## Understanding and Interpreting

 SAT ${ }^{\circledR}$ 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 ${ }^{\text {Tm }}$
- 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 <br> Points | Operational Question <br> Distribution |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Students will use comprehension, vocabulary, and <br> reasoning skills and knowledge to understand and <br> use high-utility words and phrase in context, <br> evaluate texts rhetorically, and make connections <br> between topically related texts. | - Words in Context <br> - Text Structure and Purpose <br> - Cross-Text Connections | $\approx 28 \% / 13-15$ questions |
| Craft and Structure |  |  |  |

## 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. | - Linear equations in one variable <br> - Linear equations in two variables <br> - Linear functions <br> - Systems of two linear equations in two variables <br> - Linear inequalities in one or two variables | $\approx 35 \%$ / 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. | - Equivalent expressions <br> - Nonlinear equations in one variable and systems of equations in two variables. <br> - Nonlinear functions | $\approx 35 \%$ / 13-15 questions |
| Problem <br> 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. | - Ratios, rates, proportional relationships, and units <br> - Percentages <br> - One-variable data: distributions and measures of center and spread <br> - Two-variable data: models and scatterplots <br> - Probability and conditional probability <br> - Inference from sample statistics and margin of error <br> - Evaluating statistical claims: observational studies and experiments | $\approx 15 \%$ / 5-7 questions |
| Geometry and Trigonometry | Students will solve problems that focus on area and volume; angles, triangles, and trigonometry; and circles. | - Area and volume <br> - Lines, angles, and triangles <br> - Right triangles and trigonometry <br> - Circles | $\approx 15 \%$ / 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

1. Understand SAT Suite scores, benchmarks, and score bands
2. Review the Knowledge and Skills report
3. Use results in conjunction with Skills Insight ${ }^{T M}$
4. 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 ${ }^{\circledR}$
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## 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 | RW |
|  | 430 | 450 | 480 | 510 | 530 | MATH |

## Skills Insight Performance Score Bands by SAT Suite Test Section

## Section Score

| Performance <br> Score Band | Reading <br> and Writing | Math |
| :---: | :---: | :---: |
| 1 | $<370$ | $<370$ |
| 2 | $370-410$ | $370-410$ |
| 3 | $420-480$ | $420-460$ |
| 4 | $490-540$ | $470-540$ |
| 5 | $550-600$ | $550-600$ |
| 6 | $610-670$ | $610-670$ |
| 7 | $680-800$ | $680-800$ |

## SAT Suite Benchmark Scores and Corresponding Performance Score Bands

| Benchmark (Skills Insight Score Band) | SAT |  | PSAT/NMSQT and PSAT 10 |  | PSAT 8/9 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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) |

[^0]
# Analyzing Content Domains: A Deeper Dive into the Skill and Knowledge Statements 

## Activity:

Please 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


## 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 Assessment - 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 (https://satsuite.collegeboard. org/k12-educators/using-
- 

skills-insight)

- Teacher Implementation Guide (httos://satsuite.collegeboard.org/media/pdf/redesigned-sat-k12-teacher-implementation-guide.pdf)
- 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:

1. 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
a. 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).
2. 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).
3. 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 Skills Insight 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.
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## Review the Knowledge and Skills Report

## Access the K-12 Reporting Portal



## 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.

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

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



[^1]
## Math Section Performance Score Bands and Benchmark Score Locations



[^2]
## Activity: Identify the Score Band - Information and Ideas

- Determine the main idea of passages at the high school level
- Determine the most effective literary quotation to illustrate a straightforward claim about a character, setting, or theme
- Draw a reasonable text-based inference from passages at the early college level
- 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
- Draw a reasonable text-based inference from passages at the middle grades level as well as some at the high school level
- Draw a reasonable text-based inference from passages at the high school level as well as some at the early college level


