Understanding and Interpreting SAT® Suite Scores and Reports



#### Agenda

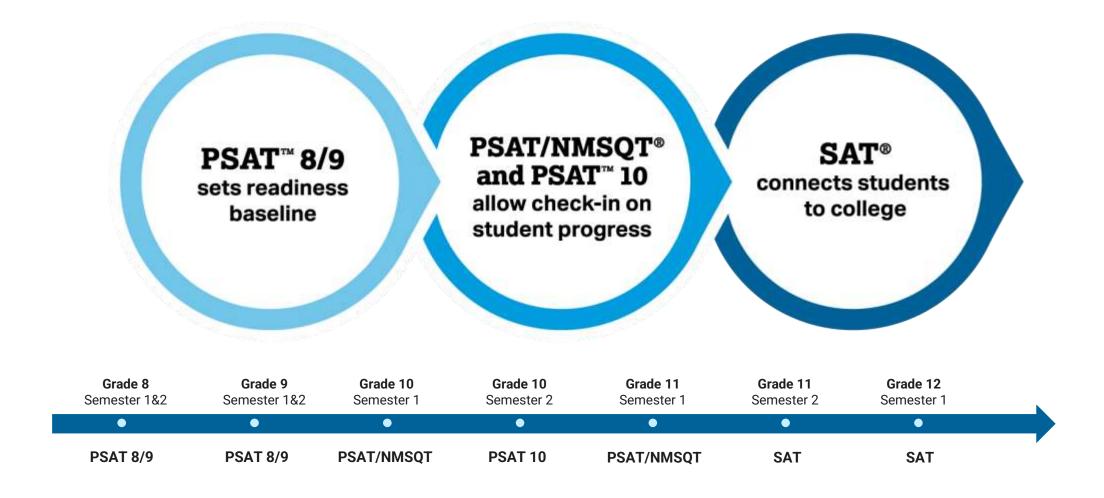
- Setting the Stage
- Exploring Content Domains
- Analyzing SAT Suite Data
  - Scores and Benchmarks
- Analyzing Content Domains: A Deeper Dive into the Skill and Knowledge Statements
  - Review the Knowledge and Skills Report
  - Skills Insight™
  - SAT Suite Question Bank
  - Teacher Implementation Guide
  - Reading and Writing Ideas
  - Math Ideas
  - Practice for Students





# **Setting the Stage**

#### The SAT Suite of Assessments







# **Exploring Content Domains**

## SAT Suite Knowledge and Skills Content Domains

#### **Reading and Writing**

- Information and Ideas
- Craft and Structure
- Explanation of Ideas
- Standard English Conventions

#### Math

- Algebra
- Advanced Math
- Problem Solving and Data Analysis
- Geometry and Trigonometry

## Reading and Writing Content Specifications

Content Domain	Domain Description	Skills/Knowledge Testing Points	Operational Question Distribution
Craft and Structure	Students will use comprehension, vocabulary, and reasoning skills and knowledge to understand and use high-utility words and phrases in context, evaluate texts rhetorically, and make connections between topically related texts.	<ul> <li>Words in Context</li> <li>Text Structure and Purpose</li> <li>Cross-Text Connections</li> </ul>	≈28% / 13-15 questions
Information and Ideas	Students will use comprehension, analysis, and reasoning skills and knowledge and the ability to locate, interpret, evaluate, and integrate information and ideas from texts and informational graphics.	<ul> <li>Central Ideas and Details</li> <li>Command of Evidence (Textual, Quantitative)</li> <li>Inferences</li> </ul>	≈26% / 11-14 questions
Standard English Conventions	Students will use editing skills and knowledge to make text conform to core conventions of Standard English sentence structure, usage, and punctuation.	<ul><li>Boundaries</li><li>Form, Structure, and Sense</li></ul>	≈26% / 11-15 questions
Expression of Ideas	Students will use the ability to revise texts to improve the effectiveness and to meet specific rhetorical goals.	Rhetorical Synthesis     Transitions	≈20% / 8-12 questions



## **Math Content Specifications**

Content Domain	Domain Description	Skills/Knowledge Testing Points	Operational Question Distribution
Algebra	Students will analyze, fluently solve, and create linear equations and inequalities as well as analyze and fluently solve equations and systems of equations using multiple techniques.	<ul> <li>Linear equations in one variable</li> <li>Linear equations in two variables</li> <li>Linear functions</li> <li>Systems of two linear equations in two variables</li> <li>Linear inequalities in one or two variables</li> </ul>	≈35% / 13-15 questions
Advanced Math	Students will demonstrate the ability to progress to more advanced math courses, including demonstrating an understanding of absolute value, quadratic, exponential, polynomial, rational, radical, and other nonlinear equations.	<ul> <li>Equivalent expressions</li> <li>Nonlinear equations in one variable and systems of equations in two variables.</li> <li>Nonlinear functions</li> </ul>	≈35% / 13-15 questions
Problem Solving and Data Analysis	Students will apply quantitative reasoning about ratios, rates, and proportional relationships; understand and apply unit rate; and analyze and interpret one- and two-variable data.	<ul> <li>Ratios, rates, proportional relationships, and units</li> <li>Percentages</li> <li>One-variable data: distributions and measures of center and spread</li> <li>Two-variable data: models and scatterplots</li> <li>Probability and conditional probability</li> <li>Inference from sample statistics and margin of error</li> <li>Evaluating statistical claims: observational studies and experiments</li> </ul>	≈15% / 5-7 questions
Geometry and Trigonometry	Students will solve problems that focus on area and volume; angles, triangles, and trigonometry; and circles.	<ul> <li>Area and volume</li> <li>Lines, angles, and triangles</li> <li>Right triangles and trigonometry</li> <li>Circles</li> </ul>	≈15% / 5-7 questions

# Activity: Reflecting on State Standards and SAT Content Domains

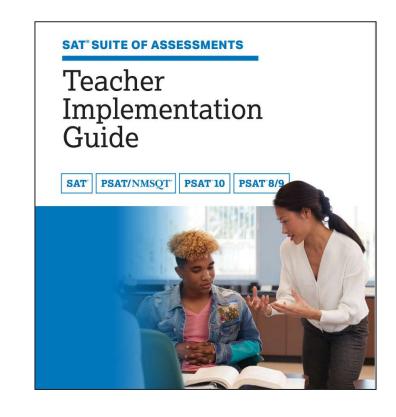
Through research, the College Board has identified a critical set of knowledge, skills, and understandings that consistently predict student success in college and workforce training programs that are aligned to state standards

As you review the RI State Standards and the SAT Content Domains on slides 6 and 7

- 1. Reflect on up to three areas you feel confident your students understand and are able to demonstrate. (Note the overarching standards and the content domains)
- 2. Reflect on up to three areas you feel students have difficulty demonstrating understanding in.

#### Discuss in groups:

- 1. Are we teaching this?
- 2. Where and when?
- 3. With what success? What is your evidence?





# **Analyzing SAT Suite Data**



# Steps for Analyzing SAT Suite Data

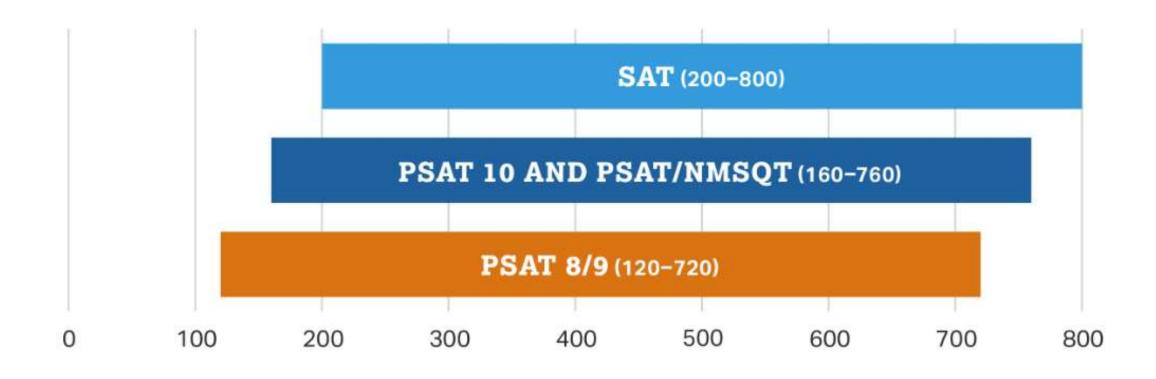
- Understand SAT Suite scores, benchmarks, and score bands
- 2. Review the Knowledge and Skills report
- 3. Use results in conjunction with Skills Insight™
- Go deeper with the SAT Suite Question Bank (SSQB)
- 5. Explore the Teacher Implementation Guide to better understand the standards and inform classroom practices
- 6. Strengthen students' skills through Official SAT Practice on Khan Academy®



## Scores and Benchmarks

## Scores Can Help Monitor Progress Over Time

Section scores are placed on a vertical scale, in 10-point increments



#### SAT College and Career Readiness Benchmarks

- 75% likelihood of earning at least a C in a first-semester, credit-bearing college course in a related subject
- Set at section level
- Grade-level benchmarks are based on expected student growth toward the SAT Benchmarks

	Grade 8	Grade 9	Grade 10	Grade 11	SAT	
Section Level	390	410	430	460	480	ERW
	430	450	480	510	530	MATH

# SAT Suite Benchmark Scores and Corresponding Performance Score Bands

Benchmark	SAT		PSAT/NMSQT and PSAT 10		PSAT 8/9	
(Skills Insight Score Band)	Reading and Writing	Math	Reading and Writing	Math	Reading and Writing	Math
College and Career Readiness	480 (3)	530 (4)				
Eleventh grade*	460 (3)	510 (4)	460 (3)	510 (4)		
Tenth grade*			430 (3)	480 (4)		
Ninth grade*					410 (2)	450 (3)
Eighth grade*					390 (2)	430 (3)

Grade-level benchmarks are subject to potential revision by College Board as more operational data for the digital SAT Suite become available.

# Analyzing Content Domains: A Deeper Dive into the Skill and Knowledge Statements

#### Activity:

Please take 15-20 minutes to review the skill and knowledge statements tied to each content domain and answer if it is taught and assessed in your curriculum, when students first learn the skill, and when students are expected to demonstrate proficiency

- Reading and Writing: pages 3-12
- Math: pages 15-25

#### Analyzing SAT° Suite Content Domains: Skill and Knowledge Statements



#### Directions:

Contained in this document are skill/knowledge statements connected to the SAT Suite Content Domains, guided questions for further reflection, and a template to develop your own Reading and Writing and Math implementation plans.

