

GUIDANCE AND RESOURCES FOR HIGH SCHOOLS

Office of Teaching & Learning

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CHICAGO PUBLIC SCHOOLS | OFFICE OF TEACHING & LEARNING



# Guidance and Resources for High Schools

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# Guidance and Resources for High Schools

## The Instructional Core and the SAT Suite of Assessments

The strength of the Instructional Core of a school is dependent on the quality and alignment across their **Curriculum**, **Instruction**, and **Assessment**. This alignment is essential to preparing students to master the Illinois Learning Standards<sup>1</sup> and demonstrate readiness for college, career, and community. The SAT is one measure of readiness selected by the Illinois State Board of Education (ISBE) to be administered statewide because of its superior alignment to the Common Core State Standards (CCSS) in ELA and Math. Schools that have made the shifts across their Instructional Core required by the adoption of the CCSS have positioned their students to be successful on the SAT.

The work of schools is the **continual reflection** on and **ongoing improvement** of the quality of each component of the Instructional Core and their alignment to one another. Preparation for the SAT Suite of Assessments should not detract from this work; rather it should be embedded within the priorities schools identify related to each component of the Instructional Core as defined by the CPS School Excellence Framework.

## The Instructional Core

The **curriculum** – what students should know and be able to do - makes standards come alive for students. All students have access to an academically rigorous curriculum that inspires students to think and contribute high quality work to authentic audiences beyond the classroom. The curriculum fully integrates academic and social emotional learning opportunities for all students, including diverse learners, English learners, and advanced learners. The school regularly examines the curriculum to check alignment to standards and opportunities for all students to meet those standards.

Teachers must have finely honed **instructional** skills. They can shift from one approach to another as the situation demands by carefully monitoring the effect of their teaching on student learning. They seamlessly incorporate ideas and concepts from other parts of the curriculum into their explanations and activities. Their questions probe student thinking and serve to extend understanding. They promote the emergence of self-directed learning for all students, including diverse learners, English learners, and advanced learners.

A **balanced assessment** system effectively measures the depth and breadth of student learning and monitors student progress towards college and career readiness. It also produces actionable data to inform planning for instruction, academic supports, and resource allocation. To meet these goals, a balanced assessment system must include multiple measures and be responsive to the needs of all students, including diverse learners, English learners, and advanced learners.

As freshmen, sophomores, and juniors prepare to take the PSAT 8/9, PSAT 10, and SAT, respectively, in early April, schools should be thoughtful about how their Instructional Core is designed to best support student success. Rigorous, standards-aligned work where students are doing the thinking will prepare students for the content expectations they will encounter on these assessments. Additionally, students should have opportunities to deepen their understanding of the test structure and design. In order to prepare students for these aspects of the assessments that may be unfamiliar, students should experience what it is like to take a full-length exam, understand the types of items they will encounter, and be familiar with the response formats (e.g. math grid-in).

The subsequent guidance for **administrators**, **teacher teams**, and **content-specific teachers** shares best practices for school organization and Instructional Core development that will help schools effectively support student success in their coursework and on the SAT Suite of Assessments.

<sup>&</sup>lt;sup>1</sup> The Illinois Learning Standards (ILS) define what all students in Illinois public schools should know and be able to do as a result of their elementary and secondary schooling. The ILS include the Common Core State Standards (CCSS) for English and Math, the Illinois Arts Learning Standards, and the Next Generation Science Standards (NGSS), among other standards sets including the WIDA English Language Development (ELD), Advanced Placement, and International Baccalaureate standards. For clarity's sake, the subject-specific standards will be referenced in this document instead of referencing the broader ILS.



## Guidance and Resources for High Schools

## **Guidance for Administrators**

High School Administrators are responsible for ensuring that teachers have the time, support, and resources they need to strengthen the school's system of curriculum, instruction, and assessment. The guidance below outlines suggestions for activities that administrators may engage in to support student success on the SAT.

