

Connections to Pennsylvania State Mathematics Standards: 11-12

Exhibit Module	Airplane	Airplane Shooter	Amazing Airways	Archimedes Screw	Bernoulli Fountain	Blue Screen	Brain Quiz	Catenary Arch	Crackle Screen	Echo Tube	Erosion Table	Gear Wall	Hurricane Chamber	Kapla Blocks	Laser Guitar	Lego Table	Magnet Wall	Peakaboo Window	PVC Pipe Organ	Rhythm machine	Steam Table	Video Browser	Water Table/Tide Pool	
Academic Content Standards Benchmarks 11-12																								
Measurement																								
Explain differences among accuracy, precision and error, and describe how each of those can affect solutions in measurement situations.		X												X										
Apply various measurement scales to describe phenomena and solve problems.		X												X										
Mathematical Processes																								
Evaluate a mathematical argument and use reasoning and logic to judge its validity.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Present complete and convincing arguments and justifications, using inductive and deductive reasoning, adapted to be effective for various audiences.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Understand the difference between a statement that is verified by mathematical proof, such as a theorem, and one that is verified empirically using examples or data.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Communicate mathematical ideas orally and in writing with a clear purpose and appropriate for a specific audience.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Apply mathematical modeling to workplace and consumer situations, including problem formulation, identification of a mathematical model, interpretation of solution within the model, and validation to original problem situation.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

