the written tests, it is expected that a student will successfully complete all four of the required Elementary-level Investigations before they sit for the written Elementary Science Test starting in 2024. Likewise, students should successfully complete all four of the Intermediate-level Investigations before they can sit for the Intermediate Science Test starting in 2024.

Completion of the Investigations prepares students for the written test by providing a hands-on opportunity to demonstrate attainment of science knowledge and skills that also will be assessed on the written test. The Department understands that the dynamic of student mobility may be challenging for districts; teachers, guidance counselors, and administrators should work together on a student-by-student basis to prepare them for success on the written exam.

22. How long do schools need to keep student Investigations? Is there a record keeping requirement and format to document student completion?

Students should record all Investigation data and answers in the Student Answer Packets (SAPs), which must be retained by the school as evidence of a student's successful completion of the activity and should be kept on file for at least six months following the date of the test. However, the method of retaining Student Answer Packets and tracking successful completion of Investigations, including keeping copies digitally, is left to local discretion. Digital copies of the Investigations can be stored on school-controlled drives as long as they are accessible by faculty only.

The Relationship between Investigations and Grade 5 and 8 Science Written Tests:

23. Will there be a separate Performance Test in addition to the Investigations and written Elementary- and Intermediate-level Science Tests?

No, the new Elementary- and Intermediate-level Science Tests will be administered as written examinations in the spring of each school year (starting Spring of 2024) and consist of both multiple-choice and constructed-response (i.e., open-ended) questions.

In order to prepare for these tests with authentic, hands-on laboratory experiences, students will participate the Investigations. Like the written tests, the Investigations are aligned to the NYSP12SLS but provide the opportunity for a performance-based assessment of student science knowledge and skills. The Investigations are designed to be embedded into instruction and can be offered any time prior to the written test. There will no longer be a two-week window before the administration of the exam during which the performance portion of the exam is administered.

24. The May 2022 memo states that "15% of the questions on the written test will measure content related to the Performance Expectations measured by the Investigations". What will those questions look like?

The questions encompassed in the 15% will not be about the specific Investigation tasks themselves, but the content of the Performance Expectations (PEs) it is aligned to or related PEs. For example, students may see questions related to circuits on the Elementary-level Science Test, but they would not be expected to design, test, and refine a circuit on the test in the way that they did during the "Light It Up" Investigation. Other questions will assess scientific practices (SEPs), and common themes across science (i.e., Cross Cutting Concepts) related to the activities undertaken by students in the Investigations, such as making and using scientific models and identifying patterns.

25. Since our accelerated 8th graders who take Regents-level science will not have to take the 8th grade science assessment, will they be required to complete all of the Investigations?

The Intermediate-level (Grade 8) Science Test should be administered to students in the grade in which they will have completed all of the material in the Middle Level (6-8) NYSP12SLS. While this grade is typically Grade 8, the test may also be administered to students in Grade 7 who will have completed, by the end of the school year, all of the material in the Middle Level (6-8) NYSP12SLS, including the required Intermediate-level Science Investigations. School principals have the discretion to either require or waive the Intermediate-level Science Test for those accelerated students who will be taking a Regents Examination in science at the end of

the school year. [The United States Department of Education \(USDE\) Extension of New York's "Double Testing" Waiver in Grades 6 and 7 Mathematics and Grades 7 and 8 Science](#) memo states that students enrolled in Grade 7 or 8 who take high school-level Regents science courses may take the corresponding high school-level Regents examination in science in lieu of the Intermediate-level Science test. Grade 7 or 8 students who will take the Regents examination in Science in lieu of the Intermediate-level Science Test, would not be required to complete the Intermediate-level Science Investigations.

The Intermediate-level Science Investigations can be offered at any time during the school years leading up to the Intermediate-level (Grade 8) Science Test. If a district chooses to administer one or more of the Investigations in Grade 6 or 7, the district must carefully consider which students (including those on track to take a Regents class in Grade 7 or 8) complete those Investigations. Consideration must be made to ensure a student who had been in an accelerated pathway in Grade 6 or 7, but then moves out of that pathway in Grade 7 or 8, would not be at a disadvantage. If a student is on track to take a science course that culminates in a Regents examination prior to high school, it is acceptable for such student to complete the Investigations with their grade cohorts. However, it is not mandatory that they do so.

Additional questions related to the Investigations for the Elementary- and Intermediate-level Science Tests should be directed to the Office of State Assessment via email at emscassessinfo@nysed.gov or by calling (518) 474-5902.

Information related to the [New York State P-12 Science Learning Standards](#), including the [Implementation Timeline for Science](#), can be found on NYSED's [Office of Standards and Instruction Science webpage](#).