

DRAFT: Marblehead Community Charter Public School Criteria for Success: Math

Problem Solving:

- Make sense of problems and persevere in solving them.
- Solve problems that arise in mathematics and in other contexts.
- Apply and adapt a variety of appropriate strategies to solve problems. .
- Justify and reflect on the process for problem solving and the solution.
- Ensure solutions are accurate and precise.

Reasoning and Proof:

- Recognize reasoning and proof as fundamental aspects of mathematics.
- Make and investigate mathematical conjectures.
- Develop and evaluate mathematical arguments and proofs.
- Select and use various types of reasoning and methods of proof.
- Make sense of the quantities and their relationships in problem solving.
- Understand and use stated assumptions, definitions, and previously established results in constructing arguments.

Communication (Oral and Written):

- Organize and consolidate mathematical thinking through communication.
- Communicate and defend mathematical thinking coherently and clearly to peers, teachers, and others.
- Analyze and evaluate the mathematical thinking and strategies of others.
- Use the language of mathematics to express mathematical ideas precisely.

Connections:

- Recognize and analyze patterns/structure in order to make connections among mathematical ideas.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.
- Recognize and apply mathematics in contexts outside of mathematics.

Representation:

- Create and use representations to organize, record, and communicate mathematical ideas.
- Select, apply, and translate appropriate mathematical representations to solve problems.
- Use representations to model and interpret physical, social, and mathematical phenomena.

*Based NCTM Process Standards and Massachusetts Curriculum Frameworks