# imagine learning

imagine

# **Program Overview**

Grades 6–8



# Authors, Research, and Certified Partnership

The high-quality Illustrative Mathematics (IM) curriculum was authored by Dr. Bill McCallum and a team of math leaders focused on improving student outcomes in mathematics. The problem-based instructional design is built on best practices and research principles from NCTM, National Research Council, Smith & Stein, and others. Imagine IM<sup>®</sup> incorporates the latest IM v. 360 curriculum update and has been optimized by Imagine Learning for engagement, accessibility, and usability.

# **Premium Certified Partnership**

Imagine Learning is a premier IM Certified Partner. The IM Certified designation assures that Imagine IM adheres to IM's philosophy and has been developed, reviewed, and approved by Illustrative Mathematics. The Imagine IM instructional experience aligns with the 2015 Every Student Succeeds Act (ESSA) Theory of Change for effective evidence-based programs. The goal is to deliver an engaging and easy-to implement instructional solution that leverages the power of high-quality curricula. The result? Comprehensive support for teachers and positive learning outcomes for students.





"As a premier partner, Imagine Learning embraces the rigor and coherence of the IM curriculum with a keen focus on effective classroom implementation. Imagine IM is the next step in achieving our mission of giving all students equitable access to grade-level mathematics."

**Dr. Bill McCallum,** Co-Founder and CEO of Illustrative Mathematics

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# Imagine IM for Grades 6–8

The certified Illustrative Mathematics curriculum optimized for engagement, accessibility, and usability

- + Students solve problems, share ideas, learn from mistakes, and thrive in a vibrant math community.
- + Teachers hone their craft as master facilitators with classroom-ready print and digital resources.
- Imagine Learning partners with schools and districts for seamless integration, effective implementation, and sustainable professional learning.

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# **Instructional Design**

The instructional design of the materials supports all learners through a coherent progression of mathematics based on content standards, mathematical practices, and research-based learning trajectories. This model embraces a multidimensional approach that is framed by interweaving the why, how, and what of mathematics.

Grades 6–8 offers two pathways: a traditional, three-year sequence comprising the Grades 6, 7, and 8 courses; and a two-year accelerated sequence that compresses three years of mathematics into the Accelerated 6 and 7 courses, allowing students to begin high school mathematics in eighth grade, while still following the coherent progression of the mathematics.

Each activity and lesson is part of a mathematical story across units and grade levels. This coherence allows students to view mathematics as a connected set of ideas that make sense together.

	Invitation to the mathematics	Ø	Deep study of concepts and procedures	¢	Consolidating and applying
Unit Level	Introductory lesson	\$	Instructional lessons	\$	Culminating lesson
Lesson Level	Warm-up	\$	Classroom activities	0	Synthesis and cool-down
Activity Level	Launch	\$	Work time	\$	Synthesis

# The overarching design structure at each level is as follows:

# Units

Fach unit starts with an

prior understandings.

invitation to the mathematics.

accessible entry point for all

students and offer teachers the

opportunity to observe students'

#### Lessons

Each lesson starts with a warmup to activate prior knowledge and set up the day's work. The first few lessons provide an

# Instructional Activities

This is followed by instructional activities in which students are introduced to new concepts, procedures, contexts, or representations, or make connections between them







# **Activities and Independent Work**

Each activity starts with a **launch** that gives all students access to the task.

Next, **independent work time** allows them to grapple with problems individually before working in small groups.

This picture represents a hanger that is balanced because the weight on each side is the same.



The activity ends with a **synthesis** to ensure students have an opportunity to consolidate their learning by making connections between their work and the mathematical goals. Included in the independent work are two sets of practice problems that can be assigned by paper and pencil or digitally.

# Let's examine equations that represent each hanger.

How are the different equations for Hanger A related?
How are the different equations for Hanger B

related?

# Synthesis and Cool-down

The lesson ends with a synthesis to consolidate understanding and make the learning goals of the lesson explicit, followed by a cool-down to apply what was learned.



# **Guiding Principles across Grades 6–8**

# Learning Mathematics by Doing Mathematics

A true problem-based instructional framework supports teachers in structuring lessons so students are the ones doing the heavy lifting to learn the mathematics. The activities and routines in Imagine IM are designed to give teachers opportunities to see what students already know — what they can notice and figure out — before having concepts and procedures explained to them.

## **Balancing Rigor**

Three aspects of rigor are essential to mathematics: conceptual understanding, procedural fluency, and the ability to apply these concepts and skills to mathematical problems with and without real-world contexts. These aspects are developed together to support student understanding.