## Activity: Identify the Score Band - Algebra

- Within a complex context, choose the best interpretation of a part of an equation or of an input-output pair when given a linear equation that models the situation
- Solve problems using a graph or linear equation when given one or more pieces of the following information: slope, intercepts, input-output pairs
- With or without a context, create and/or solve a linear equation or system of linear equations, or identify the correct coefficients or constants in the equation(s) that represent(s) the situation
- With or without a simple context, create a linear equation or inequality in one or two variables that represents the possible value(s) of the variable
- With or without a context, create a linear equation or inequality in two variables when given two input-output pairs, a table of values, or details about a translation of a given function
- Find and interpret the meaning of intercepts or slope for complex linear equations


## 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?
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Skills Insight"

## 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

READING AND WRITING
SAT Suite of Assessments Skills Insight Tool
420.480

Go
Intormation and ideas

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

Example Ouestion 1

Oluwaseyi Moejoh cofounded U-recycle Initiative Africa when she was only a teenager. Moejoh and her team founded the organization to teach young people how their actions affect the environment and why recycling is important. For example, the organization put on an exhibit of art made using recycled materials.

According to the text, what is one reason Moejoh and others founded Urecycle Initiative Africa?
A. To bring attention to overlooked African artists
B. To teach young people why recycling is important
C. To help adults gain important outdoor skills
D. To give teenagers advice about starting businesses

## Key: B

## Key Explanation

Choice $\mathbf{B}$ is the best answer because it describes a reason that Moejoh and team founded U-recycle Initiative Africa. The text mentions two reasons the initiative was founded to teach young people about how they affect the environment and to teach them "why recycling is important." Thus, teaching the importance of recycling to young people accurately describes a motivation that the text cites as a reason for the initiative's founding.

## Distractor Explanations

Choice $\mathbf{A}$ is incorrect. Although art is mentioned in the text, there are no details about artists or whether they are being overlooked. Choice $\mathbf{C}$ is incorrect because the text is explicitly about young people and their relationship to the

## Skills Insight - Math Example

## MATH <br> SAT Suite of Assessments Skills Insight Tool



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

Oxygen gas is placed inside a tank with a constant volume. The graph shows the estimated temperature $y$, in kelvins, of the oxygen gas when its pressure is $x$ atmospheres.


What is the estimated temperature, in kelvins, of the oxygen gas when its pressure is 6 atmospheres?
A. 6
B. 60
C. 700
D. 760

## Key: C

## Key Explanation

Choice $\mathbf{C}$ 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


## Skills Insight for the Digital SAT ${ }^{*}$ Suite

 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
- PSAT" $8 / 9$
- PSAT/NMSQT' and PSAT" 10
- SAT


## Skills Insight PDF - Reading and Writing Example



## Skills Insight PDF - Math Example



## Activity: Identify the Score Band - Expression of Ideas

Researchers believe that pieces of hull found off Oregon's coast are from a Spanish cargo ship that was lost in 1697. Stories passed down among the area's Confederated Tribes of Siletz Indians support this belief. $\qquad$ Siletz stories describe how blocks of beeswax, an item the ship had been carrying, began washing ashore after the ship was lost.

Which choice completes the text with the most logical transition?
A. For this reason,
B. For example,
C. However,
D. Likewise,

## Score Band 2

## Activity: Identify the Score Band - Expression of Ideas

It has long been thought that humans first crossed a land bridge into the Americas approximately 13,000 years ago. $\qquad$ based on radiocarbon dating of samples uncovered in Mexico, a research team recently suggested that humans may have arrived more than 30,000 years ago-much earlier than previously thought.