#### **Best Practices:**

- Administrators ensure that department common planning time exists and is consistently focused on student learning through activities such as:
  - o Task Analysis (see <u>EQUIP Protocol</u> for support)
  - Looking at Student Work (see <u>EQUIP</u>, <u>ATLAS</u>, <u>Tuning</u> Protocols and <u>this LASW toolkit</u> for support)
  - Peer Observations (see <u>tinyurl.com/PLCMentoring</u> for support)
  - o MTSS Problem Solving Process (see MTSS PSP KC page for support)
  - o Reviewing the question analysis report from the PSAT to determine instructional focus areas
- Weekly Principal-directed time is utilized to provide teachers with additional structured opportunities to increase their understanding of the expectations of the SAT and the CCSS and how to best support students in meeting those expectations. (see the PSAT/SAT Teacher KC page for support)
- Administrators participate in department meetings to discuss the specific needs of individual content
  areas related to curriculum, instruction, and assessment. (see below for relevant topics: Guidance for
  Content Area Teachers)
- Administrators regularly visit classrooms to provide formative feedback on the quality and alignment of curriculum, instruction, and assessment.
- Administrators develop, share, and monitor a timeline of milestones related to school-wide preparation for the administration of the SAT. A sample timeline can be found <a href="here">here</a>.
- Administrators, counselors, and teachers, including those of English learners and diverse learners, have
  attended or will attend a PSAT data analysis workshop if their students took the PSAT 8/9 or PSAT/NMSQT
  in October. These optional sessions help educators navigate the College Board K-12 Score Reporting
  Portal, understand the PSAT reports, and plan from student results. Sign up at the <u>Learning Hub</u> by
  searching the course code 35484. The dates, times and locations are:
  - o Dec. 14th at Garfield Park (9 11am and 2 4pm)
  - o Dec. 20th at Lane Tech HS (9 11am and 2 4pm)
  - o Jan. 11th at Morgan Park HS (9 11am and 2 4pm)
  - o Jan. 17th at Clemente HS (9 11am and 2 4pm)
  - o Jan. 19th at Gage Park HS (9 11am and 2 4pm)
- Administrators, counselors, and teachers, including those of English learners and diverse learners, will
  attend a Khan Academy workshop to support students with free, personalized Official SAT Practice in
  Khan Academy. These optional sessions will help educators navigate the Khan system and provide best
  practices for how schools can use Khan Academy to prepare students for the PSAT/SAT in the spring.
  Sign up at the Learning Hub by searching the course code 35793. The dates, times, and locations are:
  - o Jan. 23rd at 11424 S. Western (9 11am and 2 4pm)
  - o Jan. 25th at Clemente HS (9 11am and 2 4pm)
  - o Jan. 27th at Colman (9 11am and 2 4pm)
  - o Jan. 30th at Gage Park HS (9 11am and 2 4pm)



## Guidance and Resources for High Schools

# Guidance for Teacher Teams (ILT, Department, and Grade-Level)

Teacher leadership, collaboration, and safe practice are essential to developing a school-wide culture focused on student learning. Teacher teams need regular opportunities to meet with one another in order to reflect on and improve their practice. The guidance below outlines suggestions for activities that teacher teams may engage in to support student success on the SAT.

#### **Best Practices:**

- Teams use appropriate protocols and relevant data to deepen understanding of SAT performance requirements and to align curriculum, instruction, and assessments.
  - Analyze SAT passages and prompts across content areas; conduct question analysis protocols; identify opportunities for standards alignment. (see the <u>PSAT/SAT Teacher KC page</u> for support)
  - Identify instructional priorities for department or school-wide focus and work to continually develop common understanding and assessment of priorities.
  - Review evidence from SAT analysis and Instructional Core walks to systematically consider root cause(s) of areas in need of growth.
  - Add standing agenda items that include instructional priorities to meeting agendas.
  - Utilize MTSS Problem Solving Process to identify individual and small group student interventions. (see MTSS PSP KC page for support)
- Teams conduct deep-dives into their common assessments and their alignment to content area standards (i.e. CCSS, NGSS).
  - Conduct <u>tuning protocols</u> to <u>analyze</u> the learning experiences teachers have designed and determine their effectiveness.
  - Conduct assessment evaluation and looking at student work protocols (see <u>EQUIP</u>, <u>ATLAS</u> Protocols for support)
  - Create schedules and systems for peer observations and coaching. Establish a <u>Pineapple Chart</u> system that encourages teachers to invite peer observation. Some of the best pedagogic learning happens by watching other teachers teach.
- Teacher Teams and Administrators should collaborate to develop a school-wide plan for to support **Personalized SAT Practice for Students** through the **SAT All In Challenge**.

Chicago Public Schools recently joined the SAT All In Challenge, a campaign to boost student readiness for college and career through free, personalized Official SAT Practice on Khan Academy. Around the country, 2.5 million students are already using the free, personalized practice tools at roughly equal rates across income levels, race/ethnicity and gender. Chicago Public Schools is joining the national effort to democratize test practice and deliver opportunities to all students.

