

Standards in MESA
Sustainable Skyscraper - HS

Mathematics

A1.MP1 - Make sense of problems and persevere in solving them.

A1.MP3 - Construct viable arguments and critique the reasoning of others

A1.MP7 - Look for and make use of structure

G.N-Q.A.1: Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays, include utilizing real-world context.

G.N-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling. Include problem-solving opportunities utilizing real-world context.

G.G-GMD.A.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems utilizing real-world context

G.G-MG.A.1 Use geometric shapes, their measures, and their properties to describe objects utilizing real-world context.

G.G-MG.A.2 Apply concepts of density based on area and volume in modeling situations utilizing real-world context.

G.G-MG.A.3 Apply geometric methods to solve design problems utilizing real-world context.

ELA

9-10.SL.2 - Integrate multiple sources of information presented in diverse media and formats, evaluating the credibility and accuracy of each source.

9-10.SL.4 - Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task; use appropriate eye contact, adequate volume, and clear pronunciation.

9-10.SL.5 - Make strategic use of digital media in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Middle School

Mathematics

A1.MP1 - Make sense of problems and persevere in solving them.

A1.MP3 - Construct viable arguments and critique the reasoning of others

A1.MP7 - Look for and make use of structure

8.G.C.9: Understand and use formulas for volumes of cones, cylinders and spheres and use them to solve real-world context and mathematical problems.

7.G.B.6: Solve mathematical problems and problems in a real-world context involving area of two-dimensional objects composed of triangles, quadrilaterals, and other polygons. Solve mathematical problems and problems in real-world context involving volume and surface area of three-dimensional objects composed of cubes and right prisms.

6.G.A.4: Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques to solve mathematical problems and problems in real-world context.

ELA

6-8.SL.4: Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, appropriate vocabulary, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

6-8.SL.5: Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

6-8.SL.6: Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate