



Toms River Regional Schools
and The New Jersey State Core Curriculum Standards
Making It Work

ACADEMIC STANDARDS—SCIENCE

- 5.1. **SCIENTIFIC PROCESSES** - All students will develop problem-solving, decision-making and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results.
- Habits of Mind
 - Inquiry and Problem Solving
 - Safety
- 5.2. **SCIENCE AND SOCIETY** - All students will develop an understanding of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.
- Cultural Contributions
 - Historical Perspectives
- 5.3. **MATHEMATICAL APPLICATIONS** - All students will integrate mathematics as a tool for problem-solving in science, and as a means of expressing and/or modeling scientific theories.
- Numerical Operations
 - Geometry and Measurement
 - Patterns and Algebra
 - Data Analysis and Probability
- 5.4. **NATURE AND PROCESS OF TECHNOLOGY** - All students will understand the interrelationships between science and technology and develop a conceptual understanding of the nature and process of technology.
- Science and Technology
 - Nature of Technology
 - Technological Design
- 5.5. **CHARACTERISTICS OF LIFE** - All students will gain an understanding of the structure, characteristics, and basic needs of organisms and will investigate the diversity of life.
- Matter, Energy, and Organization in Living Systems
 - Diversity and Biological Evolution
 - Reproduction and Heredity.
- 5.6. **CHEMISTRY** - All student s will gain an understanding of the structure and behavior of matter.
- Structure and Properties of Matter
 - Chemical Reactions
- 5.7. **PHYSICS** - All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.
- Motion and Forces
 - Energy Transformations
- 5.8. **EARTH SCIENCE** - All students will gain an understanding of the structure, dynamics, and geophysical systems of the earth.
- Earth's Properties and Materials
 - Atmosphere and Weather
 - Processes that Shape the Earth
 - How We Study the Earth
- 5.9. **ASTRONOMY AND SPACE SCIENCE** - All students will gain an understanding of the origin, evolution, and structure of the universe.
- Earth, Moon, Sun System
 - Solar System
 - Stars
 - Galaxies and Universe
- 5.10 **ENVIRONMENTAL STUDIES** - All students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.
- Natural Systems and Interactions
 - Human Interactions and Impact