The College Board and Khan Academy, a leader in online education, developed the free SAT practice tools to create a world-class, tailored experience to help all students prepare for the new SAT and college-level courses. This includes options for extended time for diverse learners. Official SAT Practice supports and reinforces what students are learning in the classroom by helping them focus on the knowledge and skills essential for college readiness. Our goal is that through this partnership, more students in Chicago will complete this school year prepared to take a critical step on the pathway to college.

Students who tested in October can receive practice recommendations based on their Fall 2016 test performance. Those who did not test can take a series of diagnostic quizzes in Khan Academy to receive personalized practice recommendations.



# Guidance and Resources for High Schools

School staff can learn about best practices for Khan Academy SAT Practice Implementation at one of the Khan workshops referenced in the "Guidance for Administrators" section. Linked below are resources to help schools with this implementation.

- Khan Academy Student Sign Up "How-To" Guide
- Khan Academy Gettina Started
- Khan Academy Supporting Students w/ Official SAT Practice
- Khan Academy Teacher-Coach Implementation Guide
- Khan Academy Technology and Logistics
- Khan Academy Toolkit
- Khan Academy Practice Flyer (English)
- Khan Academy Practice Flyer (Spanish)

## **Guidance for Content Area Teachers**

The content departments within the Office of Teaching & Learning provide learning opportunities and resources that support alignment across high-quality curriculum, instruction, and assessment. In addition to professional learning opportunities for individual content area teachers and monthly sessions focused on instructional best practice (tinyurl.com/FrameworkFest and tinyurl.com/FRAMEWORKshops), the Office of Teaching & Learning collaborates with the Office of Network Support to host the quarterly High School Summit Meetings. During these sessions, administrators and teachers have the opportunity to learn about best practices for preparing students for the SAT in content-specific breakout sessions and then collaboratively plan for how and when this learning will be shared and implemented across their school.

On pages 7-15 of this document, you can find supports specifically designed to meet the needs of high school teachers across all core content areas. It is important to note that the instructional strategies described can be applied to a variety of instructional contexts including International Baccalaureate (IB) and Advanced Placement (AP) classrooms. English learners and diverse learners should also have the same opportunities to engage in the identified instructional strategies and resources. A thorough analysis of ACCESS data and Individualized Education Programs (IEPs) will support teachers in providing additional appropriate supports for English learners and diverse learners respectively. Teachers should carefully consider the needs of all of their students when deciding how and when these strategies should be used to develop student understanding of course content and readiness for the SAT Suite of Assessments.

#### Reading, Writing, & Language Instruction across Content Areas

Reading and writing to learn are foundational practices for building students' literacy across contents. Just as students should read from rich, diverse texts of varying lengths daily, they should also engage in frequent writing assignments in all content area classes. Students strengthen their learning by writing in science, arts, social science, math, health, and career-related courses.

Additionally, instruction should be designed across content areas to ensure that all students have opportunities to develop their English language proficiency. The WIDA <u>Can Do Descriptors</u> support teachers of English learners by providing valuable information on the language their students are able to understand and produce in the classroom across all content areas. Additional information can be found on the <u>CPS Office of Language</u> and <u>Cultural Education</u>'s <u>Knowledge Center page</u>.

The table on page 5 offers suggested resources and strategies that can be implemented across content areas.



