

Woodbridge Mathematics Philosophy and Curriculum

Philosophy

Mathematics philosophy in the Woodbridge School District builds on the belief that children begin school with mathematical intuition and with the ability to think mathematically. School provides a mathematical environment into which come ideas from the broader world and from children's own experiences. Children's relationships with mathematics outside of school are shaped by their experiences with mathematics in school. Through their experiences at Beecher Road School, children will develop an understanding of the world as a mathematical environment.

- Students' experiences in school will promote a positive disposition toward mathematics.
- Students' math programs will recognize and build upon the intuition and awareness with which they begin school.
- Students will have opportunities and will be encouraged to construct their own mathematical understandings.
- Students will use appropriate math tools strategically.
- Students will make use of problems and persevere in solving them.
- Students will reason abstractly and quantitatively.
- Students will construct viable arguments and critique the reasoning of others.
- Students will apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.
- Students will attend to detail and evaluate the reasonableness of their results.

Curriculum

Curriculum templates are being developed at all grade levels with support from a consultant from ACES. Curriculum templates include:

- Suggested pacing (days/weeks)
- Essential questions (big ideas)
- Background information including any relevant changes from past practice
- Correlating standards from the grade level before, the current grade level and the next year's grade level (ie: a grade 3 curriculum template will include all of the standards associated with a unit for grades 2, 3 and 4)
- Explanations and examples for the standards and the standards for mathematical practices
- What students should KNOW and DO throughout the unit as well as what they should UNDERSTAND
- Possible misconceptions students might encounter
- Vocabulary and literature connections for the unit
- Lessons to support the learning along with all associated links and resources
- Resources to support extension/enrichment activities as well as extra practice
- Formative and summative assessments
- Works cited

Supporting Your Child's Math Education at Home

- Encourage your children to think of themselves as mathematicians. Acknowledge your own enthusiasm for mathematics.
- Try not to allow your children to convince themselves that they are unable to do math. Their confidence is critical to their success in mathematics.
- If your children don't know their math facts, work with them regularly at home, in the car, or at other appropriate times to memorize these facts. They provide the foundation for work in mathematics.
- Remember that mathematics instruction is different now than it was when you were in school. At first, the language and approach may be uncomfortable for you. Try not to struggle to assist when you don't understand what is being asked. Instead, encourage your children to formulate questions that they can bring to the teacher.
- There are many ways to incorporate math into daily life. While shopping you may ask questions like, "If one box of cereal costs \$3.00, how much money would two boxes cost?" While driving, you could say, "We're at exit 24 and we need to go to exit 29. How many exits to go?" At home, you can discuss fractions when you are cooking by looking at the marks on a measuring cup. You can reinforce time concepts by asking your child to tell you when the clock says a certain time. As you become more comfortable using math language and engaging your children in mathematical discussions you will find these kinds of conversations are easy to do and can be fun as well!