Texas Education Agency

Ad Hoc Committee on Mathematics Instruction Framework

Meeting 1

December 11, 2024

Texas Education Agency

Housekeeping

SharePoint Resources

- The Committee will use SharePoint to store and share information pertaining to our work.
- Sarah sent a link (to your SBOE email) that includes research and background materials for your review.
- We will have a folder for each of our meetings that will include the agenda and any additional presentations or materials.

Mathem-Ad-Hoc-Committee.aspx

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Committee Charge

Committee Charge

Committee Description: The State Board of Education is establishing an Ad Hoc Committee on Mathematics Instruction Framework to evaluate Texas' current mathematics content and process standards, research best practices in mathematics education, and provide recommendations for developing exemplary state standards and effective instruction that will provide significant improvement to student performance.

Goal: Provide clear, actionable recommendations for developing mathematics curriculum standards, teacher training, and district implementation supports that will position Texas as a national leader in mathematics education. The recommendations should emphasize explicit, including direct and systematic instruction, precision teaching, fluency in math facts, functional mastery of foundational skills, and effective spiraling of content to ensure deep understanding and retention. The State Board of Education must lay the foundation for Texas to see significant gains in student mastery of mathematics.

Committee Charge

Final Report and Presentation: The Ad Hoc Committee's final report will recommend a framework for revising the Texas K-12 mathematics standards and instructional methods. The framework will provide an organizational structure that reflects the latest research in cognitive science, behavioral learning, and explicit instruction, emphasizing the integration of strategies to improve functional mastery, retention, and application of math skills generally. The report will guide subsequent workgroups responsible for developing detailed standards under the proposed framework.

Timeline: The committee will have 18 months to complete its work, with progress updates provided to the State Board of Education at regular intervals. The final report and recommendations should be submitted no later than November 2026.

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Committee Deliverables

Committee Deliverable 1 - Strengths and Weaknesses Analysis

a) Current Framework Review:

i. Conduct a thorough review of Texas' current mathematics TEKS framework
ii. Identify specific strengths to preserve and build upon
iii. Pinpoint areas of weakness, gaps in content coverage, or structural issues to address
iv. Compare Texas standards to effective frameworks from other states and countries
v. Provide concrete examples to illustrate strengths and weaknesses
vi. Analyze how the existing TEKS framework aligns with principles of explicit instruction and cognitive science, such as scaffolding, spaced repetition, and minimizing cognitive load.
vii. Evaluate the inclusion of the science of math and behavioral learning strategies, such as precision teaching, positive reinforcement, goal setting, and other techniques, in current instructional recommendations.

b) Strengths:

i. Identify areas where the current standards effectively promote mathematical fluency, conceptual understanding, and functional skill mastery.
ii. Highlight successful practices, such as explicit progressions in foundational skills or effective use of formative assessments.

c) Weaknesses:

i. Pinpoint gaps in addressing long-term retention, problem-solving fluency, and integration of behavioral strategies.
ii. Assess structural issues that may limit the effective implementation of explicit instruction or fail to address gaps in instructional design and other challenges in classrooms.

Today's presentations will address this first charge by contributing to the landscape analysis the committee will complete over the course of its work.

Committee Deliverable 2 -Comparison with High-Performing Frameworks

a) Compare the TEKS to math standards from top-performing states and nations to identify best practices, particularly:

i. Integration of cognitive science principles, such as working memory, cognitive load theory, spaced repetition, scaffolding and interleaved practice, to support long-term retention and use of the science of math

b) Provide concrete examples from these frameworks, such as:

i. How they structure fluency development through incremental steps and behavioral reinforcement.
ii. Strategies for embedding spiraling content effectively across grade levels.
iii. Summarize key findings on sequencing, skill development, and content prioritization

Committee Deliverable 3 - Student and Educator Feedback Analysis

a) Gather insights from Texas educators and students to assess:

i. Challenges in applying explicit instruction techniques or behavioral strategies within the current TEKS framework.

ii. Successes and limitations in fostering math fluency and positive classroom behaviors under the existing standards.

b) Analyze how current practices impact student motivation and engagement, particularly in relation to behavioral learning.

***Note:** The ad hoc committee chairman plans to invite parents and educators to provide public testimony in a public meeting.

Committee Deliverable 4 - Recommendations for Improvement

a) Provide recommendations to address identified weaknesses, focusing on:

i. Strengthening explicit instruction and scaffolding practices to better align with cognitive load theory.

ii. Embedding the science of math and other techniques, such as precision teaching, feedback loops, reinforcement schedules, and progress tracking, to improve student engagement and self-regulation.

iii. Enhancing spiraling techniques to support conceptual connections and skills retention across grade levels.

Committee Deliverable 5 - Implementation Considerations

a) Identify key challenges in integrating cognitive and the science of math approaches into the revised TEKS framework, including:

i. Professional development needs for educators to effectively implement these strategies.

ii. Adjustments to assessment practices to better align with the current science of math and cognitive mastery goals.

b) Suggest pilot programs or phased implementation plans to test the integration of explicit instruction, cognitive science and the current science of math in real classroom settings.

c) Recommendations for updates to Texas State Statutes and Administrative Code.

Committee Deliverable 6 - Final Review Report and Framework Recommendations

a) Summarize findings in a clear, accessible report

b) Final Report Presentation:

i. Framework Goal

• Emphasize that the framework integrates cognitive science and the current science of math enhance student outcomes in mathematics.

ii. Develop presentation materials

• Prepare a presentation to the State Board of Education and the Texas Legislature**.**

iii. Focus on Guiding Future Standards

• Clarify that the framework will provide the structure for detailed standards development, ensuring consistency and alignment across grade levels while incorporating evidence-based teaching practices.

c) The report should address identified key areas, with the current science of math principles integrated where appropriate.

Committee Deliverable 7 - Implementation Guidelines

a) Workgroup Structure:

i. The framework should offer guiding principles and specific criteria for workgroups tasked with developing detailed standards.

ii. Workgroups should integrate explicit instructional principles and current science of math strategies, like direct instruction, while ensuring alignment with the proposed organizational framework.

b) Professional Development Needs:

i. Professional development should equip educators to implement both explicit instruction and the current science of math techniques, such as reinforcement strategies, self-monitoring, and progress tracking.

ii. Training should also focus on leveraging a variety of formative assessments to provide immediate feedback and inform instructional adjustments.

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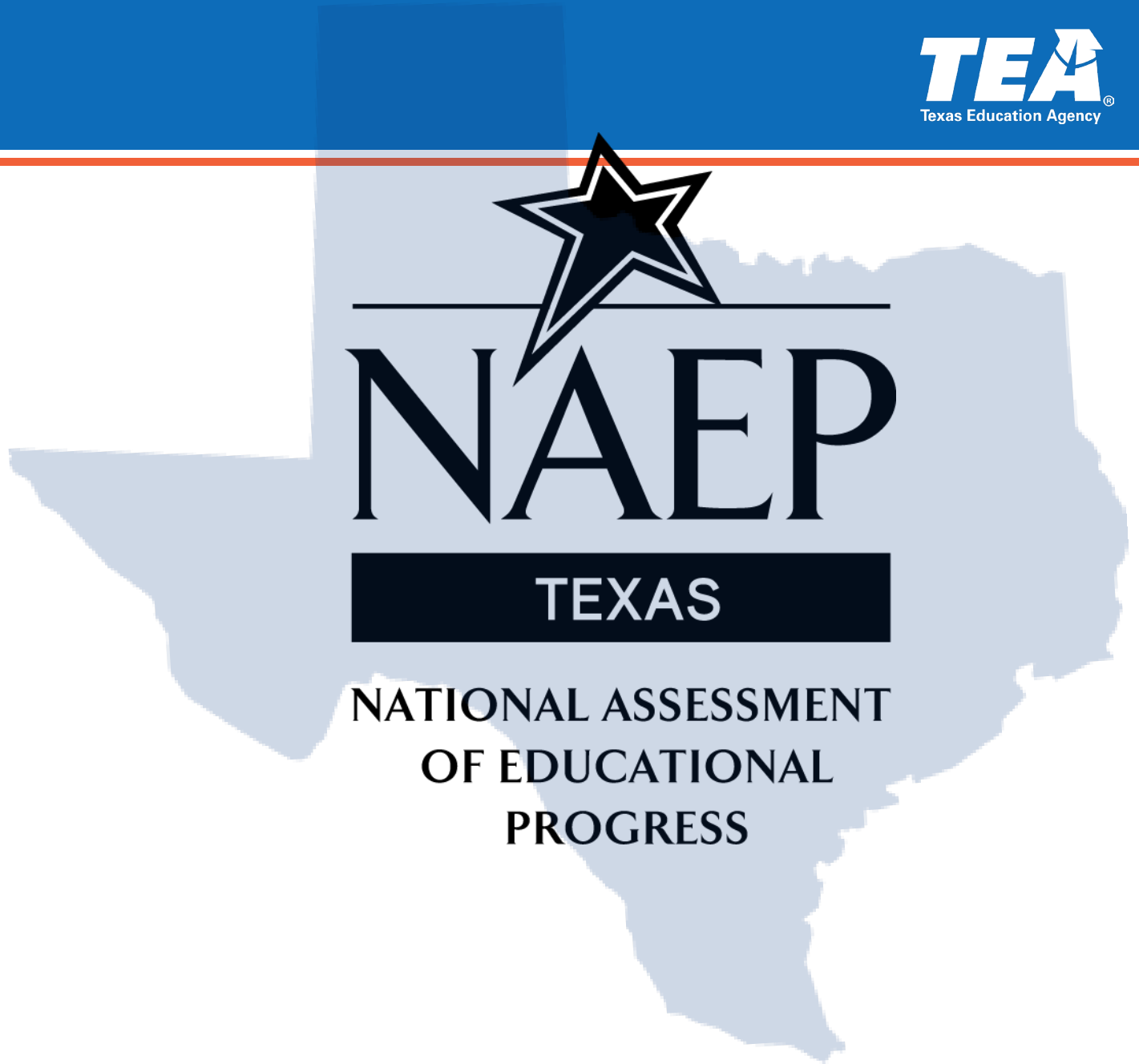
NAEP Overview

NAEP
Navigating New Horizons

Agenda

- What is NAEP?
- 2022 NAEP Mathematics Data
  - National
  - Texas
- 2022 NAEP Reading Data
  - National
  - Texas
- 2024 Results



What is NAEP?

