

GeoDome Workshop

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Available to Grade(s): 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8	
Art Form: Visual Art	Curriculum Focus: Math
Program Type: Grade Level Program	Integration Continuum Level: Access
# of Visits as a Grade Level Program: 1	Length of Visit (Grade Level Program): 90 min
Length Info: Not applicable	
Program Format: In-School Workshop	Program Format Info: Suitable for classrooms and grade levels. Workshop easily accommodates 40-60 students (space providing) during a 75-90 minute hands-on workshop. Over the course of a school day three GRADE levels of three classes each with 20 students each can be accommodated.
Location info: Not applicable	
Availability: September through May	
Cost Per Student (Grade Level Program):	Minimum # of Students Needed In Order to Book This Program:

\$10	20
Program Requires Prior Meeting: no	Meeting Method: In-Person , Email , Phone
Materials Arts Provider Provides: All pipes and connectors to construct 3-4 two story geodomes.	
Materials School Provides: All pre-workshop support materials are available on the website (GeodomeWorkshops.com) and can be previewed and downloaded by classroom teachers. Printing (optional) is responsibility of the classroom teacher.	
Space and/or Set Up Requirements for Program: A small gymnasium or space with 16' high ceiling. Weather permitting, the workshops can be conducted out-of-doors.	
Program Learning Objective: I can identify polygons from 3 to 10 sides. I can identify the 5 regular polyhedral shapes (tetrahedron, hexahedron, octahedron, dodecahedron, icosahedron) I can identify parts and their aspects of polygons (angles, sides) and use them to categorize the type of shape it is (equilateral, isosceles, scalene, quadrilateral, . . .) I can use materials safely and correctly to construct large scale designs that I replicate or create. I can explain why triangles are strong and how they transfer the forces of compression and tension. I can cite examples of how design affects human behavior.	
Program Description (Grade Level Program): This program actively involves students in the construction of large scale geometric shapes through hands-on use of cpvc pipe (4-5' lengths) in a large space over an 80-90 minute time span. Intermittent explanations of the materials, process, learning targets, and final creations take place throughout the session. Differentiation across grades occurs within the reinforcement of the common core / art standards specific to grade level.	
Additional Notes:	
Parent Engagement Opportunities:	
Core & National Art Standards:	
Grade 1: Mathematics: Geometry: Reason With Shapes and Their Attributes: Cluster #2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	
Grade 1: Mathematics: Geometry: Reason With Shapes and Their Attributes: Cluster #3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for	

these examples that decomposing into more equal shares creates smaller shares.

Grade 1: Visual Art: Creating: Anchor Standard 1: Generate and Conceptualize Artistic Ideas and Work. A: Engage collaboratively in exploration and imaginative play with materials. B: Use observation and investigation in preparation for making a work of art.

Grade 1: Visual Art: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work. A. Explore uses of materials and tools to create works of art or design. B. Demonstrate safe and proper procedures for using materials, tools, and equipment while making art.

Grade 2: Mathematics: Geometry: Reason With Shapes and Their Attributes: Cluster #1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Grade 2: Mathematics: Geometry: Reason With Shapes and Their Attributes: Cluster #3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Grade 2: Visual Art: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work. B. Demonstrate safe procedures for using and cleaning art tools, equipment, and studio spaces. Grade 2: Visual Arts: Creating Anchor Standard 3: Refine and Complete Artistic Work: C. Repurpose objects to make something new.

Grade 2: Visual Art: Presenting Anchor Standard 6: Convey Meaning Through the Presentation of Artistic Work. A. Analyze how art exhibited inside and outside of schools (such as in museums, galleries, virtual spaces, and other venues) contributes to communities.

Grade 3: Mathematics: Geometry: Reason With Shapes and Their Attributes: Cluster #1: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Grade 3: Visual Art: Creating Anchor Standard 1: Generate and Conceptualize Artistic Ideas and Work: A: Elaborate on an imaginative idea.

