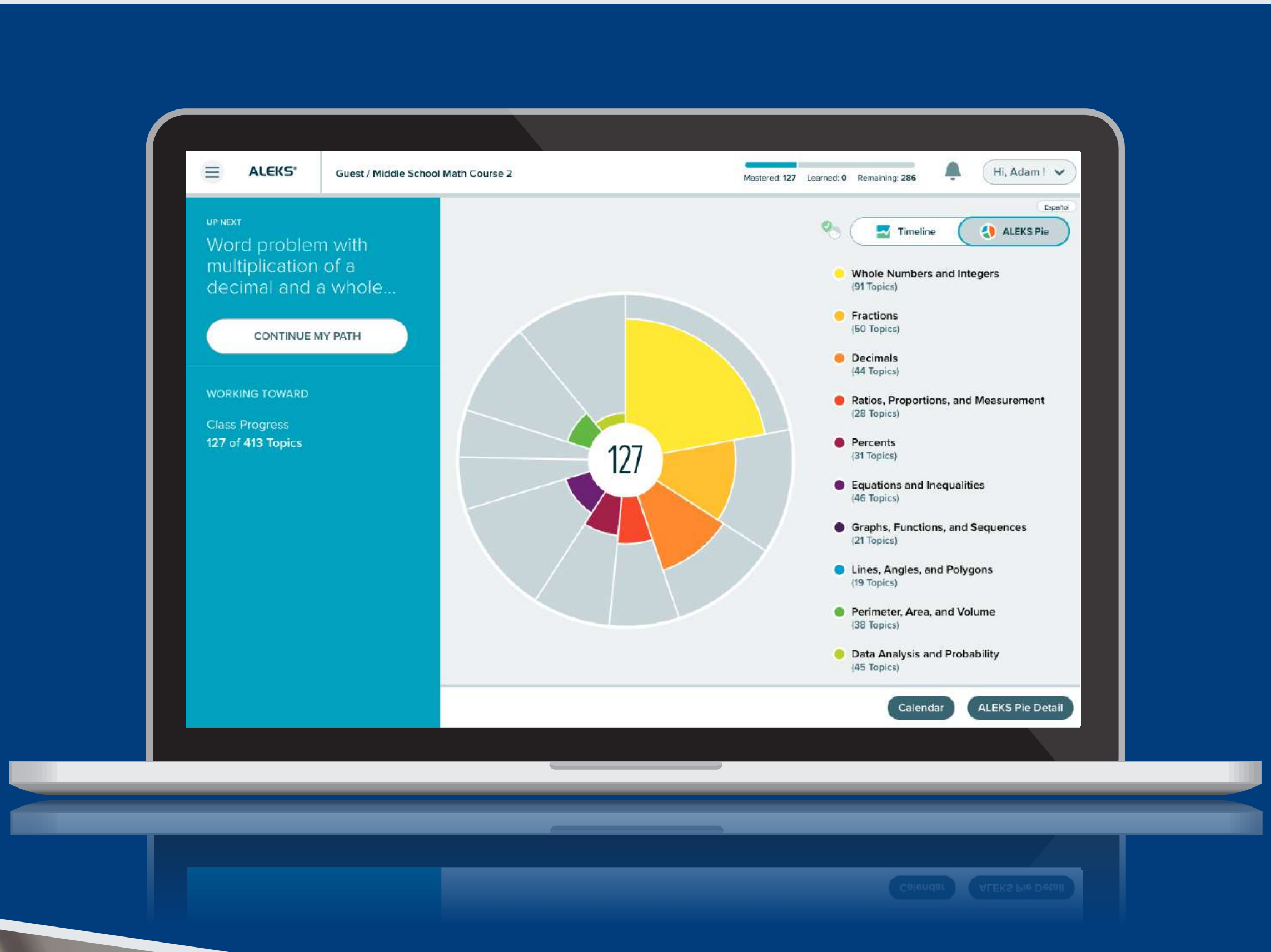
ALEKS® Program Overview

Introduction | Evidence Based Learning | Student Experience | Teacher Experience | *ALEKS* Reporting | Support



Introduction

ALEKS® (Assessment and Learning in Knowledge Spaces) is a web-based, artificially intelligent assessment and learning system for grades 3–12. *ALEKS* uses adaptive questioning to quickly and accurately determine exactly what topics a student knows and doesn't know in a course. *ALEKS* then instructs each student on the topics they are most ready to learn. As a student works through a course, *ALEKS* periodically reassesses the student's knowledge to ensure that topics learned are also retained. It's an approach that has proven to create math confidence and measurable success for over 20 years. *ALEKS* courses align with state and national standards, making it a perfect complement to any classroom environment.

To date, *ALEKS* has helped more than 20 million students at thousands of K–12 schools, colleges, and universities throughout the world. The proven technology of *ALEKS* can integrate with any system, anywhere, on any device. Educators can use *ALEKS* to:

- Identify instructional gaps.
- Personalize learning paths.
- Track the progress of student learning and mastery.

The Power of Evidence Based Learning

A recent study compared student outcomes on the AzMERIT End of Course assessments in schools that use *ALEKS*® against those that do not.

