

Measuring Shapes

Perimeter	Area	Surface Area	Volume	Changes in Dimensions	Points for Each Level
<input type="checkbox"/> Choose four objects or rooms in your school and measure their perimeter. Present the objects or rooms and your data. (15 pts.)	<input type="checkbox"/> Create a poster that shows how to find the areas of at least three different shapes. (10 pts.)	<input type="checkbox"/> Create a mobile with different space figures, the formulas for calculating the surface area, and your results from the calculation. (15 pts.)	<input type="checkbox"/> Create a brochure that shows examples of the different solids and explains how to calculate the volume of each. (10 pts.)	<input type="checkbox"/> Create a brochure that shares how changing the measure of one side of a figure impacts its perimeter, area, and volume. (15 pts.)	10–15 points
<input type="checkbox"/> Choose six different locations on your body and measure their perimeter. Use this information to approximate the volume of material within that area of the body. (25 pts.)	<input type="checkbox"/> Create an advertisement for a product whose area is its main selling point. (25 pts.)	<input type="checkbox"/> The ancient Greeks tried to calculate the surface area of the Earth. Create a poster that shows how this calculation could be accomplished. (25 pts.)	<input type="checkbox"/> Design a board game that allows players to estimate the volume of classroom objects and provides an opportunity for them to test their estimates. (25 pts.)	<input type="checkbox"/> Create a model that shows how volume changes as perimeter changes. (20 pts.)	20–25 points
<input type="checkbox"/> Your school is thinking of putting a new fence all the way around the outside area including the fields. Determine how to calculate the amount of fencing needed and then complete the calculations. (30 pts.)	<input type="checkbox"/> You have been given the task of recarpeting your school's library. Develop a plan for how to accomplish this task. After measuring, make a proposal for the amount of carpet needed and a reasonable cost. (30 pts.)	<input type="checkbox"/> The surface area of a lake affects how quickly the water from the lake evaporates. Investigate this phenomenon and create a news report that explains this phenomena and shares calculations about a lake in your state. (30 pts.)	<input type="checkbox"/> Your teacher made the comment that more than 100,000 ping pong balls would fit in the school gym. Develop a calculation method to see if he or she is right. After taking some measurements, propose the amount the gym would hold. (30 pts.)	<input type="checkbox"/> Research at least four geometric monuments around the world. Create a poster with a picture of each and their measurements. Show how the other dimensions will change if you created a scale model no taller than 12 inches. (30 pts.)	30 points
Free Choice (prior approval) (25–50 pts.)	Free Choice (prior approval) (25–50 pts.)	Free Choice (prior approval) (25–50 pts.)	Free Choice (prior approval) (25–50 pts.)	Free Choice (prior approval) (25–50 pts.)	25–50 points
Total:	Total:	Total:	Total:	Total:	Total Grade: