

Imagine MyPath K–12

Grade-level Prioritization and Adaptivity



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A growing number of educators have turned to technology to provide personalized interventions that meet the unique learning needs of students in their classrooms (Shemshack et al., 2021). Imagine MyPath, a next-generation learning environment for students in Grades K–12, has revolutionized the student experience. The student-centered design inspires learning breakthroughs by personalizing instruction and providing a strategically-designed sequence of adaptive lessons. These lessons prioritize essential grade-level reading and mathematics skills to maximize learning. Through its unique cycle of assessment, assignment, adaptivity, analysis, and action, Imagine MyPath helps all students reach their full potential.



Imagine MyPath prioritizes grade-level reading and mathematics content and adapts instruction to optimize student learning.

The Research

When educators **prioritize essential grade-level concepts and skills**, students have opportunities to develop a deeper understanding of content. Emphasizing depth of learning, rather than breadth of learning, is more effective than addressing every concept or skill within a standard (Ainsworth, 2013). The Council of the Great City Schools (2020) endorsed this idea, stating, “Prioritizing content and learning does not mean that students will be deprived of critical knowledge, or that their education will be any less diverse or rich” (p. 5). Rather, instruction should reinforce skills that elevate the most important reading and mathematics concepts at each grade level to accelerate learning or address areas of interrupted learning.

Although prioritization is critical, it is insufficient for driving student success. Classrooms are becoming increasingly academically diverse, making each student’s experience in school unique. **Adaptive instruction**, or modifying the content and presentation of material, personalizes learning, promotes a deeper transfer of learning (Clark & Mayer, 2016; Fuchs et al., 2017; Parsons & Vaughn, 2016; Vagle, 2016) and can meet the ongoing challenge of inclusive teaching (Westwood, 2018). In fact, research shows students who receive adaptive instruction demonstrate significantly greater gains in reading and mathematics than those who receive nonadaptive methods of instruction (Aleven et al., 2017; Alshammari et al., 2016; Ma et al., 2014; VanLehn, 2011; Ysseldyke & Tardrew, 2007). This instructional approach streamlines success by focusing on grade-level content, essential skills, and students’ strengths.

How Imagine MyPath Integrates Research into Practice

Students bring a diverse set of knowledge, experiences, and skills to a classroom. To meet the needs of all learners, teachers need access to technology and offline resources that support these efforts. Imagine MyPath provides students in Grades K–12 with a next-generation learning environment that not only prioritizes lessons and activities based on their skill level, but also on what they need to succeed with grade-level work.

In Imagine MyPath, Smart Sequencer™ technology creates an individual learning path (ILP) for each student. These ILPs deliver an adaptive sequence of lessons so students can effectively catch up, keep up, and get ahead. Program designers utilize research, standards, and coherence mapping (or the underlying idea that concepts across reading and mathematics connect within and across grades) to identify the most essential grade-level skills. The coherence map integrates with Smart Sequencer™ technology so each student's ILP addresses learning gaps and pinpoints prerequisite skills needed to master grade-level standards. If a student is performing significantly below grade level, it is possible they are having trouble with a broader range of concepts. In this case, the student's ILP maximizes learning by organizing essential skills into progressions, which allows the student to comprehensively focus on fewer skills and propel them toward grade-level content.

READING INSTRUCTION

In reading, word-recognition skills are considered essential for reading comprehension (Hoover & Tunmer, 2020). However, students who have not developed strong reading foundations have trouble transitioning from *learning to read* to *reading to learn*. Imagine MyPath's Early Literacy Bundles support struggling readers by providing explicit instruction on reading foundations (phonics, fluency, and vocabulary) to help them develop the essential skills needed to comprehend grade-level texts. There are six versions of the Early Literacy Bundles, each purposefully designed to support students who are performing two or more grades below their current grade level (Figure 1). Consider a fourth-grade student who is struggling to break words into syllables and sound out unfamiliar two-syllable words (Grades K–2 skill). This student would receive Bundle 2, which contains lessons that emphasize phonics.