- The only assessment that measures what U.S. students know and can do in various subjects across the nation, states, and in some cases, urban districts.

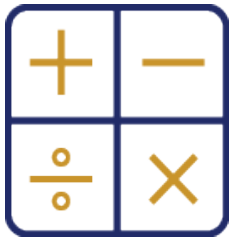
- NAEP results are released as “The Nation’s Report Card”
- www.nationsreportcard.gov

The Nation’s Report Card

National Assessment of Educational Progress

NAEP includes a range of subjects at grades 4, 8, and 12


Civics

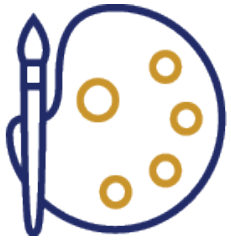

Mathematics


Economics


Music


Technology & Engineering Literacy

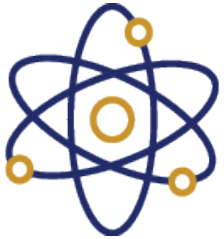

Geography


Visual Arts


Reading


U.S. History


Writing

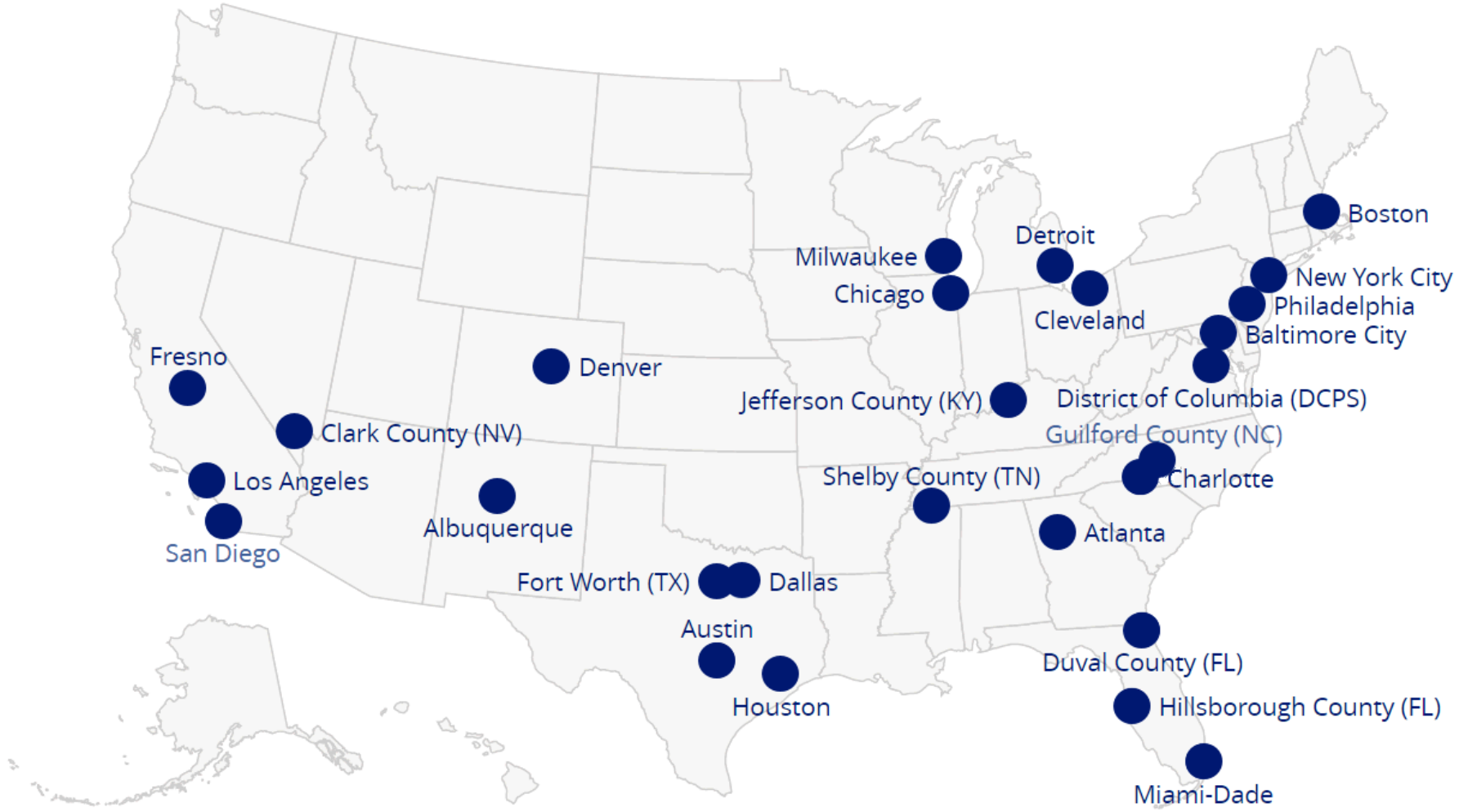

Science

Most subjects return national results only. State-level results are available for reading and mathematics at grades 4 & 8.

Who participates?

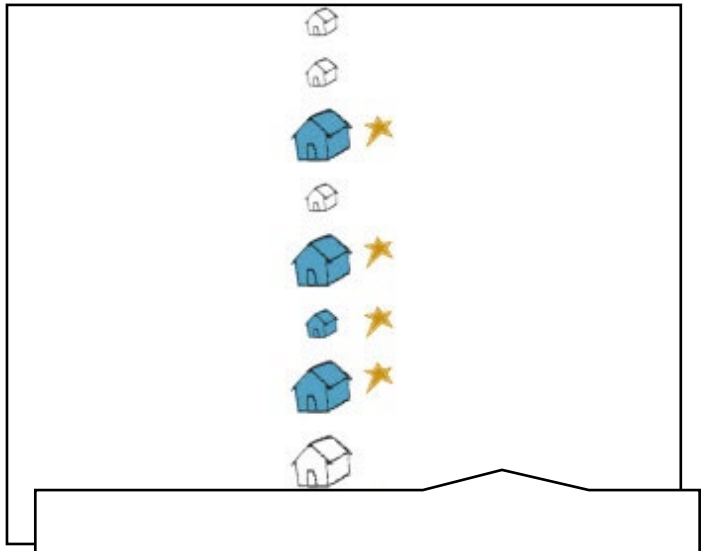
- NAEP produces **jurisdiction-level** results for…
  - All 50 states
  - Department of Defense Education Activity (DS)
  - District of Columbia
  - 26 urban districts - Trial Urban District Assessment (TUDA)

Texas has four districts in the TUDA program

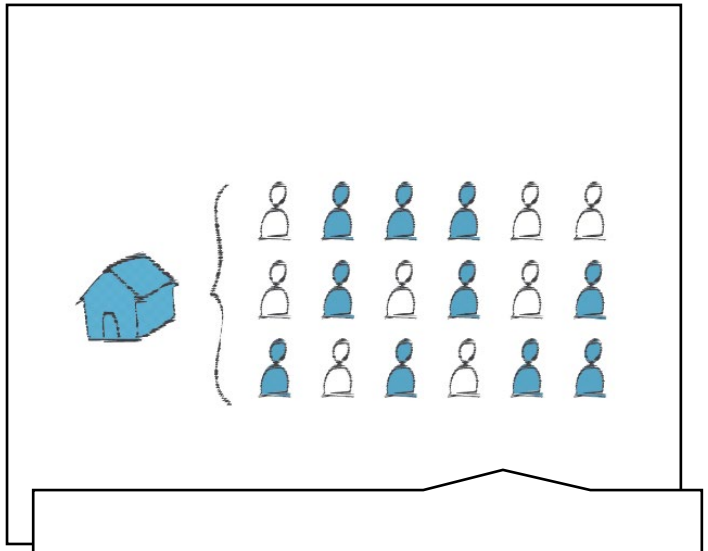


How are schools and students selected?