KEY FINDINGS:

- Students in Algebra I who used *ALEKS* did significantly better than those who did not with a 5.1% reduction in Level 1 (Minimally Proficient) scores and a 4.2% gain in Level 4 (Highly Proficient) scores.
- The percentage of students scoring in Level 1 (Minimally Proficient) dropped for *ALEKS* users in these specific subgroups:
  - Free and Reduced Lunch: 4.9%
  - Hispanic: 4.4%
  - English Language Learners: 7.2%
  - Students with a Disability: 12.3%

Designed to Ensure Mastery

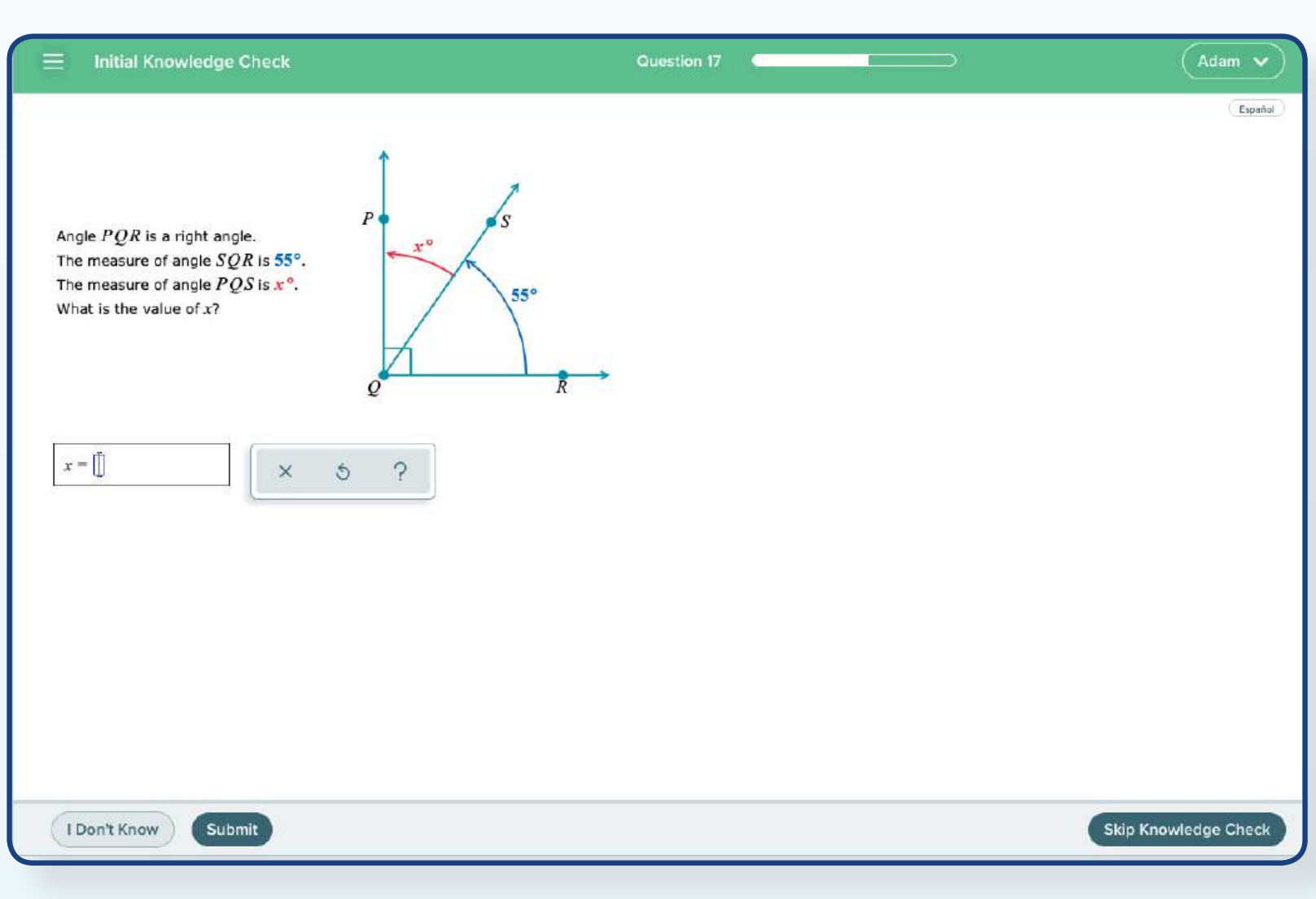
In *ALEKS*, mathematically rigorous theory facilitates the development of computer algorithms for the construction and mapping of knowledge spaces. This enables *ALEKS* machine learning software to comprehensively investigate trillions of potential knowledge states. This investigation accurately diagnoses each student's precise knowledge of the subject and identifies what they are ready to learn next. *ALEKS* maps each student's evolving knowledge state and continuously refines the way topics are connected to each other. By presenting only the topics a student is most ready to learn next, *ALEKS* ensures a mastery rate of more than 90 percent.

Click here for more information about the research behind *ALEKS*.