#### The purpose of this activity is to help you:

- . Understand the knowledge, skills, and understandings that are assessed on the SAT Suite of Assessments
- · Identify skills that need additional instruction and support
- · Develop a plan for implementation

#### Additional resources needed:

- · District/school curriculum maps
- K-12 Score Reporting Portal data (https://k12reports.collegeboard.org)
- Skills Insight" for the SAT Suite of Assessments (<a href="https://satsuite.collegeboard.org/k12-educators/using-skills-insight">https://satsuite.collegeboard.org/k12-educators/using-skills-insight</a>)
- Teacher Implementation Guide (<a href="https://satsuite.collegeboard.org/media/pdf/redesigned-sat-k12-teacher-implementation-guide.pdf">https://satsuite.collegeboard.org/media/pdf/redesigned-sat-k12-teacher-implementation-guide.pdf</a>)
- SAT Suite Question Bank (https://satsuite.collegeboard.org/k12-educators/tools-resources/question-bank)
- · Official SAT Practice on Khan Academy (https://www.khanacademy.org/digital-sat)

#### Steps for this activity:

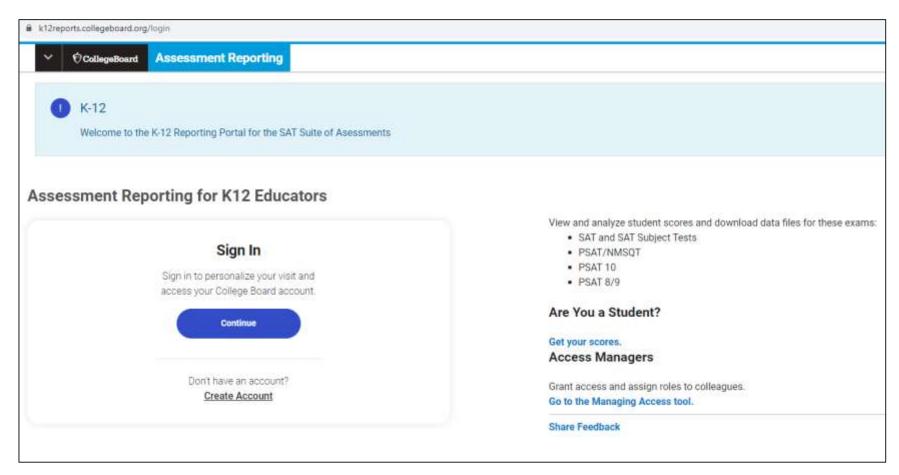
- To help understand how your students are performing on the SAT Suite of Assessments, using your curriculum map, review the skill and knowledge statements tied to each content domain below and indicate if the skill/knowledge is
  - Taught and assessed in your curriculum.
  - b. When students first learn the skill,
  - When students are expected to demonstrate proficiency (Reading and Writing: pages 3-12; Math: pages 15-25).
- Validate your assumptions by reviewing the Knowledge and Skills report in the K-12 Reporting Portal.
   Guided questions are included to support your analysis (Reading and Writing: page 13; Math: page 26).
- Based on your analysis, use the action plan template to identify three to five skills for development (Reading and Writing: page 26; Math: pages 27).
  - a. Review <u>Skills Insight</u> to generate potential actions for improving skills. Be sure to look at the next highest score band as you think through strategies. Think about how you want to incorporate those skills into existing classes/departments.
  - b. Check the Teacher Implementation Guide to select the most-tested skills.
  - c. Set a timeline, identify resources, and indicate measures of success.

1



# Review the Knowledge and Skills Report

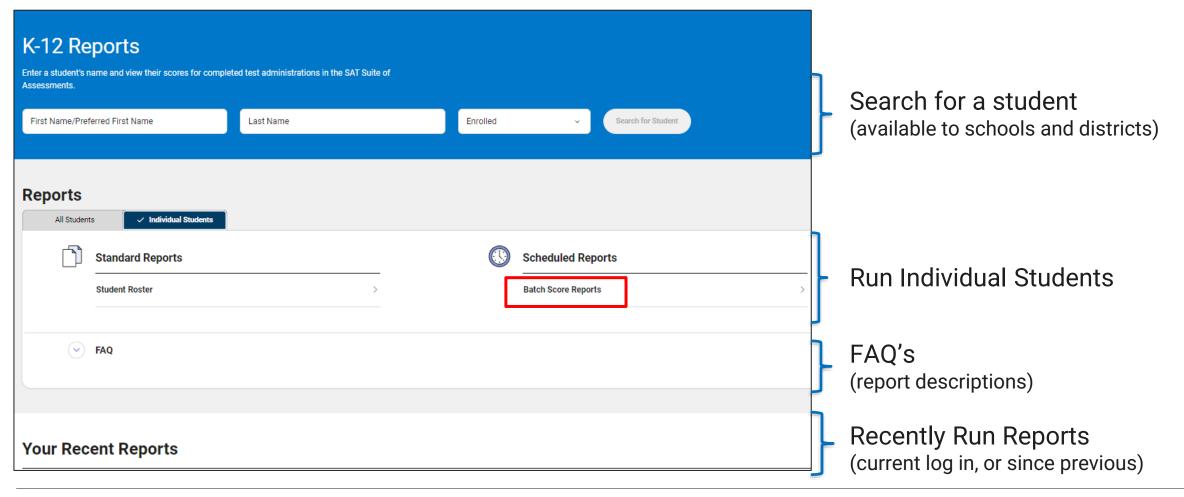
#### Access the K-12 Reporting Portal



- Log in to your College Board account.
- Request and receive detail access from the K12 Portal Data Access Manager.
- 3. Log in to the K-12
  Reporting Portal to
  analyze student scores
  and download data
  files.

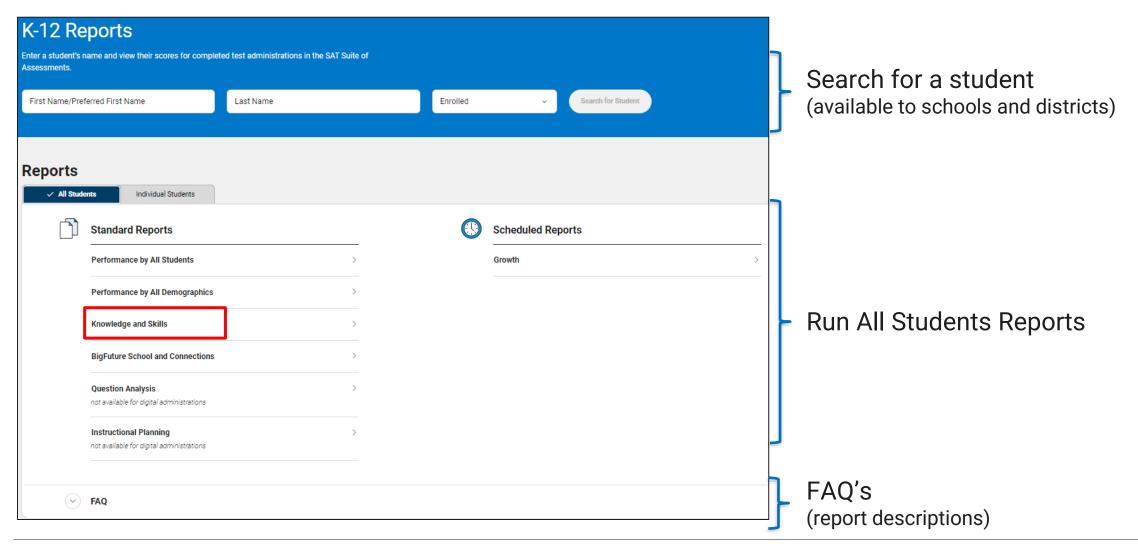


## Reports Home Page – Individual Students



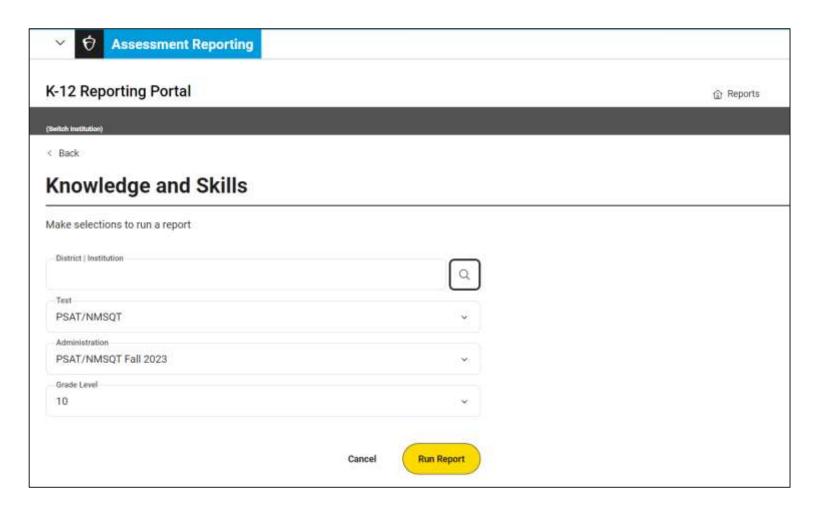


#### Reports Home Page – All Students

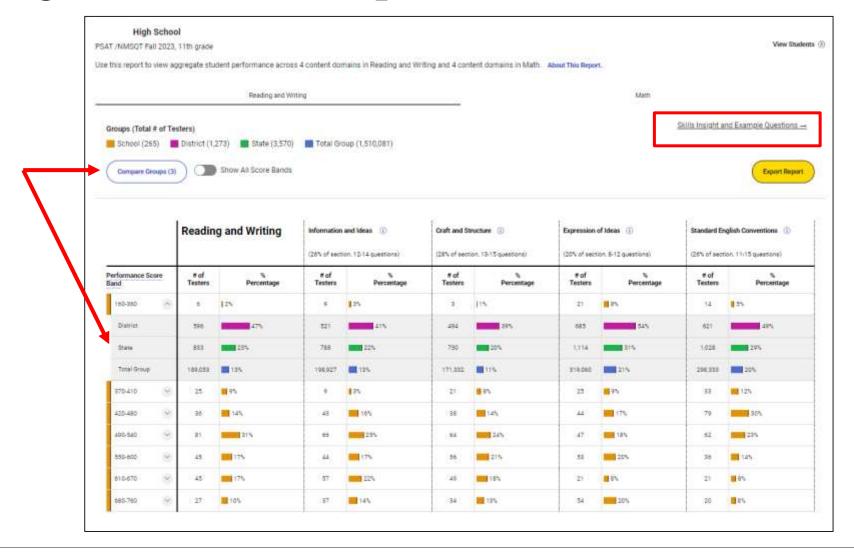




## Make Selections to Run Your Report



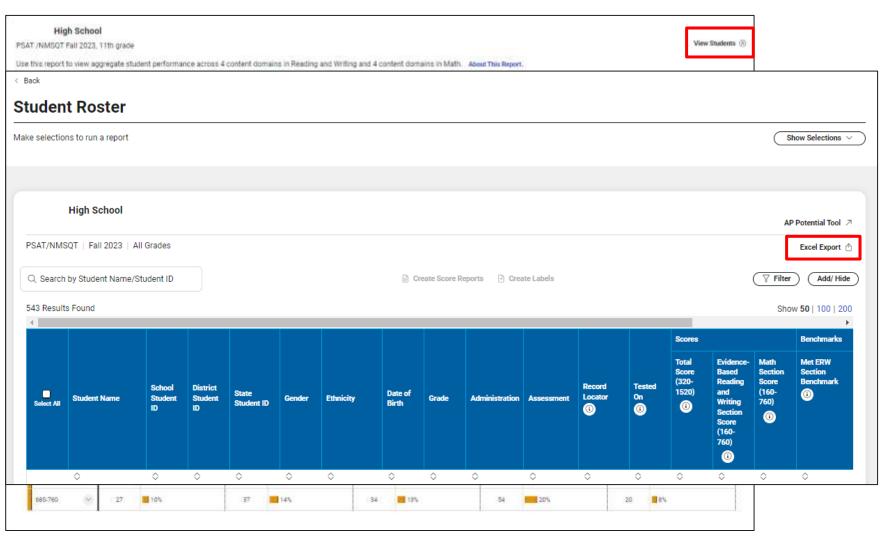
#### Knowledge and Skills Report





#### Knowledge and Skills Report: Student-Level Data

- 1. Click on "View Students"
- 2. Click on "Excel Export" to download the file to view performance score bands for each content domain at the student-level





