

Accelerated Pathways in Science

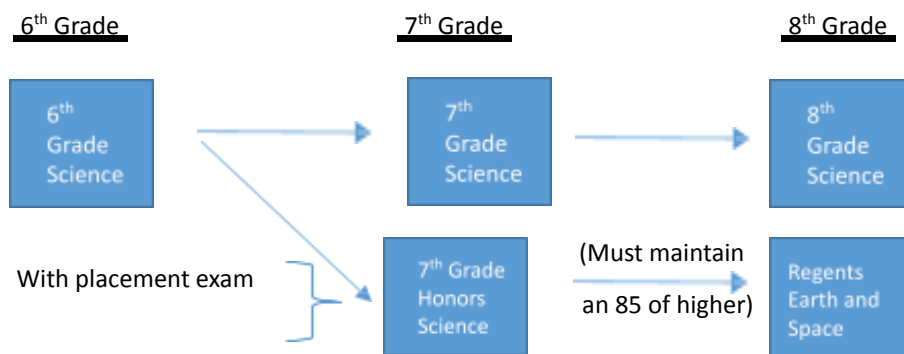
North Country Road Middle School

The North Country Road Middle School has an accelerated pathway to foster student achievement in Science. This program is based on student readiness and provides opportunities for acceleration if appropriate at another time during the middle school years. **A student is not "behind" if they do not accelerate.**

Possible Pathways in Science

- Most students will follow the standard New York State Science progression, beginning with Science 6, followed by Science 7, Science 8, and Earth and Space Science in high school.
- Some students may meet the criteria for Science 7 Honors. Students who are successful in Science 7 Honors and meet the minimum grade requirements are eligible to enroll in Earth and Space Science Honors (Regents) in grade 8.
- Students in Science 7 who do not enroll in the honors course may still be considered for Earth and Space Science Honors based on strong performance (a minimum 90% final average and 95% on the final exam). However, students who accelerate directly to Earth and Space Science without completing Science 8 should be aware that they may miss key foundational skills.
- Science 8 plays an important role in reinforcing and extending core concepts, serving as a bridge to higher-level science courses. Students who choose to accelerate should be prepared for the additional effort required to master these essential skills independently.

Pathway 1:



Pathway 2:



Science 7 Honors

- The Science 7H course covers the grade 7 curriculum and some essential grade 8 material, providing a strong foundation before advancing to Earth and Space Honors in grade 8.
- This course compacts the grade 7 and some grade 8 science curricula, increasing both pace and rigor.
- This class will be "weighted" in comparison to other classes (1.05%)
 - 90% = 94.5%
 - 80% = 84%

Why Accelerate?

The purpose of acceleration in Science is to provide students with opportunities to engage in advanced coursework throughout high school. By completing Earth and Space, Biology, Chemistry, and Physics by grade 11, students will have the flexibility to pursue higher-level science courses beyond Physics (regents), such as AP Biology, AP Chemistry, or AP Physics, as well as explore additional advanced science topics beyond these courses, including college-level or specialized STEM courses.

Regardless of acceleration, students in 11th and 12th grade may have the opportunity to enroll in multiple science courses simultaneously, provided they meet prerequisite requirements and scheduling availability allows. This pathway enables students to explore additional advanced science topics beyond AP-level coursework, including college-level or specialized STEM offerings. Some students demonstrate mastery of grade-level content, making them ready for more advanced material.

Placement Exam

Approximately the top 65% of students will be invited to take a Science 7H placement exam. This exam will assess material covered in grade 6, as well as concepts that extend beyond the current curriculum. This placement exam is designed to assess students' readiness for an accelerated and rigorous science experience. The science placement exam is modeled after NYS Science Assessments and structured differently from the math placement exam. The exam is divided into two parts and features:

- Stimulus-based multiple-choice questions
- Extended response items requiring explanation and use of evidence

This exam is designed to assess scientific thinking and the application of knowledge. It focuses primarily on Grade 6 science content, with select introductory Grade 7 concepts. Students will apply their understanding to real-world scenarios, analyze and interpret data, and demonstrate their understanding of topics including, but not limited to:

- Forces and motion (Newton's Laws, force and acceleration, friction)
- Energy (kinetic and potential energy, energy transformations, heat transfer)
- Waves (frequency, amplitude, pitch)
- Magnetism and magnetic fields
- Density (mass, volume, displacement)
- Basic atomic structure
- Interpreting tables, graphs, and scientific data
- Applying scientific reasoning and analyzing data in real-world scenarios

The exam includes multiple-choice and short-response questions. Students may be required to analyze data, solve multi-step problems, and apply scientific concepts to unfamiliar situations.

The placement exam helps identify students who demonstrate strong analytical thinking, mathematical reasoning in science contexts, and readiness for the pace and depth of the Honors course.

Selection Criteria for Science 7H

- **Science 6 Final Grade Average (60%)**
- **Science 7H placement exam (30%)**
- **Overall Grade 6 Grade Point Average (10%)**