# **Establishing Norms**

Structures around doing math together and sharing understandings play an important role in the success of a problem-based curriculum. Students must take risks, listen to each other, disagree respectfully, and honor equal time when working together in groups. Establishing norms helps teachers cultivate a community of learners where visible thinking is both expected and valued.





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## **Instructional Routines**

Instructional routines create structures so that all students can engage in and contribute to mathematical conversations. Throughout the curriculum, routines are introduced in a purposeful way within and across grade levels, to build a collective understanding of their structure. Students learn to endure and persevere in their learning as these routines are developed.

## **Use of Digital Tools**

The curriculum empowers students to become fluent users of digital tools who produce representations, solve problems, and communicate their reasoning. The digital platform embeds Desmos, GeoGebra, and other interactive tools at the point of use to increase understanding and engagement.





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# **Teacher Experience**

Imagine IM 's enhanced resources are specially tuned to support teachers in planning and facilitating lessons across the various instructional environments. Imagine IM offers a premium classroom solution you won't find anywhere else.

# Implementation that Fits Teachers' Needs

Teachers can better hone their craft as master facilitators when they have high-quality, point-of-use supports that save them time and offer implementation guidance.

## Print

Exclusive print versions of Teacher Guides and Student Workbooks connect directly to the digital components, ensuring that the integrity of the rich Illustrative Mathematics content is maintained in any classroom implementation model.



QR codes are embedded at point of use within the Teacher Guide, providing a seamless connection between the print and digital components for simplified implementation.

# Digital

A comprehensive digital platform with interactive tools and features for multidimensional teaching.



# Multimedia

Engaging media content with Inspire Math videos convey topics in real and relevant contexts outside of the classroom.



# **Professional Learning**

Embedded professional learning with Learning Narrative videos accessible directly from both the print Teacher Guides and in the digital platform.



# Interactive Teaching Tools

Live Learn allows for synchronous instruction virtually within the platform. Teachers can transition from asynchronous work time to a live session with one click. Student progress is visible in the moment.

The on-demand feature makes visibility of student work and timely feedback more efficient.



Annotation Tool — daily instruction comes alive through the ability to write, draw, model, and share student work directly on the lesson cards. Teachers can annotate in lesson plan and full-screen views.



# **Flexibility and Personalization**

Editable digital lesson cards can be projected or assigned to students, which allows options to meet the needs of all students. Lessons can be copied, edited, and customized as needed.

#### Formative Assessment Opportunities

Teachers are equipped to monitor student progress through digital task statements, section checkpoints, and cool-downs. These provide real-time feedback and data to inform instructional decisions.

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# **Student Experience**

Through a rigorous problem-based design and engaging resources, Imagine IM builds a community where all students can develop confidence and become empowered with skills to apply throughout college, careers, and beyond.

Students are immersed in the curriculum through digital, print, and interactive materials.

# **Make mathematics** meaningful and relevant

Students are natural mathematicians: good at thinking about problems, sharing ideas, learning from mistakes, and being curious about others' thinking. Imagine IM is full of such opportunities — valuing and inspiring students and encouraging them to be more productive.

Your teacher will assign to you either Problem A or Problem B. Work together as a group to answer the questions. Be prepared to create a visual display to show your reasoning with the class.

Problem A: A piece of rope is 5.75 meters in length.

• • • 10 14.2 Activity: Applying Division with Decimals

1. If it is cut into 20 equal pieces, how long will each piece be?

2. If it is cut into 0.05-meter pieces, how many pieces will there be?

## OPTIONAL ACTIVITY

:

Launch continued

Assign each group Problem A or B
 and have students circle the

Teaching notes

- problem they are assigned.
  Give groups 5–7 minutes to work on their assigned problem.
  If time permits, consider giving
- students access to tools for
- Have them create a simple visual display.
  Have them create a simple visual display to showcase their solutions and prepare a short presentation in which they explain their reasoning ind calculati
- Give students 2–3 minutes to review one another's work followed by groups' presentation

#### of their disp Student response

Problem A:

- 1. 0.2875 meters. Each piece of rope is 5.75+20 meters long. This is a "how many in each group" division problem with the groups being the
- pieces of rope and the "how much

# Deep focus on conceptual understanding, procedural fluency, and application

Instructional routines, representations, and math tools are carefully utilized to help students develop an understanding of concepts and procedures.





# **Inspire Math Videos**

Inspire Math videos are short, engaging videos that showcase the math for each unit in a relevant and often unexpected real-world context to help spark curiosity. The chronological viewing structure in each unit consists of an introduction to the context, followed by reinforce and review opportunities later in the unit, following a similar structure to that of the overall instructional design.



Inspire Math videos are available in both English and Spanish.