Which choice completes the text with the most logical transition?
A. As a result,
B. Similarly,
C. However,
D. In conclusion,

## Score Band 3

# Activity: Identify the Score Band - Problem Solving and Data Analysis 

A wind turbine completes 900 revolutions in 50 minutes. At this rate, how many revolutions per minute does this turbine complete?
A. 18
B. 850
C. 950
D. 1,400

## Score Band 1

## Activity: Identify the Score Band - Problem Solving and Data Analysis

Last year, 200 students enrolled in an interior design program. This year, the number of students enrolled is $147 \%$ of last year's number. How many students are enrolled in the interior design program this year?
A. 247
B. 294
C. 347
D. 394

## Score Band 3

## Activity: Identify the Score Band - Problem Solving and Data Analysis

A sample consisting of 720 adults who own televisions was selected at random for a study. Based on the sample, it is estimated that $32 \%$ of all adults who own televisions use their televisions to watch nature shows, with an associated margin of error of $3.41 \%$. Which of the following is the most plausible conclusion about all adults who own televisions?
A. More than $35.41 \%$ of all adults who own televisions use their televisions to watch nature shows.
B. Between $28.59 \%$ and $35.41 \%$ of all adults who own televisions use their televisions to watch nature shows.
C. Since the sample included adults who own televisions and not just those who use their televisions to watch nature shows, no conclusion can be made.
D. Since the sample did not include all the people who watch nature shows, no conclusion can be made.

## Score Band 4

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## SAT Suite Question Bank

## SAT Suite Question Bank (SSQB)

Create custom, targeted question sets and improve instruction


## 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



## SSQB - Sample Question


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Teacher Implementation Guide

## Teacher Implementation Guide - Quick Reference

- Reading and Writing p. 19-38
- Math
p. 39-63
- Test Taking Strategies p. 84-86
- Essay p. 64-73
- Instructional Strategies
p. 88-93
- Essay Rubric and Samples .p.94-116
- Detailed Skills Knowledge and Testing Points p.117-133


## SAT ${ }^{\circ}$ SUITE OF ASSESSMENTS

## Teacher Implementation Guide

```
SAT ' PSAT/NMSQT PSAT'10 PSAT' 8/9
```


## 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-classroom-practice-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

| Skill to Develop | Strategy | Implementation <br> Timeline | Resource(s) <br> Needed | Indicator of <br> Success |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
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|  |  |  |  |  |

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Reading and Writing Ideas

## What should students be doing?

Pursue inquiries that connect to communities and identities

Engage in higherorder discussion of complex texts in varying groupings

Wide reading of a diverse array of texts

## Vary speech for

 audiences and listen to understandRead with an analytical lens

Set goals and reflect on growth

Wide informal and formal disciplinary writing

Monitor language, vocabulary, and conceptual
knowledge development

## What should teachers be doing?

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

Intentionally build vocabulary and conceptual knowledge

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


Implement intentional and standards-aligned instruction in disciplinary writing

Connect with community resources

Support higherorder discussion of increasingly complex text

Build awareness of how talk varies across contexts

## 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.


## What does this look like daily?

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
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Math Ideas


## In Summary...

Calculator permitted for all questions

Reference sheet \& calculator can be accessed throughout the test

Each multiple choice question has one correct answer

## Student-produced response questions:

- enter only one answer
- up to 5 characters for a positive answer
- up to 6 characters (including the negative sign) for a negative 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 $31 / 2$ ) 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

Use appropriate tools strategically

Reason abstractly and quantitatively

Construct viable arguments and critique the reasoning of others

Model with mathematics

Look for and make use of structure

Attend to precision

## What should teachers be doing?

## Effective Mathematics Teaching Practices

## Establish mathematics goals to focus learning

Pose purposeful questions

Implement tasks that promote reasoning and problem solving

## Build procedural

 fluency from conceptual understandingUse and connect mathematical representations

Support productive struggle in learning mathematics

Facilitate meaningful mathematical discourse

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.