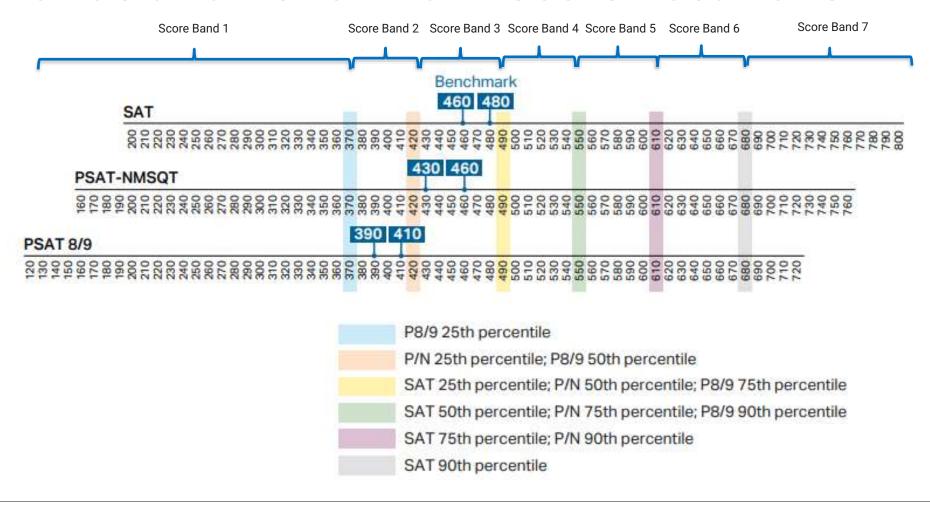
#### A Closer Look At Score Bands

- The seven performance score bands cover the entirety of the digital suite's vertical scale.
- This is possible because each test in the SAT Suite measures essentially the same knowledge and skills as all the other tests
- The six scale anchor points selected correspond to various widely recognized percentile scores across the digital suite's vertical scale, resulting in seven performance score bands.

		Digital SAT Suite Test Sect	
Performance Score Band	Scale Anchor Percentile Location (Lower Limit of Band)	Reading and Writing	Math <370 370–410 420–460 470–540
1	n/a	<370	<370
2	PSAT 8/9 25th percentile	370-410	370-410
3	PSAT/NMSQT / PSAT 10 25th percentile PSAT 8/9 50th percentile	420–480	420-460
4	SAT 25th percentile PSAT/NMSQT / PSAT 10 50th percentile PSAT 8/9 75th percentile	490–540	470–540
5	SAT 50th percentile PSAT/NMSQT / PSAT 10 75th percentile PSAT 8/9 90th percentile	550-600	550-600
6	SAT 75th percentile PSAT/NMSQT / PSAT 10 90th percentile	610–670	610–670
7	SAT 90th percentile	680-800	680-800

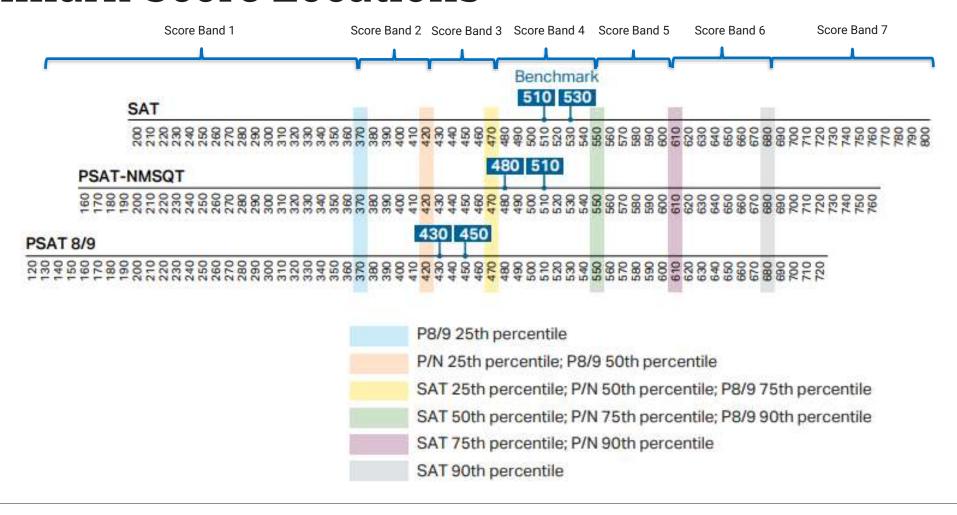


## Reading and Writing Section Performance Score Bands and Benchmark Score Locations





# Math Section Performance Score Bands and Benchmark Score Locations





## Activity: Guided Questions for Analyzing Data

(Reading and Writing: page 13; Math: page 26)

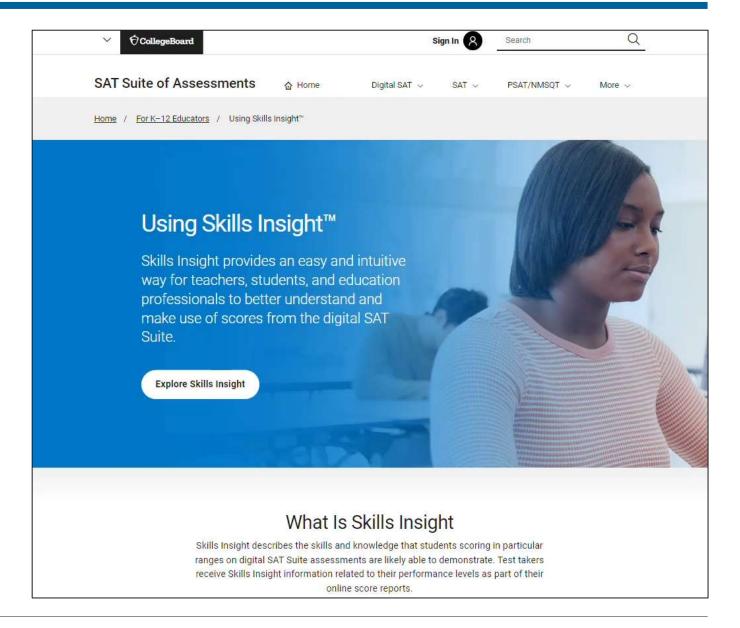
- 1. Does your analysis match what you thought you knew? Why or why not?
- 2. What surprised you? Why?
- 3. How are your students performing in relation to the College and Career benchmarks?
- 4. Where in the curriculum are the skills from the questions being taught/or where should they be taught?
- 5. What actions or strategies might address these issues for improved student success?
- 6. Where are there existing opportunities to design common activities, assignments, and assessments that build skills from year to year?



# Skills Insight<sup>™</sup>

#### Skills Insight Tool

Describes the skills and knowledge that students scoring in particular ranges on digital SAT Suite assessments are likely able to demonstrate

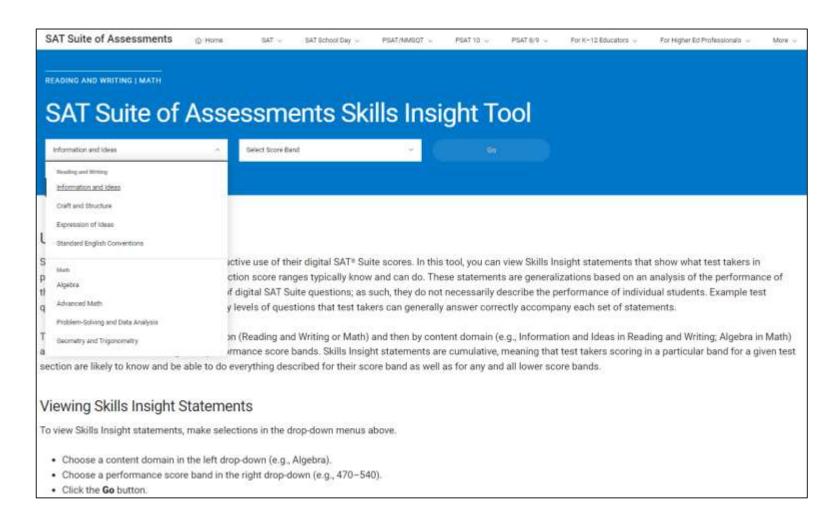




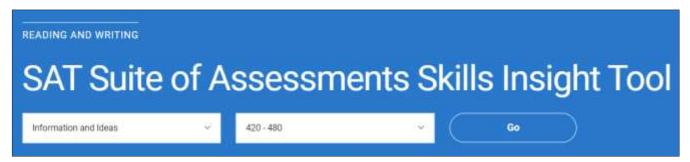
#### How to Use Skills Insight

# Skills Insight consists of two main components:

- Skill/Knowledge Statements
- Exemplar Test Questions



## Skills Insight – Reading and Writing Example

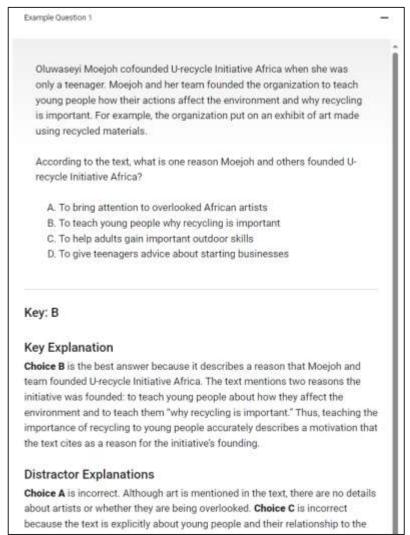


After selecting the domain and score range, the Skills Insight tool will share example questions and skill statements.

