Or Connections to Ohio State Mathematics Standards: 8-10

Exhibit Module Academic Content Standards Benchmarks 8-10	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
Measurement																							
Solve increasingly complex non-routine measurement problems and check for reasonableness of results.		X												X		X	X						
Apply indirect measurement techniques, tools and formulas, as appropriate, to find perimeter, circumference and area of circles, triangles, quadrilaterals and composite shapes, and to find volume of prisms, cylinders, and pyramids.														X		X	X						
Write and solve real-world, multi-step problems involving money, elapsed time and temperature, and verify reasonableness of solutions		X					X																
Geometry and Spatial Sense																							
Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.																	X						
Draw and construct representations of two- and three-dimensional geometric objects using a variety of tools, such as straightedge, compass and technology.		X												X		X							
Data Analysis and Probability																							

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Design an experiment to test a theoretical probability, and record and explain results.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Make predictions based on theoretical probabilities and experimental results.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mathematical Processes																							
Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits for acceptable solution.	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 knowledge and skills routinely in other content areas and practical situations.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Recognize and use connections between equivalent representations and related procedures for a mathematical concept; e.g., zero of a function and the *x*-intercept of the graph of the function, apply proportional thinking when measuring, describing functions, and comparing probabilities.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Apply reasoning processes and skills to construct logical verifications or counter-examples to test conjectures and to justify and defend algorithms and solutions.	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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Use a variety of mathematical representations flexibly and appropriately to organize, record and communicate mathematical ideas.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X