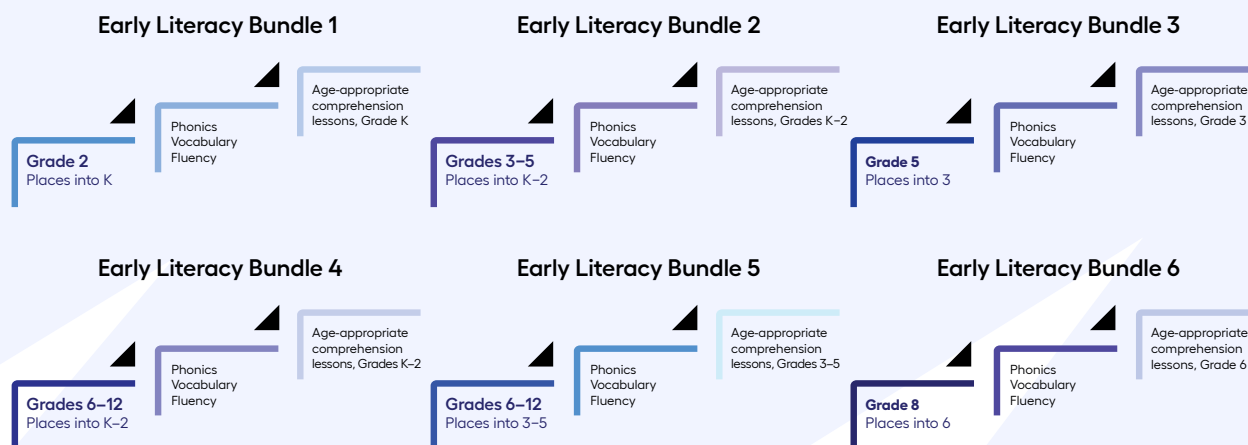


Figure 1. Imagine MyPath's Early Literacy Bundles.

MATHEMATICS INSTRUCTION

In mathematics, lessons incorporate rigorous mathematics standards and practices to help students develop a conceptual understanding of number and operations, algebra, measurement and data, and geometry. Figure 2 displays a granular view of how a student's ILP prioritizes content for a Grade 9 student performing three grade levels below in algebra. This student's ILP progressions review prerequisite skills and become more refined and efficient over time to accelerate growth and grade-level proficiency.

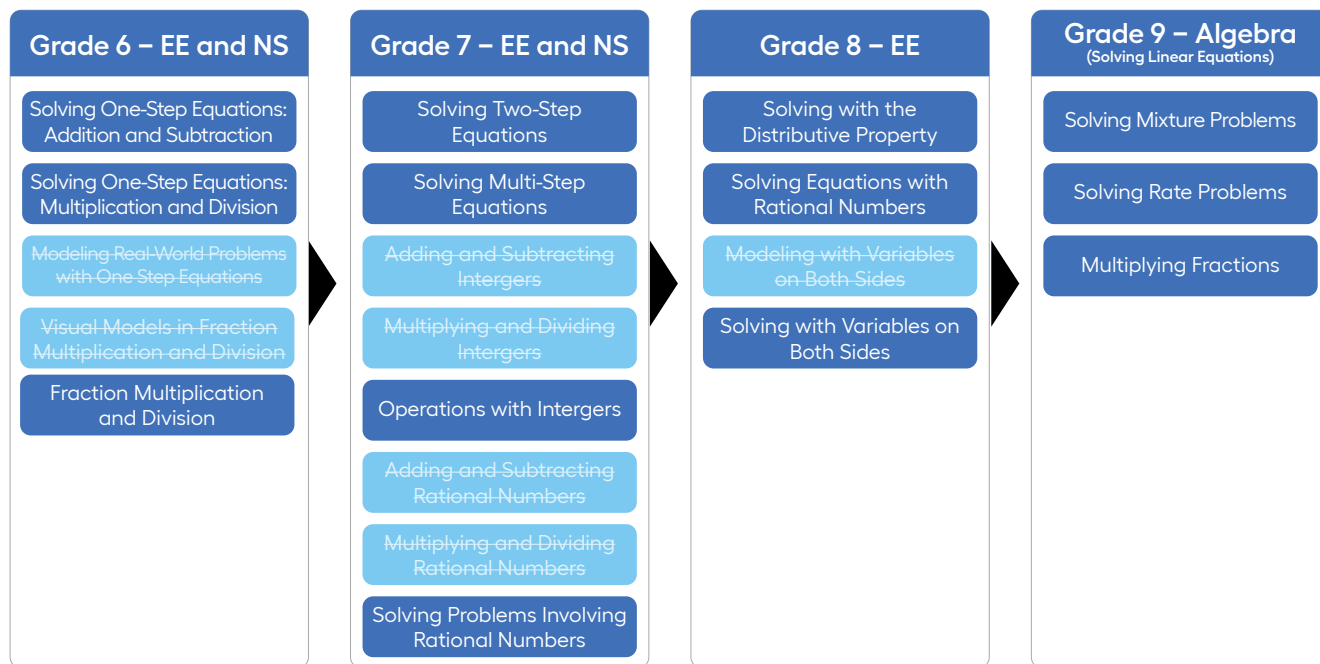


Figure 2. Student's ILP adapts to prioritize grade-level mathematics skills

Imagine MyPath also provides adaptive instruction within each lesson. These lessons follow a similar instructional framework. Lessons provide explicit instruction on a concept or skill, incorporate opportunities for guided and independent practice, integrate three formative assessments (known as Mastery Checks), and offer offline printable resources to reinforce or reteach a skill. The graphic in Figure 3 shows how an Imagine MyPath K–5 lesson adapts to students' knowledge within a lesson.

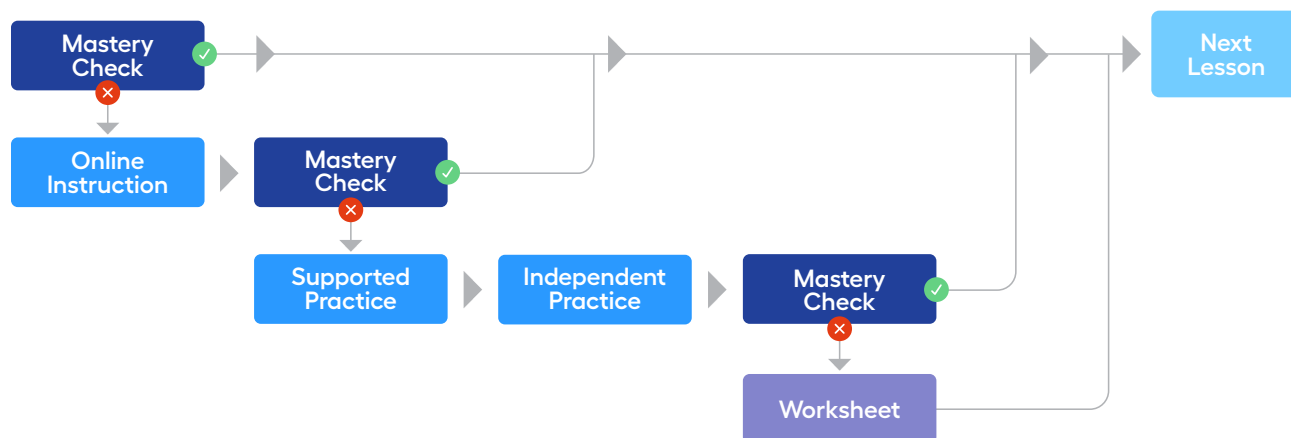
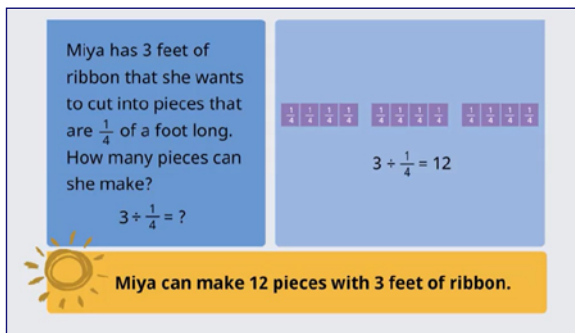


Figure 3. Imagine MyPath K–5 adaptivity within a lesson.

AGE-APPROPRIATE LESSONS

A notable feature of Imagine MyPath is the program's ability to provide instruction on the same skill to students across Grades K–12. Yet, the presentation style of the skill is differentiated to reflect the students' chronological age. For instance, students in upper grade levels who require support developing skills from lower grade levels receive modified, age-appropriate material that is commensurate with their maturity level. Figures 4 and 5 both teach the same mathematics skill, dividing by a unit fraction. However, the presentation style of Figure 4 is designed for a Grade 3–5 student, whereas Figure 5 is modified for a Grade 6–12 student. Notice the differences in the visual models, vocabulary, real-world context, colors, and overall layout.



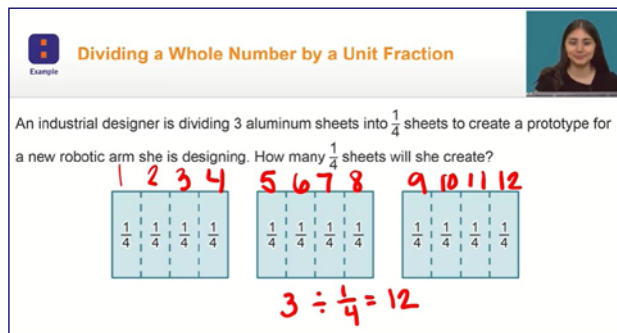
Miya has 3 feet of ribbon that she wants to cut into pieces that are $\frac{1}{4}$ of a foot long. How many pieces can she make?

$$3 \div \frac{1}{4} = 12$$

$3 \div \frac{1}{4} = ?$

Miya can make 12 pieces with 3 feet of ribbon.

Figure 4. Grades 3–5 lesson.



Dividing a Whole Number by a Unit Fraction

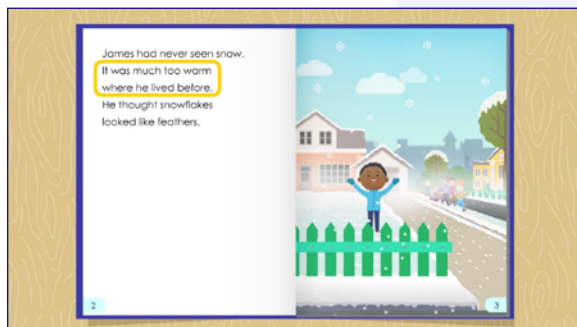
Example

An industrial designer is dividing 3 aluminum sheets into $\frac{1}{4}$ sheets to create a prototype for a new robotic arm she is designing. How many $\frac{1}{4}$ sheets will she create?

$$3 \div \frac{1}{4} = 12$$

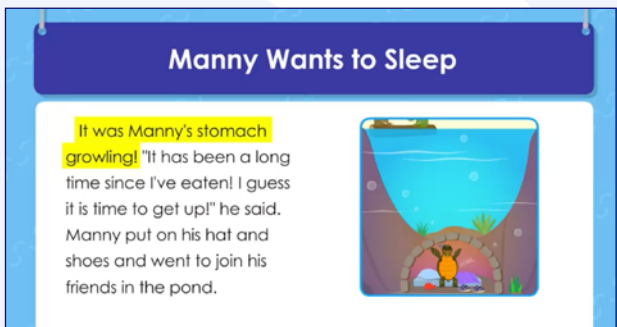
Figure 5. Grades 6–12 lesson.

Relatedly, the presentation styles of reading and mathematics lessons adapt according to the students' grade level. For instance, in reading, there are four different presentation styles of on-screen text (Figures 6, 7, 8, and 9). Each style is age-appropriate (e.g., image use, font size, organization) and mimic books and curricula students would typically see at that grade level.



James had never seen snow. It was much too warm where he lived before. He thought snowflakes looked like feathers.

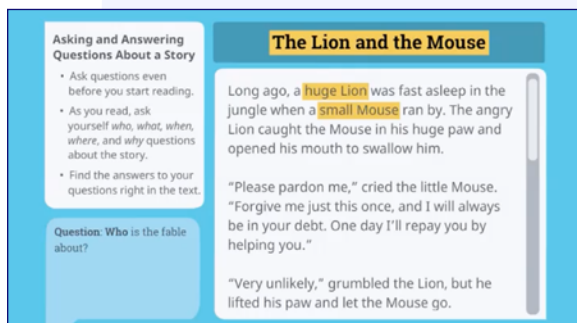
Figure 6. Reading lesson (Grades K–1).



Manny Wants to Sleep

It was Manny's stomach growling! "It has been a long time since I've eaten! I guess it is time to get up!" he said. Manny put on his hat and shoes and went to join his friends in the pond.

Figure 7. Reading lesson (Grade 2).



The Lion and the Mouse

Long ago, a huge Lion was fast asleep in the jungle when a small Mouse ran by. The angry Lion caught the Mouse in his huge paw and opened his mouth to swallow him.

"Please pardon me," cried the little Mouse. "Forgive me just this once, and I will always be in your debt. One day I'll repay you by helping you."

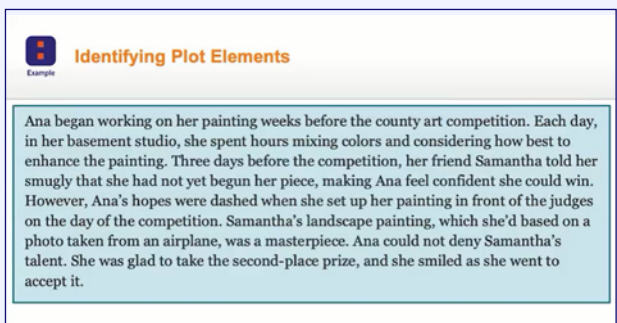
"Very unlikely," grumbled the Lion, but he lifted his paw and let the Mouse go.

Asking and Answering Questions About a Story

- Ask questions even before you start reading.
- As you read, ask yourself who, what, when, where, and why questions about the story.
- Find the answers to your questions right in the text.

Question: Who is the fable about?

Figure 8. Reading lesson (Grades 3–5).



Identifying Plot Elements

Example

Ana began working on her painting weeks before the county art competition. Each day, in her basement studio, she spent hours mixing colors and considering how best to enhance the painting. Three days before the competition, her friend Samantha told her smugly that she had not yet begun her piece, making Ana feel confident she could win. However, Ana's hopes were dashed when she set up her painting in front of the judges on the day of the competition. Samantha's landscape painting, which she'd based on a photo taken from an airplane, was a masterpiece. Ana could not deny Samantha's talent. She was glad to take the second-place prize, and she smiled as she went to accept it.

Figure 9. Reading lesson (Grades 6–12).

Conclusion

Imagine MyPath K–12 was designed with the student in mind. The program provides age-appropriate, adaptive instruction to individualize each student’s learning experience. Reading and mathematics lessons prioritize essential grade-level content so that students are equipped with the knowledge and skills needed to comprehend texts and understand math conceptually. Smart Sequencer™ technology creates ILPs that allow students to move at their own pace and continuously adapts based on their performance. Students are accelerated through content they have already mastered or provided with scaffolded support to help address any learning gaps. Imagine MyPath commits to delivering accessible instruction to all students by providing personalized breakthroughs along every student’s unique journey.

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