Creating a Personalized Learning Experience for Students

Understanding the three-phase cycle within the student experience

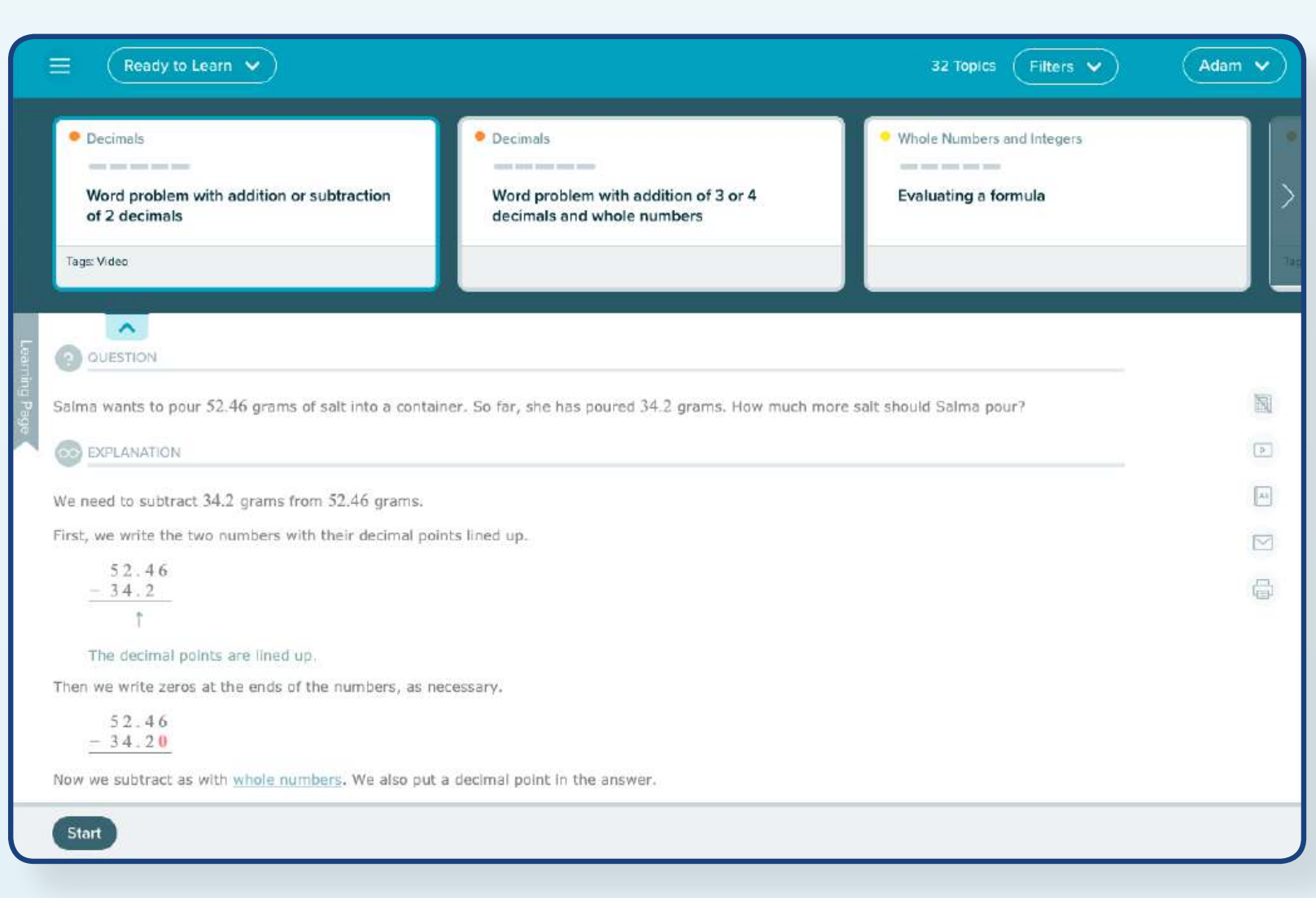
The three-phase cycle of learning and assessment in *ALEKS* targets the unique needs of every student.



Angle PQR is a right angle.
The measure of angle SQR is 55°.
The measure of angle PQS is $x°$.
What is the value of x?

Assessment

Students begin with an Initial Knowledge Check to accurately measure what they know, don't know, and what concepts they are ready to learn next. The results are summarized in the *ALEKS* Pie, a tool that provides insight on student knowledge across multiple topics. Within each pie slice (topic area), the colored section shows what a student knows. The gray area shows what the student has left to learn.



Salma wants to pour 52.46 grams of salt into a container. So far, she has poured 34.2 grams. How much more salt should Salma pour?

We need to subtract 34.2 grams from 52.46 grams.

First, we write the two numbers with their decimal points lined up.

$$\begin{array}{r} 52.46 \\ -\ 34.2 \end{array}$$

The decimal points are lined up.