# Guidance and Resources for High Schools

Possible Reading Texts	Questioning Text	Resources
<ul> <li>Textbooks</li> <li>Novels</li> <li>Articles &amp; Op-Eds</li> <li>Data, graphs, charts</li> <li>Cartoons</li> <li>Infographics</li> <li>Music</li> <li>Works of visual art</li> <li>Fashion</li> <li>Graphic Design</li> <li>Architecture</li> <li>Plays and scripts</li> <li>Task solution strategies and explanations</li> <li>Question stems</li> </ul>	<ul> <li>Ask students to consider HOW and/or WHY [the author(s)]:</li> <li>uses evidence, facts, or examples?</li> <li>omits certain information or points of view?</li> <li>makes choices in arrangement, word choice, color, or style to reach the audience?</li> <li>uses reasoning to develop ideas and to connect claims and evidence?</li> <li>chooses a tone to convey meaning?</li> <li>presents information as either formal or informal?</li> <li>uses stylistic or persuasive elements, such appeals, to reach the audience?</li> <li>uses his/her/their credibility to give power to the ideas expressed?</li> <li>Additional examples for math tasks:</li> <li>Why did each student use the strategies/solution process shown? Which strategy is more efficient?</li> <li>What quantities can you identify in the situation? What questions could you ask related to the quantities in this situation?</li> </ul>	<ul> <li>Think Literacy's         Cross-curricular         approaches</li> <li>RAFT</li> <li>Harvard's         Interrogating         Text</li> <li>SOAPSTone</li> <li>5 Key Questions         that Can         Change the         World: Media         Literacy lesson         plans across         content areas</li> </ul>
Possible Forms of Writing	Questioning During the Writing Process	Resources
<ul> <li>Essay</li> <li>Short Response</li> <li>Short Story</li> <li>Argument</li> <li>Article/OpEd</li> <li>Lab Report</li> <li>Reflection</li> <li>Policy Brief</li> <li>Solution Explanation</li> <li>Proof</li> <li>Types: opinion, argument, and analysis</li> </ul>	<ul> <li>Consider the rhetorical situation while writing:</li> <li>Who is my audience? Who am I trying to inform or persuade?</li> <li>What is my purpose for writing? What do I hope to make the audience think, know, do, or feel?</li> <li>Is my subject narrow enough? Is it so general or so specific that it leaves me with little to say?</li> <li>What kind of evidence will be most effective for my audience in order to achieve my purpose?</li> <li>Is the audience I have selected the most appropriate in relation to my purpose?</li> <li>What tone should I employ in my writing? What would impact my audience and purpose the most?</li> <li>Does the evidence I use actually strengthen my argument, claim, thesis, etc.?</li> <li>Additional examples for math tasks:</li> <li>How does your diagram match your explanation?</li> <li>Why did you use the strategy shown?</li> <li>What are some similarities and differences you notice between solution methods?</li> </ul>	Use SAT essay question stems with your content as formative and summative writing tasks.  NWP 30 Ideas for Teaching Writing  SOAPSTone

Writing is a recursive process. Revision in writing workshops and conferences are important strategies for developing writers. Further, students should revisit previous writing assignments periodically to alter their evidence, word choice, or arrangement of paragraphs and sentences. This process shows students their growth and builds writing confidence as well as skill. For example, teachers can keep a summative task writing sample of students' writing from Q1. Then, As a Q2 assessment, ask students to read and revise their previous writing; make suggestions for improvement in a specific area (thesis, evidence, style, etc.), or ask them to rewrite for a different audience (teacher-peers), or purpose (inform-persuade).



## Guidance and Resources for Arts Teachers

#### **Arts Education**

The SAT alignment with CCSS positions the arts (dance, media arts, music, drama/theatre, and visual arts) to contribute to SAT readiness and mastery. The new *Illinois Arts Learning Standards* are written with identical processes and vocabulary as the CCSS. This provides opportunities to increase student mastery in the skills necessary for success on the SAT.

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students interpret graphics and edit a part of the accompanying passage so that it clearly and accurately communicates the information in the graphics.	Arts Anchor Standard #3: Revise, refine, and complete artistic work.  Arts Anchor Standard #7: Perceive and analyze artistic work.  Arts Anchor Standard #8: Interpret intent and meaning in artistic work.	<ul> <li>Engage students in "Close Reading" of works of arts across disciplines using complex works as text.</li> <li>Lead students in revising their works of art based criteria and feedback from critiques.</li> </ul>	OPTIC Strategy  Analyze Primary Sources: Close Reading Images  Art Institute of Chicago Learning through Museums Resources for Language Learning  Using Popular Music for Close Reading
Students apply their reading, writing, language, and math knowledge and skills to answer questions in science, history, and social studies contexts.	Arts Anchor Standard #1: Generate and conceptualize artistic ideas and work Arts Anchor Standard #11: Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.	<ul> <li>Prompt students to design or plan works of art that are connected to other areas of knowledge or cross-disciplinary contexts.</li> <li>Make arts connections with other areas of knowledge through social, political, cultural, and economic contexts.</li> </ul>	Arts Integration, CPS Chicago Guide  Project AIM, Columbia College  Kennedy Center, Arts Integration  CAPE, Arts Integration
Students perform critical analysis texts including: world literature, U.S. founding documents, science passages, and selections about psychology, economics, and sociology	Arts Anchor Standard #1: Generate and conceptualize artistic ideas and work. Arts Anchor Standard #3: Revise, refine, and complete artistic work. Arts Anchor Standard #9: Apply criteria to evaluate artistic work.	Use artistic critique and evidence-based analysis to evaluate works of art and text.	Guidelines for Evaluation of Visual Art  CPS Scope & Sequence for Arts: HS Music, HS Visual Art, HS Drama/Theatre, and HS Dance  HS Theatre Model Cornerstone Assessment Rubric  WIDA Can Do Descriptors for Grades 9-12



## Guidance and Resources for English Language Arts Teachers

## **English Language Arts**

The overall aim of the SAT Reading Test is to determine whether students can demonstrate college and career readiness proficiency in comprehending a broad range of high-quality, appropriately challenging literary and informational texts in the content areas from a variety of historical periods and genres of U.S. and world literature, history/social studies, and science. The overall aim of the redesigned SAT Writing and Language Test is to determine whether students can demonstrate college and career readiness proficiency in revising and editing a range of texts in a variety of content areas. Unlike many standardized direct-writing assessments, the redesigned SAT Essay will not elicit students' subjective opinions. Instead of simply emulating the form of evidence used by asking students to draw on their own experiences or imaginations, the Essay will require students to make purposeful, substantive use of textual evidence in a way that can be objectively evaluated. Essay responses will be evaluated across three dimensions: reading, analysis, and writing. For additional guidance to support English learners, see the CPS High School English as a Second Language Resource Guide.

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students use multiple reading passages to explore ideas in both fiction and nonfiction, and practice analysis and synthesis of texts to make judgments and claims, and use precise evidence to support judgments and claims.	RI.11-12.1/RL.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly/implicitly RI.11-12.2/RL.11-12.2 Determine two or more central ideas of a text and analyze development over the course of the text, including how they interact and build on one another RI.11-12.7/RL.11-12.7 Integrate and evaluate multiple sources of information presented in different text, media, or formats in order to address a question or solve a problem. W.11-12.1.A Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims	Ask students to practice identifying thesis/claim often, using varied texts (print and non-print) and in varied contexts.  Create prompts and activities that require students to synthesize varied viewpoints to inform their own claim:  Essay writing prompts  Synthesis Simulations (i.e. town hall forum on a new policy)  Focus on argumentation (debates, essays, discussions on controversial issues)	Synthesis instruction information:  College Board  Meeting our Monsters  Planning Resources:  Argument Centered Education & ProCon.org  Sub-skills/strategies for developing synthesis activities for students  NYT Constructing Arguments  Question stems for pairing text and graphics



# Guidance and Resources for English Language Arts Teachers

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students investigate the way authors use word choice, structure, and other techniques to create a desired effect in both fiction and nonfiction.	RI.11-12.5 Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument. RI.11-12.6 Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text. RL.11-12.3 Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama	<ul> <li>SOAPSTone (Speaker, Occasion, Audience, Purpose, Subject, Tone)</li> <li>Use SOAPSTone with strategies outlined above</li> <li>Rhetorical analysis of texts:</li> <li>Analyze the relationship of the message, audience, and purpose of the text. Consider the WHAT and HOW: What is the text doing? How is the text doing it?</li> </ul>	The <u>SOAPSTone Strategy</u> from College Board  Rhetorical Analysis Tools:  • <u>Rhetorical Situation</u> , <u>article</u> , <u>tool</u> , and <u>more</u> • <u>Basic questions for rhetorical analysis</u>
Students will reveal an understanding of words in context and how word choice helps shape meaning and tone	RI.11-12.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text  L.9-10.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	Provide instruction on Tier Two vocabulary (more precise or subtle forms of familiar words (e.g. walk v. saunter).  Design questions that draw students back to the text rather than rewarding only isolated vocabulary knowledge.  Explore how the same word shifts meaning between or even within contexts (i.e. the use of "dedicated" in Lincoln's Gettysburg Address)  Create tasks that focus less on definitions and more on the rhetorical impact of words and phrases on meaning and tone.	<ul> <li>Tool for tone/diction analysis:</li> <li>DIDLS: Strategy for identifying tone</li> <li>Denotation/Connotation</li> <li>Resource for teaching words with multiple meanings:</li> <li>Radiolab and NPR video, WORDS and accompanying Words episode</li> <li>General Reading Comprehension Strategies for English Learners</li> <li>Increasing Academic Language Knowledge for English Learner Success</li> </ul>



# Guidance and Resources for English Language Arts Teachers

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students will demonstrate a careful understanding of the passage, effective and selective use of textual evidence to develop and support points, clear organization and expression of ideas, and a command of the conventions of standard written English.  The Essay will require students to analyze how an author uses evidence, reasoning, and/or stylistic or persuasive elements (and/or other elements of the students' choosing) to build an argument.	W.11-12.5 Develop and strengthen writing by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. W.11-12.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences RI.11-12.5 Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument RI.11-12.6 Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective L.11-12.3 Apply knowledge of language to understand how language functions in different contexts.	<ul> <li>Shift traditional practices of reading and analyzing text, learning grammar and style, and writing to include analysis of WHAT the author is doing, HOW the author is doing it, WHY he/she/they made those choices, and the degree to which those choices were effective.</li> <li>Make a habit of including questions with any reading and writing tasks that will help build students' capacity to analyze text and build the confidence and language required to make evidence-based judgments of an author's work.</li> </ul>	<ul> <li>Rhetorical Precis Strategy</li> <li>Use sample essays and rubric from the SAT guidance document, or anonymous student samples from other classes, to practice revision as a class.</li> <li>Writing prompts: Question stems for pairing text and graphics</li> <li>See Reading, Writing, and Language Instruction across Content Areas (above) for more resources</li> <li>Consult colleagues with experience teaching AP Language and Composition</li> </ul>
Students will engage in analysis of writing, effective language use, conformity to the conventions of standard written English grammar, usage, and punctuation.	L.11-12.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. L.11-12.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	<ul> <li>Provide instruction on conventions of grammar in the context of writing. Teach grammar choices that authors make to reach the audience and achieve the purpose.</li> <li>Revisit previous writing assignments periodically, allow students to change or enhance their evidence, alter word choices, or otherwise edit their work to strengthen their skills.</li> </ul>	Effectively Teaching     Grammar     Grammar Though     Author's Writing     Engaging Grammar     Further reading     options on Teaching     Grammar in Context



## Guidance and Resources for Mathematics Teachers

#### **Mathematics**

The overall aim of the SAT Math Test is to assess fluency with, understanding of, and ability to apply the mathematical concepts that are most strongly prerequisite for and useful across a wide range of college majors and careers. Math teachers should design instruction so that students are regularly engaged in the Standards for Mathematical Practice (MP) as defined by the Common Core State Standards for Mathematics. Note that the SAT Math Test has a <u>calculator portion</u> and <u>no-calculator portion</u>. Students should be prepared to use calculators strategically to solve problems efficiently. Classroom instruction and assessments should be designed to provide regular opportunities for students to make use of mathematical structure and engage in quantitative reasoning to reach solutions without the use of a calculator.

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Real-world problems ask students to analyze a situation, determine the essential elements required to solve the problem, represent the problem mathematically, and carry out a solution.	MP #1: Make sense of problems and persevere in solving them. MP #2: Reason abstractly and quantitatively. MP #4: Model with mathematics.	The Three Reads Strategy provides opportunities for all students to 1) understand and make sense of the context of the situation, 2) identify, understand, and connect the mathematical quantities within the situation; and 3) elicit questions based on the mathematical context of the situation. Teachers can use this strategy with text-heavy question stems from the SAT practice tests.	tinyurl.com/3Reads This was the focus of the math breakout at the Quarter 2 High School Summits. You can access the resources from this session in the December folder at: tinyurl.com/mathsummits See additional recommendations for supporting English learners in accessing word problems.
<ul> <li>Students will show that they can:</li> <li>Carry out procedures flexibly, accurately, efficiently, and strategically.</li> <li>Solve problems quickly by identifying the most efficient solution approaches. This might involve solving a problem by inspection, finding a shortcut, or reorganizing information they've been given.</li> </ul>	MP #5: Use appropriate tools strategically. MP #6: Attend to precision. MP #7: Look for and make use of structure.	Contrasting Examples provide meaningful opportunities for students to compare and contrast solution methods, both for the purpose of making connections between procedures and concepts, and for the purpose of developing efficiency in problem solving. Use examples that include one solution strategy that makes use of a calculator and one that does not. Ask students to discuss the efficiency of each strategy.	tinyurl.com/contrastingexamples This will be the focus of the math breakout at the Quarter 3 High School Summits. You can access the resources from this session in the March folder at: tinyurl.com/mathsummits



# Guidance and Resources for Mathematics Teachers

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students will demonstrate their grasp of math concepts, operations, and relations. For instance, students might be asked to make connections between properties of linear equations, their graphs, and the contexts they represent.	MP #1: Make sense of problems and persevere in solving them. MP #7: Look for and make use of structure.	Formative Assessment Lessons provide opportunities for students to grapple with rich tasks that assess how well they can "think with mathematics". These tasks allow for multiple solution pathways and support students making connections between multiple algebraic representations.	tinyurl.com/FALCPS Formative Assessment Lessons are examined and discussed in depth during the High School Leading with Algebra PLCs. You can access the resources from these sessions, and find details for upcoming sessions at: tinyurl.com/cpshsmath
Students will solve equations and engage in mathematical reasoning to solve problems without the use of a calculator. Within the calculator portion of the test, students must consider when and how to use the calculator strategically.	MP #2: Reason abstractly and quantitatively. MP #5: Use appropriate tools strategically. MP #7: Look for and make use of structure.	A Math Talk is a ten minute daily classroom routine that focuses on building conceptual understanding, mental fluency, and efficiency with numbers and operations, as well as building positive habits of dialogue and discourse in the classroom community. Math Talks offer teachers the opportunity to regularly incorporate tasks that require students to reason and explain their ideas without the use of a calculator.	tinyurl.com/CPSMathTalks Math Talks are regularly explored throughout district-wide professional learning opportunities including the Math Teacher Leader Institutes.



