This guide provides detailed information and resources related to every indicator in Connecticut’s Next Generation accountability system. Each indicator includes the rationale for its inclusion and the methodology used. Additionally, to inform local improvement efforts, the guide offers links to resources, research, and evidence-based strategies.
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<td>Added a visual and accompanying explanation to show the contribution of every indicator to a school’s Accountability Index.</td>
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<tr>
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<td>7</td>
<td>Language and values in weights table updated to include Science.</td>
</tr>
<tr>
<td>Indicator 1</td>
<td>7</td>
<td>Description of the indicator updated to reflect that the Science performance index has been added back into 2018-19 reports. Included a reference to the weights for science in elementary and middle schools versus high schools and other schools without academic achievement growth data.</td>
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</tr>
<tr>
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</tr>
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<td>Updated years, added references to science achievement, and updated table with minimum values by distinction type.</td>
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INTRODUCTION

A student is more than a test score; in the same way a school or district is more than the aggregate of the results from state tests. Focusing on a broader set of indicators:

- Provides a more complete picture of a school or district;
- Guards against narrowing of the curriculum to the tested subjects;
- Expands ownership of accountability to more staff; and
- Allows schools to demonstrate progress on “outcome pre-cursors”;

Here’s a high level summary of the changes that were made to the accountability system and implemented for the first time in March 2016.

- A range of indicators were incorporated including some focused on college- and career-readiness and others on arts and physical fitness to draw attention to the delivery of a well-rounded education.

- The model gives greater emphasis to academic growth on state tests than academic achievement. The historical focus on ‘achievement only’ failed to acknowledge schools that may have low performing students but made significant strides last year to improve their performance and close the achievement gap.

- Some metrics were refined (e.g., the calculation of the performance index).

- Student group metrics are more impactful and actionable.

- The school classification methodology was adjusted to better represent overall school performance, target interventions and support, and refrain from “labels” to the greatest extent possible.

The CSDE has worked collaboratively with district/school leaders, consulted with state/national experts, and sought ongoing input from a variety of stakeholders to revamp its accountability system for schools and districts. The CSDE is most appreciative for their feedback and ideas. This model represents our best efforts at the present time to expand the model without adding new data collection/reporting burden to districts. As this model is implemented, the CSDE will continue to work collaboratively with stakeholders and analyze data to refine and improve this model.

Lastly, the CSDE encourages leaders to view accountability results not as a “gotcha” but as a tool to guide and track improvement efforts. This guide emanates from that sincere belief. It provides detailed information and resources related to every indicator. It includes the rationale for its inclusion and the methodology used; also, to inform local improvement efforts, the guide offers links to resources, research, and evidence-based strategies.
The chart below shows how every indicator in the 2018-19 accountability model contributes to a school’s overall Accountability Index. The percentage contribution for each indicator is dependent on the grades served, and the graphic reflects those differences.

Elementary schools in the example below serve students up to and including Grade 7, but do not enroll eighth graders. Middle schools in the example below must include Grade 8 but does not include any higher grades. High schools in this example serve Grades 9-12, and the Middle/High designation is applicable for any school that includes Grade 8 and Grade 12.
## Indicator 1: Academic Achievement (Status)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schools with academic growth data (Indicator 2)</strong></td>
<td></td>
</tr>
<tr>
<td>Subject Performance Index (0-100) in ELA, Math, and Science</td>
<td></td>
</tr>
<tr>
<td>• All Students</td>
<td>150</td>
</tr>
<tr>
<td>• Students with High Needs group</td>
<td>150</td>
</tr>
<tr>
<td><strong>Schools without academic growth data (e.g., 9-12 high schools)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>400</td>
</tr>
</tbody>
</table>

**Description (What):** This indicator produces performance indices for English Language Arts/Literacy (ELA) and Mathematics based on results from the Smarter Balanced assessments for Grades 3-8, SAT for Grade 11, and the Connecticut Alternate Assessments (CTAA) in all available tested grades (i.e., 3 through 8 and 11) in the district/school. The performance index for Science is based on results from the Next Generation Science Standards (NGSS) assessment and the Connecticut Alternate Science (CTAS) assessment administered in Grades 5, 8, and 11. ELA, mathematics, and science are weighted equally in elementary, middle, and middle/high schools and at a ratio of 3:3:2 for high schools per Connecticut’s approved ESSA plan. Therefore high schools may earn up to 150 points for ELA All Students, 150 points for Math All Students, and 100 for Science All Students, and the same point totals for students with High Needs.

**Rationale (Why):** The academic achievement indicator provides the most current status of achievement of the students in a school or district.

**Applicability (Who):** The achievement status indicator is applicable to all schools and districts with at least one tested grade (i.e., grades 3 through 8, or 11).

**Input/Feedback:** The overall notion of a Performance Index that recognizes student performance across the continuum (not just ‘proficient’ and ‘not proficient’) has been well received. However, in extensive conversations with local practitioners, three important issues emerged with Connecticut’s approach to the index prior to the implementation of this model:

First, though the index was an enhancement to the AYP approach of looking solely at ‘proficient’ and ‘not proficient’, it still did not capture improvement *within* performance levels. Furthermore, with Smarter Balanced assessments offering four achievement levels as opposed to five in the CMT/CAPT assessments, practitioners were concerned that the index would fail to capture differences in performance within the wide achievement levels.
Second, the interpretable and actionable value of an overall index score that averages all the tested subjects was questioned. Practitioners generally prefer subject-specific indices.

Lastly, practitioners asked why advanced performance couldn’t garner additional points in the index, especially if the State’s expected level of achievement was below that level. For example, in the Smarter Balanced assessment, level 3 of 4 is considered on-track for college and career readiness while level 4 is an explicit standard that truly represents an “advanced” level of performance.

**Methodology (How):** The detailed performance index calculation rules and methodology for converting scale scores to index scores for each assessment are included in the appendix. Points are prorated based on the percentage of the ultimate target (75) achieved.

Subject-specific index scores are generated and reported for the following groups as long as the minimum group size of at least 20 students is reached:

- All students
- All race/ethnicities
- Gender
- Eligibility for Free- or Reduced-Price Meals
- Students with Disabilities (SWD)
- English learners (EL)—For Indicator 1 of the accountability system, this group includes students currently identified as EL and all students who were formerly identified as an EL any time in the four previous school years.
- High Needs supergroup— (i.e., a student belongs to at least one of the following ESEA student groups – Eligible for Free- or Reduced-Price Meals, English learners or Students with Disabilities).

Though index scores are reported for all student groups, the High Needs supergroup is the student group used in accountability calculations. This holds more schools accountable for the performance of many more students.

Lowering the minimum group size from 40 to 20 in the first iteration of ESEA Flexibility in 2012 made many more student groups visible across Connecticut; utilizing the High Needs group further increases the number of schools that are held accountable for student group performance and achievement gap determinations.

Connecticut has been granted permission to exempt “recently arrived” ELs in grades 3 through 8 who have attended schools in the United States for less than two years from the academic achievement (status) measure in the State’s accountability system for ELA, mathematics, and Science. Instead, Connecticut includes student growth of “recently arrived” ELs from the first to the second year in both ELA and mathematics in school and district accountability calculations in the student’s second year. This requires that all “recently arrived” ELs test in all content areas.
annually. Assessment scores for ELs who have attended U.S. schools for more than two years are used in the achievement status and growth measures of the accountability system.

For more information about how data for “recently arrived” ELs are handled in assessment and accountability reporting, please see the Appendix.

Data Source: State assessment data files and Public School Information System (PSIS) for student demographic (e.g., race/ethnicity, gender) and program (EL, FRPL, disability) data.