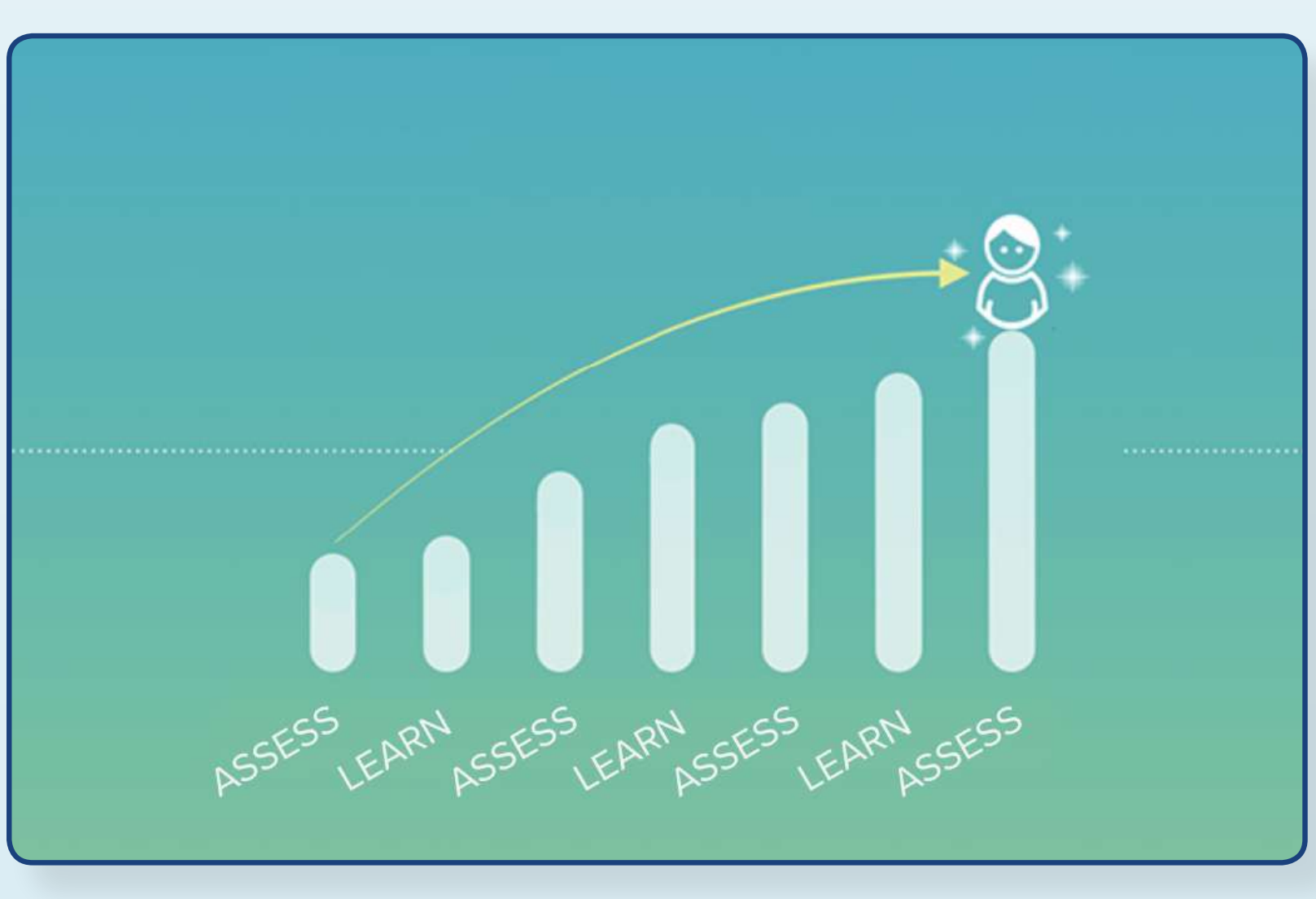
Then we write zeros at the ends of the numbers, as necessary.

$$\begin{array}{r} 52.46 \\ -\ 34.20 \end{array}$$

Now we subtract as with whole numbers. We also put a decimal point in the answer.

Personalized Learning

As students work through their ready-to-learn topics, *ALEKS* provides immediate feedback, detailed explanations, definitions, and other tools for building mastery.