1. Identify all eligible schools



2. Sample schools



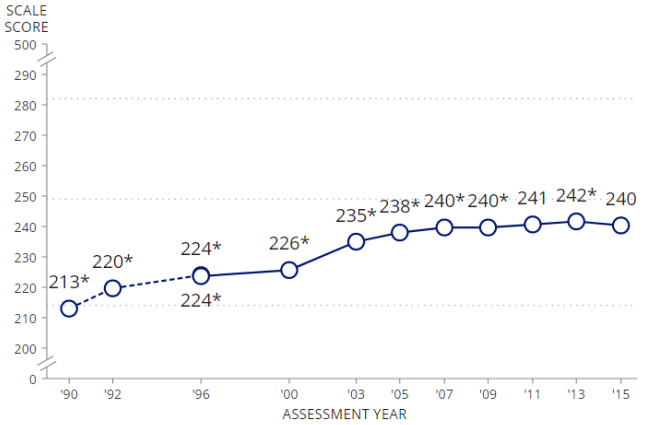
3. Sample students

NAEP Administration

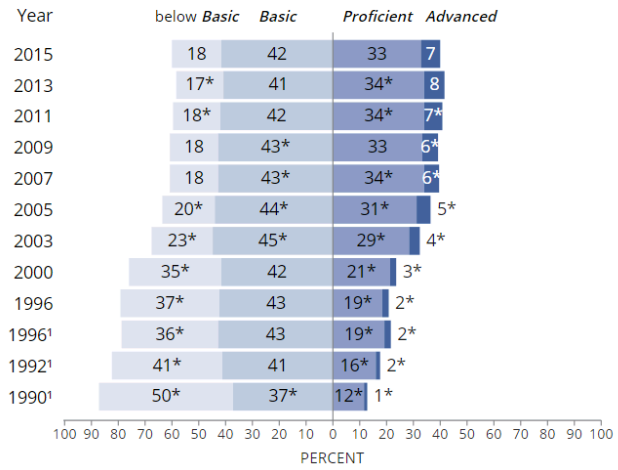
- January to March
- Administered as a digitally based assessment on tablets
- Each student assessed in one subject
- Students take a small portion of the item pool
- Accommodations provided as necessary for
  - Students with disabilities
  - English learners

How are NAEP results reported?

- Scale Scores
  - 0 – 500 on mathematics and reading assessments
  - Cannot be compared across grade levels or content areas



- Achievement Levels
  - Below NAEP Basic
  - NAEP Basic
  - NAEP Proficient
  - NAEP Advanced

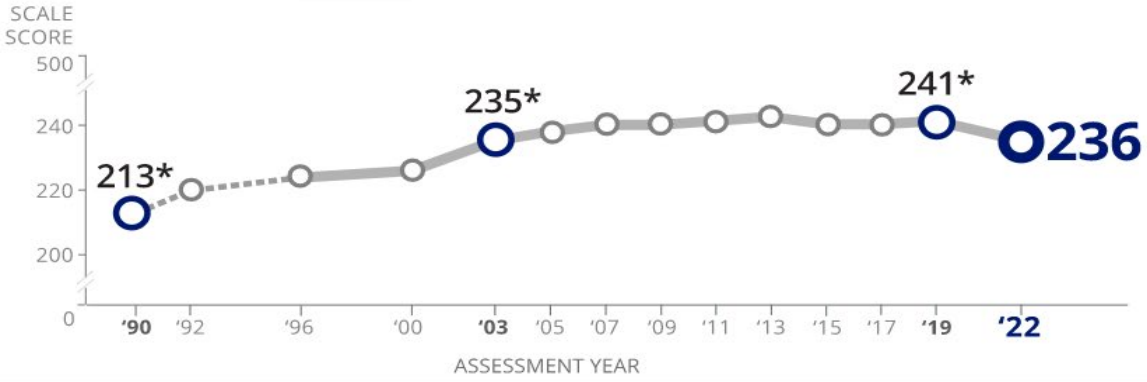


2022 NAEP Results

Mathematics Results
National Overview
NAEP 2022

Largest ever score declines in mathematics

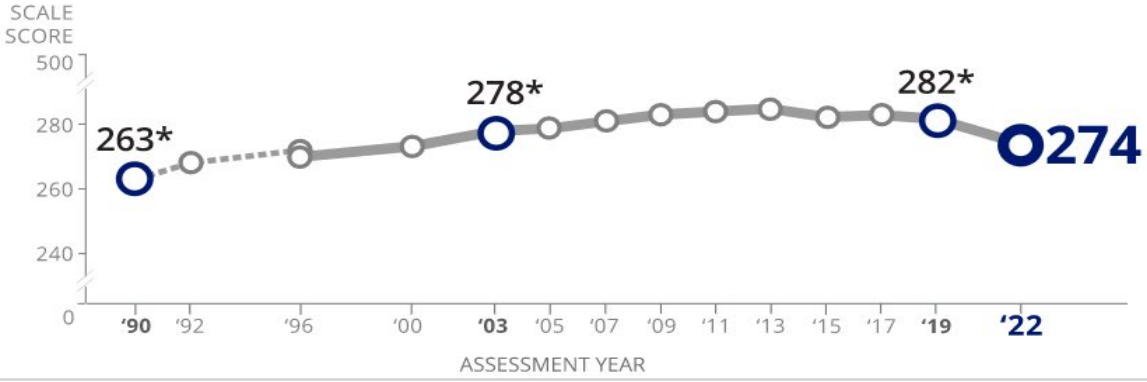
GRADE 4



23pts
compared to 1990

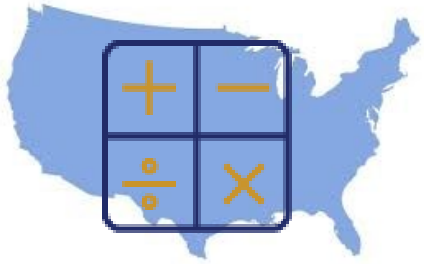
5pts
compared to 2019

GRADE 8



12pts
compared to 1990

8pts
compared to 2019



Scores decline across states during pandemic

Grade 4

From 2019 to 2022

43	10	0
decreased ↓	no significant change ◆	increased ↑

Nation (public)

decreased ↓

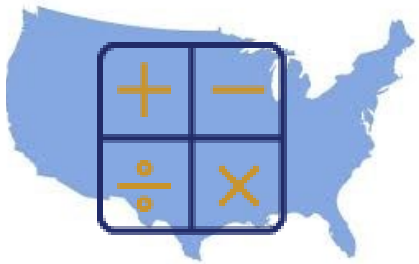
Grade 8

From 2019 to 2022

51	2	0
decreased ↓	no significant change ◆	increased ↑

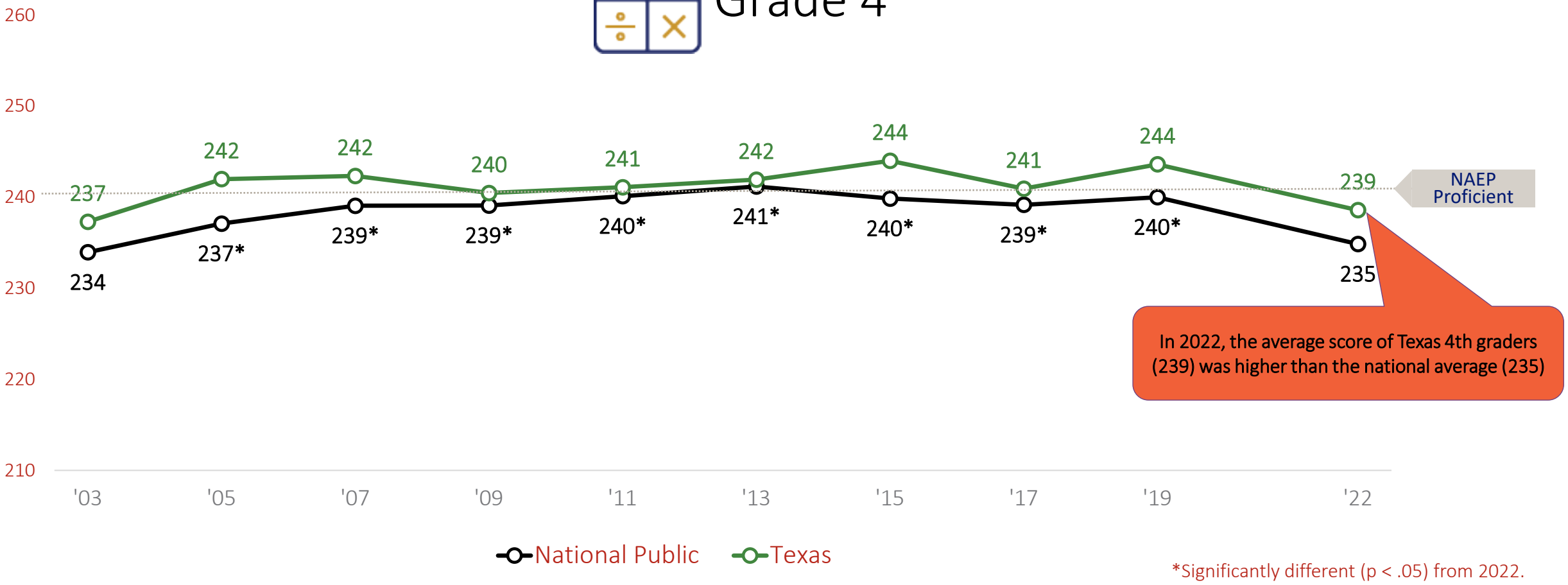
Nation (public)

