

6TH AND 7TH GRADE MATH: AREA AND VOLUME

In the bustling Math classroom, 6th and 7th grade students discover the beauty and intricacy of shapes, spaces, and dimensions. Yet, beyond the equations and formulas lies a deeper understanding—one that embraces a Christian worldview. 6th and 7th grade students are learning all about area and volume, and are also uncovering connections between mathematical concepts and the Creator. Here are some examples of how critical thinking leads to the development of personal values, as illustrated by the insights of our students.

Question: How can understanding the concept of volume be used to make ethical decisions, aligning with Christian values?

Answer by Lily Hall (6th Grade):

"I can use volume and area to help make houses for people experiencing homelessness."

Explanation:

Through critical thinking, Lily recognizes that her understanding of volume can be applied to address real-world issues, aligning with the Christian value of compassion. By logically assessing the situation, she concludes that her mathematical skills can be leveraged to make a tangible difference in the lives of those in need.



Question: In what ways can we use our knowledge of area to promote sustainability and care for the environment, in line with Christian teachings about caring for God's creation?

Answer by Claire Shohmelian (6th Grade):

"Understanding volume and area allows hospitals to be made so that sick people can be helped."

Answer by Marcus Cowley (6th Grade):

"Area can be used to find the space in a National Park and the cost of preserving it (more area, more cost)."

Explanation:

By critically analyzing the implications of their mathematical knowledge, Claire and Marcus realize the potential impact on environmental sustainability and human well-being. Clarie concludes that her understanding of area and volume can contribute to the creation of healthcare facilities, while Marcus shows his understanding about the relationship between space and costs. Both of these students are aligning with the Christian value of stewardship and care for God's creation.

Question: How can the concept of volume be used to make ethical choices about the use of resources and possessions, aligning with Christian values of gratitude and moderation?

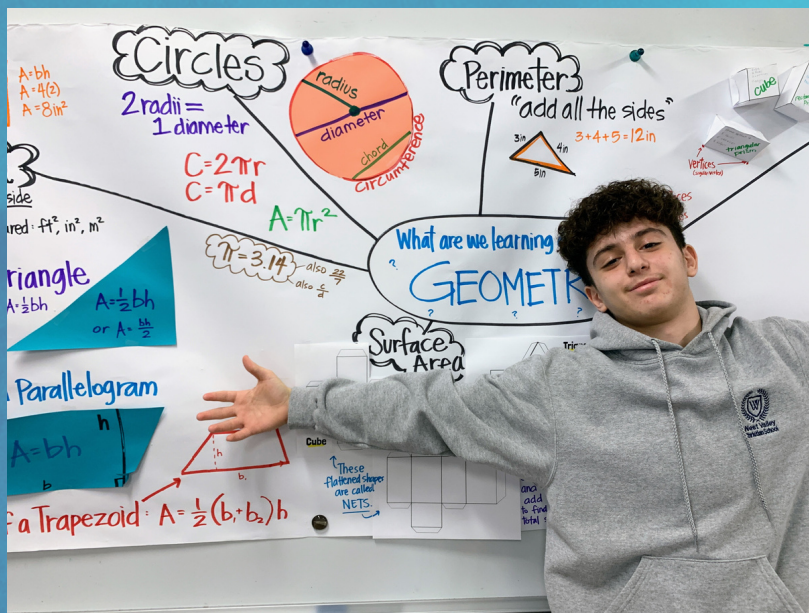
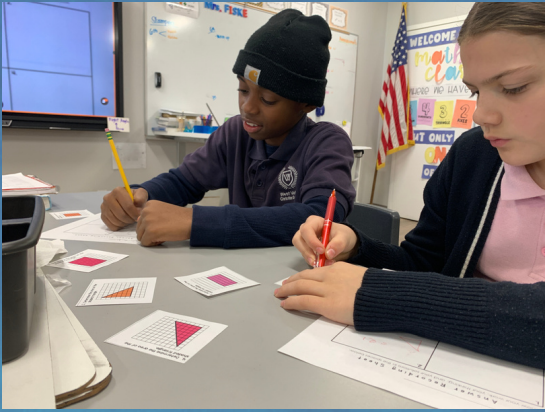
Answer by Liam Ozmolski (7th Grade):

"We can help feed homeless people by calculating the volume of food in boxes."

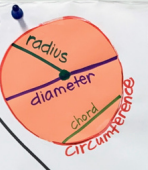
Explanation:

Through logical reasoning, Liam recognizes the practical applications of volume calculations in addressing societal needs, reflecting the Christian values of gratitude and generosity. By assessing the situation critically, he concludes that his mathematical skills can be used to promote ethical choices and serve others.

As evidenced by the insights of our students, critical thinking serves as a catalyst for the development of personal values. We empower students to connect their mathematical knowledge with their faith, leading to Christian principles. By posing thought-provoking questions and encouraging reasoned responses, students can develop a deeper understanding of their role as stewards of God's creation. Through this integration of critical thinking and personal values, students are equipped to make informed decisions, pursue justice and compassion, and live out their faith with conviction and integrity.



Circles
 $A = bh$
 $A = 4(a)$
 $A = 8w^2$
 $2 \text{ radii} = 1 \text{ diameter}$
 $C = 2\pi r$
 $C = \pi d$
 $A = \pi r^2$
 $\pi = 3.14$ also $\frac{22}{7}$ also $\frac{22}{7}$



Perimeter
"add all the sides"
 $3 + 4 + 5 = 12 \text{ in}$



What are we learning?
GEOMETRY

Surface Area

Triangle
 $A = \frac{1}{2}bh$
or $A = \frac{bh}{2}$

Parallelogram
 $A = bh$

Trapezoid: $A = \frac{1}{2}(b_1 + b_2)h$

These flattened shapes are called NETS

