

**PA Academic Standards at the Lancaster Science Factory Exhibits  
Science as Inquiry**

Topic	Exhibit	Grades 5-7: Abbreviated Standard Statements								
		Developing Theories	Develop questions and evaluate them	Investigate as guided by scientific knowledge	Inference, prediction	Use tools to gather/analyze/interpret data	Develop descriptions, explanations, models based on scientific principles	Alternative explanations, skepticism	Use math in scientific inquiry	New ideas for study, methods, procedure
Acoustics	Physics of Sound: Bongophone			X					X	
	Physics of Sound: Drumbone			X					X	
	Whisper Dishes			X						
	Whisper Tubes			X						
Energy and Magnetism	Crank Power			X				X		
	Electrical Circuit			X	X	X	X		X	
	Electrical Conductors & Insulators			X		X	X		X	
	Light It Up			X		X		X	X	X
	Magnetic Field Visualization: At the Poles			X						
	Magnetic Field Visualization: Liquid Spikes			X						
	Magnetic Field Visualization: Seeing Magnetic Fields			X						
	Magnetic Sculpture			X	X					
Fluid Dynamics	Rockin' Radiation			X		X	X		X	X
	Airplay			X						X
	Dam the Creek	X		X	X		X	X		
	Flight Deck	X		X			X			X
	Tennis Ball Launcher			X						
	Minimal Surfaces	X		X	X		X	X	X	X
	Parachute Launcher			X			X			
Light and Vision	Water Table: Hero's Fountain	X		X						
	Water Table: Water Tornado			X			X			
	Benham Disk			X				X		X
	Bubble Mirrors			X						
	Color Filters			X						
	Kaleidoscope									
	Light Room: Color Change-Up			X	X					
	Light Room: Colored Shadows			X						
	Light Room: Lenses, Mirrors and Filters			X						
Mechanics and Motion	Light Room: Einstein's Face Illusion			X	X			X		
	Scope on a Rope			X		X			X	
	Visual Illusions	X		X				X		
	Can You Lift 100 Pounds?	X		X	X		X		X	
	Gear Power			X			X	X	X	
	Gravity Racer			X	X					
	Gravity Well	X		X	X		X	X	X	X
	Kinetic Energy Machine			X			X			X
	Leverage Learning			X						
	Newton's Cradle	X		X	X		X			
	Pendulum Booth: Compare Amplitude/Mass/Length	X		X	X				X	
	Pendulum Booth: Magnetic Pendulum			X				X		X
	Pendulum Booth: Pegboard Pendulum			X	X					
	Pendulum Booth: Pendulum Snake			X	X				X	
Puzzles and Brain Teasers	Pendulum Booth: Sand Pendulums	X		X	X					
	Race Track Table: Galileo Track	X		X						
	Race Track Table: High Road ~ Hilly Road	X		X						
	Race Track Table: High Road ~ Low Road	X		X						
	Race Track Table: Identical Tracks	X		X						
	Roller Coaster	X		X	X		X	X		X
	Super Bounce	X		X	X					X
	Cyclograph									
	Geometric Shapes				X		X	X	X	
	Hyperbolic Slot			X	X		X	X	X	
	K'NEX Building Zone						X		X	X
	K'NEX Mini-Racers					X	X	X		X
	Puzzle Table A: Magic Square									
Puzzle Table A: Crossing the River										
Puzzle Table A: Circle Packing										
Puzzle Table A: Tangram										
Puzzle Table B: Shut the Box					X		X			
Puzzle Table B: Big Magic	X				X					
Puzzle Table B: Color Match										
Puzzle Table B: Cover the Circle										
Puzzle Table C: Army Ants						X				
Puzzle Table C: Trapezoids 2 Triangle										
Puzzle Table C: Pyramid Puzzler										
Puzzle Table C: Tower of Hanoi	X				X					
Backup Puzzle: Square Deal										
Backup Puzzle: Horse & Cowboy										
Backup Puzzle: Box of Many Holes										
Backup Puzzle: Vanishing Leprechaun										
Structural Engineering	Catenary Arch			X	X		X		X	
	Ceiling Beam						X		X	
	Earthquake	X		X	X		X			X
	Truss Bridge	X		X			X	X		