decreased ↓



Texas scores higher than the nation

Grade 4

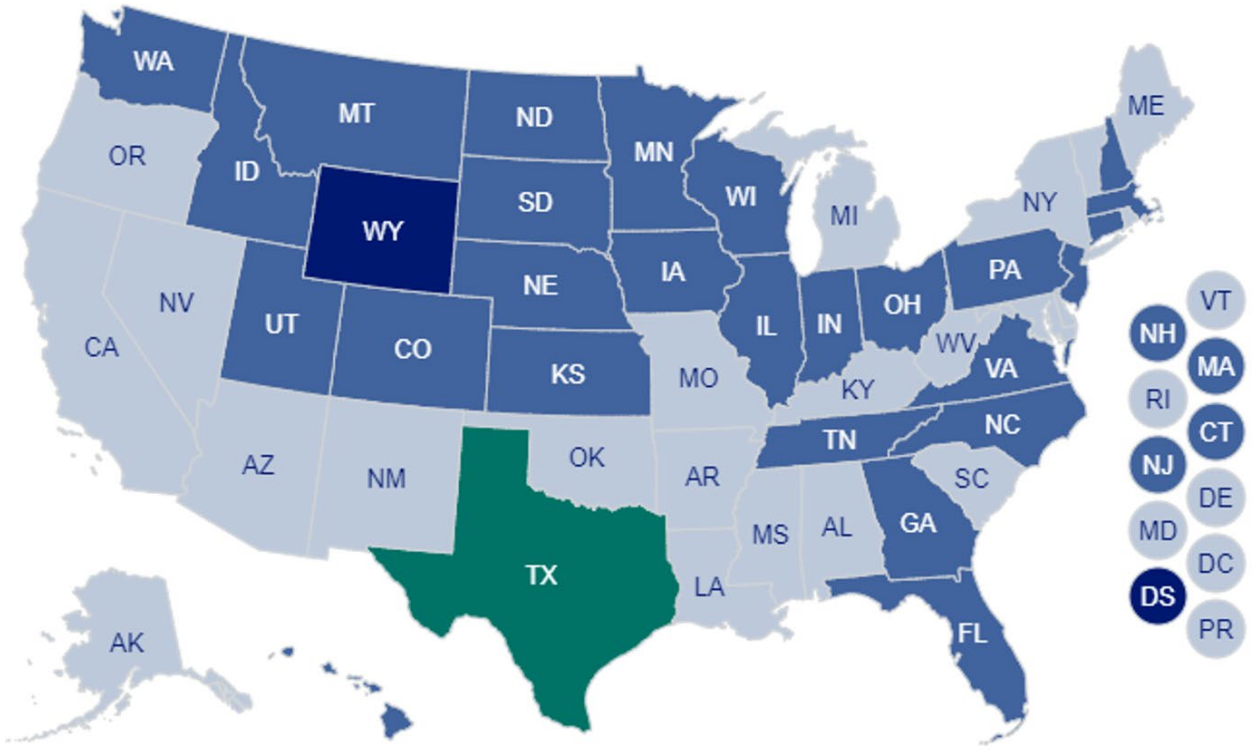


In 2022, the average score of Texas 4th graders (239) was higher than the national average (235)

*Significantly different ($p < .05$) from 2022.

National Comparison

Grade 4



2022 Texas public average scale score (0–500)

239

2

jurisdictions significantly higher

26

jurisdictions not significantly different

24

jurisdictions significantly lower

Texas Scale Score Ranking

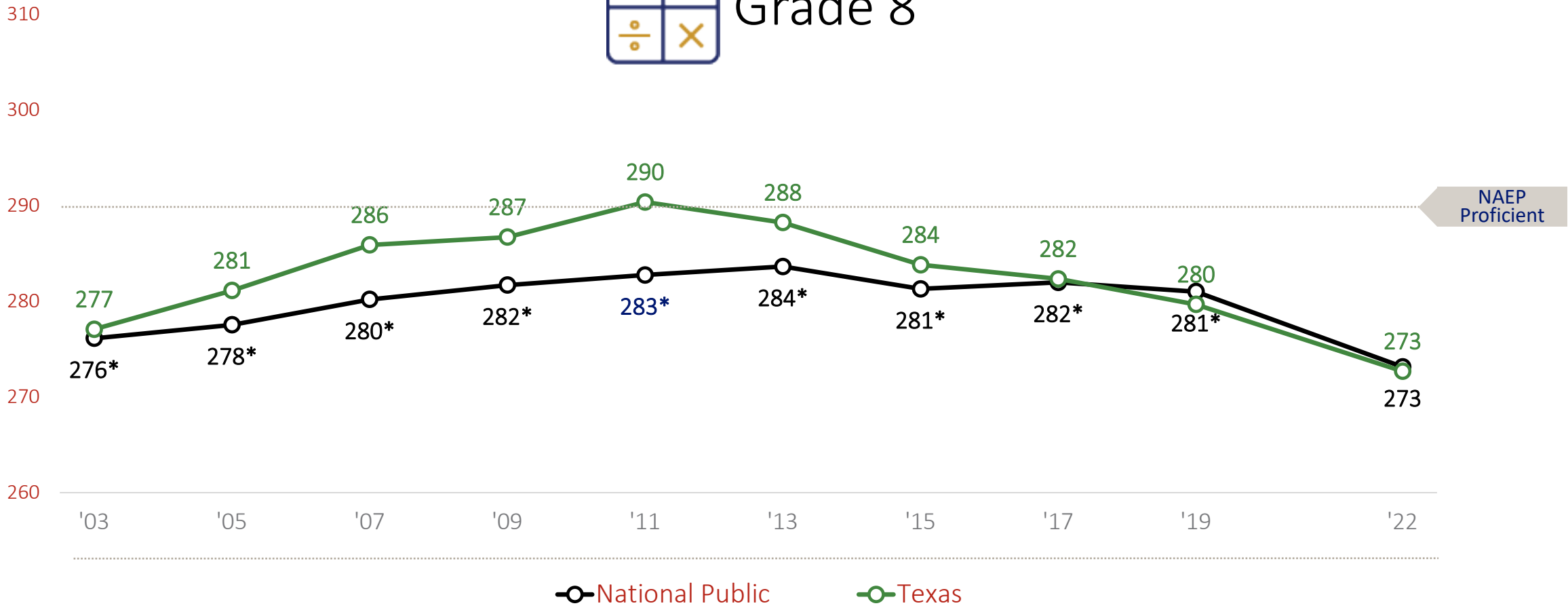
Grade 4

	2019	2022	Rank Change
Overall	12th	14th	-2

Sub-population	2019	2022	Rank Change
African American Students	1st	1st	0
Asian/Pacific Islander Students	1st	4th	-3
Hispanic Students	5th	4th	1
White Students	3rd	2nd	1
Students Learning English	2nd	2nd	0
Special Education Students	18th	5th	13
Low Income Students	4th	6th	-2
Non-Low Income Students	6th	2nd	4

TX scores decline and remain in line with the nation

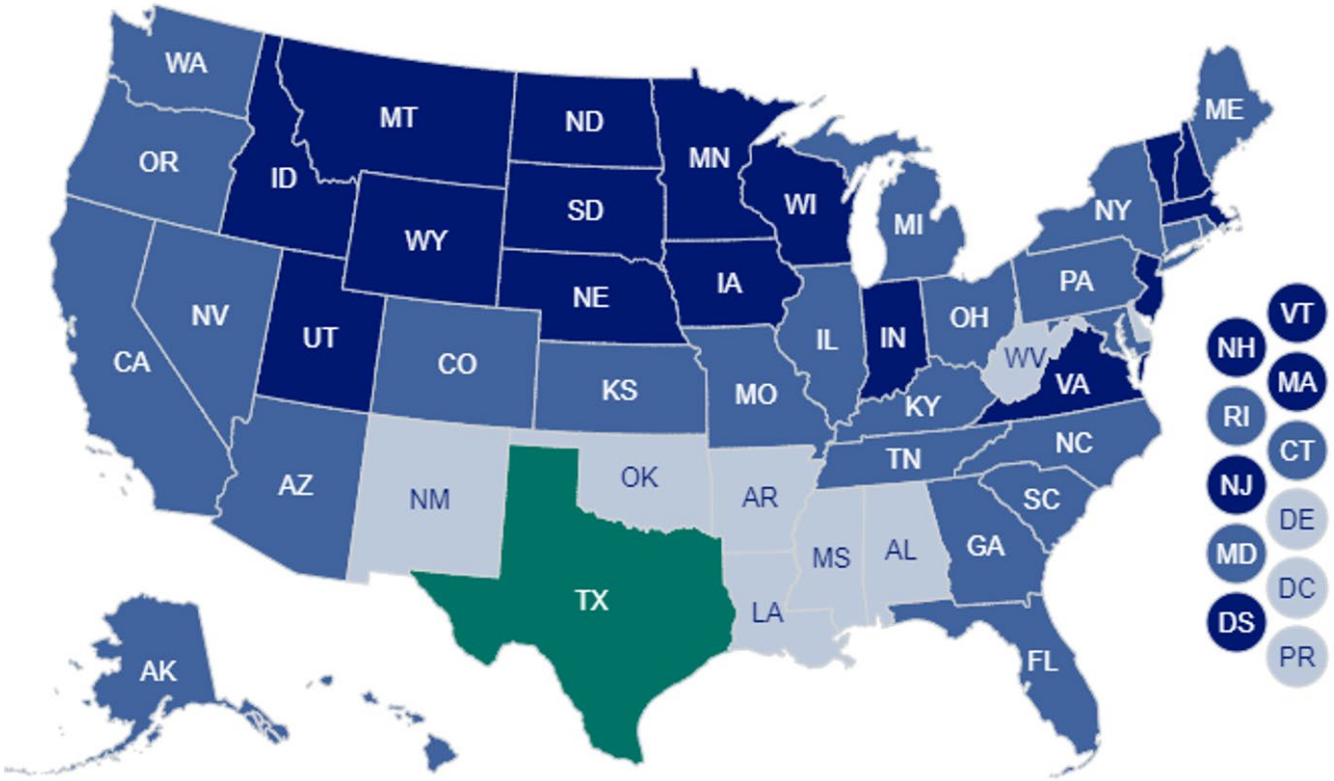
Grade 8



*Significantly different ($p < .05$) from 2022.