Continuous Reinforcement

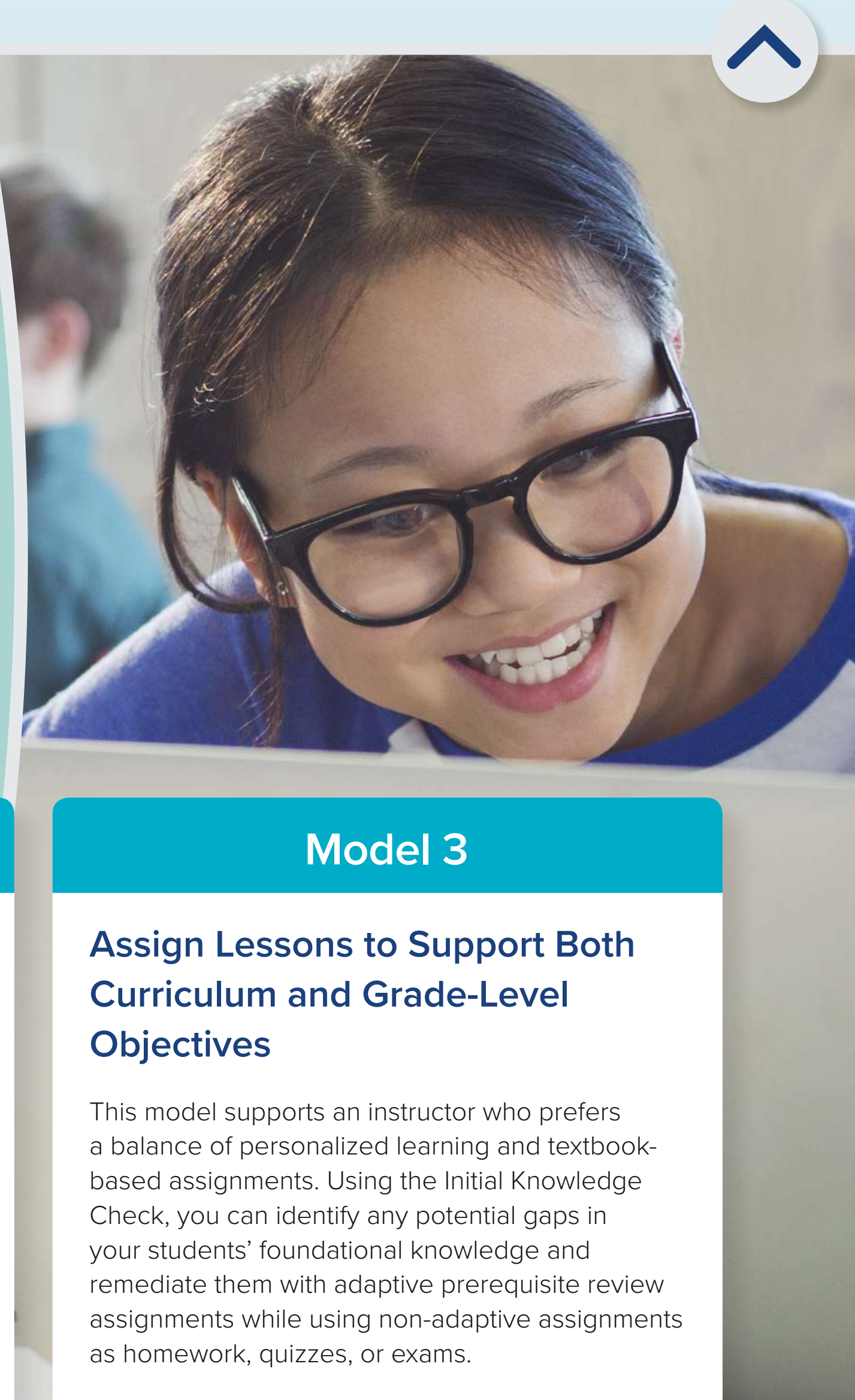
As students learn new topics, *ALEKS* periodically rechecks their knowledge to ensure retention. The system then provides remediation for topics students have not successfully mastered.

Customization for Teachers

The Flexibility to Support Any Classroom Model

All *ALEKS* courses for grades 3–12 deliver standards-based content correlated to state standards. By combining adaptive learning technology and comprehensive progress monitoring, *ALEKS* accommodates the unique learning styles of all students. This ensures that they are working on the exact skills needed to effectively prepare for standardized testing while setting them up for college and career success.

ALEKS also offers the flexibility you need to support your math instruction while still accommodating the unique individual needs of all your students with three instructional models:



Model 1

Truly Adaptive

This model is for the instructor who wants to maximize their use of the adaptive learning technology in *ALEKS* to encourage concept mastery and retention. Perfect for intervention, acceleration, or enrichment blocks.

Model 2

Customize Your *ALEKS* Course to Match Your Instruction

Perfect for blended learning, summer school, or credit recovery, this model benefits an instructor who requires mastery of prerequisite topics and the majority of course topics. This model allows you to use adaptive assignments as homework and the chapter reviews, tests, or exams from your core mathematics curriculum to assess mastery.

