Illustrative Mathematics®

LEARN MATH FOR LIFE

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IM Curriculum

Information for Families

We'd like to introduce you to the Illustrative Mathematics curriculum. This problem-based curriculum makes rigorous elementary school mathematics accessible to all learners.

What is a problem-based curriculum?

In a problem-based curriculum, students spend most of their time in class working on carefully crafted and sequenced problems. Teachers help students understand the problems, ask questions to push their thinking, and orchestrate discussions to be sure that the mathematical takeaways are clear. Learners gain a rich and lasting understanding of mathematical concepts and procedures and experience applying this knowledge to new situations. Students frequently collaborate with their classmates—they talk about math, listen to each other's ideas, justify their thinking, and critique the reasoning of others. They gain experience communicating their ideas both verbally and in writing, developing skills that will serve them well throughout their lives.

This kind of instruction may look different from what you experienced in your own math education. Current research says that students need to be able to think flexibly in order to use mathematical skills in their lives (and also on the types of tests they will encounter throughout their schooling). Flexible thinking relies on understanding concepts and making connections between them. Over time, students gain the skills and the confidence to independently solve problems that they've never seen before.

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What supports are in the materials to help my student succeed?

- Warm-ups: Each lesson begins with a warm-up routine that is an invitation to the mathematics of the lesson. The same routines are used throughout the entire curriculum, and students become very familiar with the structure of the routines. During warm-up routines, all students are encouraged to share their developing ideas, ask questions, and respond to the reasoning of others.
- Activity and Lesson Syntheses: Each activity and lesson includes a synthesis that provides an opportunity for students to discuss key mathematical ideas of the activity/lesson and incorporate their new insights into

their big-picture understanding.
- Section Summaries: Each section is followed by a section summary that describes the key mathematical ideas discussed in the section. The summaries include visuals and worked examples of problems when relevant. Students can use the section summaries to review the topics covered in the section.
- Representations: There are a limited number of representations thoughtfully introduced in the curriculum and students are encouraged to use the representations that make sense to them. These representations help students develop an understanding of the content as well as solve problems.
- Family Support Materials: Included in each unit, is an overview of the unit's math content and questions to ask or problems to work on with your student.

What can my student do to be successful in this course?

Learning how to learn in a problem-based classroom can be a challenge for students at first. Over time, students gain independence as learners when they share their rough drafts of ideas, compare their existing ideas to new things they are learning, and revise their thinking. Many students and families tell us that while this was challenging at first, becoming more active learners in math helped them build skills to take responsibility for their learning in other settings. Here are some ideas for encouraging your student:

- If you're not sure how to get started on a problem, that's okay! What can you try? Could you draw a picture or diagram? Could you make a guess? Could you describe an answer that's definitely wrong?
- If you're feeling stuck, write down what you notice and what you wonder, or a question you have, and then share that when it's time to work with others or discuss.
- Your job when working on problems in this class is to come up with ideas and share them. You don't have to be right or confident at first, but sharing your thinking will help everyone learn. If that feels hard or scary, it's okay to say, "This is just an idea . . ." or "I'm not really sure but I think . . ."
- Whether you're feeling stuck or feeling confident with the material, listen to your classmates and ask them about their ideas. One way that learning happens is by comparing your ideas to other people's ideas.

We are excited to be able to support your student in their journey toward knowing, using, and enjoying mathematics.

Key Structures in This Course ›

® **What is IM Certified™?**