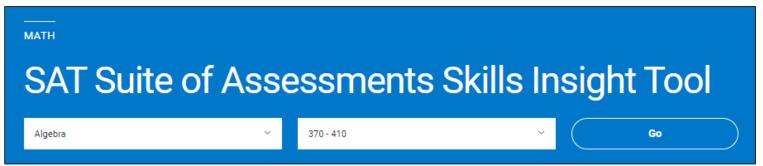
#### Skills

A student in this performance score band can typically demonstrate the following skills in this content domain:

- Determine the most effective textual evidence (e.g., an additional finding; a
  quotation from a scholar) to support a claim in passages at the middle grades
  level as well as some at the high school level
- Accurately identify explicitly stated and implicitly conveyed details in passages at the high school level



## Skills Insight – Math Example

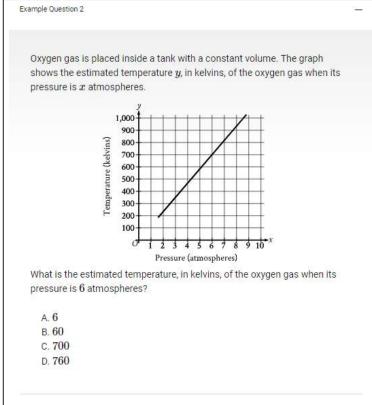


After selecting the domain and score range, the Skills Insight tool will share example questions and skill statements.

#### Skills

A student in this performance score band can typically demonstrate the following skills in this content domain:

- Solve problems using a graph or linear equation when given one or more pieces
  of the following information: slope, intercepts, input-output pairs
- Identify the coordinates of a solution, point, or intercept when given a graph of a linear equation or a graph of a system of two linear equations



#### Key: C

#### **Key Explanation**

**Choice C** is correct. For the graph shown, the x-axis represents pressure, in atmospheres, and the y-axis represents temperature, in kelvins. Therefore, the estimated temperature, in kelvins, of the oxygen gas when its pressure is 6 atmospheres is represented by the y-coordinate of the point on the graph that has an x-coordinate of 6. The point on the graph with an x-coordinate of 6 has a y-coordinate of approximately 700. Therefore, the estimated temperature, in kelvins, of the oxygen gas when its pressure is 6 atmospheres is 700.

#### **Distractor Explanations**



## Skills Insight PDF

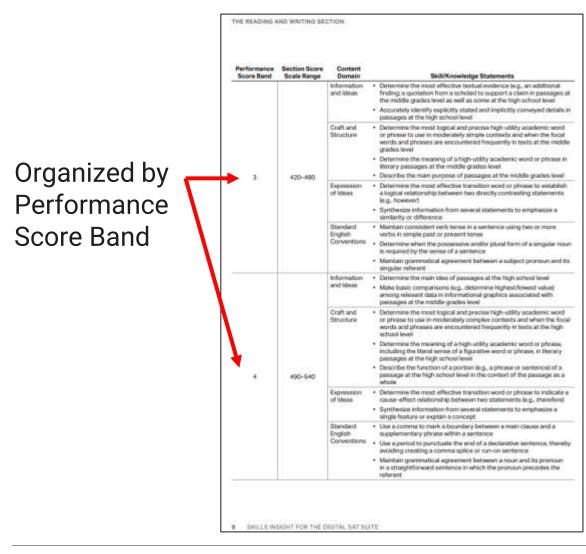
- Provides an overview of the Skills Insight framework
- Includes the full sets of skill/knowledge statements across all performance score bands and brief overviews of the test sections
- Use to better grasp the skills and knowledge that students scoring in particular ranges are typically able to demonstrate and how those capacities increase in sophistication and complexity at successively higher performance score bands.
- Examining the statements associated with a given set of scores and, at higher score bands, can help to understand test performance and how to improve it



# Skills Insight for the Digital SAT Suite

- PSAT™8/9
- PSAT/NMSQT\* and PSAT\*\*10
- SAT

## Skills Insight PDF – Reading and Writing Example

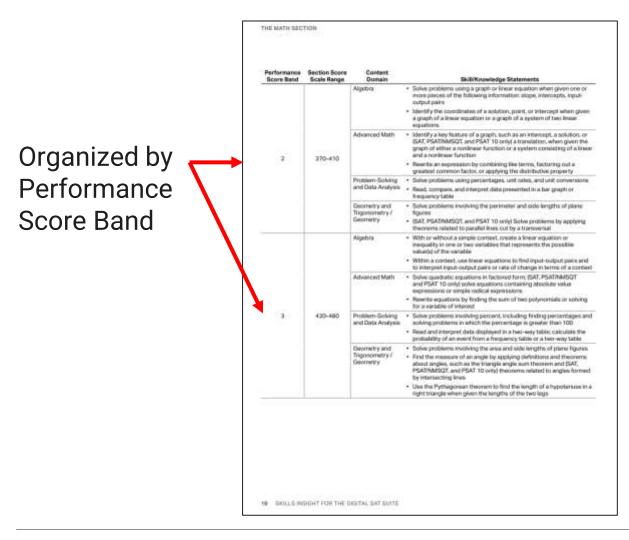


Organized by Content Domain

rformance core Band	Information and Ideas Content Domain: Skill/Knowledge Statements				
1	Students in this performance score band are beginning to obtain foundational skills to be college ready.				
2	<ul> <li>Determine the most effective literary quotation to illustrate a straightforward claim about a character, setting, or theme</li> </ul>				
	<ul> <li>Locate relevant data points in informational graphics associated with passages at the middle grades level</li> </ul>				
3	<ul> <li>Determine the most effective textual evidence (e.g., an additional finding; a quotation from a scholar) to support a claim in passages at the middle grades level as well as some at the high school level</li> </ul>				
	<ul> <li>Accurately identify explicitly stated and implicitly conveyed details in passages at the high school level</li> </ul>				
4	Determine the main idea of passages at the high school level				
	<ul> <li>Make basic comparisons (e.g., determine highest/lowest value) among relevant data in informational graphics associated with passages at the middle grades level</li> </ul>				
5	Draw a reasonable text-based inference from passages at the middle grades level as well as some at the high school level				
	<ul> <li>Make comparisons among relevant data in informational graphics associated with passages at the high school level in order to complete an example or illustrate or support a straightforward claim</li> </ul>				
6	Draw a reasonable text-based inference from passages at the high school level as well as some at the early college level				
	<ul> <li>Determine the most effective literary quotation to support or illustrate an analytical claim about passages at the early college level</li> </ul>				
	<ul> <li>Interpret and integrate relevant data from informational graphics associated with passages at the high school level in order to support a claim</li> </ul>				
7	Draw a reasonable text-based inference from passages at the early college level				
	<ul> <li>Determine the most effective textual evidence (e.g., a finding of a research study) to support or refute a claim in passages at the early college level</li> </ul>				
	<ul> <li>Interpret and integrate relevant data from informational graphics associated with passages at the early college level in order to support or refute a claim</li> </ul>				



#### Skills Insight PDF – Math Example



Organized by / Content Domain

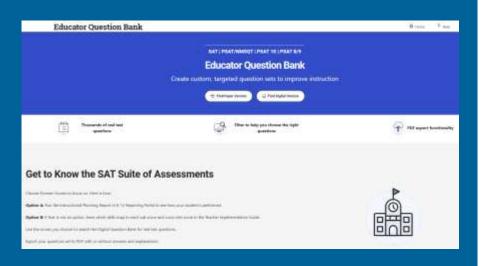






# SAT Suite Question Bank

#### Create custom, targeted question sets and improve instruction



## SAT Suite Question Bank (SSQB)

#### **Enables Access**

The SAT Suite Question Bank provides educators with access to questions from the SAT, PSAT/NMSQT, PSAT 10 and PSAT 8/9 assessments

#### **Informs Instruction**

Educators can view the skills and knowledge that students need to be successful on any SAT Suite Assessment

#### **Easy to Use**

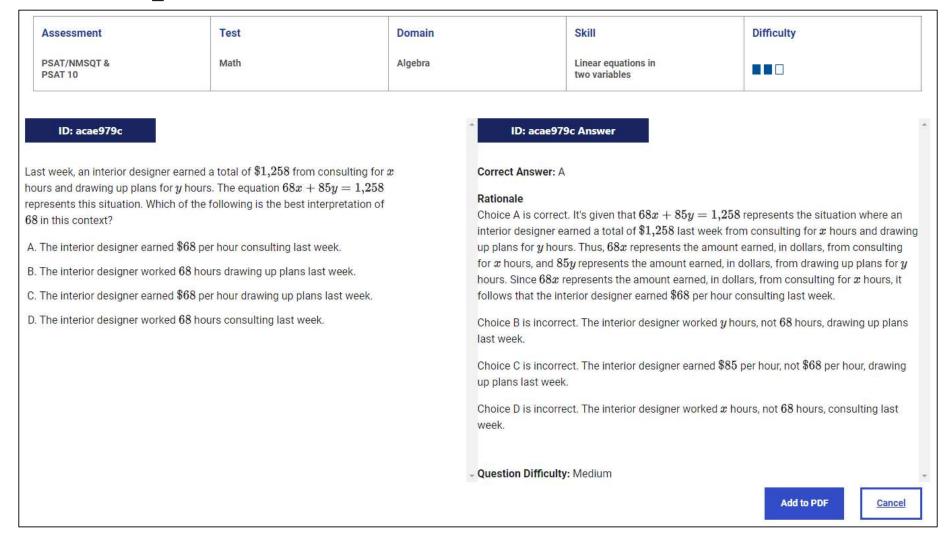
Questions grouped into Easy/Medium/Hard (aligned to score performance ranges) and content domains aligned to Knowledge and Skills report. Additional filters can then be applied.