Model 3

Assign Lessons to Support Both Curriculum and Grade-Level Objectives

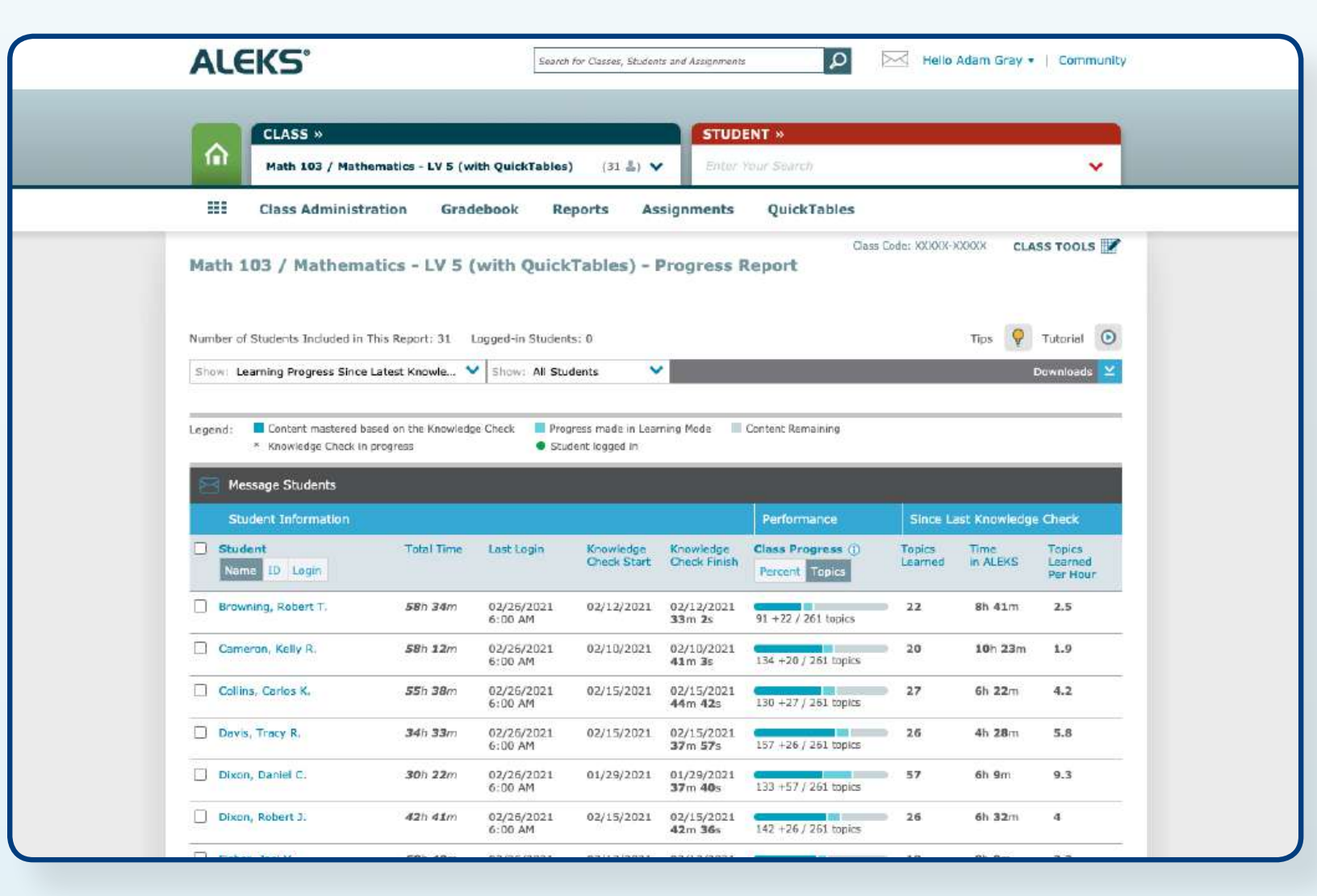
This model supports an instructor who prefers a balance of personalized learning and textbook-based assignments. Using the Initial Knowledge Check, you can identify any potential gaps in your students' foundational knowledge and remediate them with adaptive prerequisite review assignments while using non-adaptive assignments as homework, quizzes, or exams.

ALEKS Reporting

ALEKS reports are designed to provide real-time data and summary reports to help students and teachers monitor usage, track progress, and identify areas of growth or areas where students could use additional support. The actionable data provided in these reports will help you plan for full-class and small-group instruction and intervene with individual students, as needed.

Progress Report

Using Progress Reports, you can view student progress on Knowledge Checks and in Learning Mode at various time intervals. These reports allow you to track student progress, see how well they are retaining new learning, and ensure they can get intervention when they need it the most.