Achievement Gap
A district/school is identified as having an achievement gap if the size of its index score gap between the High Needs student group and the Non-High Needs student group (or the ultimate achievement target of 75 if that’s lower) is a significant outlier i.e., at least one standard deviation greater than the statewide gap in any subject area.
INDICATOR 2A-D: ACADEMIC GROWTH (LONGITUDINAL)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average percentage of growth target achieved by students in grades 4 through 8 (½ SB-ELA; ½ SB Math)</td>
<td></td>
</tr>
<tr>
<td>• All Students</td>
<td>200</td>
</tr>
<tr>
<td>• Students with High Needs</td>
<td>200</td>
</tr>
</tbody>
</table>

Description (What): In Connecticut, the Smarter Balanced (SB) Assessment in English Language Arts/Literacy (ELA) and Mathematics are used for measuring student achievement growth. Since spring 2015, Connecticut students have taken the SB ELA and Mathematics in grades 3-8. In both subjects, the test scores are vertically scaled across grades and facilitate tracking student growth within the same subject across grades, despite differences in test content and difficulty.

Each vertical scale ranges from 2000-3000 score points. By subtracting a student’s current score (e.g., a grade 5 score of 2400 in Mathematics) from the student’s previous score in the same subject (e.g., a grade 4 score of 2300 in Mathematics), a teacher or administrator can assess the individual student’s growth in Mathematics performance over a one year period (a growth of 100 points in this example). Teachers and administrators can use achievement growth information with other academic information about students to plan for student instruction.

The CSDE used the vertical scale to create a growth model based on the expectation that all students in grades 4 through 8 should demonstrate growth each year in ELA and Mathematics. Ambitious yet achievable growth targets were established in ELA and Mathematics for all students entering grades 4 through 8 to reach in that year. To learn more about Connecticut’s growth model and how student growth targets were established, see Developing Connecticut’s Growth Model for the Smarter Balanced Summative Assessments in English Language Arts (ELA) and Mathematics.

There are two metrics generated from the growth model. The percentage of students meeting or exceeding their growth targets is reported as the “Growth Rate.” Growth rate is not part of the Next Generation accountability system. The measure used for accountability purposes is the “Average Percentage of Target Achieved” (APTA).

To calculate the APTA for a school or district, every student’s growth in vertical scale score points is evaluated against the student’s assigned growth target. Students can meet anywhere from 0% of the growth target to 110% of the growth target, yielding 0-110 points toward the school’s Indicator 2 values in the accountability system. The school’s APTA is an average of the percentage of growth target achieved across all students.
Rationale (Why?): The vertical scale enables the evaluation of growth achieved by the same students over time. A district/school won’t be deemed successful on this metric simply because it enrolls students who are historically high performing. Success on this metric is earned by helping all students, whether low or high performing, to achieve adequate growth from one year to the next.

Applicability (Who): The academic growth indicator is applicable to all districts and schools with at least one grade between 4 and 8, inclusive.

Input/Feedback: Practitioners have long awaited the inclusion of academic growth as an indicator in district/school accountability. They are generally more supportive of using academic growth than achievement status to evaluate the effectiveness of a district/school.

Methodology (How): Points are earned for the All Students group and the High Needs group based on the average percentage of growth target achieved across all students in the group. While students may earn 0-110 points based on the percentage of target achieved, the maximum value for schools and districts is 100 points. Weighting the High Needs group separately in addition to the All Students group rightly over-weights the growth of students with High Needs. The ultimate target for this indicator is 100%.

Similar to Indicator 1 (Academic Achievement—Status), a school or district must have at least 20 matched students in order to be eligible to earn any points for Indicator 2 (Academic Growth). If a school or district has at least 20 matched students for any of the four growth indicators (i.e., ELA-All Students, ELA-High Needs, Math-All Students, Math-High Needs), then the maximum possible points for all of the Academic Achievement indicators (indicator 1) for all subjects for that school or district will be 50 points (i.e. Math = 50; ELA = 50; Science = 50). If an elementary or middle school or district has no reportable growth data, the maximum possible points for all of the Academic Achievement indicators (indicator 1) for all subjects for that school or district will be 100 points (i.e. Math = 100; ELA = 100; Science = 100).