## What does this look like daily?

## Use and connect multiple representations

In the $x y$-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 $A B$ ?
A) 10
B) 12
C) 14
D) 16

## What does this look like daily?

| Representation 1: |  |  |
| :---: | :---: | :---: |
| $\mathbf{x}$ | $y=(x-11)^{2}$ | $y=25$ |
| 5 | 36 | 25 |
| 6 | 25 | 25 |
| 7 | 16 | 25 |
| 8 | 9 | 25 |
| 9 | 4 | 25 |
| $\ldots$ | $\ldots$ | $\ldots$ |
| 15 | 16 | 25 |
| 16 | 25 | 25 |



Representation 3:
Algebra
$25=(x-11)^{2}$
$\sqrt{25}=\sqrt{(x-11)^{2}}$
$\pm 5=x-11$
$5=x-11-5=x-11$
$16=x \quad 6=x$
$16-6=10$

## What does this look like daily?

## Look for and make use of structure

Lesson on Solving Systems of Equations


## What does this look like daily?

## Lesson on Solving Systems:

## Look for and make use of structure

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.


## What does this look like daily?

## Construct viable arguments and critique the reasoning of others

| Sentence Stems |  |
| :---: | :---: |
| Explain | Justify |
| First, I $\qquad$ because... Then/next, l. . . <br> I noticed $\qquad$ sol. I tried $\qquad$ and what happened was. . <br> How did you get . . . ? <br> What else could we do? | I know $\qquad$ because... <br> I predic $\qquad$ because.. $\qquad$ then $\qquad$ because. <br> Why did you . . . ? <br> How do you know . . . ? <br> Can you give an example? |

## What does this look like daily?

## Number Talk

| What is $10 \%$ of 200? |
| ---: | ---: |
| How do you know? | | What is $12 \%$ of $200 ?$ |
| :---: |
| How do you know? |

What is $8 \%$ of $200 ?$
How do you know? 16

## 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.


## What does this look like daily?

## 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 |
| efficiency |


| Standards for |
| :---: |
| Mathematical |
| Practice |
| $\&$ |
| Effective Teaching |
| Practices |

Exposure to the calculator

Exposure to the reference sheet


## What should leaders be doing?

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

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

Build a collective sense of responsibility for all students and a focus on developing independence and competence in a safe learning environment

Systems assess and respond to individual student needs

Maintain learning environments that reflect a strong commitment to effective instruction and culturally sustaining approaches

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

Professional learning opportunities reflect research on adult learning and effective instruction
${ }^{6}$ CollegeBoard
Practice for Students

## Digital SAT Suite - Student Practice and Preparation

## $\theta$ SAT Suite

## - Bluebook <br> 

## My Practice

Review your practice test scores, dig deeper into your performance, and learn your strengths before test day
© Khan Academy

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 MyPractice


## Welcome, Lucy! Take a practice test and get ready for test day.

## Your Tests vacive Fat Domeseveuctenthere?

## You Have No Upcoming Tests

Diotul exme will appest hese 5 days before test dyy

## Practice and Prepare

```
Active
```

Patt


Full-Length Practice

SAT Practice 1
(C) mhogest

Resume

## MyPractice



## Official Digital SAT Prep Course on Khan Academy

- Khan Academy partners with College Board, providing free authentic practice questions, hints, tips, strategies, videos, and explanations from experienced tutors and test prep experts.



## Official Digital SAT Prep Course on Khan Academy

- The Official Digital SAT Prep
Courses $\quad$ Search
Test prep
ificial Digital SAT (i) Prep

Course summary

Digital SAT Math
Digital SAT Reading and Writing

## Digital SAT Math

## About the digital SAT

Foundations: Algebra
Foundations: Problem solving and data analysis
Foundations: Advanced math
Foundations: Geometry and trigonometry
Medium: Algebra

## Medium: Problem solving and data analysis

Medium: Advanced math

## Medium: Geometry and trigonometry

## Advanced: Algebra

Advanced: Problem solving and data analysis
Advanced: Advanced math
Advanced: Geometry and trigonometry

ㅍ․ Digital SAT Reading and Writing

About the digital SAT
Foundations: SAT Reading and Writing
Medium: SAT Reading and Writing