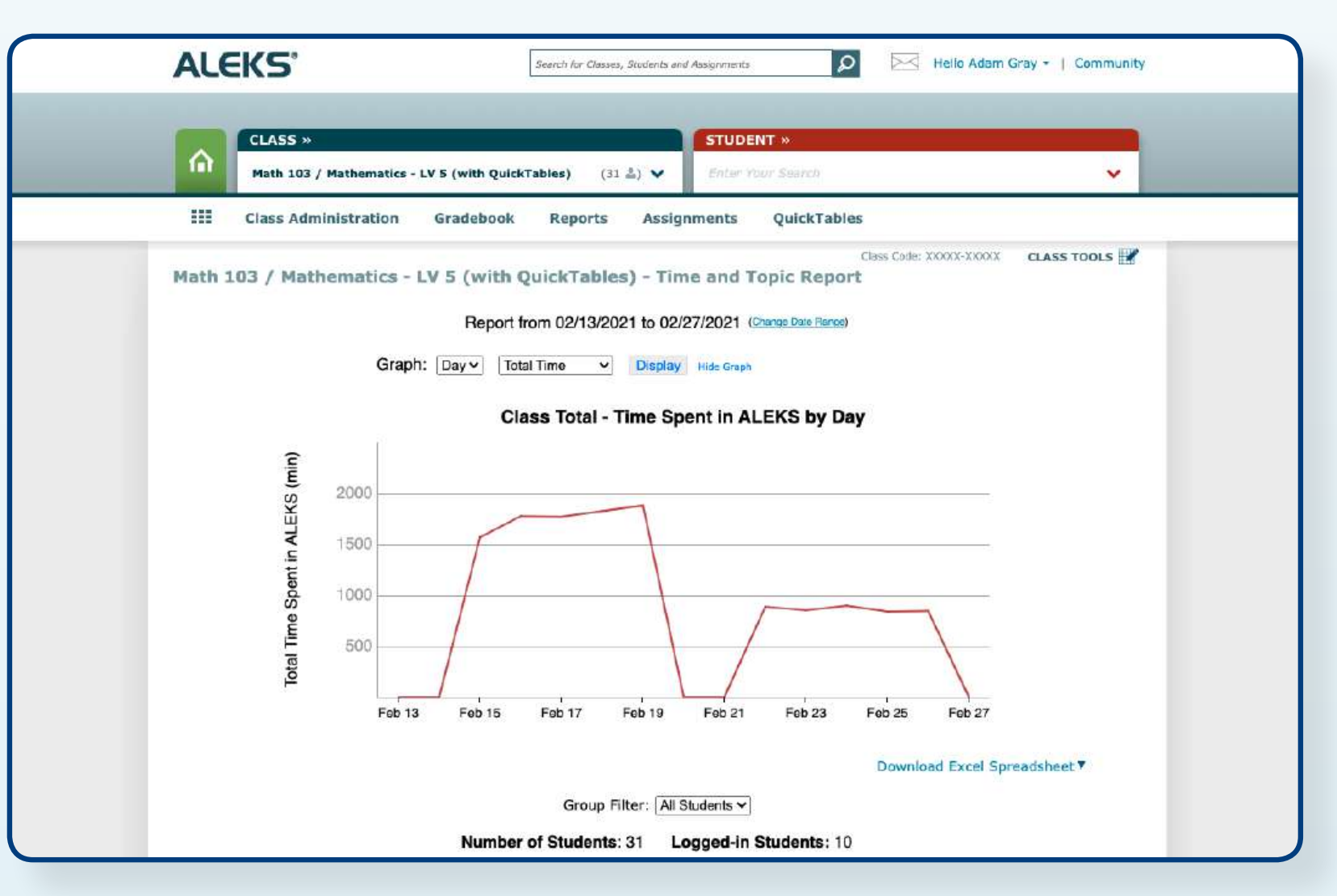


Math 103 / Mathematics - LV 5 (with QuickTables) - Progress Report

Number of Students Included in This Report: 31 Logged-in Students: 0

Time & Topic Report

This report allows you to monitor the amount of time individual students are spending on *ALEKS* Knowledge Checks, Learning Mode, and assignments. It also allows you to monitor the number of topics a student has attempted over a particular period of time and how many of those topics the student has learned.



Math 103 / Mathematics - LV 5 (with QuickTables) - Time and Topic Report

Report from 02/13/2021 to 02/27/2021

Number of Students: 31 Logged-in Students: 10

ALEKS Insights

ALEKS **Insights** alerts instructors when students might be at risk of falling behind so that immediate action can be taken. Insights identifies students exhibiting at least one of four adverse behaviors that may require intervention:

Failed Topics

This report is updated in real-time to inform you if a student has attempted a topic multiple times without success. You can also select a student and message them from the Insights report to address their learning needs **immediately.**

Decreased Learning

Identify when students might be "hitting a wall" and need additional help. This report alerts you when a student's rate of learning has decreased significantly despite continual work in *ALEKS*.

Unusual Learning

This report identifies students whose learning rate has increased significantly compared to their usual pace, which could signify that they may not be doing their own work.

Procrastination

Stop procrastination in its tracks with this report that identifies students in *ALEKS* who are exhibiting extremely long periods of inactivity.

ALEKS Support

Whether you need help with implementation or are wanting professional development resources, *ALEKS* offers comprehensive customer support.

