

Buffalo Academy of Scholars Math Standards

(Based off of the Common Core State Standards for Mathematics)

Elementary Level (1-5)

1. Make sense of problems and persevere in solving them.
 - a. Explain to themselves the meaning of a problem and looking for entry points to its solution.
 - b. Use concrete objects or pictures to help conceptualize and solve a problem.
 - c. Check their answers to problems and ask themselves, “Does this make sense?”

2. Reason abstractly and quantitatively.
 - a. Make sense of quantities and their relationships in problem situations.
 - b. Know and flexibly use different properties of operations and objects.
 - c. Decontextualize and contextualize during the manipulation process with symbols

3. Construct viable arguments and critique the reasoning of others.
 - a. Justify their conclusions, communicate them to others, and respond to the arguments of others.
 - b. Reason inductively about data, making plausible arguments.
 - c. Construct arguments using concrete referents such as objects, drawings, diagrams, and actions.
 - d. Listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4. Model with mathematics.
 - a. Apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.
 - b. Identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas.
 - c. Analyze relationships mathematically to draw conclusions.

5. Use appropriate tools strategically.
 - a. Be familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful.
 - b. Identify relevant external mathematical resources, and use them to pose or solve problems.

6. Attend to precision.
 - a. Use clear definitions in discussion with others and in their own reasoning.
 - b. Specify units of measure, and label axes.
 - c. Give carefully formulated explanations to each other.

7. Look for and make use of structure.
 - a. Look closely to discern a pattern or structure.
 - b. Sort objects by similar characteristics.

8. Look for and express regularity in repeated reasoning.
 - a. Notice when they are repeating the same calculations over and over again to conclude their answer.
 - b. Notice regularity to complete a problem.