## SSQB – Entering Search Criteria

Your Search Criteria Assessment: Test: Domain Scores:	New Search PSAT/NMSQT & PSAT 10 Reading and Writing Information and Ideas	D				
Difficulty: ? Skill: ? Please Select > Please Select >						Export
291 questions in results set.						Show selected questions   Show All
	✓	ID #	Difficulty	Domain ?	Skill ?	
		8c5213c5		Information and Ideas	Central Ideas and Details	
		3a4ad06d	•••	Information and Ideas	Command of Evidence	
		50948f5b		Information and Ideas	Inferences	
		94aba545		Information and Ideas	Command of Evidence	
		e75b4de6		Information and Ideas	Command of Evidence	



## SSQB – Sample Question







# Teacher Implementation Guide

## Teacher Implementation Guide – Quick Reference

•	Reading and Writingp. 19-38	<b>!</b> :
•	Mathp. 39-63	)
•	Test Taking Strategies	5
•	Essay	}
•	Instructional Strategiesp. 88-93	)
•	Essay Rubric and Samplesp.94-11	6
•	Detailed Skills Knowledge and Testing	
	Points	33

#### SAT° SUITE OF ASSESSMENTS

## Teacher Implementation Guide



## Teacher Implementation Guide

#### **General Instructional Strategies**

- The single best preparation students can undertake for the digital SAT Suite Reading and Writing section is engaging in wide and/or deep reading and in writing routinely for a range of tasks, purposes, and audiences.
  - Wide reading involves reading a great variety of texts on differing subjects, while deep reading involves reading intensively about a single subject. Both kinds of reading are capable of developing students' comprehension skills, metacognitive ability (i.e., the ability to monitor and adjust one's own reading approach), and stamina (i.e., the ability to read over an extended period of time without fatigue or loss of understanding).
  - Students should be given a range of writing tasks over the course of the school year. These tasks should involve both on-demand writing first-draft writing to a prompt under time constraints—and writing over extended time periods and involving various aspects of the writing process, including planning, drafting, obtaining and using feedback, revising, editing, and publishing.
  - Students should engage in numerous appropriately challenging reading and writing tasks throughout the school year.

- Sudents need extensive exposure to and experience with reading, comprehending, and working with informational graphics.
  - Select Reading and Writing passages are accompanied by a table, bar graph, or line graph. Students must be able to locate relevant data points from such graphics, make reasonable interpretations of the data, and integrate information conveyed graphically with that expressed in words.
  - Students should gain experience working with elements of informational graphics, including the title, the labels used for key elements, the quantitative data represented, and any legend or additional contextual information provided to make the graphic easier to understand.
- Students should have ample practice demonstrating the kinds of skills and knowledge tested in the Reading and Writing section. Among the most critical literacy-related skills and knowledge assessed by the digital SAT Suite are the following:
  - Locating and/or reasonably inferring the main point of a text, and identifying and using supporting details.
  - Understanding and using textual and quantitative evidence (e.g., quotations, facts, figures, data) to support or challenge points or claims.
  - Making reasonable text-based inferences.
  - Determining the meaning of and effectively using high-utility academic vocabulary in context.
  - Analyzing the structure of texts, including identifying a text's overall
    organizational pattern and figuring out the contribution that important
    parts of a text (e.g., particular statements) make to the text as a whole.
  - Making text-supported connections between two or more texts on the same topic or similar topics, including recognizing where the texts agree and disagree in terms of content and/or point of view.

#### COMPANION RESOURCE

Chapter 9 of *The Official Digital SAT Study Guide* walks through Reading and Writing informational graphics for students.

#### "HIGH-UTILITY ACADEMIC VOCABULARY"

High-utility academic vocabulary (sometimes known as tier two words and phrases) is commonly encountered in readings, especially complex readings, but less often in conversation and isn't specific to any one domain of knowledge, such as history or science. Chapter 3 of the Classroom Practice Guide for the Digital SAT Suite: ELA/Literacy satsuite.org/digital-classroompractice-english) contains an extensive discussion of highutility academic vocabulary and how to help students develop their stores of it.

## Activity: Action Plan

Use the action plan template to identify three to five skills for development

- Review Skills Insight to generate potential actions for improving skills. Be sure to look at the next highest score band as you think through strategies. Consider how you want to incorporate those skills into existing classes/departments.
- Check the Teacher Implementation Guide to select the most-tested skills.
- Set a timeline, identify resources, and indicate measures of success
  - -Reading and Writing: page 14
  - -Math: page 27

#### **Math Action Plan**

Skill to Develop	Strategy	Implementation	Resource(s)	Indicator of
		Timeline	Needed	Success

27



# Reading and Writing Ideas

# What should students be doing?

Pursue inquiries that connect to communities and identities

Wide reading of a diverse array of texts

Read with an analytical lens

Wide informal and formal disciplinary writing

Engage in higherorder discussion of complex texts in varying groupings Vary speech for audiences and listen to understand

Set goals and reflect on growth

Monitor language, vocabulary, and conceptual knowledge development

Modified from the Michigan Association of Intermediate School Administrators General Education Leadership Network Disciplinary Literacy Task Force (2019) Essential instructional practices for disciplinary literacy: grades 6 to 12 Lansing, MI: Authors

# What should teachers be doing?

Establish engaging purposes for students to read, write, and communicate through problem-based instructional frames

Support intentional and standards-aligned instruction in disciplinary reading with abundant, diverse reading opportunities

Implement intentional and standards-aligned instruction in disciplinary writing

Support higherorder discussion of increasingly complex text

Intentionally build vocabulary and conceptual knowledge

Engage in ongoing assessment

Connect with community resources

Build awareness of how talk varies across contexts

Modified from the Michigan Association of Intermediate School Administrators General Education Leadership Network Disciplinary Literacy Task Force (2019) Essential instructional practices for disciplinary literacy: grades 6 to 12 Lansing, MI: Authors

## General Instructional Strategies

- Students should engage routinely in reading and demonstrating understanding of appropriately challenging texts across subject areas and text types as well as writing in various disciplines and using a range of text types.
  - The Reading and Writing section includes passages in the subject areas of literature, history/social studies, the humanities, and science. Each subject area constructs and conveys knowledge differently, so students should be familiar with how to productively read texts in a range of academic disciplines.

Support intentional and standards-aligned instruction in disciplinary reading with abundant, diverse reading opportunities

- Implementing interactive, problembased units of instruction
- Using a variety of text types across disciplinary contexts
- Provide time for collective meaningmaking and discussion
- Modeling and guided practice using strategies for comprehension, analysis and synthesis

## What's Next for Teachers...

## What does this look like daily?

- Use sample SAT reading and writing questions to connect to effective strategies
- Attend to precision of language and detail in reading and writing
  - Name and notice different text structures for students as they move across disciplines
  - Model the use of textual evidence
  - Demonstrate close reading strategies to revisit small chunks of text within extended texts



# Math Ideas

# In Summary...

Calculator permitted for <u>all</u> questions

Reference sheet & calculator can be accessed throughout the test

Each <u>multiple choice</u> question has one correct answer

#### Student-produced response questions:

- enter only one answer
- up to 5 characters for a <u>positive</u> answer
- up to 6 characters (including the negative sign) for a <u>negative</u> answer
- fraction and decimal responses are both permitted
  - if the fraction doesn't fit, enter the decimal equivalent
  - if the decimal doesn't fit, enter by rounding
- Don't enter symbols: %, \$, commas, etc.
- Mixed numbers (such as 3 ½) should be entered as an improper fraction (7/2) or its decimal equivalent 3.5

# What should students be doing?

#### **Standards for Mathematical Practice**

Make sense of problems and persevere in solving them

Reason abstractly and quantitatively Construct viable arguments and critique the reasoning of others

Model with mathematics

Use appropriate tools strategically

Attend to precision

Look for and make use of structure

Look for and express regularity in repeated reasoning



# What should teachers be doing?

#### **Effective Mathematics Teaching Practices**

Establish mathematics goals to focus learning

Implement tasks that promote reasoning and problem solving

Use and connect mathematical representations

Facilitate meaningful mathematical discourse

Pose purposeful questions

Build procedural fluency from conceptual understanding

Support productive struggle in learning mathematics

Elicit and use evidence of student thinking



## What's next for our Math Teachers...

## What does this look like daily?

- Use sample SAT math questions to connect to effective strategies
  - Look for and make use of structure
  - Use appropriate tools strategically
  - Attend to precision
- Use brief instructional routines frequently with sample SAT problems
  - Three Reads
  - Math Talks
  - Error Analysis (e.g., My Favorite No)

## Three Reads

#### **Read 1: Understand the Story Context**

- Remove the question
- Make sure students make sense of the story context

#### **Read 2: Identify Quantities**

- Keep question removed
- Ask, "What can be counted or measured?"
- Students think deeply about various quantities & how they're related

#### Read 3: Reveal Questions and Plan Solution Strategies

- Ask, "What are some ways we might solve this?"
- Students plan and strategize

## General Instructional Strategies

- Ensure that students practice solving multistep problems. Math questions on assessments in the digital SAT Suite often ask students to solve more than one problem to arrive at the correct answer.
- Vary the types of problems in homework assignments so that students aren't always using the same strategy to find solutions. Students benefit from the practice of determining the right mathematical strategy to solve problems in addition to solving the problems correctly.

Use and connect multiple representations

In the xy-plane, the parabola with equation

 $y = (x - 11)^2$  intersects the line with equation y = 25 at two points, A and B. What is the length of the segment **AB**?

- A) 10
- B) 12
- C) 14
- D) 16

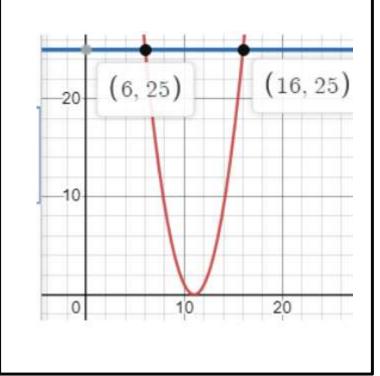
## **Representation 1:**

Table

	rab	ie
x	$y = (x - 11)^2$	y = 25
5	36	25
6	25	25
7	16	25
8	9	25
9	4	25
15	16	25
16	25	25

## **Representation 2:**

**Graph** 



## **Representation 3:**

Algebra

$$25 = (x - 11)^{2}$$

$$\sqrt{25} = \sqrt{(x - 11)^{2}}$$

$$\pm 5 = x - 11$$

$$5 = x - 11 - 5 = x - 11$$

$$16 = x \qquad 6 = x$$

$$16 - 6 = 10$$

Look for and make use of structure

### **Lesson on Solving Systems of Equations**

Option 1: Solve question 1-30



# Look for and make use of structure

#### **Lesson on Solving Systems:**

Option 2: Highlight problems that lend themselves to the different approaches for solving systems of equation and explain why:

Blue: graphing

Yellow: substitution

Green: elimination

Choose 2 problems from each and solve.

## General Instructional Strategies

- Assign students some math problems or create some classroom-based assessments that don't allow for the use of a calculator. While all digital SAT Suite Math questions permit the use of a calculator, this practice encourages greater number sense, probes students' understanding of content on a conceptual level, and builds student skill in determining when it's more efficient to answer a question without using a calculator.
- Separate students into small working groups. Ask them to discuss how to arrive at solutions. When their solutions are incorrect, ask them to discuss how to make corrections. Encourage students to express quantitative relationships in meaningful words and sentences to support their arguments and conjectures.

Construct viable arguments and critique the reasoning of others

Sentence Stems		
Explain	Justify	
First, I because Then/next, I I noticed so I I tried and what happened was How did you get ? What else could we do?	I know because I predict because If then because Why did you ? How do you know ? Can you give an example?	