# Embedded opportunities provide active discussion and reflection and foster the mathematical practices

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									Show
o make	a shade of p	aint called j	asper green	, mix 4 quar	ts of green p	aint with $\frac{2}{3}$	cups of bla	ck paint. How	v much gree
aint sha	ould be mixed	f with 4 cup	s of black pe	aint to make	jasper gree	1?			
rag and	drop the co	rrect choice	to complet	e the senter	ice.				
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# Students engage with the content through digital, print, and interactive resources



# **Classroom Resources in Action**

Through a rich and comprehensive blend of digital, print, and hands-on materials, Imagine IM makes the curriculum come alive in every classroom.

Each unit begins with an Inspire Math video to introduce the content. These provide an opportunity to preview what students will learn through an authentic context.

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Inclusive warm-ups build on students' lived experiences and cultures. Open-ended instructional routines invite all students into the math conversation. Teachers can facilitate wholegroup, small-group, and partner pairs for the discussion.

Teaching support is provided in both the print and digital resources for guiding questions, language development, advancing student thinking, and synthesizing understanding.



Each activity in Imagine IM encourages further exploration and discovery. Activities invite student questions and conjectures via small groups. They make work and thinking a visual process through a variety of representations and examples. The Activity Synthesis consolidates all of the student thinking





Teachers can use a combination of both print and online resources to meet the needs of their classrooms.



Embedded QR codes link directly to digital resources for a seamless integration between print and digital.

Cool-downs provide teachers with valuable formative assessment information for student progress toward learning goals. Teacher supports are available to remediate as necessary.



Teachers can administer digital cool-downs and see student data.



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# **Equity and Access**

There are three major design principles to support all learners:

- Provide access for all
- Presume competence
- Provide a strength-based approach

## **Embedded Structures for Endurance and Perseverance**

In Imagine IM, careful attention is given to the complexity of contexts, numbers, and required computation, as well as to students' potential familiarity with given contexts and representations.

## Access for Students with Diverse Abilities

Embedded supports for students with diverse abilities are found in the teaching notes of each lesson. These supports are designed using the Universal Design for Learning (UDL) guidelines and align to one of the three principles of UDL: engagement, representation, and action and expression.

#### Access for Students with Diverse Abilities

#### Action and Expression: Internalize Executive Functions

To support working memory, provide students with access to sticky notes or mini whiteboards. They can trace the square composed of 2 medium triangles and use it as a reference for 1 square unit. Supports accessibility for: Memory, Organization

# **Multilingual Learners**

Embedded supports for multilingual learners are also found in the teaching notes. Mathematical Language Routines (MLR) are based on the UL/SCALE framework developed at Stanford University. The eight consistent routines simultaneously support students' learning of mathematical practices, content, and language.



# **Building on Student Thinking**

Lessons include specific practice problems called explorations designed for students who are ready for more of a challenge.



#### Building on Student Thinking

Students may not be sure which angle to measure. They may measure the acute angle between Shape A and Shape B. Ask these students to trace Shape A on tracing paper and rotate it by that angle to see that this does not give Shape B.

# Culturally Responsive Teaching and Learning

The materials are inclusive of various cultures and ethnicities and are free from bias in portraying ethnic groups, gender, age, class, cultures, religion, and people with disabilities. Imagine IM addresses racial, cultural, and religious bias in the following ways:

- The materials contain a racial and ethnic balance in main characters and illustrations.
- A variety of racial, ethnic, and cultural groups are central figures in texts and illustrations.
- Figures within various racial, ethnic, and cultural groups reflect qualities such as leadership, intelligence, imagination, and courage.
- The materials provide an opportunity for a variety of racial, ethnic, and cultural perspectives.
- Biographical or historical content includes figures from various racial, ethnic, and cultural groups and their discoveries and contributions to society.





## Home Connections

Each unit includes a guide that explains the key ideas and concepts in family-friendly language. These pages are meant to create a stronger school-home connection and empower parents and guardians to support students at home. Additionally, parents and caregivers have access to family support videos that include prior learning, vocabulary explanations, math in pictures, and an easy-to-implement activity.

Family Support videos provide the background a family may need to help their child, as well as access to key concepts and ideas in both English and Spanish. Additionally, they include prior learning, vocabulary explanations, math in pictures, and an easy-to-implement activity.

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Actions	~					
-	scluded in					
This unit cove	ers three big topics. Re	ed about each topic and fi	nd a tack or activity to	complete with your student below.		
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Depres	onting Dress	artianal Delat	in this set	th Tables		
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# Assessment

# Measure understanding and meet learning goals

Imagine IM offers opportunities for both formative and summative assessment that empower teachers to measure student understanding and progress toward learning goals.

