

Eighth Grade Science students at St. Patrick’s will develop into individuals with the ability to understand the difficult concepts of physical science. They will be introduced to such topics as: matter, elements, periodic table, motion, force, chemistry, etc. With all of this information, 8th grade students at St. Patrick’s will have the ability to know the whys and hows that happen on a daily basis within reactions and processes. By the end of the 8th grade term, these students will have obtained enough knowledge about physical science that they will appreciate things in an altogether different manner. Labs will be utilized as much as possible as well as projects, group work, and many other instances of cooperative learning.

	<u>Standards/Goals</u>	<u>Instructional Tools</u>	<u>Assessment Tools</u>
8.1 Matter and Elements	Students will gain an understanding of matter and elements <ul style="list-style-type: none"> a. matter <ul style="list-style-type: none"> - measuring, changes, physics b. states of matter <ul style="list-style-type: none"> - solid, liquid, gas, plasma - changes in state, gas behavior <ul style="list-style-type: none"> c. periodic table of elements <ul style="list-style-type: none"> - atoms, protons, neutrons, electrons - metals, non-metals, metalloids d. materials <ul style="list-style-type: none"> - alloys, ceramics, glass, radio-activity	Text Notes Periodic Table Charts Beakers Liquids Heat Fire Atomic Model Make your own element project Labs	Chapter Tests Quizzes Observation Periodic Table Test Worksheets Projects Labs
8.2 Motion and Force	Students will gain an understanding of motion and force <ul style="list-style-type: none"> a. motion <ul style="list-style-type: none"> - measuring, acceleration b. force <ul style="list-style-type: none"> - Newton, friction, gravity c. forces in fluids <ul style="list-style-type: none"> - pressure, floating & sinking Pascal, Bernoulli <ul style="list-style-type: none"> d. work and energy <ul style="list-style-type: none"> - simple machines - forms of energy, transformation, conservation <ul style="list-style-type: none"> e. thermal energy and heat <ul style="list-style-type: none"> - temperature, heat transfer uses	Text Notes Debate Visuals No-force cars Beakers Simple Machines Hot Plates Venn Diagrams Labs	Chapter Tests Quizzes Observation Projects Group Projects Debate Rubric Labs

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8.3 Electricity and Magnetism	Students will gain an understanding of electricity and magnetism <ul style="list-style-type: none"> a. inside a magnet b. electrical charge, current, circuits, power c. uses of both d. electricity and technology 	Text Notes Magnets Wires Batteries Circuit Boards Nails Labs	Chapter Tests Quizzes Observation Circuit Making Labs
8.4 Sound and Light	Students will gain an understanding of sound and light <ul style="list-style-type: none"> a. waves, wavelengths, properties, music, uses of both b. electromagnetism, visible light c. color, reflection, refraction, uses 	Text Notes Slinkies Hollow Tubes Instruments Prisms Color Scopes Binoculars Labs	Chapter Tests Quizzes Observation Wave Game Labs
8.5 Chemistry	Students will gain and understanding of chemistry <ul style="list-style-type: none"> a. atoms and bonding b. ionic bonds, covalent bonds c. chemical reactions <ul style="list-style-type: none"> - changes, measuring change d. acids, bases, solutions <ul style="list-style-type: none"> - concentrations e. carbon 	Text Notes Atom Builders Beakers Graduated Cylinders Buckets Acids Bases Litmus Paper Fire Wood String Videos Labs	Homemade Reaction Demos Chapter Tests Quizzes Observation Fire-Making Labs