

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

Topic	Exhibit	Grades K-4: Abbreviated Standard Statements						
		Fact vs. opinion	Ask questions	Compare questions based on investigations to what's already known	Conduct investigation, different questions require different investigations	Use equipment/tools/technology to gather data (using more than senses)	Use data to construct explanations and compare to current scientific knowledge	Scientists publicize results to contribute to public and scientific community
Acoustics	Physics of Sound: Bongophone		X	X			X	
	Physics of Sound: Drumbone						X	
	Whisper Dishes Whisper Tubes						X	
Energy and Magnetism	Crank Power		X	X			X	
	Electrical Circuit		X	X	X	X	X	
	Electrical Conductors & Insulators		X	X		X	X	
	Light It Up		X	X		X	X	
	Magnetic Field Visualization: At the Poles		X	X	X		X	
	Magnetic Field Visualization: Liquid Spikes		X	X	X		X	
	Magnetic Field Visualization: Seeing Magnetic Fields				X		X	
	Magnetic Sculpture		X	X			X	
	Rockin' Radiation		X	X	X	X	X	
Fluid Dynamics	Airplay		X	X	X		X	
	Dam the Creek		X	X	X		X	
	Flight Deck		X	X	X		X	X
	Tennis Ball Launcher						X	
	Minimal Surfaces				X		X	
	Parachute Launcher						X	
	Water Table: Hero's Fountain	X	X	X			X	X
	Water Table: Water Tornado		X	X			X	
Light and Vision	Benham Disk	X	X	X			X	
	Bubble Mirrors						X	
	Color Filters		X	X	X		X	
	Kaleidoscope							
	Light Room: Color Change-Up				X		X	
	Light Room: Colored Shadows						X	
	Light Room: Lenses, Mirrors and Filters		X	X	X		X	
	Light Room: Einstein's Face Illusion	X	X	X	X		X	
	Scope on a Rope		X	X		X	X	
Visual Illusions	X	X	X	X		X	X	
Mechanics and Motion	Can You Lift 100 Pounds?		X	X			X	
	Gear Power		X	X	X		X	
	Gravity Racer		X	X			X	
	Gravity Well	X	X	X			X	
	Kinetic Energy Machine						X	
	Leverage Learning	?	X	X		?	X	?
	Newton's Cradle				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	
	Pendulum Booth: Pendulum Snake						X	
	Pendulum Booth: Sand Pendulums				X		X	X
	Race Track Table: Galileo Track		X	X	X		X	X
	Race Track Table: High Road ~ Hilly Road		X	X	X		X	
	Race Track Table: High Road ~ Low Road		X	X	X		X	
Race Track Table: Identical Tracks	X	X	X	X		X		
Roller Coaster		X	X	X		X		
Super Bounce		X	X	X		X		
Puzzles and Brain Teasers	Cyclograph				X			
	Geometric Shapes				X			
	Hyperbolic Slot	X					X	
	K'NEX Building Zone				X			
	K'NEX Mini-Racers					X		
	Puzzle Table A: Crossing the River		X	X				
	Puzzle Table A: Tangram				X			
	Puzzle Table B: Shut the Box				X			
	Puzzle Table C: Army Ants		X	X				
Puzzle Table C: Tower of Hanoi							X	
Backup Puzzle: Box of Many Holes		X	X					
Structural Engineering	Catenary Arch						X	
	Earthquake		X	X			X	
	Truss Bridge		X	X	X		X	X