National Comparison

Grade 8



2022 Texas public average scale score (0–500)

273

17

jurisdictions significantly higher

25

jurisdictions not significantly different

10

jurisdictions significantly lower

Texas Scale Score Ranking

Grade 8

	2019	2022	Rank Change
Overall	32nd	25th	7

Sub-population	2019	2022	Rank Change
African American Students	5th	1st	4
Asian/Pacific Islander Students	8th	13th	-5
Hispanic Students	15th	7th	8
White Students	17th	24th	-7
Students Learning English	4th	2nd	2
Special Education Students	16th	26th	-10
Low Income Students	8th	9th	-1
Non-Low Income Students	34th	20th	14

2024 NAEP Data

Historically, NAEP data has been released in late fall.

However, 2024 NAEP data is delayed and expected to be available in late January / early February 2025.

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Questions?

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History of the Math TEKS

Early Versions of Mathematics TEKS

- The mathematics TEKS were originally adopted in 1998.
- The math TEKS went through a refinement and alignment process in 2004 and 2005.
- The secondary mathematics TEKS were amended effective February 22, 2009 to align with the Texas college readiness standards.

Commissioner's Draft of Texas Mathematics Standards

In anticipation of the State Board of Education's scheduled 2011-2012 revision of the TEKS for mathematics, the Commissioner of Education convened a group of advisors to review current research and resources and to offer suggestions regarding the upcoming TEKS revision and future professional development. The Commissioner's Mathematics Advisory Group, established in the fall of 2010, includes mathematics educators and mathematicians from Texas. The recommendations of the Commissioner's Mathematics Advisory Group regarding the next generation of mathematics standards in Texas were compiled and then reviewed by a panel of national advisors in mathematics, known as the National Review Team.

The result of this work is a document titled, "The Commissioner's Draft of the Texas Mathematics Standards (PDF, 954KB)."

Resources Used in Development of Commissioner's Draft

Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence.
Used to understand the most important mathematical topics for each grade level

Common core state standards for mathematics
Used as a reference to understand similarities and differences between Texas standards and CCSS

Foundations for success: The National Mathematics Advisory Panel final report
Used to understand recommendations of national mathematics experts for high quality mathematics instruction

Original TEKS for Mathematics (19 Texas Administrative Code (TAC) Chapter 111)
Used to understand existing expectations

State of Texas Assessments of Academic Readiness (STAAR) resources (TEA)
Used to understand how existing standards were assessed

Texas Response to Curriculum Focal Points (TEA)
Used to understand how the national curriculum focal points applied to Texas Standards

Texas College and Career Readiness Standards
Used to understand expectations for college readiness in mathematics

Other State and National Standards

Massachusetts Department of Elementary and Secondary Education (2000)
Mathematics Curriculum Framework

Minnesota Department of Education (2007)
Minnesota academic standards: mathematics K-12

Singapore Ministry of Education (2007)
Mathematics (primary) syllabus

Singapore Ministry of Education (2007)
Mathematics (secondary) syllabus

The Commissioner's Mathematics Advisory Group recommendations were guided by several key factors

Mathematical Processes

- Balance procedural skills and the requirement that students solve routine as well as nonroutine problems
- Intentional placement of the process skills at the beginning of the draft
- Using the process skills to weave the other knowledge and skills together so that students may be successful problems solvers and use mathematics efficiently and effectively in daily life

Local Control

- Identify what students should know and be able to do as proficient students and users of mathematics.
- Do not inform teachers how to teach the content
- Deliberately avoid instructional language to leave curriculum and instructional decisions to local districts and schools

Organization of the Draft Standards

- The standards are not a scope and sequence
- When possible, the order reflects a progression of learning but is not a mandated sequence for instruction.
- The K-8 standards are organized by mathematics topic areas or strands, and the high school standards are organized by customary course titles.
- All grade levels and courses contain data and statistics standards.
- Although most of the standards may be easily identified with a particular topic area, there are standards that could be placed in more than one topic area. In these situations, a decision was made that may seem to some like an artificial separation from one topic area but a good fit in another topic area.
- The standards are placed at the grade level where mastery is expected.
- This does not preclude introducing the content at earlier grade levels.

TEA provided an update on Mathematics TEKS Review in September 2011

- **October 2010-January 2011** Applications for appointment to mathematics TEKS review committees were accepted by TEA.
- **January 2011** TEA staff provided an update on the mathematics TEKS review schedule and asked the board to provide any guidance for the review committees in January or April 2011.
- **February 2011** Nominations for expert reviewers and mathematics TEKS review committee members were made.
- **April 2011** The Commissioner's Draft of the Texas Mathematics Standards were provided to the SBOE.
- **May 2011** The mathematics TEKS review committees were convened in Austin to work on draft recommendations for revisions to the TEKS. The Commissioner's draft served as a resource for recommended revisions to the TEKS.
- **July 2011** The mathematics TEKS review committees were convened in Austin to continue work on draft recommendations for revisions to the TEKS.
- **August 2011** First draft recommendations were provided to the board and to the board-appointed expert reviewers and posted to the TEA website for informal public feedback.
- **October 2011** The mathematics TEKS review committees met to finalize recommendations for revisions to the TEKS.

Resources provided to TEKS Review Committees

- Commissioner's Draft of the Texas Mathematics Standards
- Texas College and Career Readiness Standards
- K to 5 skill progressions from Commissioner's draft
- 6 to 8 skill Progressions Commissioner's draft
- Common Core State Standards
- Learning Trajectories for Primary Grades Mathematics
- Thomas B. Fordham Report, The State of State Standards: Texas
- Increasing the Focus and Mathematical Precision for TEKS in Middle & High School Mathematics
- Institute of Education Sciences, Developing Effective Fractions Instruction for Kindergarten through 8th Grade
- Massachusetts Math Standards
- Minnesota Math Standards
- National Math Panel Report
- Singapore Math Standards

In 2010, the Thomas B. Fordham Institute published an assessment of state mathematics standards

Texas • Mathematics

DOCUMENTS REVIEWED

Texas Essential Knowledge and Skills for Mathematics. August 1, 2006.
Accessed from: http://www.tea.state.tx.us/index4.aspx?id=3449

Overview

Texas's standards are well presented and easy to read, but they are somewhat minimal and lack specificity. They often seem disjointed and do not sufficiently outline a coherent approach to the mathematical content. The development of arithmetic is stated as a priority, but this priority is not supported within the standards. Despite the lack of specificity and coherence, the high school material is fairly complete, and covers much STEM-ready material.

Clarity and Specificity:	2/3
Content and Rigor:	4/7
Total State Score:	**6/10**

(*Common Core Grade: A-*)

TEKS review committees were asked to address two specific areas

1. The Commission for College Ready Texas concluded that a serious examination of the TEKS in grades 6-12 would be an important first step in efforts to ensure that Texas students are taught mathematics in such a way that they will be ready to succeed in college-level courses in mathematics and other courses requiring quantitative abilities.

The Commissioner of the governor-appointed Council on College Ready Texas (CCRT) requested an analysis of the mathematics TEKS for Grades 6-8 and High School mathematics. A team of research mathematicians and four educational researchers explored the extent to which the 2004 version of TEKS appropriately prepares students to be ready to succeed in a college algebra course. Both the report of the National Mathematics Advisory Panel (2008) and Curricula Focal Points (NCTM, 2006) urged educators to ensure that mathematics in elementary and secondary schools cover less content but in much more depth, and with increased levels of mathematical precision.

- Russell Gersten, Chair, University of Oregon & Instructional Research Group
- Trish Koontz, Kent State University
- Jane F. Shielack, Texas A & M University
- Daniel Erman, University of California at Berkeley
- David Chard, Southern Methodist University

2. Senate Bill 290 required the SBOE to add instruction in personal financial literacy to the kindergarten-grade 8 TEKS.

(a) The Texas essential knowledge and skills and, as applicable, Section 28.025 shall require instruction in personal financial literacy in:

(1) mathematics instruction in kindergarten through grade eight; and

(2) one or more courses required for high school graduation.

The SBOE discussed proposed revisions to 19 TAC Chapter 111, TEKS for Mathematics in November 2011

SUMMARY: This item provides the opportunity for the committee to discuss proposed revisions to 19 TAC Chapter 111, Texas Essential Knowledge and Skills for Mathematics, Subchapter A, Elementary, Subchapter B, Middle School, and Subchapter C, High School, and Subchapter D, Other high School Mathematics Courses.
Examples:

- The board chair asked staff to make all introductions in K-12 consistent and make any necessary technical and grammatical edits when preparing draft rule text.
- The board asked staff to look at the alignment between the proposed mathematics TEKS and the adopted science TEKS.
- The board requested a side-by-side document showing the number of student expectations in the proposed TEKS compared to the current TEKS.

The SBOE considered proposed revisions to 19 TAC Chapter 111, TEKS for Mathematics for first reading in January 2012

SUMMARY: This item presents for first reading and filing authorization proposed revisions to 19 TAC Chapter 111, Texas Essential Knowledge and Skills for Mathematics, Subchapter A, Elementary, Subchapter B, Middle School, Subchapter C, High School, and Subchapter D, Other High School Mathematics Courses. The proposed revisions recommend an implementation date of the 2013-2014 school year for the revised mathematics Texas Essential Knowledge and Skills (TEKS).