Grade 3: Visual Art: Creating Anchor Standard 1: Generate and Conceptualize Artistic Ideas and Work: B: Apply knowledge of available resources, tools, and technologies to investigate personal ideas through the art-making process.

Grade 4: Mathematics: Geometry: Draw and Identify Lines and Angles, and Classify Shapes by Properties of Their Lines and Angles: Cluster #2: Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Grade 4: Mathematics: Geometry: Draw and Identify Lines and Angles, and Classify Shapes by Properties of Their Lines and Angles: Cluster #3: Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Grade 4: Visual Art: Creating Anchor Standard 1: Generate and Conceptualize Artistic

Ideas and Work: A: Brainstorm multiple approaches to a creative art or design problem.

Grade 4: Visual Art: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work: B: When making works of art, utilize and care for materials, tools, and equipment in a manner that prevents danger to oneself and others.

Grade 5: Mathematics: Geometry: Classify Two-dimensional Figures Into Categories Based on Their Properties: Cluster #3: Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

Grade 5: Mathematics: Geometry: Classify Two-dimensional Figures Into Categories Based on Their Properties: Cluster #4: Classify two-dimensional figures in a hierarchy based on properties.

Grade 5: Visual Art: Presenting Anchor Standard 5: Develop and Refine Artistic Techniques and Work for Presentation: A: Develop a logical argument for safe and effective use of materials and techniques for preparing and presenting artwork.

Grade : Visual Art: Connecting Anchor Standard 11: Relate Artistic Ideas and Works With Societal, Cultural, and Historical Context to Deepen Understanding: A: Identify how art is used to inform or change beliefs, values, or behaviors of an individual or society.

Grade 6: Mathematics: Geometry: Solve Real-World and Mathematical Problems Involving Area, Surface Area, and Volume: Cluster #1: Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

Grade 6: Mathematics: Geometry: Solve Real-World and Mathematical Problems Involving Area, Surface Area, and Volume: Cluster #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 in the context of solving real-world and mathematical problems.

Grade 6: Visual Art: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work: A: Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design. Grade 6: Visual Art: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work: B: Explain environmental implications of conservation, care, and clean-up of art materials, tools, and equipment.

Grade 6: Visual Art: Presenting Anchor Standard 4: Select, Analyze, and Interpret Artistic Work for Presentation: A: Analyze similarities and differences associated with preserving and presenting two- dimensional, three- dimensional, and digital artwork.

Grade 7: Mathematics: Geometry: Solve Real-World and Mathematical Problems Involving Area, Surface Area, and Volume: Cluster # 5: Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

Grade 7: Mathematics: Geometry: Solve Real-World and Mathematical Problems Involving Area, Surface Area, and Volume: Cluster # 6: Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Grade 7: Visual Art: Creating Anchor Standard 1: Generate and Conceptualize Artistic Ideas and Work: A: Develop criteria to guide making a work of art or design to meet an identified goal. Grade 7: Visual Art: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work: A: Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design.

Grade 7: Visual Arts: Responding Anchor Standard 7: B: Analyze multiple ways that images influence specific audiences.

Grade 8: Mathematics: Geometry: Understand and Apply the Pythagorean Theorem: Cluster #7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Grade 8: Mathematics: Geometry: Understand Congruence and Similarity Using Physical Models, Transparencies, or Geometry Software: Cluster #5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.

Grade 8: Visual Arts: Creating Anchor Standard 1: Generate and Conceptualize Artistic Ideas and Work: B: Collaboratively shape an artistic investigation of an aspect of present-day life using a contemporary practice of art and design. Grade 8: Visual Arts: Creating Anchor Standard 2: Organize and Develop Artistic Ideas and Work: A: Demonstrate willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of art-making or designing.

Grade 8: Visual Arts: Responding Anchor Standard 7: Perceive and Analyze Artistic Work: Explain how a person's aesthetic choices are influenced by culture and environment and impact the visual image that one conveys to others.

Get to Know Our Arts Provider:



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