

Introductory Physical Science (7th and 8th editions) & Force, Motion, and Energy – Alignment with South Carolina Science Curriculum Standards
Grade 8 November 2005

Standard	Indicators	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	IPS7	FM	FM	FM	FM	FM	FM	FM
		IPS8 Ch. 1	IPS8 Ch. 2	IPS8 Ch. 3	IPS8 Ch. 4	IPS8 Ch. 5	IPS8 Ch. 6	IPS8 Ch. 7	IPS8 Ch. 8	IPS8 Ch. 9	IPS8 Ch. 10	Ch. 11	Ch. 12	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7
Scientific Inquiry 8-1: The student will demonstrate an understanding of technological design and scientific inquiry	1. Design a controlled scientific investigation		X X	X X	X X	X X	X X	X X				X	X	X	X	X	X	X	X	X
	2. Recognize the importance of a systematic process for safely and accurately conducting investigations.	X X	X X	X X	X X	X X	X X	X X	X X	X X	X X	X	X	X	X	X	X	X	X	X
	3. Construct explanations and conclusions from interpretations of data obtained during a controlled scientific investigation.	X X	X X	X X	X X	X X	X X	X X				X	X	X	X	X	X	X	X	X
	4. Generate questions for further study on the basis of prior investigations	X X	X X	X X	X X	X X	X X	X X	X X	X X	X X	X	X	X	X	X	X	X	X	X
	5. Explain the importance of and requirements for replication of scientific investigations.	X X	X X	X X	X X	X X	X X	X X	X X	X X	X X	X	X	X	X	X	X	X	X	X
	6. Use appropriate tools and instruments safely and accurately when conducting a controlled scientific investigation.	X X	X X	X X	X X	X X	X X	X X	X X	X X	X X	X	X	X	X	X	X	X	X	X
	7. Use appropriate safety procedures when conducting investigations.	X X	X X	X X	X X	X X	X X	X X	X X	X X	X X	X	X	X	X	X	X	X	X	X

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		IPS8 Ch. 1	IPS8 Ch. 2	IPS8 Ch. 3	IPS8 Ch. 4	IPS8 Ch. 5	IPS8 Ch. 6	IPS8 Ch. 7	IPS8 Ch. 8	IPS8 Ch. 9	IPS8 Ch. 10	IPS8 Ch. 11	IPS8 Ch. 12	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7		
Forces and Motion 8-5: The student will demonstrate an understanding of the effects of forces on the motion of an object.	1. Use measurement and time-distance graphs to represent the motion of an object in terms of its position, direction, or speed.																				X	
	2. Use the formula for average speed, $v=d/t$, to solve real-world problems.																					X
	3. Analyze the effects of forces on the speed and direction of an object.														X		X					
	4. Predict how varying the amount of force or mass will affect the motion of an object.																X					
	5. Analyze the resulting effect of balanced and unbalanced forces on an object's motion in terms magnitude and direction.														X		X					
	6. Summarize and illustrate the concept of inertia.																X					
Waves 8-6: The student will demonstrate an understanding of the	1. Recall that waves transmit energy but not matter.																				X	
	2. Distinguish between mechanical and electromagnetic waves.																					X
	3. Summarize factors that influence the basic properties of waves.																					X
	4. Summarize factors the behaviors of waves.																					X
	5. Explain hearing in terms of the relationship between sound and the ear.																					

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	6. Explain sight in terms of the relationship between the eye and the light waves emitted or reflected by an object.																			
	7. Explain how the absorption and reflection of light waves by various materials result in the human perception of color.																			
	8. Compare the wavelength and energy of waves in various parts of the electromagnetic spectrum.																			