A **public hearing** on the mathematics TEKS was conducted prior to SBOE consideration of the proposed TEKS.

***MOTION**: It was moved by Mr. Bradley and seconded by Mr. Craig to recommend that the State Board of Education approve for first reading and filing authorization proposed revisions to 19 TAC Chapter 111, Texas Essential Knowledge and Skills for Mathematics, Subchapter A, Elementary, Subchapter B, Middle School, Subchapter C, High School, and Subchapter D, Other High School Mathematics Courses.*

The board made **32 amendments** to the draft mathematics TEKS.

***VOTE**: A vote was taken on the original motion by Mr. Bradley to recommend that the State Board of Education approve for first reading and filing authorization proposed revisions to 19 TAC Chapter 111, Texas Essential Knowledge and Skills for Mathematics, Subchapter A, Elementary, Subchapter B, Middle School, Subchapter C, High School, and Subchapter D, Other High School Mathematics Courses. The motion carried with 11 members voting Aye and 2 members voting No.*

The SBOE adopted proposed revisions to 19 TAC Chapter 111, TEKS for Mathematics in April 2012

A **public hearing** was conducted prior to SBOE consideration of the proposed TEKS.

The board made **117 amendments** to the draft mathematics TEKS.

The board ***unanimously*** adopted the amended TEKS.

Mrs. Cargill explained that it was the intent of the board that the **process standards should not be addressed nor assessed in isolation**. The instructional materials and assessment items for mathematics must integrate the process standards into the rest of the student expectations for each grade level and high school course.

The mathematics TEKS were implemented in 2014-2015.

The mathematics TEKS were implemented in 2014-2015

§111.1. Implementation of Texas Essential Knowledge and Skills for Mathematics, Elementary, Adopted 2012.

(a) The provisions of §§111.2-111.7 of this subchapter shall be implemented by school districts.

(b) No later than August 31, 2013, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills for mathematics as adopted in §§111.2-111.7 of this subchapter.

(c) If the commissioner makes the determination that instructional materials funding has been made available under subsection (b) of this section, §§111.2-111.7 of this subchapter **shall be implemented beginning with the 2014-2015 school year** and apply to the 2014-2015 and subsequent school years.

(d) If the commissioner does not make the determination that instructional materials funding has been made available under subsection (b) of this section, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that §§111.2-111.7 of this subchapter shall be implemented for the following school year.

The SBOE considered proposed amendments to 19 TAC Chapter 111, TEKS for Mathematics in 2016 and 2017

- Mrs. Bahorich explained that the item was added to the agenda at her request in order for the board to consider possible changes to the knowledge and skills statements in the kindergarten - grade 12 mathematics TEKS.

  Examples of proposed amendments:

  (2) Number and operations. The student **understands** [~~**applies mathematical process standards to understand**~~] how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system.

  (3) Number and operations. The student **develops** [~~**applies mathematical process standards to develop**~~] an understanding of addition and subtraction situations in order to solve problems.

- The SBOE conducted a public hearing regarding possible amendments in November 2016
- Following the public hearing the SBOE asked TEA to add an action item to the April 2017 SBOE agenda.
- The motion to amend the mathematics TEKS failed with 5 members voting Aye, 9 members voting No, and 1 member Abstaining.

In 2018, the Thomas B. Fordham Institute published an assessment of state mathematics standards

The following individuals served as mathematics reviewers:

- Solomon Friedberg, James P. McIntyre Professor of Mathematics at Boston College
- Juliana Belding, a professor of the Practice in Mathematics at Boston College
- Andrew Chen, former professor and principal research scientist at MIT
- Francis (Skip) Fennell, L. Stanley Bowlsbey Professor of Education and Graduate and Professional Studies at McDaniel College in Maryland
- Roger Howe, Curtis D. Roberts Professor of Mathematics Education in the College of Education and Human Development at Texas A&M University

The math team identified several trends in state standards that include the following:

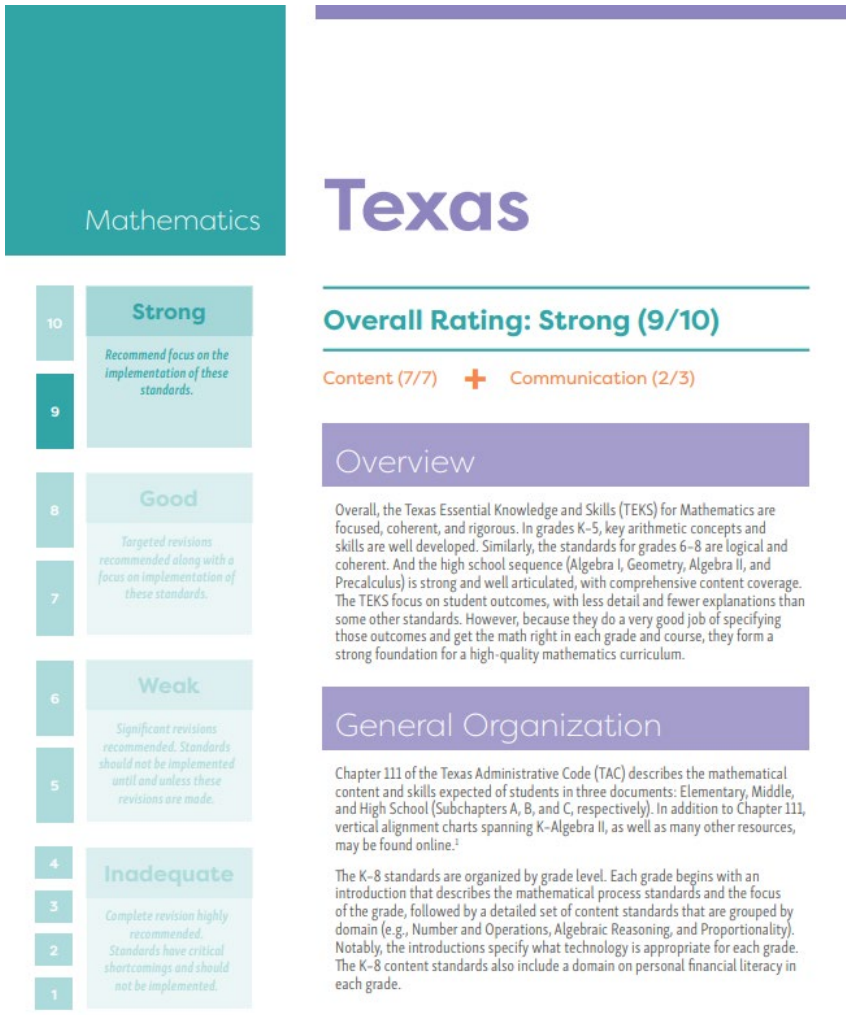
1. **A stronger focus on arithmetic in grades K–5**, where the priority should be ensuring students' mastery of foundational skills, such as counting and flexibly computing with whole numbers, decimals, and fractions, as well as their understanding of the place value principle.

2. **More coherent treatment of proportionality and linearity in middle school**, including rates and ratios, slope, and linear relationships and functions (e.g., $y = mx + b$).

3. **An appropriate balance between conceptual understanding, procedural fluency, and application**, each of which is an essential dimension of mathematical thinking.

4. **Better organization and teacher supports**, including focused introductions for individual grade levels and courses, mathematically coherent organizational approaches that highlight the connections between standards, and helpful ancillary materials.

In 2018, the Thomas B. Fordham Institute published an assessment of state mathematics standards



Excerpt from Executive Summary:

"However, as suggested by the low scores that some states' math standards received, there are more exceptions to these trends than one would want to see. For example, some states do not **explicitly require students to know their addition and multiplication facts** from memory, while others make no mention of **proficiency in the standard algorithms** for the four major operations. Similarly, some states still have incoherent (or partially coherent) middle school progressions that fail to make the **appropriate connections between interrelated standards** and topics. And some give short shrift to **conceptual understanding** at all grade levels. Finally, some states have poorly organized standards, while others fail **to include process or practice standards** that describe the 'essential mathematical habits of mind' that all students should learn—or fail to connect those habits to content."

https://fordhaminstitute.org/sites/default/files/publication/pdfs/%2808.22%29%20The%20State%20of%20State%20Standards%20Post-Common%20Core.pdf

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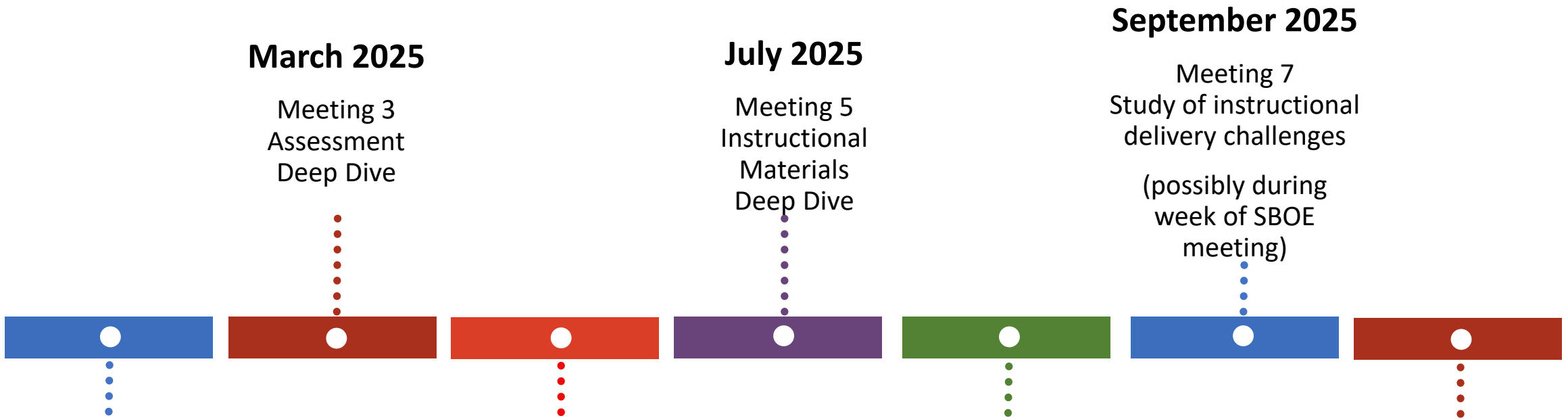
Future Meeting Planning

Suggested Meeting Topics and TEA Presentations

1) Deep dive into standards development
   - Texas Essential Knowledge and Skills
   - College and Career Readiness Standards
   - Other State Standards
   - Singapore Standards
   - National Math Panel Information
   - National Council of Teachers of Mathematics (NCTM) recommendation
2) History of mathematics assessments –
   - TABS to STAAR
   - Overview of Texas Mathematics Standards and Related Assessments
3) Educator Preparation, Certification, and Professional Development
4) Deep dive on the relationship among standards, instructional materials, and instructional execution
   - Review of IMRA quality rubric
5) Study of common instructional delivery challenges
6) Review of relevant research and evidence that supports strong mathematics
   - National Math Panel research
   - NCTM research and resources
   - Chalk and Talk podcast and related resources

Please submit any suggestions for invited testimony to Sarah Harrington

Preliminary Timeline



January 2025

Meeting 2
Standards
Deep Dive

(possibly during week of SBOE meeting)

March 2025

Meeting 3
Assessment
Deep Dive

May 2025

Meeting 4
Educator
Certification
Deep Dive

July 2025

Meeting 5
Instructional
Materials
Deep Dive

August 2025

Meeting 6

Invited Testimony

September 2025

Meeting 7
Study of instructional delivery challenges

(possibly during week of SBOE meeting)

October 2025

Meeting 8
Review of Relevant Research

Additional meetings will be scheduled for 2026 as needed to develop recommendations and report.

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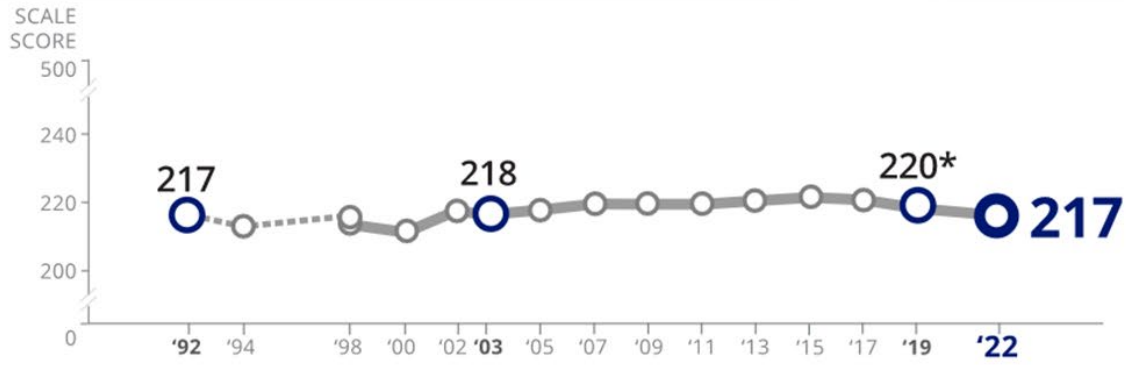
Appendix

Reading Results National Overview NAEP 2022

Reading scores declined during pandemic

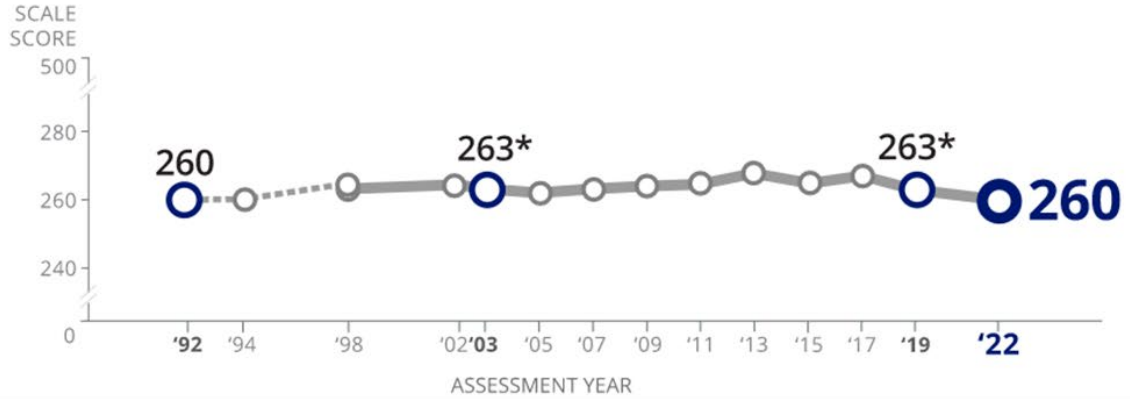
GRADE 4



No significant score change compared to 1992

3pts compared to 2019

GRADE 8



No significant score change compared to 1992

3pts compared to 2019

Scores declined across majority of jurisdictions across both grades

Grade 4

From 2019 to 2022

30	22	0
decreased ↓	no significant change ◆	increased ↑

Nation (public): decreased ↓

Grade 8

From 2019 to 2022

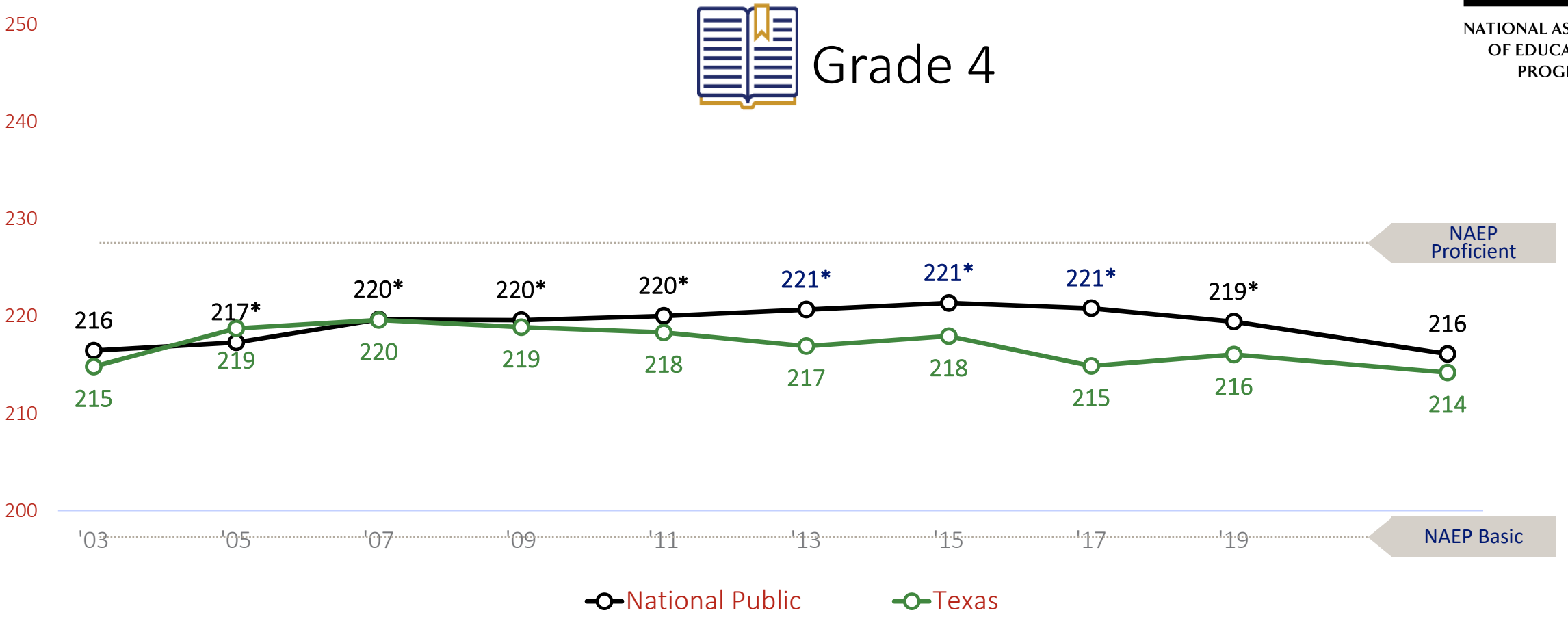
33	18	1
decreased ↓	no significant change ◆	increased ↑