Implementation Team

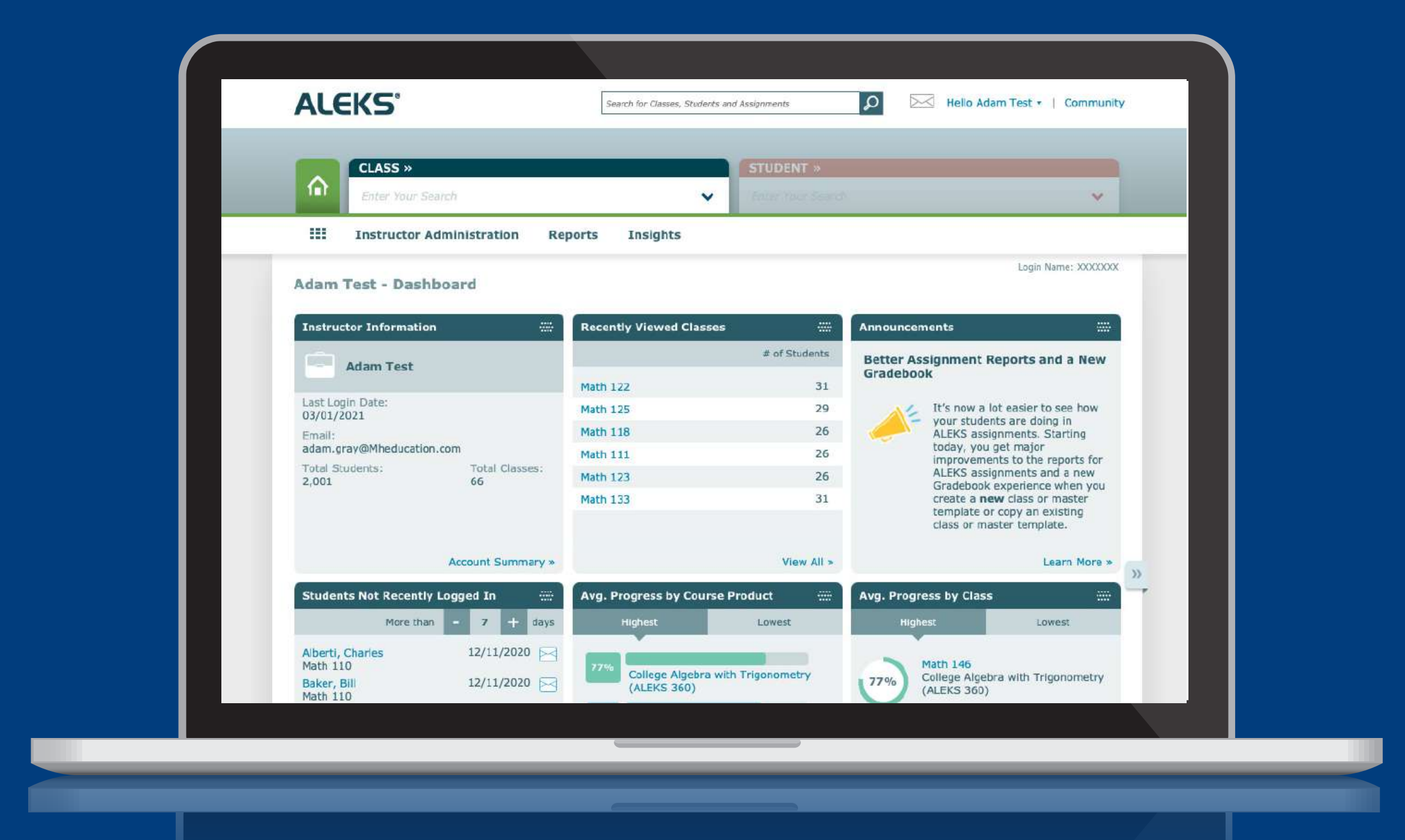
The *ALEKS* implementation team provides support to educators throughout the entire implementation process from start to finish. The *ALEKS* implementation team also offers live trainings for new users. These trainings provide an overview of the *ALEKS* system, share best practices for use, answer questions about your *ALEKS* implementation, and provide a guided exploration through *ALEKS* on how to find and utilize its most commonly used features.

Customer Service

Have technical questions about *ALEKS*? Our expert customer support representatives are here to help! On our Support Page, you can find frequently asked questions, system requirements, and dates/times to reach us. *ALEKS* customer service is available seven days a week and offers extended hours on weekdays to help meet the needs of you and your students.

On-Demand Training

Our Training Center is your go-to place for on-demand resources—including user guides, videos, and printable tutorials on how to complete common tasks that you'll be doing in *ALEKS*.



Adam Test - Dashboard

Login Name: XXXXXXX

Adam Test
Last Login Date: 03/01/2021
Email: adam.gray@Mheducation.com
Total Students: 2,001
Total Classes: 66

	# of Students
Math 122	31
Math 125	29
Math 118	26
Math 111	26
Math 123	26
Math 133	31

Better Assignment Reports and a New Gradebook

It's now a lot easier to see how your students are doing in ALEKS assignments. Starting today, you get major improvements to the reports for ALEKS assignments and a new Gradebook experience when you create a **new** class or master template or copy an existing class or master template.

More than 7 days

Alberti, Charles Math 110 12/11/2020
Baker, Bill Math 110 12/11/2020

77% College Algebra with Trigonometry (ALEKS 360)

77% Math 146 College Algebra with Trigonometry (ALEKS 360)

ALEKS PPL

ALEKS® *Placement, Preparation, and Learning (ALEKS PPL)* offers a unique combination of adaptive assessments and personalized learning, and accurately identifies students' readiness for college-level math. Inspired by *ALEKS*, the award-winning *ALEKS PPL* provides a complete solution that empowers college-bound students to practice skills to improve preparation and progress in achieving their goals.

ALEKS Chemistry

ALEKS Chemistry provides extensive coverage of high school level chemistry, including Next Generation Science Standards (NGSS) and prerequisite concepts ranging from essential algebra to physics. It's suitable for use in both general chemistry and honors classes.

Visit www.mheonline.com/aleks to learn more about *ALEKS*.

07/21 MA21 D 19523