### **Number Talk**

What is 10% of 200?

How do you know?

**20** 

What is 12% of 200?

How do you know?

**24** 

What is 8% of 200?

How do you know?

16

What is p% of 200?

## General Instructional Strategies

- Develop interest and facility in math by having students practice
  using math to address tasks and problems in a wide range of
  subject areas. Use tables, expressions, and graphs that students
  encounter in other courses to present math as a tool that may be
  applied to many areas of study rather than being relegated to math
  classes.
- Provide frequent opportunities for students to interpret and apply math skills and knowledge in real-world and academic contexts, particularly ones in the sciences and social studies.

Make sense of problems and persevere in solving them

Store A sells raspberries for \$5.50 per pint and blackberries for \$3.00 per pint. Store B sells raspberries for \$6.50 per pint and blackberries for \$8.00 per pint. A certain purchase of raspberries and blackberries would cost \$37.00 at store A or \$66.00 at store B. How many pints of blackberries are in this purchase?

- A) 12
- B) 8
- C) 5
- D) 4

# Final Suggestions

Make connections among different strategies

Encourage <u>efficiency</u>

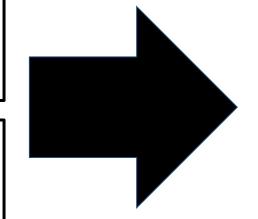
Standards for Mathematical Practice &

Effective Teaching Practices

Exposure to the calculator

Exposure to the reference sheet

Take a test yourself!



Better prepared

# What should leaders be doing?

Form a leadership team with a shared commitment to continuous improvement and ongoing attention to data

Build a collective sense of responsibility for all students and a focus on developing independence and competence in a safe learning environment Maintain learning
environments that reflect a
strong commitment to
effective instruction and
culturally sustaining
approaches

Professional learning opportunities reflect research on adult learning and effective instruction

Allocate academic support equitably in addition to high-quality classroom instruction with multiple supports available to students

Systems assess and respond to individual student needs

High-quality instructional resources are well maintained, available, and effectively utilized

Intentional community networking

Modified from the Michigan Association of Intermediate School Administrators General Education Leadership Network Disciplinary Literacy Task Force (2020) Essential School-Wide Practices In Disciplinary Literacy: Grades 6 to 12. Lansing, MI: Authors



## Practice for Students

## Digital SAT Suite - Student Practice and Preparation







#### My Practice

Review your practice test scores, dig deeper into your performance, and learn your strengths before test day.



Untimed preview to review navigation, tools, and content layout

Full Length
Practice
Exams

Digital and Linear Formats



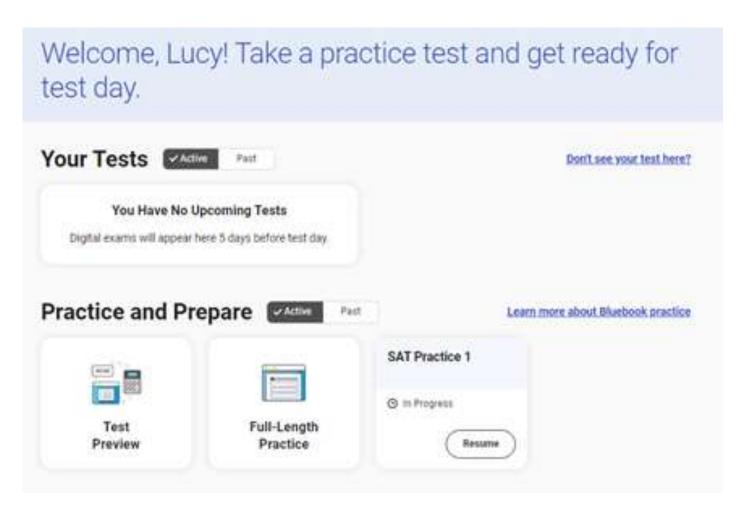
Digital SAT Prep Course

Videos, articles, and worked examples of digital SAT content

Start with Bluebook and strengthen skills with Khan Academy

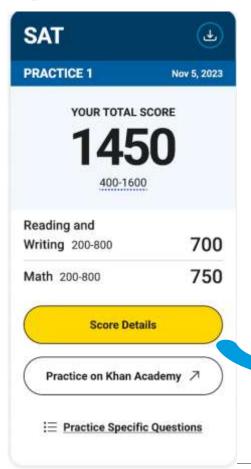
## Practice Tests on Bluebook

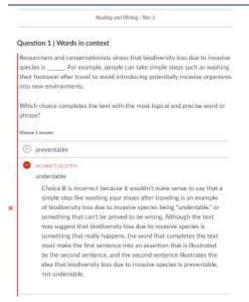
- Four full-length practice exams for all SAT Suite Assessments currently available
- No time lost for exiting and coming back
- Retake as many times as you want
- Students can practice with the same accommodations and supports they will receive on test day
- Practice Test Question Review and Scores in <u>MyPractice</u>



## **MyPractice**

#### My SAT Practice Tests





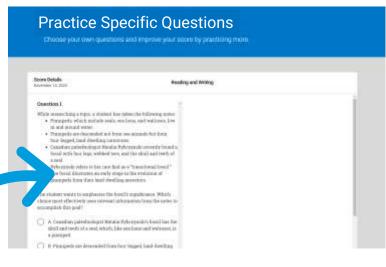
Review every answer and rationale from your completed practice tests





Eighten every question on than Available

Province Specific Specifics



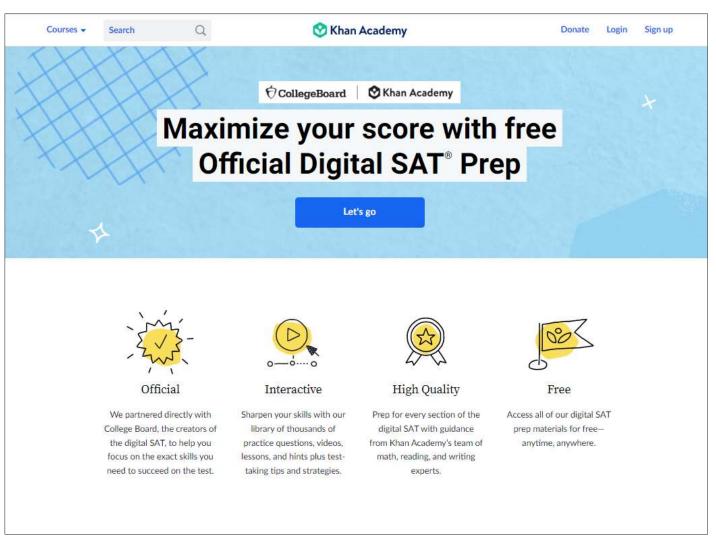
Use the
Practice
Specific
Questions to
explore similar
questions and
create
personalized
practice

Penaling and Militim

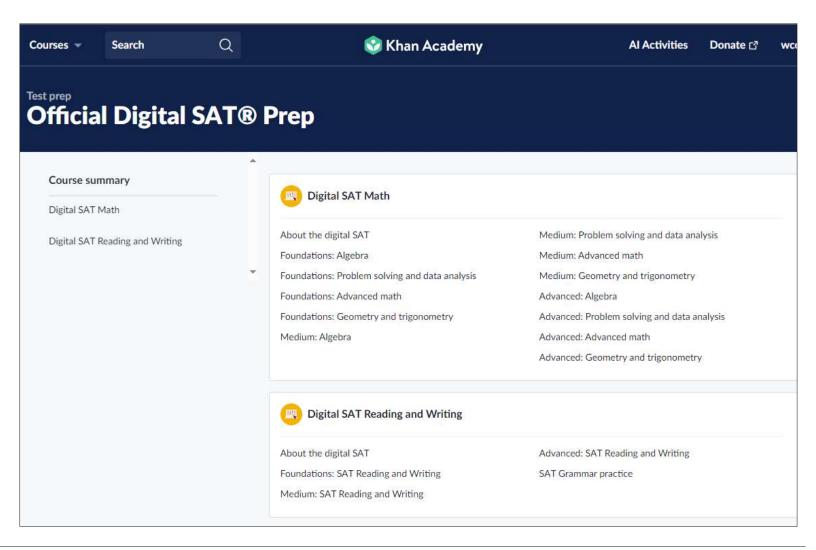
**Paralising sent Writing** 

Score Details

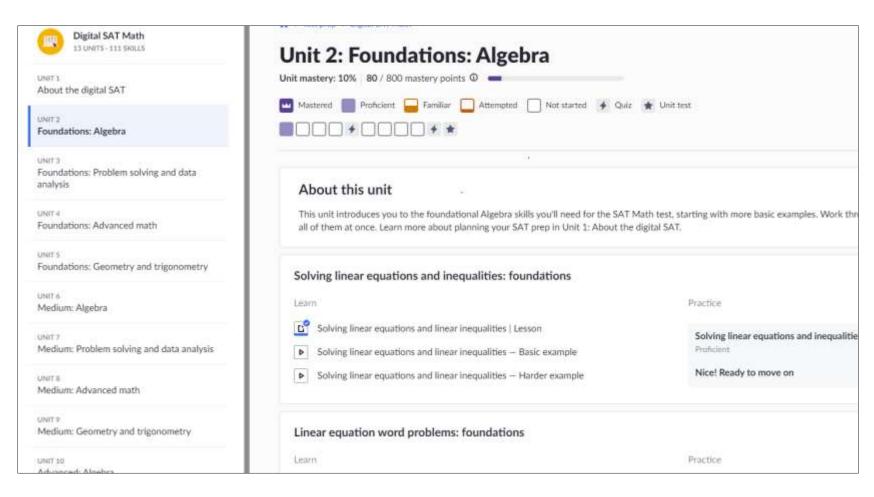
- Khan Academy partners with College Board, providing free authentic practice questions, hints, tips, strategies, videos, and explanations from experienced tutors and test prep experts.
- Khan Academy's Official Digital SAT Prep is a mastery-based course with assignable content and skill-level reporting.



- The Official Digital SAT Prep course is fully aligned to the content domains, skills, and knowledge assessed on the digital SAT.
- The digital SAT Math course has 13 units and the Digital SAT Reading and Writing course has 5 units.

