

Properties of Atoms, Elements, and Compounds

Catholic Identity Standards (Ways to Grow)		Notes	Check Up		
Living our Faith	<input type="checkbox"/> I can connect what I learn to my faith.*				
	<input type="checkbox"/> I can apply what I learn in my daily life.*				

Learning Process Standards (Tools to Know)		Notes	Check Up		
Planning/ Performing Investigations	<input type="checkbox"/> I can plan and carry out an investigation. PS.2A				
Using Scientific Tools	<input type="checkbox"/> I can collect information using scientific tools. PS.2B				

Content		Notes	Check Up		
Structure of Atoms	<input type="checkbox"/> I can describe the structure of atoms. PS.3A <ul style="list-style-type: none"> <input type="checkbox"/> masses <input type="checkbox"/> electrical charges <input type="checkbox"/> location of protons and neutrons in the nucleus <input type="checkbox"/> location of electrons in the electron cloud 				
	<input type="checkbox"/> I can identify that protons determine an element's identity. PS.3A.1				
	<input type="checkbox"/> I can identify that valence electrons determine an element's chemical properties, including reactivity. PS.3A.1				
Periodic Table	<input type="checkbox"/> I can interpret the arrangement of the Periodic Table, including groups and periods, to explain how properties are used to classify elements. PS.3B				
	<input type="checkbox"/> I can explain that an element is a pure substance represented by a chemical symbol. PS.3B.1				
	<input type="checkbox"/> I can explain that a compound is a pure substance represented by a chemical formula. PS.3B.1				
Atomic Composition of Molecules	<input type="checkbox"/> I can develop models to describe the atomic composition of simple molecules and extended structures. PS.3C				

Learning Process Standards (Ways to Show)		Notes	Check Up		
Observing and Measuring	<input type="checkbox"/> I can collect and record information by observing and measuring. PS.2C				
Interpreting Information	<input type="checkbox"/> I can analyze and interpret information from an investigation and give a reasonable explanation based on the evidence. PS.2D				
Constructing Models	<input type="checkbox"/> I can represent the natural world using models. PS.2E				

Chemical Formulas, Equations, and Reactions

Catholic Identity Standards (Ways to Grow)		Notes	Check Up		
Living our Faith	<input type="checkbox"/> I can connect what I learn to my faith.*				
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Learning Process Standards (Tools to Know)		Notes	Check Up		
Planning/ Performing Investigations	<input type="checkbox"/> I can plan and carry out an investigation. PS.2A				
Using Scientific Tools	<input type="checkbox"/> I can collect information using scientific tools. PS.2B				

Content		Notes	Check Up		
Chemical Formulas	<input type="checkbox"/> I can recognize how chemical formulas are used to identify substances. PS.3D				
	<input type="checkbox"/> I can determine the number of atoms of each element in chemical formulas containing subscripts. PS.3D				
Chemical Reactions	<input type="checkbox"/> I can investigate how evidence of chemical reactions indicates that new substances with different properties are formed. PS.3E				
	<input type="checkbox"/> I can investigate how chemical reactions relate to the law of conservation of mass. PS.3E				
	<input type="checkbox"/> I can distinguish between physical and chemical changes in matter. PS.3E.1				
	<input type="checkbox"/> I can identify the formation of a new substance by using evidence of a possible chemical change. PS.3E.2 <input type="checkbox"/> production of gas <input type="checkbox"/> change in temperature <input type="checkbox"/> production of a precipitate <input type="checkbox"/> color change				
	<input type="checkbox"/> I can use a model to show that the total number of atoms does not change in a chemical reaction and that mass is conserved. PS.3E.3				
Change in Particle Motion	<input type="checkbox"/> I can describe changes in particles when thermal energy is added or removed. PS.3F				

Learning Process Standards (Ways to Show)		Notes	Check Up		
Observing and Measuring	<input type="checkbox"/> I can collect and record information by observing and measuring. PS.2C				
Interpreting Information	<input type="checkbox"/> I can analyze and interpret information from an investigation and give a reasonable explanation based on the evidence. PS.2D				
Constructing Models	<input type="checkbox"/> I can represent the natural world using models. PS.2E				

Force, Motion, and Energy

Catholic Identity Standards (Ways to Grow)		Notes	Check Up		
Living our Faith	<input type="checkbox"/> I can connect what I learn to my faith.*				
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Learning Process Standards (Tools to Know)		Notes	Check Up		
Planning/ Performing Investigations	<input type="checkbox"/> I can plan and carry out an investigation. PS.2A				
Using Scientific Tools	<input type="checkbox"/> I can collect information using scientific tools. PS.2B				