Nation (public): decreased ↓

Scores remain statistically unchanged from 2019

NAEP TEXAS
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

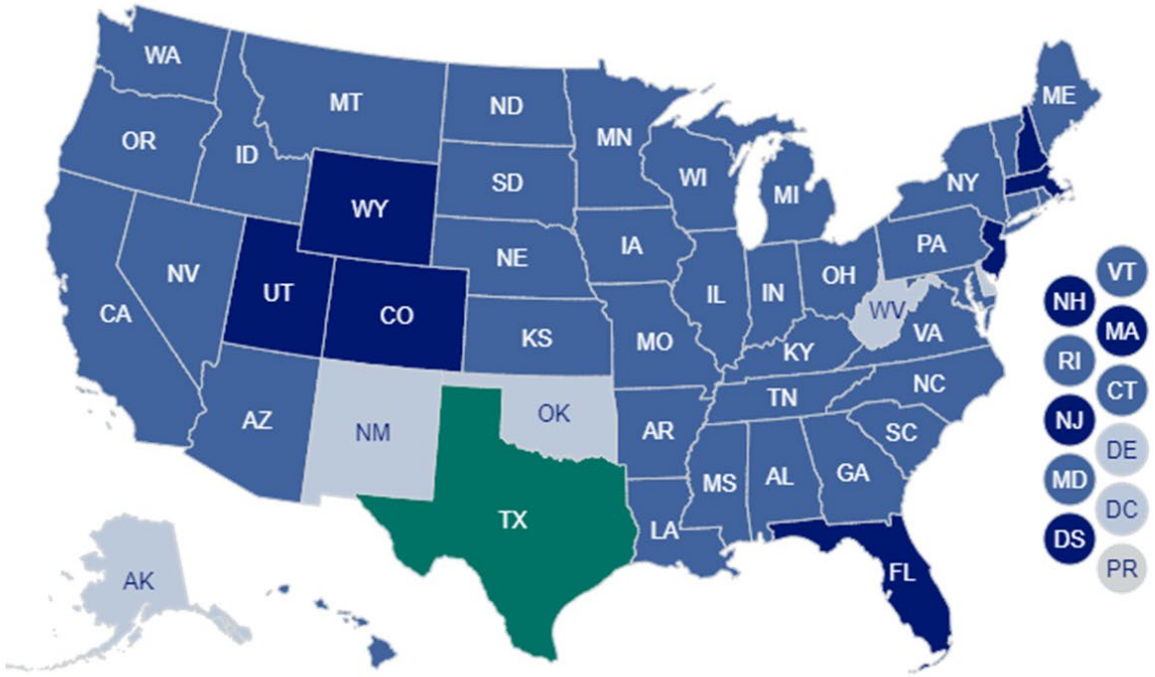
Grade 4



*Significantly different ($p < .05$) from 2022.

National Comparison

Grade 4



2022 Texas public average scale score (0–500)

214

8
jurisdictions significantly higher

37
jurisdictions not significantly different

6
jurisdictions significantly lower

Texas Scale Score Ranking

Grade 4

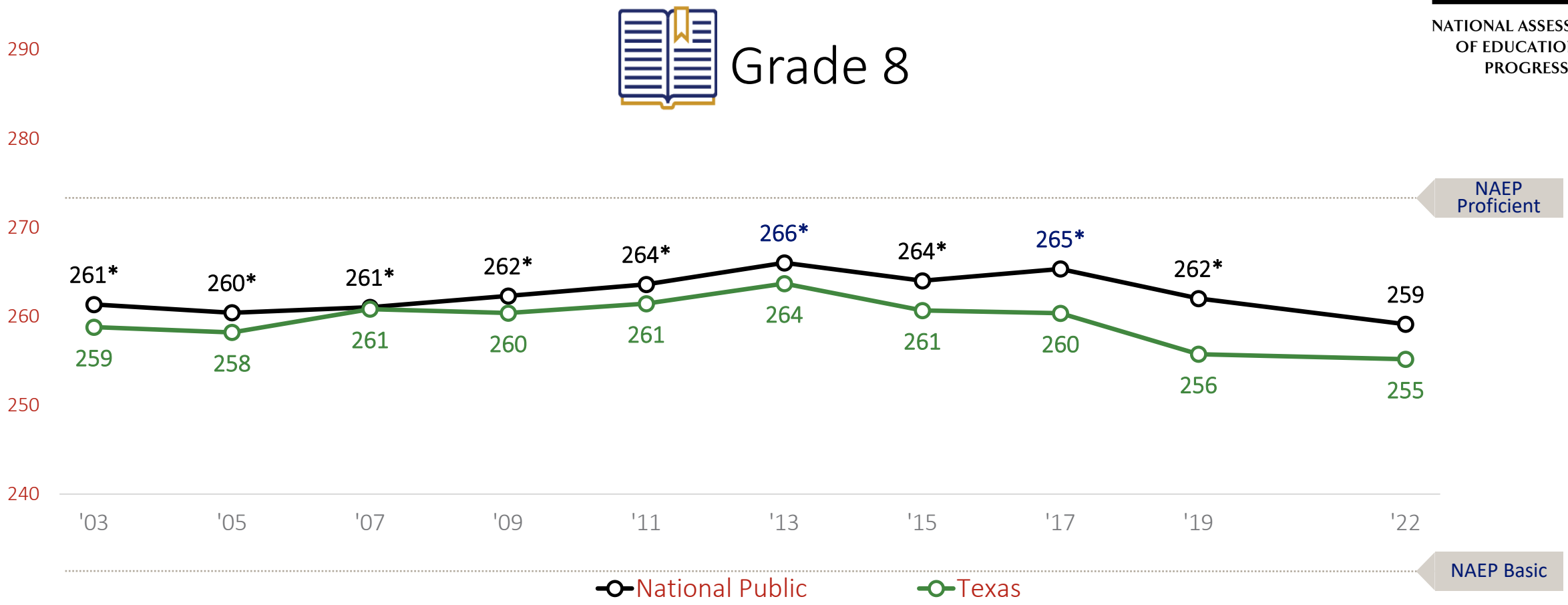
	2019	2022	Rank Change
Overall	42nd	33rd	9

Sub-population	2019	2022	Rank Change
African American Students	25th	6th	19
Asian/Pacific Islander Students	8th	2nd	6
Hispanic Students	13th	21st	-8
White Students	12th	15th	-3
Students Learning English	14th	4th	10
Special Education Students	34th	19th	15
Low Income Students	31st	20th	11
Non-Low Income Students	33rd	13th	20

NAEP TEXAS
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

While lower than the nation, Texas 8th grade reading scores remain unchanged from 2019

TEXAS
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS



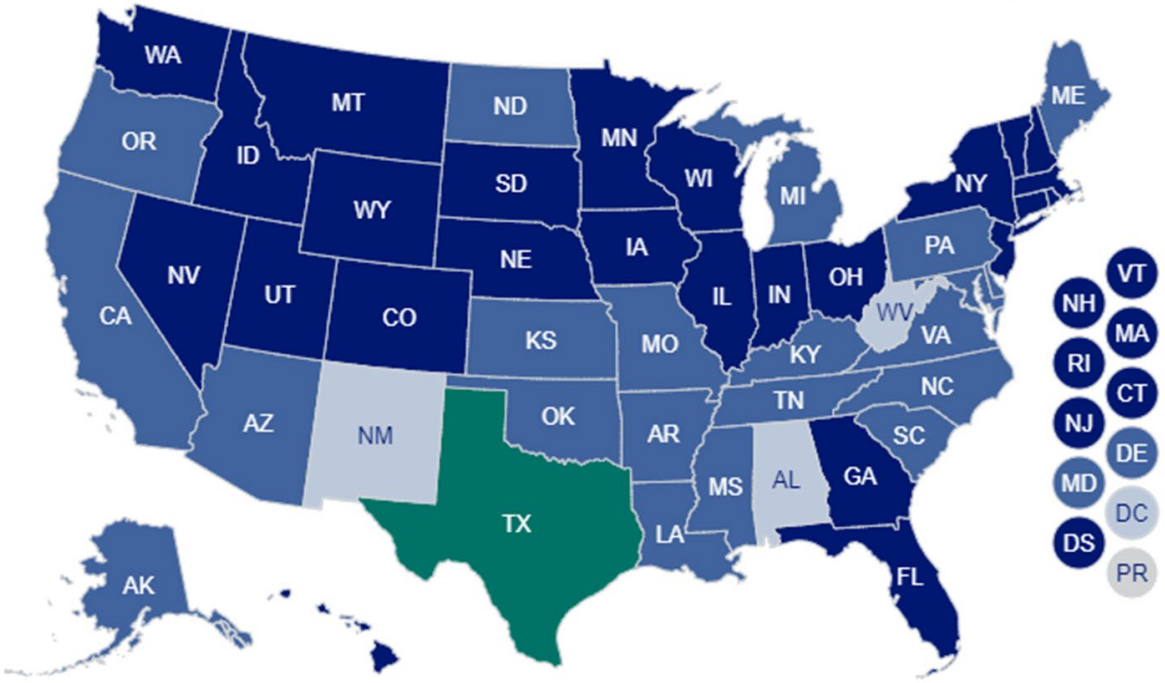
*Significantly different ($p < .05$) from 2022.

National Comparison

TEXAS

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

Grade 8



2022 Texas public average scale score (0–500)

255

26

jurisdictions significantly higher

21

jurisdictions not significantly different

4

jurisdictions significantly lower

Texas Scale Score Ranking

Grade 8

	2019	2022	Rank Change
Overall	47th	41st	6

Sub-population	2019	2022	Rank Change
African American Students	34th	6th	28
Asian/Pacific Islander Students	9th	6th	3
Hispanic Students	34th	26th	8
White Students	40th	40th	0
Students Learning English	8th	1st	7
Special Education Students	48th	22nd	26
Low Income Students	43rd	22nd	21
Non-Low Income Students	9th	6th	3