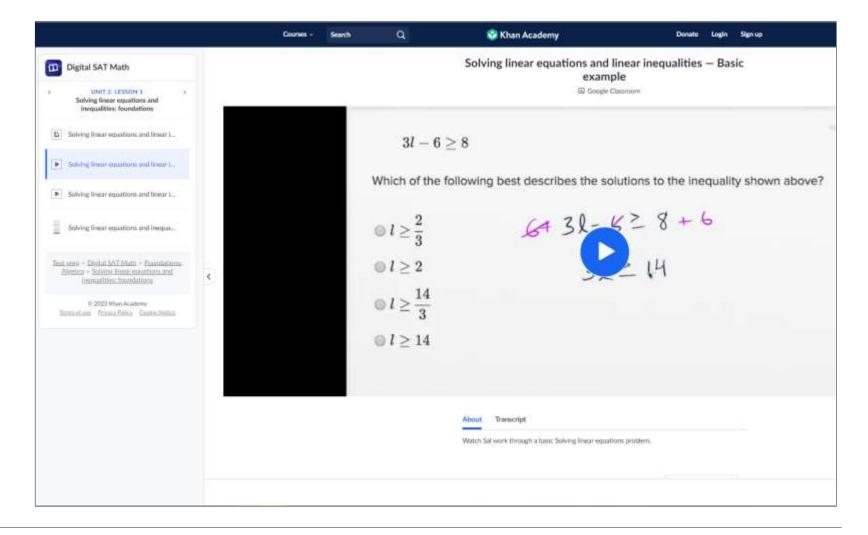


- Students can move through the Math or Reading and Writing course unit by unit or go straight to units they want to address first.
- Within each unit students will progress through videos, quizzes, and unit tests.
- Student progress is tracked as they work through each unit.



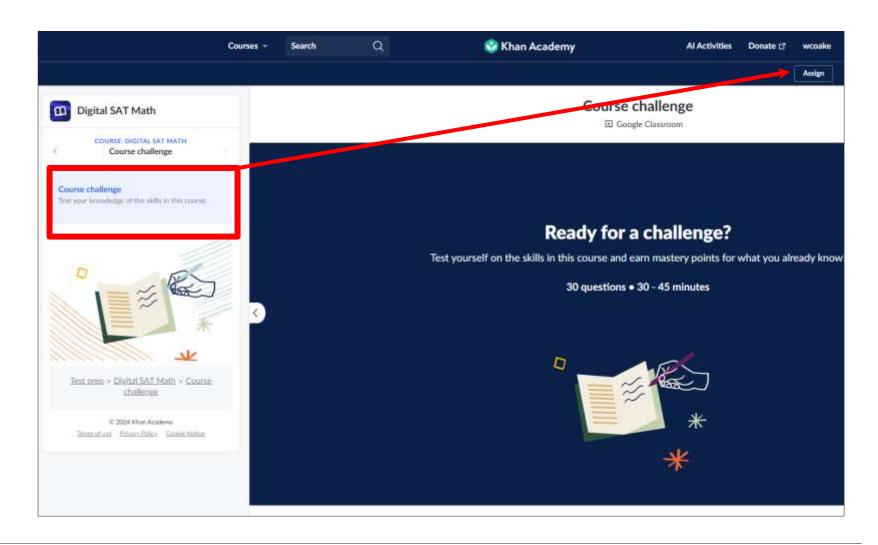


Intertwined with articles, quizzes, and unit tests, students can view videos to increase their understanding of specific Reading and Writing or Math topics.



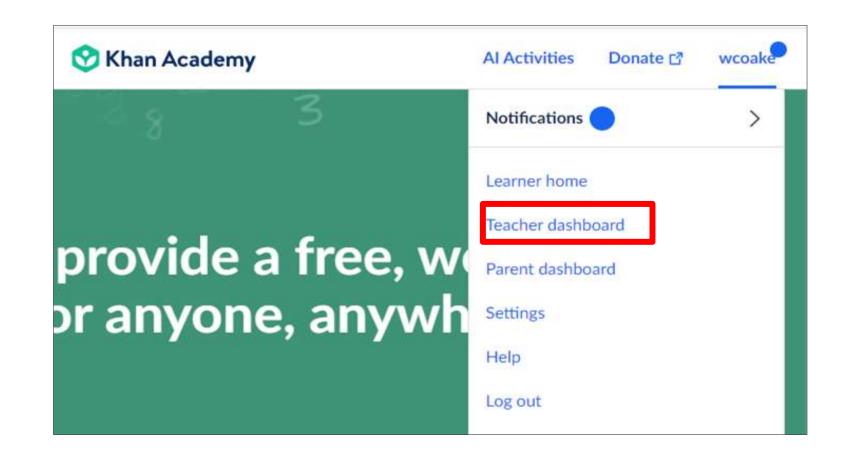


- Students may complete
   the Course Challenge to
   learn more about the skills
   that are important for them
   to practice ahead of test
   day.
- Teachers have the option of assigning the Course Challenge to students.



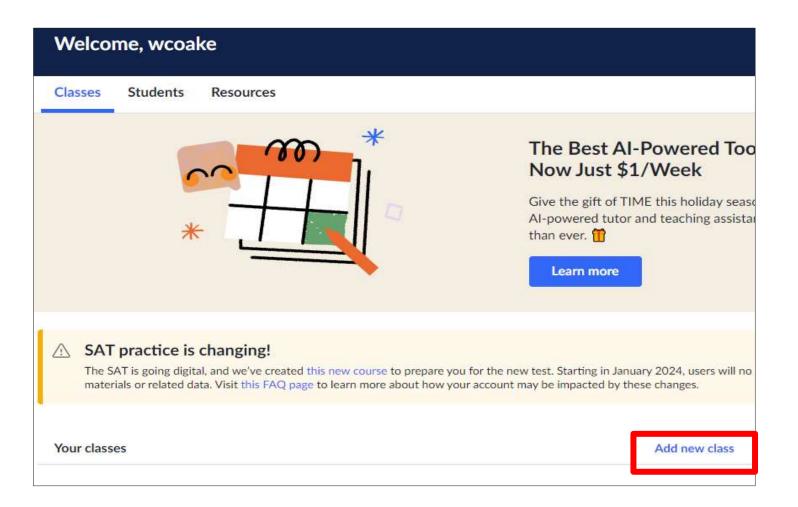
### Creating a Course

- Educators can create Khan Academy courses in their Teacher dashboard and invite students to join.
- Educators can monitor student practice progress for those students tagged to their course.



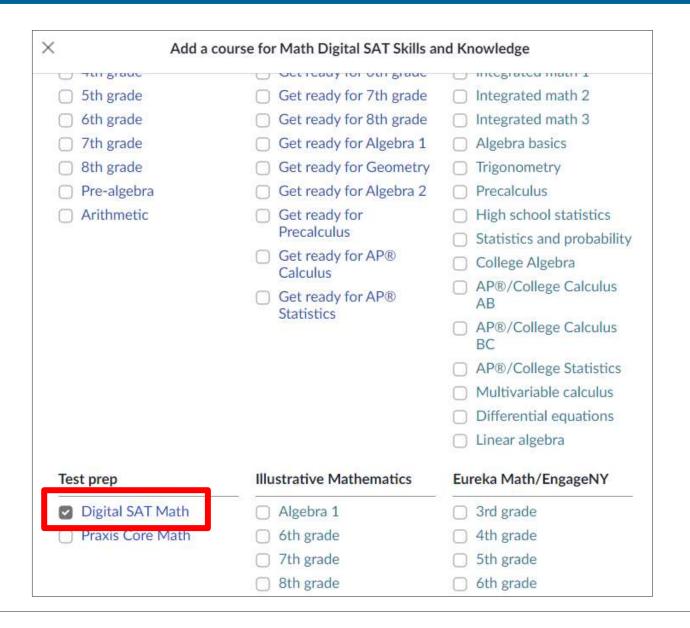
### Creating a Course

 Within the Teacher dashboard, educators can add a new class.



### Creating a Course

Educators can choose the content they want students to see in their course. For SAT practice, educators need to click the *Digital SAT Math* and *Digital SAT Reading and Writing* content under Test Prep.



# Adding Students to Course

Three ways students can join a course:

- 1. Through Google Classroom Invitation
- By using a join code provided by teacher
- Teacher can create student accounts



#### Add new class

#### How would you like to add your students?



#### Invite your Google Classroom

The fastest, easiest way to invite your students.



#### Students join with a class link

Email or share a link, or have your students use a class code.



### Create your students'

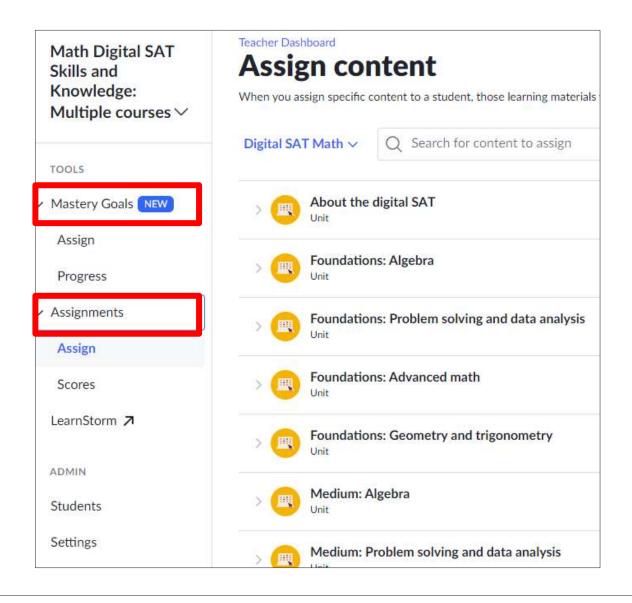
Enter student names and we'll make passwords you can customize.

Before inviting students, please note that Khan Academy assumes you have received parent permission (or meet an exception from parent consent requirements) for any students you add to your class. Download our sample parent notice (available in multiple languages).

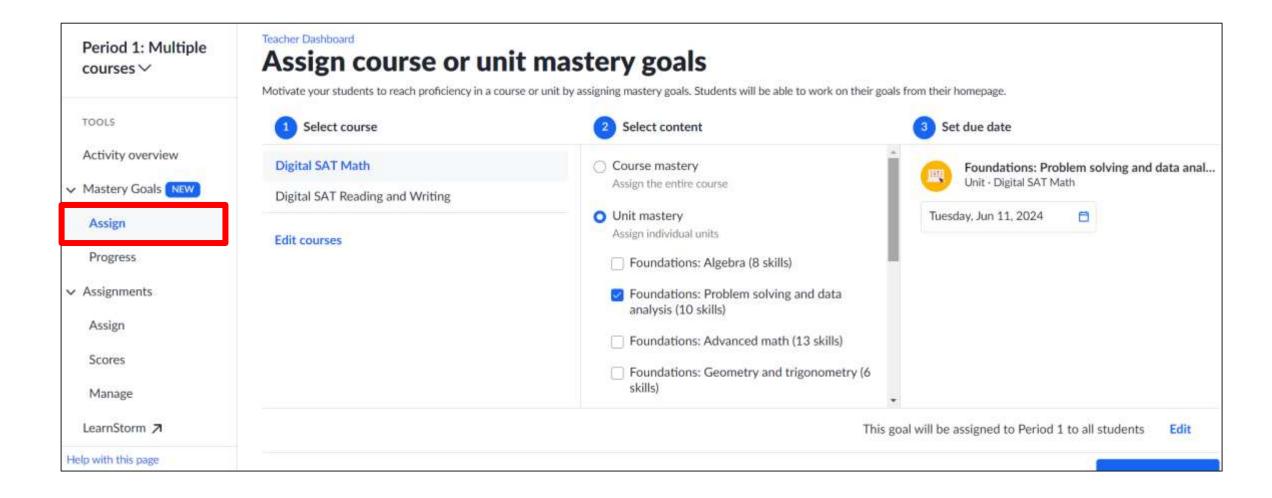


# **Assigning Content**

- Educators can assign content they want their entire class, or individual students, to focus on.
- Assignments can be set up, with specific due dates, by designated mastery levels or general assignment completion.