Digital assessment resources include new-generation item types including multiple choice, multiple select, and other tech-enhanced items.

## **Formative Assessment**

The Illustrative Math instructional design offers regular, embedded options for monitoring student progress and providing constructive feedback.

Each unit begins with a **Check Your Readiness** diagnostic assessment of concepts and skills that are prerequisites to the unit. Teachers can use these to identify students with particular below-grade needs or topics to carefully address during the unit.

B. 25% of a number         •           C. 50% of a number         •           D. 75% of a number         •           E. 80% of a number         •           F. 100% of a number         •	A. 10% of a number	
C. 50% of a number D. 75% of a number E. 80% of a number F. 100% of a number	B. 25% of a number	
D. 75% of a number         •	C. 50% of a number	
E. 80% of a number	D. 75% of a number	
F. 100% of a number	E. 80% of a number	
	F. 100% of a number	

**Learning goals** invite students into the work of that day.

Let's solve problems involving proportional relationships using tables.

Teachers and students can use **learning targets** as formative assessment prompts for a reflection or self-assessment as part of a lesson synthesis.

I understand the terms proportional relationship and constant of proportionality. I can use a table to reason about two quantities that are in a proportional relationship.

Each lesson includes a **cool-down** to assess that day's lesson.

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## Summative Assessment

Each unit includes an end-of-unit **written and digital assessment** to assess what students have learned at the conclusion of the unit. In longer units, a **mid-unit assessment** is also available.



**Digital assessments** allow students to access, record, and submit their questions and answers for a variety of technology-enhanced item types including multiple choice, multiple select, drag-and-drop, cloze, graphing, labeling, constructed response, short essay, and drawing types.

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All **summative assessment** problems include a complete solution and standard alignment. Multiple-choice and multiple response problems often include a reason for potential errors.

A	12 teaspoons	
в	14 teospoons	
С	18 teaspoons	
D	26 teaspoons	

# **Digital Practice**

Additionally, a set of cumulative practice problems is provided for each lesson that can be used for homework or practice.



# **Data and Reporting**

Real-time reporting is available for teachers to give them actionable data. Class performance reports show assignment scores and item analysis and year-over-year retention data.

Drill downs allow teachers to analyze student work for open-ended item types.

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# **Program Components**

Imagine IM offers a full suite of print, digital, and hands-on components that are ready to go and designed to meet the needs of educators and students.

# **Teacher Components\***

#### **Print**

#### **Teacher Course Guide**

Includes grade-level curriculum information about the instructional design, guiding principles, meeting the needs of all learners, and assessment. This component highlights pacing and coherence across the year.

#### Teacher Guides — 9 spiral-bound volumes

**GRADE 6 Pacing Guide** 

Antonio in Antonio Interest

Includes full lessons with teaching support and student page reduxes. Provides QR codes to digital resources at point of use in each unit, section, and lesson.



Grade 6 covers shown. Other grade levels have the same component configuration.

### Digital

The Imagine IM digital platform includes PDFs of all print components, teacher notes, classroom-ready lesson cards with teacher annotation, assignable lessons and assessments, student and teacher videos, family support materials, extension problems, digital interactives, digital tasks and assessments, digital practice sets, PLCs, reports, and more!

### **Manipulative Kits**

Classroom manipulative kits for each grade level.

\* Spanish translations available

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# Student Components\*

## Print

#### Consumable full-color Student Workbooks (units 1–9)

Include full lessons with learning goals, warm-ups, activities, and practice problems with space for student thinking and work. Provide QR codes to digital family resources at point of use.



## Digital

The Imagine IM digital student license includes access to Student Workbook content, family support materials, interactive lessons, videos, digital interactives (including Desmos and GeoGebra), digital task statements, digital practice sets, digital cool-downs, digital assessments, and more!





#### \* Spanish translations available

# **Professional Learning**

Imagine IM professional learning offerings support teachers, coaches, and administrators in effectively implementing the curriculum and platform with integrity throughout their program adoption.

There are virtual and in-person options to support the unique needs of your school or district. The workshop modules allow participants to learn, apply, and synthesize their understandings.

Ongoing and self-directed professional development is also available within the digital platform for use by teachers. Included are learning narrative videos that give teachers insight into the unit objectives, models, and possible student errors and misconceptions, plus lesson example videos that show authentic Imagine IM classrooms, teachers, and students in action.



# imagine Imagine IM is the certified Illustrative Mathematics curriculum optimized for engagement, accessibility, and usability.



imaginelearning.com/imagine-im 877-725-4257 • solutions@imaginelearning.com