## Guidance and Resources for Science Teachers

#### Science

The SAT Science cross-test score measures how well students can use their ELA and Math knowledge and skills in the context of Science examples. Science teachers should provide opportunities for students to apply their literacy and numeracy knowledge and skills to science texts, tasks, and scenarios by engaging students in the NGSS Science and Engineering Practices (SEP) to learn core science ideas.

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students perform critical analysis with science texts such as graphs, models, data tables, scientific articles, and various other data representations.	SEP 4: Analyzing and Interpreting Data SEP 7: Engaging in Argument from Evidence SEP 8: Obtaining, Evaluating, and Communicating Information	Incorporate the use of authentic science texts that include informational graphics which are connected to the topic of study.  Provide opportunities for students to develop their own data representations (models, graphs, data tables).	Science in the Classroom: Annotated research papers and teaching materials tinyurl.com/scitext  Resources from Quarter 2 HS Summit Science Breakout: http://tinyurl.com/q2summitsci
Students analyze information presented quantitatively as graphs, tables, and charts and/or relate that information to information presented in the text. Students use data in the graphic to offer or improve support for a claim or correct passage's inaccurate description of data in a graphic.	SEP 4: Analyzing and Interpreting Data SEP 6: Constructing Explanations SEP 7: Engaging in Argument from Evidence SEP 8: Obtaining, Evaluating, and Communicating Information	Provide students with opportunities to read, write, and revise their own scientific writing as well as the research of others.  Ask students to use evidence (i.e., descriptive details and data from informational graphics) to add or refine central ideas, develop and strengthen claims and points, sharpen focus, and improve precision and accuracy of the key science ideas they are writing about.	Student Resources in Context: CPS HS Library Database: user name and password: cps  Fully integrated database for high school containing thousands of curriculumtargeted primary documents and full-text coverage of over 1,000 magazines, newspapers http://ic.galegroup.com/ic/suic/
Students solve math problems and analyze data grounded in authentic and meaningful science contexts.	SEP 4: Analyzing and Interpreting Data SEP 5: Using Mathematics and Computational Thinking	Determine math connections in science disciplines and embed these math skills in science instruction. Help students become fluent in working with numbers and data that are important in reading, writing, and communicating about texts and topics in science investigations by regularly gathering, organizing, and analyzing relevant data.	NGSS Appendix L: Connections to CCSS-M with examples in each Science Discipline tinyurl.com/ngssmath Maine Data Literacy Project: Resources to support students with acquiring skills and language for making sense of data and graphs as evidence to support their reasoning. http://tinyurl.com/datangss



## Guidance and Resources for Social Science Teachers

#### **Social Science**

The SAT History/Social Studies cross-test score measures how well students can apply their reading, writing, language, and quantitative analysis knowledge and skills in the context of History/Social Studies examples. History/Social Science teachers should provide high quality curriculum and instruction using the Inquiry Standards and Disciplinary Concepts as outlined by the new Illinois Learning Standards and CCSS ELA History/Social Science Standards.

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students interpret, negotiate, and make meaning from a visual image.	SS.IS.5.9-12; Identify evidence that draws information from multiple sources to revise or strengthen claims. ELA.RH.9-10.7 Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.	<ul> <li>Integrate graphs, tables, and charts into reading assignments.</li> <li>Scaffold use of graphs, tables, and charts.</li> <li>Provide students with multiple graphs that are not directly tied to a text but are related to the issue, topic, or theme of the text.</li> <li>OPTIC Strategy (Overview, Parts, Title, Interrelationships, Conclusion) Use OPTIC in conjunction with strategies outlined above</li> </ul>	OPTIC Strategy  Question stems for pairing text and graphics  Resources from the Quarter 2 HS Summit Social Science Breakout:  Resource Folder for the SAT (includes links for various types of infographics and paired text sets)
Students will take varied ideas or points of view from a text and existing schema to inform one thought.	ss.Is.4.9-12 Gather and evaluate information from multiple sources while considering the origin, credibility, point of view, authority, structure, context, and corroborative value of the sources. ELA.RH.11-12.9 Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.	<ul> <li>Provide paired reading passages.</li> <li>Ask students to identify similarities and differences in multiple passages. Have them create a Venn diagram or develop their own graphic organizers to organize their thoughts and facilitate synthesis and analysis of multiple texts.</li> </ul>	Student Resources in Context: CPS HS Library Database: user name & password: cps  Fully integrated database for high school containing thousands of curriculum-targeted primary documents and full-text coverage of over 1,000 magazines, newspapers http://ic.galegroup.com/ic/suic/



