



ASSISTANT COMMISSIONER, OFFICE OF STATE ASSESSMENT
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To: District Superintendents
Superintendents of Schools
Principals of Public, Religious, and Independent Schools
Charter School Leaders
Science Coordinators

From: Zachary Warner

Subject: Planning for Regents Examinations in Earth and Space Sciences and Life Science:
Biology Investigations

This memorandum has been revised to indicate that 10-cm circular protractors will be needed for the Earth and Space Sciences Investigations (see attachment). In response to questions from science teachers, clarifications of several other materials have been added.

The Regents Examinations in Earth and Space Sciences and Life Science: Biology will be administered for the first time in June 2025. More details about the implementation of these new exams is provided in [this memorandum](#). Similar to the Elementary- and Intermediate-level Science Tests, the Regents Examinations will be written tests consisting of multiple-choice and constructed-response questions. There will no longer be a Performance Test (Earth Science) or Laboratory Activities for Part D (Living Environment). Instead, authentic, hands-on scientific and engineering experiences, called Investigations, will be part of the assessment strategy for high school science. Like the written tests, the Investigations are aligned with the New York State P-12 Science Learning Standards but provide the opportunity for performance-based assessment of students' science knowledge and skills. The Investigations are designed to be embedded into classroom instruction and assessment and can be offered any time during the school year, dependent on local curricular planning.

Like with the Elementary- and Intermediate-level Investigations, the grading of the Investigations for the Regents Examinations will be left to local discretion (a scoring rubric will be included with the teacher materials). Student performance on the Investigations will not contribute to final Regents Examination scores. However, approximately 15% of the questions on the written test will measure content related to the performance expectations measured by the Investigations. Other questions will assess concepts related to the activities undertaken by students in the Investigations. The Investigations will help prepare students for the three-dimensional scientific reasoning they will need to perform on the written test and may be counted as part of the minimum 1200 minutes of hands-on laboratory experiences required under Part 100 of the Commissioner's Regulations.

At this time, the Office of State Assessment is providing the performance expectations (PE) that will be assessed by each of the three Investigations for each course. In addition, a

list of the expected materials is attached so that schools can plan for the necessary procurements. The activities were specifically designed to require relatively simple and inexpensive materials. Please note that the materials list prioritizes supplies that schools may not already have in their science classrooms and will need to order or to procure in bulk, or are consumable materials that will need to be replenished. It is likely that other, minor materials (e.g., lab safety equipment, rulers, chalk) that would be expected to already be present in science classrooms will be needed to complete the Investigations.

The three required Investigations for Earth and Space Sciences and the primary performance expectation measured by each are:

- Space Systems: Unearthing Mars – A Historical Perspective (PE: HS-ESS1-4)
- Earth's Systems: The Ripple Effect – The Work of Water Across New York State Surfaces (PE: HS-ESS2-5)
- Weather and Climate: The Sky is the Limit – Decoding Weather Conditions (PE: HS-ESS2-8)

The three required Investigations for Life Science: Biology and the primary performance expectation measured by each are:

- Structure and Function: Balancing Act – Exploring Feedback and Homeostasis (PE: HS-LS1-3)
- Inheritance and Variation of Traits: Unraveling the Mystery of Lactose Intolerance (PE: HS-LS3-3 & HS-LS1-1)
- Interdependent Relationships in Ecosystems: For the Birds – Designing Solutions (PE: HS-LS-2-7)

Additional details about the Investigations for the Regents Examinations in Earth and Space Sciences and Life Science: Biology will be forthcoming. All documentation for the Investigations, including translated editions, will be available in spring 2024 so that science educators may review it prior to the 2024-25 school year.

The purpose of this communication is to confirm the inclusion of Investigations as part of the strategy for high school science assessment and to provide schools and districts with a list of materials to aid in budgeting and planning. Details about the implementation of the Investigations will be shared as soon as possible.

Please contact the Office of State Assessment at emscassessinfo@nysed.gov with any questions about the contents of this memorandum.

Earth & Space Sciences Materials List

- Stream Tables (1 for every 2-4 students) (note: these can be constructed using a plastic 41 qt. container)
- Electronic balances, **minimum accuracy to the nearest tenth** (1 for every 2 students)
- **2 to 2.5 gallon-sized buckets** (1 for every 2 students, plus several extra)
- Acetate sheets
- 2-liter soda bottles, 1-liter soda bottles, spray bottles, and 16 oz rain bottles (1 of each for every 2 students)
- Cheese cloth, washcloths, and coffee filters (1 of each for every 2 students)
- Food coloring
- Gravel (pebble-sized), fine sand, coarse sand, and potting soil
- **10-cm circular protractors with 0-360 degrees markings** (1 for every student) **(note: circular protractors with swing arms to assist students in finding angle measures are recommended but not required)**
- 12-inch by 12-inch cork or foam boards, at least ½-inch thick (1 for every student)
- **2.5 gallon plastic bags with zip closure or similar reusable container for storage and distribution of each student materials kit** (1 for every student)
- Colored pencils
- Stopwatches or timers (1 for every 2 students)
- Red and blue pressure blocks (5 red and 5 blue per setup) **(note: a template will be included with the Investigation to allow 1⅜-inch by 1⅜-inch (red) and 11/16-inch by 1⅜-inch (blue) blocks to be made from cardstock)**

Life Science: Biology Materials List

- Non-contact IR digital thermometers that can measure surfaces and body temperatures (1 for every 2 students)
- Plastic bins or containers, large enough for students to put their hand in (1 for every 2 students)
- Stopwatches or timers (1 for every 2 students)
- Lactase pills (½ pill for every 2 students)
- Mortar and pestle (for teacher use only)
- Microcentrifuge tubes (1 for every 2 students)
- Room Temperature cow's milk (10mL for every 2 students)
- Small beakers or containers, approximately 20mL (2 for every 2 students)
- **10 to 25mL-sized graduated cylinders** (1 for every 2 students)
- Stirring rods (1 for every 2 students)
- Glucose test strips (2 for every 2 students)
- Modeling clay (50 grams for every 2 students)
- Metric tape measures or meter sticks (1 for every 2 students)
- Fiberglass window screening (approximately, a 14-inch by 14-inch square for every 2 students)
- Wooden embroidery hoops (at least 10-inch diameter) (1 for every 2 students)
- Electronic balances, **minimum accuracy to the nearest tenth** (optimally, 1 for every 4-5 students)