Advanced: SAT Reading and Writing
SAT Grammar practice

## Official Digital SAT Prep Course on Khan Academy

- 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.

```
    Digital SAT Math
    ungr
    About the digital SAT
usct?
Foundations: Algebra
Unar3
Foundations: Problem solving and data
analysis
UNIT4
Foundations: Advanced math
uNaIs
Foundations: Geometry and trigonometry
Medium: Algebra
Medium: Problem solving and dota analysis
Marts
Medium: Advanced math
uvit
    Medium: Geometry and trigonometry
unat 10
M10
```

Unit 2: Foundations: Algebra

```
Unit mastery: 10% 80/800 mastery points (1) =
```



## About this unit

This unit introduces you to the foundational Algebra skills you'll need for the SAT Math test, starting with more basic examples. Work thr all of them at once. Learn more about planning your SAT prep in Unit 1: About the digital SAT.

## Solving linear equations and inequalities: foundations

| Learn | Practice |
| :--- | :--- |
| Solving linear equations and linear inequalities / Lesson | Solving linear equations and inequalitie |
| Proficient |  |
| Solving linear equations and linear inequalities - Harder example | Nice! Ready to move on |
| Linear equation word problems: foundations |  |

## Official Digital SAT Prep Course on Khan Academy

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


## Official Digital SAT Prep Course on Khan Academy

- 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.

| Welcome, wcoake |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Classes | Students Resources |  |  |  |
|  |  |  | The Best A Now Just \$ <br> Give the gift of Al-powered tuto than ever. $\uparrow$ <br> Learn more | owered T Week <br> this holiday se d teaching assis |
| © SAT practice is changing! <br> The SAT is going digital, and we've created this new course to prepare you for the new test. Starting in January 2024, users will no materials or related data. Visit this FAQ page to learn more about how your account may be impacted by these changes. |  |  |  |  |
| Your classes |  |  |  | Add 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.

| $\times \quad$ Add a course for Math Digital SAT Skills and Knowledge |  |  |
| :---: | :---: | :---: |
| $\checkmark$ тursram | $\checkmark$ vilicamy ive var grame | - mugramematr |
| $\square$ 5th grade | $\square$ Get ready for 7th grade | $\bigcirc$ Integrated math 2 |
| $\square$ 6th grade | $\square$ Get ready for 8th grade | - Integrated math 3 |
| $\square$ 7th grade | $\square$ Get ready for Algebra 1 | $\bigcirc$ Algebra basics |
| $\square$ 8th grade | $\square$ Get ready for Geometry | $\square$ Trigonometry |
| - Pre-algebra | $\square$ Get ready for Algebra 2 | $\bigcirc$ Precalculus |
| Arithmetic | Get ready for Precalculus | High school statistics Statistics and probability |
|  | Get ready for $A P ®$ Calculus | College Algebra |
|  | Get ready for $A P ®$ Statistics | AP ®/College Calculus $A B$ |
|  |  | AP ®/College Calculus BC |
|  |  | $\square \mathrm{AP}$ ®/College Statistics |
|  |  | Multivariable calculus |
|  |  | $\square$ Differential equations |
|  |  | $\square$ Linear algebra |
| Test prep | Illustrative Mathematics | Eureka Math/EngageNY |
| - Digital SAT Math | $\bigcirc$ Algebra 1 | $\square$ 3rd grade |
| $\checkmark$ Praxis Core Math | $\square$ 6th grade | $\square$ 4th grade |
|  | $\square$ 7th grade | $\square$ 5th grade |
|  | $\square$ 8th grade | $\square$ 6th grade |

## Adding Students to Course

Three ways students can join a course:

1. Through Google Classroom Invitation
2. By using a join code provided by teacher
3. Teacher can create student accounts
```
×
```


## Add new class

How would you like to add your students?