# Guidance and Resources for Social Science Teachers

SAT Characteristics	Standards & Practices	Instructional Strategy	Where to Find It
Students will analyze multiple types of sources, analyze arguments in terms of claims, reasoning, evidence, and point of view. As part of this process, students will utilize close reading skills, understand relationships, interpret words and phrases in context, and summarize.	SS.IS.5.9-12 Identify evidence that draws information from multiple sources to revise or strengthen claims. SS.IS.4.9-12 Gather and evaluate information from multiple sources while considering the origin, credibility, point of view, authority, structure, context, and corroborative value of the sources. SS.IS.6.9-12 Construct and evaluate explanations and arguments using multiple sources and relevant, verified information. ELA.RH.11-12.4 Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text.	<ul> <li>Students should analyze history and social studies passages historical primary sources.</li> <li>Provide students with an array of contemporary secondary sources with an emphasis of social science topics from the field of psychology, sociology, economics, and geography.</li> <li>Assign a range of reading passages that includes some longer and more difficult selections, and provide students with needed scaffolding so that they can develop independence in reading such pieces.</li> <li>Analyze primary and secondary sources using sourcing, corroborating, contextualizing, and close reading.</li> <li>Ask students to locate and present additional texts that support an author's conclusion and to defend their choices by citing textual evidence (e.g., quotations) from the additional texts</li> </ul>	College Board Teacher Overview of the Founding Documents and Great Global Conversations on the SAT: illustrates the shift in the reading section of the SAT  Great Global Conversation: SAT created resource with U.S. Founding Documents & Global Conversations  Library of Congress: Teaching with Primary Sources: database of U.S. based primary sources lessons  SHEG: U.S/World History DBQ Lessons which focus on sourcing, corroboration, contextualization, and close reading  General Reading Comprehension Strategies for English Learners  Background Knowledge: A Key to Close Reading with English Learners  Teaching English Learners to Summarize and Synthesize Texts



## For More Information

## **Contact Information**

## Office of Teaching & Learning

LaTanya McDade, Chief Officer

#### **Department of Arts Education**

Contact Evan Plummer, Director of Arts Education at eeplummer@cps.edu.

Visit the <u>Arts Page on the Knowledge Center</u> for additional supports related to high school arts curriculum and instruction.

#### **Department of Framework for Teaching**

Contact Lauren Secatore, Director of Framework for Teaching at Ilsecatore@cps.edu.

Visit the <u>Framework for Teaching Page on the Knowledge Center</u> for additional supports related to instructional best practice for all grades and content areas.

#### **Department of Literacy**

Visit the <u>Literacy Page on the Knowledge Center</u> for additional support related to high school literacy curriculum and instruction.

## Department of Magnet, Gifted, and International Baccalaureate Programs (MGIB)

Contact Veronica Nash, Director of MGIB at vnash@cps.edu.

Visit the MGIB Page on the Knowledge Center for additional support related to IB and AP programs for high schools.

#### **Department of Mathematics**

Contact Jessica Mahon, Director of Mathematics at ilfulton@cps.edu.

Visit the <u>Mathematics Page on the Knowledge Center</u> for additional support related to high school mathematics curriculum and instruction.

#### **Department of Science**

Contact Chandra James, Director of Science at cmjames2@cps.edu.

Visit the <u>Science Page on the Knowledge Center</u> for additional support related to high school science curriculum and instruction.

#### Department of Social Science & Civic Engagement

Contact Jessica Marshall, Director of Social Science & Civic Engagement at jmmarshall2@cps.edu. Visit the <u>Social Science & Civic Engagement Page on the Knowledge Center</u> for additional support related to high school social science curriculum and instruction.

#### **Department of Student Assessment**

Contact Peter Leonard, Director of Student Assessment at pileonard 1@cps.edu.

Visit the <u>Assessment Page on the Knowledge Center</u> for additional support related to high school assessments.

## Office of Language and Cultural Education

Jorge Macias, Chief Officer

Contact María Elena Pagán-Goutos, HS English Learner Specialist at mgoutos@cps.edu. Visit the Office of Language and Cultural Education Page on the Knowledge Center for additional support related to English learners.