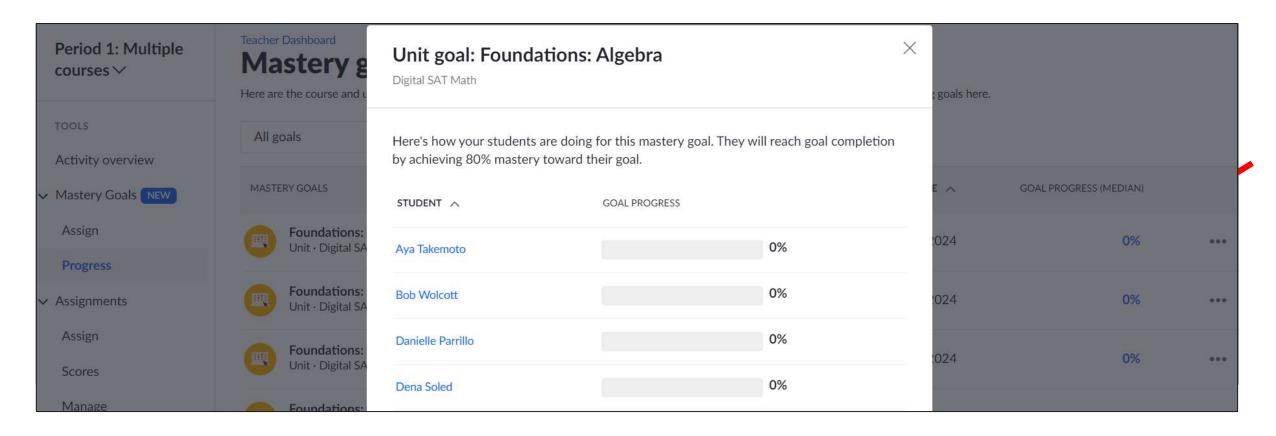


### Mastery Goals: Assigning Content



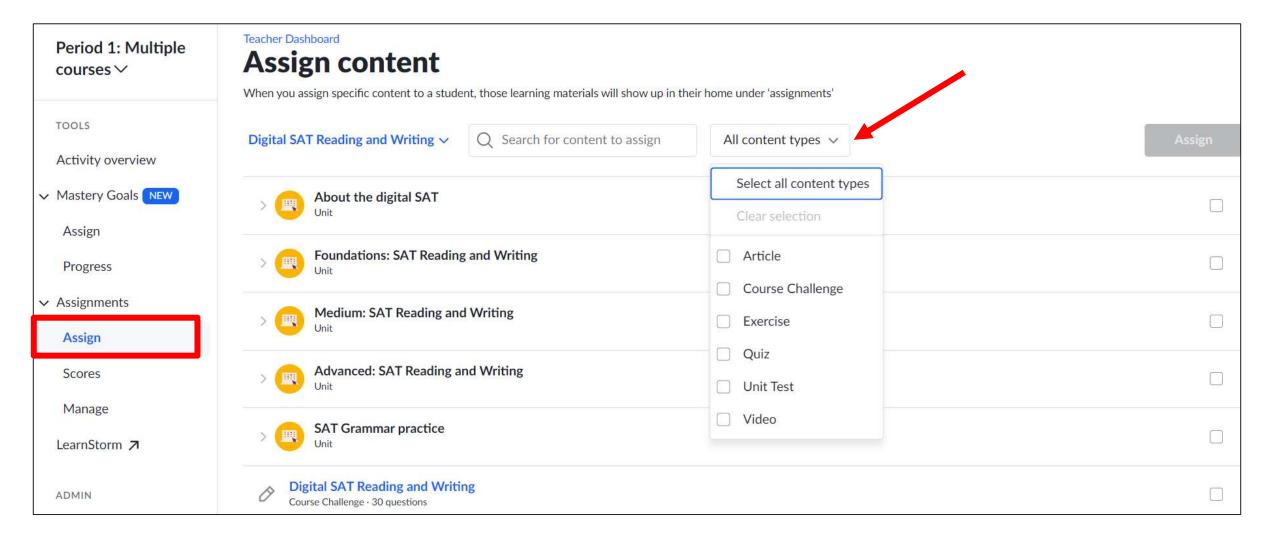


### Mastery Goals: Viewing Progress





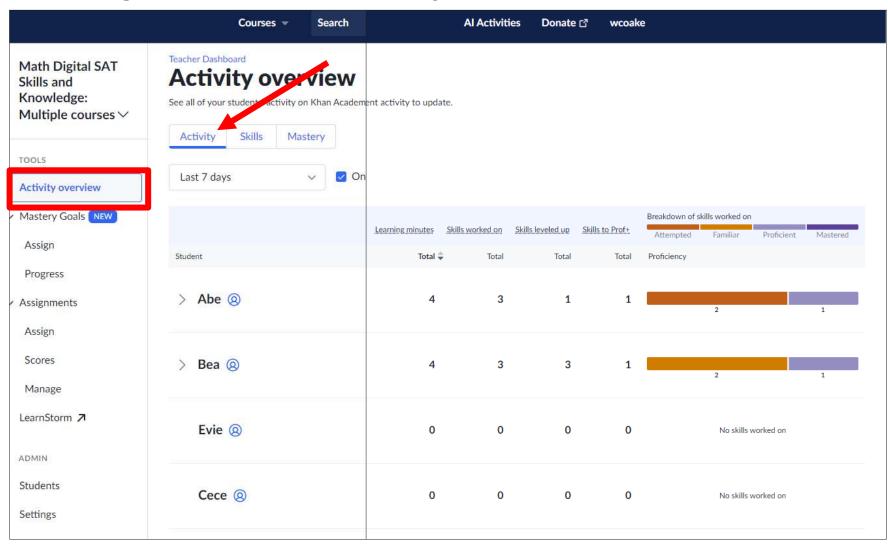
### Assignments: Assign Content





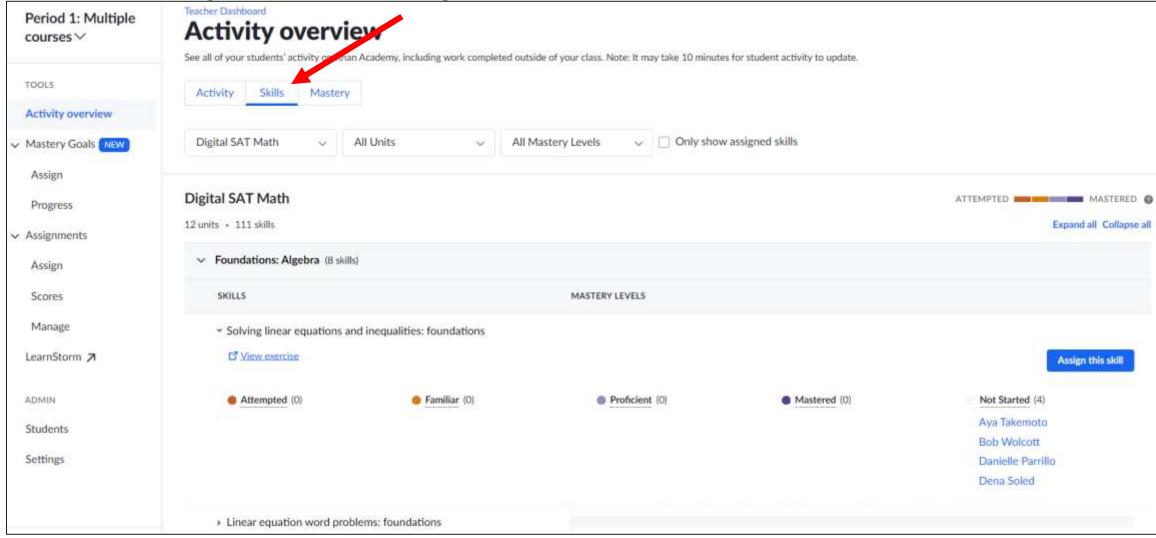
# Monitoring Class Progress – Activity Overview

- Educators can monitor students' overall progress on all assignments.
- Tracking includes:
  - Lessons completed
  - Skills completed
  - Skills leveled up
  - Skill proficiency





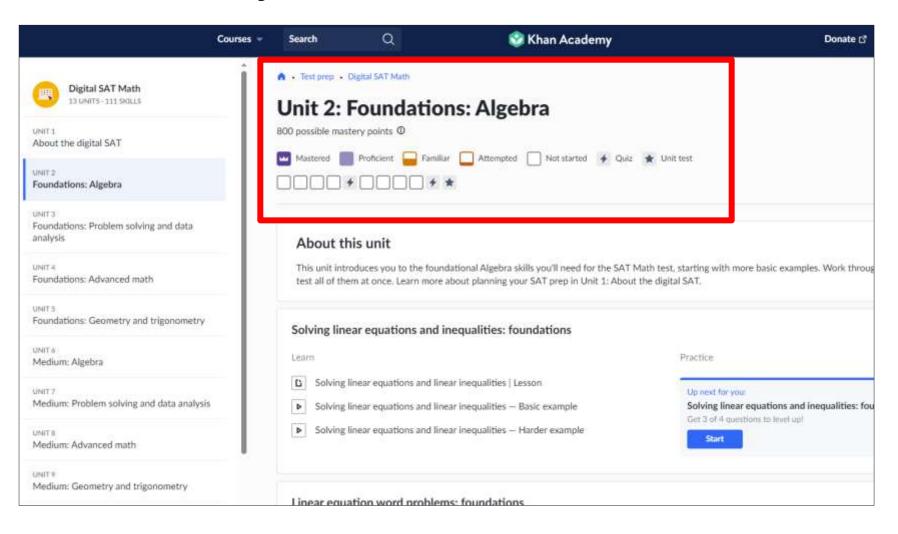
# Monitoring Class Progress – Skills Overview





## Student View: Unit Mastery Goal

Students can track their progress toward mastery on each skill within the assigned unit.



# Student View: Unit Mastery Goal

As students complete lessons within a unit, they will be prompted to continue practice until mastery has been achieved.