Data Source: State assessment data files and Public School Information System (PSIS) for student demographic (e.g., race/ethnicity, gender) and program (EL, FRPL, disability) data.
INDICATOR 2E AND 2F: PROGRESS TOWARD ENGLISH LANGUAGE PROFICIENCY

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average percentage of growth target achieved based on LAS Links for all English learners—½ LAS Links Literacy; ½ LAS Links Oral</td>
<td>100</td>
</tr>
</tbody>
</table>

**Description (What):** The LAS Links, administered annually to all English learners, is used to measure Progress Toward English Language Proficiency. A student’s LAS Links scores from spring of the prior school year are used as a baseline and to establish a Literacy growth target and an Oral growth target. The student’s change in vertical scale score in each composite area in the next school year is compared to the student’s targets. The percentage of target achieved is determined for each composite area (negative growth is reported as 0; students are capped at 110% of target achieved). At the school-level, the percentage of target achieved is averaged across English learners to report the Average Percentage of Target Achieved for the school for Literacy and Oral. These values are included as Indicator 2e and 2f in the accountability system for the first time in 2018-19.

To learn more about Connecticut’s growth model using LAS Links, including an explanation of how student growth targets were established, see Connecticut’s Growth Model for the English Language Proficiency Assessments.

**Rationale (Why?):** The Every Student Succeeds Act (ESSA) requires that states measure and report on the annual progress English learners make toward attaining English language proficiency.

The LAS Links vertical scale enables the evaluation of English language proficiency growth achieved by the same students over time. Success on this metric is earned by helping all English learners achieve adequate growth from one year to the next with the ultimate goal of achieving English language proficiency within five years.

**Applicability (Who):** The progress toward English language proficiency indicator is applicable to all districts and schools with at least 20 English learners with matched LAS Links scores across two school years.

**Input/Feedback:** Practitioners are generally more supportive of using growth measures for accountability rather than evaluating the effectiveness of a district/school using status measures exclusively.
Methodology (How): Points are earned for the composite areas of Literacy and Oral of LAS Links. Each composite score is based on the average percentage of growth target achieved across all English learners. While a student may achieve up to 110% of a growth target, the maximum value for schools and districts when all students are averaged is 100%. The ultimate target for this indicator is 100%.

Similar to the academic growth measure (Indicators 2a-d), a school or district must have at least 20 matched students in a composite area (i.e. Literacy or Oral) in order to be eligible to earn any points for Indicators 2e and 2f.

Data Source: State assessment data files and Public School Information System (PSIS) for student demographic (e.g., race/ethnicity, gender) and program (EL, FRPL, disability) data.

RESOURCES FOR IMPROVING STUDENT ACHIEVEMENT IN ELA, MATHEMATICS AND SCIENCE

CURRICULUM (content of learning by lesson, unit, course, or full year)

1. Standards Alignment of the English Language Arts and Mathematics Curriculum and Instruction
   - CT Core Standards for English Language Arts and Mathematics
     http://www.corestandards.org/read-the-standards/
   - CT English Language Proficiency (CELP) Standards
     o www.ct.gov/sde/englishlearners
   - Lesson Planning: Plan with the Common Core in Mind
     o http://achievethecore.org/lesson-planning-tool/
   - EQuIP (Educators Evaluating the Quality of Instructional Products) Rubric: a tool designed to identify high-quality materials aligned to the Common Core State Standards (CCSS). http://www.achieve.org/EQuIP
   - Instructional Materials Evaluation Tool
   - District Common Core Implementation Self-Assessment
   - Models, Samples, and Exemplars of Curriculum Units and Lessons (rated by CSDE)
     https://portal.ct.gov/SDE/CT-Core-Standards/Materials-for-Teachers
   - Basal Alignment Project (Achieve the Core).
     http://achievethecore.org/page/751/bap-project-page
   - What I Use in my Classroom (Achieve the Core)
• Grade by Grade Content Guides (UnboundEd)
  https://www.unbounded.org/enhance_instruction?subjects=math
• EdReports provides educator-led, evidence-based reviews of K-12 instructional materials: https://www.edreports.org/

