Third Grade

PA Academic Standards at the Lancaster Science Factory Exhibits

Technology and Engineering Education (Standard category (3.4.)) PART 1

Topic	Exhibit	A. The Scope of Technology			B. Technology and Society			C. Technology and Engineering Design		
		Strand 1. Characteristics of Technology	Strand 2. Core Concepts of Technology	Strand 3. Technology Connections	Strand 1. Effects of Technology	Strand 3. Society and Development of Technology	Strand 4. Technology and History	Strand 1. Design Attributes	Strand 2. Engineering Design	Strand 3. Research & Development, Invention & Innovation, Experimentation/Problem Solving and Troubleshooting
Acoustics	Physics of Sound: Bongophone			X						
	Physics of Sound: Drumbone			X						
	Whisper Dishes			X		X				
	Whisper Tubes			X		X				
Energy and Magnetism	Crank Power					X				
	Electrical Circuit					X				
	Electrical Conductors & Insulators					X				
	Light It Up			X	X	X				X
	Magnetic Field Visualization: At the Poles	X	X							
	Magnetic Field Visualization: Liquid Spikes	X	X							
	Magnetic Field Visualization: Seeing Magnetic Fields	X	X							
	Magnetic Sculpture	X		X						
	Rockin' Radiation	X	X	X	X					
Fluid Dynamics	Airplay		X							
	Dam the Creek	X	X	X	X	X		X	X	X
	Flight Deck			X				X	X	X
	Tennis Ball Launcher			X						
	Minimal Surfaces			X	X			X		
	Parachute Launcher			X	X implied					
	Water Table: Hero's Fountain			X						
Light and Vision	Benham Disk	X	X	X					X	
	Color Filters	X	X	X		X				
	Light Room: Color Change-Up			X						
	Light Room: Colored Shadows			X					X	
	Light Room: Lenses, Mirrors and Filters	X	X	X						
	Light Room: Einstein's Face Illusion	X	X	X						
Mechanics and Motion	Can You Lift 100 Pounds?	X	X		X					
	Gear Power	X	X		X			X	X	
	Gravity Racer	X	X	X						
	Gravity Well	X	X	X						
	Kinetic Energy Machine	X	X	X					X	
	Leverage Learning	X	X	X	X		X	X		
	Newton's Cradle			X						
	Pendulum Booth: Compare Amplitude/Mass/Length		X	X						
	Pendulum Booth: Magnetic Pendulum		X	X					X	
	Pendulum Booth: Pegboard Pendulum		X	X						
	Pendulum Booth: Pendulum Snake		X	X						
	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
	Super Bounce		X	X						
Puzzles and Brain Teasers	Cyclograph			X				X	X	
	Geometric Shapes							X	X	
	Hyperbolic Slot			X					X	
	K'NEX Building Zone							X	X	
	K'NEX Mini-Racers							X	X	X
Structural Engineering	Catenary Arch			X					X	X
	Ceiling Beam				X		X			
	Earthquake	X	X	X	X	X	X	X	X	X
	Truss Bridge	X	X	X	X	X	X	X	X	X