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

| Period 1: Multiple courses | Teacher Dashboard <br> Assign course or unit mastery goals |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Toots | (1) Select course | 2. Select content | 3 Set due date |  |  |
| Activity overview <br> - Mastery Goals | Digital SAT Math Digital SAT Reading and Writing | Course mastery <br> Assign the entire course | Foundations: P <br> Unit - Digital SAT | em solving and | ata anal... |
| Assign | Edit courses | O Unit mastery Assign individual units | Tuesday, Jun 11, 2024 | $\square$ |  |
| Progress |  | $\square$ Foundations: Algebra (8 skills) |  |  |  |
| $\checkmark$ Assignments |  | Foundations: Problem solving and data analysis (10 skills) |  |  |  |
| Assign |  |  |  |  |  |
| Scores <br> Manage |  | Foundations: Geometry and trigonometry (6 skills) |  |  |  |
| LearnStorm $\boldsymbol{\pi}$ | This goal will be assigned to Period 1 to all students Edit |  |  |  |  |
| Help with this page |  |  |  |  |  |

## Mastery Goals: Viewing Progress



## Assignments: Assign Content

| Period 1: Multiple <br> courses $\checkmark$ |
| :--- |
| TooLs |
| Activity overview |
| $\checkmark$ Mastery Goals NEW |
| Assign |
| Progress |
| $\checkmark$ Assignments |
| Assign |
| Scores |
| Manage |
| LearnStorm $\pi$ |
| ADMIN |

## Assign content

When you assign specific content to a student, those learning materials will show up in their home under 'assignments'

Digital SAT Reading and Writing $\vee$
Q Search for content to assign
( About the digital SAT UnitFoundations: SAT Reading and Writing
Unit


Medium: SAT Reading and Writing
Unit


Advanced: SAT Reading and Writing Unit


SAT Grammar practice
Unit
Unit

Digital SAT Reading and Writing Course Challenge 30 questions

## Select all content types

Clear selection
$\square$ Article
$\square$ Course Challenge
$\square$ Exercise$\square$ Unit Test
$\square$ Video




## Monitoring Class Progress - Activity Overview



## Monitoring Class Progress - Skills Overview



## Student View：Unit Mastery Goal

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

```
Digital SAT Math
13 UNits－111ssaus
unit 1
About the digital SAT
Unit 2
Foundations：Algebra
```

Foundations：Problem solving and data analysis
unit
Foundations：Advanced math
Unit 5
Foundations：Geometry and trigonometry
UNIT．
Medium：Agebra
Unit 7
Medium：Problem solving and data analysis
UNIT：
Medium：Advanced math

Medi
Medium：Geometry and trigonometry

## Unit 2：Foundations：Algebra

800 possible mastery points（1）

```
#Mastered Prohcient \squareFamiliar \square Attempted \square Not started & Quir * Unit test
ロロロロ*ロロロロ * *
```


## About this unit

This unit introduces you to the foundational Algebra skilis youlli need for the SAT Math test starting with more basic examples．Work throu
test all of them at once．Learn more about planning your SAT prep in Unit 1：About the digital SAT．

Solving linear equations and inequalities：foundations
Learn
Practice
© Solving linear equations and linear inequalities｜Lesson
D Solving linear equations and linear inequalities－Basic example
D Solving linear equations and linear inequalities－Harder example

Solving linear equations and inequalities：fo
Ger 3 of 4 questionto tilyef upt

Linear equation word nrohlems：foundations

## Student View: Unit Mastery Goal

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



[^0]:    * Grade-level benchmarks are subject to potential revision by College Board as more operational data for the digital SAT Suite become available.

[^1]:    P8/9 25th percentile
    P/N 25th percentile; P8/9 50th percentile
    SAT 25th percentile; P/N 50th percentile; $\mathrm{P} 8 / 975$ th percentile
    SAT 50th percentile; P/N 75th percentile; P8/9 90th percentile
    SAT 75th percentile; P/N 90th percentile
    SAT 90th percentile

[^2]:    P8/9 25th percentile
    P/N 25th percentile; P8/9 50th percentile
    SAT 25th percentile; P/N 50th percentile; P8/9 75th percentile
    SAT 50th percentile; P/N 75th percentile; P8/9 90th percentile
    SAT 75th percentile; P/N 90th percentile
    SAT 90th percentile

