

Standard	Purpose/Learning Expectation	Performance Indicators	IPS	IPS	IPS	IPS	IPS	IPS	IPS	IPS	IPS	IPS	IPS	IPS	IPS	FM&E	FM&E	FM&E	FM&E	FM&E	FM&E	FM&E	
			Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7	Ch. 8	Ch. 9	Ch. 10	Ch. 11	Ch. 12	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7		
		13. Explain that the sun is a major source of the Earth's energy and that energy is emitted in various forms, including visible light, infrared and ultraviolet radiation.																					
		14. Show how light is reflected, refracted, or absorbed when it interacts with matter and how colors appear as a result of this interaction.																					
Science Standard 9: <i>All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.</i>	This standard forms the basis for an investigation of force and motion leading to an understanding of energy and energy transformation.	15. Show how vibrations in materials can generate waves, which can transfer energy from one place to another.																				X	
		<i>Building upon knowledge and skills gained in the preceding grades, by the end of Grade 12, students</i> 16. Explain the mathematical relationship between the mass of an object, the unbalanced force exerted on it, and the resulting acceleration.																					X
		17. Prove that whenever one object exerts a force on another, an equal amount of force is exerted back on the first object.														X		X					
		18. Know that gravity is a universal force of attraction between masses that depends on the masses and the distance between them.																					X
		19. Know that electrically charged bodies can attract or repel each other with a force that depends on the size and nature of the charges and the distance between them.																					
		20. Explain the similarities and differences between gravitational forces and electrical forces that act at a distance.														X							X

