How will students learn science in the classroom?

Each year, students in our schools should be able to demonstrate greater capacity for connecting knowledge across, and between, the physical sciences, life sciences, earth and space sciences, and engineering design. During grades 6–8, your child will begin to form deeper connections between concepts previously learned in grades K–5, such as collecting evidence and drawing conclusions, understanding relationships between objects, and critical thinking that leads to designing effective solutions for problems.

Upon completion of grades 6–8, your child should have a deeper understanding of:

- Physical and chemical interactions that affect the world around us;
- Factors that affect organism survival and reproduction;
- Factors that influence the Earth and our solar system; and
- How to optimize design solutions.

Physical Sciences

Physical sciences during grades 6–8 may explore topics including atomic chemistry, forces and fields, thermal energy, and the wave model. Such lessons will help prepare students for advanced classes—like physics, forensics, or chemistry— that they might encounter in high school and/or college.

Life Sciences

Life Sciences during grades 6–8 may explore topics including cells, gene variation, biodiversity, and adaptation. Such lessons will help prepare students for advanced classes—like biology, physiology, and genetics—that they might encounter in high school and/or college.

Earth and Space Sciences

Earth and space sciences during grades 6–8 may explore topics including the solar system, the Earth's history, and energy flows. Such lessons will help prepare students for advanced classes—like astronomy, environmental science, or geology— that they might encounter in high school and/or college.

Engineering Design

Engineering design during grades 6–8 may explore how students can refine criteria and constraints when designing engineering solutions. Such lessons will help prepare students for advanced classes— like mechanics, robotics, or engineering-enriched science courses— that they might encounter in high school and/or college.

For additional information about academic expectations for students in Grades 6-8, visit www.nextgenscience.org/parentguides.

For frequently asked questions regarding the science standards,visit http://www.doe.mass.edu/stem/standards/faq.html for more information.