Content		Notes	Check Up		
Motion	<input type="checkbox"/> I can investigate applications of Newton’s three laws of motion in: PS.4A <input type="checkbox"/> vehicle restraints <input type="checkbox"/> sports activities <input type="checkbox"/> amusement park rides <input type="checkbox"/> Earth’s tectonic activities <input type="checkbox"/> rocket launches				
	<input type="checkbox"/> I can compare and contrast potential and kinetic energy. PS.4A.1				
Force	<input type="checkbox"/> I can plan an investigation that shows that the change in an object’s motion depends on: PS.4B <input type="checkbox"/> the sum of the forces on the object <input type="checkbox"/> the mass of the object				
	<input type="checkbox"/> I can demonstrate and calculate how unbalanced forces change the speed or direction of an object’s motion. PS.4B.1				
	<input type="checkbox"/> I can differentiate between speed, velocity, and acceleration. PS.4B.2				
	<input type="checkbox"/> I can calculate average speed using distance and time measurements. PS.4B.3				
	<input type="checkbox"/> I can measure and graph changes in motion. PS.4B.4				
	<input type="checkbox"/> I can investigate how inclined planes can change the amount of force needed to move an object. PS.4B.5				

(continued)

Force, Motion, and Energy (continued)

Content		Notes	Check Up		
Newton's Third Law	<input type="checkbox"/> I can use scientific theories to describe the motion of two colliding objects. PS.4C				
	<input type="checkbox"/> I can describe the changes in the motion of an object when acted upon by unbalanced forces. PS.4C.1				
Electric and Magnetic Forces	<input type="checkbox"/> I can determine the factors that affect the strength of electric and magnetic forces. PS.4D				
	<input type="checkbox"/> I can describe that fields exist between objects exerting forces on each other. PS.4D.1				

Learning Process Standards (Ways to Show)		Notes	Check Up		
Observing and Measuring	<input type="checkbox"/> I can collect and record information by observing and measuring. PS.2C				
Interpreting Information	<input type="checkbox"/> I can analyze and interpret information from an investigation and give a reasonable explanation based on the evidence. PS.2D				
Constructing Models	<input type="checkbox"/> I can represent the natural world using models. PS.2E				

Law of Conservation of Energy

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Learning Process Standards (Tools to Know)		Notes	Check Up		
Planning/ Performing Investigations	<input type="checkbox"/> I can plan and carry out an investigation. PS.2A				
Using Scientific Tools	<input type="checkbox"/> I can collect information using scientific tools. PS.2B				

Content		Notes	Check Up		
Potential and Kinetic Energy	<input type="checkbox"/> I can describe how the arrangement of objects interacting at a distance impacts the amount of potential energy stored. PS.4E				
	<input type="checkbox"/> I can describe the relationships of kinetic energy to the mass of an object and to the speed of an object. PS.4E.1				
Transfer of Energy	<input type="checkbox"/> I can design, construct, and test a device that either minimizes or maximizes thermal energy transfer. PS.4F				
	<input type="checkbox"/> I can describe methods of thermal energy transfer. PS.4F.1				
	<input type="checkbox"/> conduction				
	<input type="checkbox"/> convection				
	<input type="checkbox"/> radiation				
	<input type="checkbox"/> I can describe how thermal energy moves in a predictable pattern from warmer to cooler until all the substances reach the same temperature. PS.4F.2				
	<input type="checkbox"/> I can demonstrate and describe examples of energy transformations. PS.4F.3				
Changes in Kinetic Energy	<input type="checkbox"/> I can explain that when the kinetic energy of an object changes, energy is transferred to or from the object. PS.4G				

Learning Process Standards (Ways to Show)		Notes	Check Up		
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Interpreting Information	<input type="checkbox"/> I can analyze and interpret information from an investigation and give a reasonable explanation based on the evidence. PS.2D				
Constructing Models	<input type="checkbox"/> I can represent the natural world using models. PS.2E				

Waves and their Application

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Learning Process Standards (Tools to Know)		Notes	Check Up		
Planning/ Performing Investigations	<input type="checkbox"/> I can plan and carry out an investigation. PS.2A				
Using Scientific Tools	<input type="checkbox"/> I can collect information using scientific tools. PS.2B				

Content		Notes	Check Up		
Waves	<input type="checkbox"/> I can explain how the amplitude of a wave is related to the energy in a wave. PS.4H				
	<input type="checkbox"/> I can describe how waves are reflected, absorbed, or transmitted through various materials. PS.4H.1				

Learning Process Standards (Ways to Show)		Notes	Check Up		
Observing and Measuring	<input type="checkbox"/> I can collect and record information by observing and measuring. PS.2C				
Interpreting Information	<input type="checkbox"/> I can analyze and interpret information from an investigation and give a reasonable explanation based on the evidence. PS.2D				
Constructing Models	<input type="checkbox"/> I can represent the natural world using models. PS.2E				