2. Next Generation Science Standards (NGSS) Resources

• **NGSS Content Crosswalk Report** shows content similarities and differences between NGSS and Connecticut’s 2004 science standards.
• **STEM Practice Briefs** - Brief essays, each focused on a specific issue, authored and reviewed by teachers and researchers. Each Practice Brief leverages practitioners’ expertise and research findings to support the teaching and learning transformations called for in the NGSS.
• **Tools for Ambitious Science Teaching** - Strategies and tools for designing learning experiences that engage all students in meaningful forms of science learning.
• **Classroom Sample Tasks: (Introduction and Overview) (View and Download Tasks)**
  The Classroom Sample Tasks blend content, practices, and concepts from both the NGSS and the Common Core State Standards. Teachers across the disciplines have collaborated to write sample tasks, which are the result of a vision of integrating science, engineering, and mathematics for classroom use.
• **National Science Teachers Association NGSS Resources** - web seminars, articles from peer-reviewed journals, NSTA Press books, short courses and face-to-face conference lectures and workshops, all designed to build an understanding of the NRC Framework and NGSS.
• **NSTA Archived Webinars - NGSS Science and Engineering Practices**
• **EQuIP Rubric for Evaluation NGSS Quality of Science Lessons and Units** - The Educators Evaluating the Quality of Instructional Products (EQuIP) Rubric for science provides criteria by which to measure the alignment and overall quality of lessons and units with respect to the Next Generation Science Standards (NGSS).

3. CT Core Standards Professional Learning Resources for Educators

• Connecticut Professional Learning Online Modules for ELA and mathematics. There are resources for supporting all students as well as resources targeted toward students with disabilities and English learners (CSDE).
• Self-paced online courses developed as part of Math and Science Partnership (MSP) grants.
  http://ngss.ccat.us/
• Education and Teacher Training Courses (Edx).
  https://www.edx.org/course?search_query=education
• Library of Professional Learning Materials from past workshops and conferences
• On-Demand Professional Learning: Recordings of Webinars
  https://portal.ct.gov/SDE/CT-Core-Standards/Professional-Development-Opportunities/On-Demand-Professional-Learning

4. **CT Standards For All Subject Areas**

5. **CT English Language Proficiency (CELP) Standards** https://portal.ct.gov/SDE/English-Learners/English-Learners/Documents

6. **Parent and Community Resources for CT Core Standards** including translated materials in six languages https://portal.ct.gov/SDE/CT-Core-Standards/Family-and-Community

**INSTRUCTION** (how the curriculum will be taught)

1. **Tier 1 – Core Instruction**
   • CSDE Evidence-Based Practice Guides https://portal.ct.gov/SDE/Connecticut-State-Department-of-Education-Evidence-Based-Practice-Guides
   • CSDE English Learner Resources https://portal.ct.gov/SDE/English-Learners/English-Learners/Related-Resources
   • CSDE Special Education Resources https://portal.ct.gov/Services/Education/Special-Education/Special-Education-Resources
   • Resource aligned to the CT Common Core of Teaching Rubric for Effective Teaching 2016 for use by teachers with ELs in their classes Coaching and Self Reflection Tool for Competency in Teaching English Learners
   • SRBI and ELs Handbook
     Scientific Research-Based Interventions for English Learners
   • Math Walkthrough Tool

2. **Tier 1 Reading Instructional Resources**
   • CSDE Menu of Grade K-3 Reading Assessments http://portal.ct.gov/SDE/Language-Arts/Literacy-English-Language-Arts
   • International Literacy Association http://www.literacyworldwide.org/
   • Research-Based Literacy Instruction and Assessment for Children in PK-12 (Florida Center for Reading Research). http://www.fcrr.org/for-educators/
• Selecting a Scientifically-Based Core Curriculum for Tier 1
  http://www.rtinetwork.org/learn/research/selectingcorecurriculum-tier1

• LD Online http://www.ldonline.org/ A leading website on learning disabilities, learning disorders and differences. Parents and teachers of learning disabled children will find authoritative guidance on attention deficit disorder, ADD / ADHD, dyslexia, dysgraphia, dyscalculia, dysnomia, reading difficulties, speech, and related disorders.


• Dyslexia Research, Education & Advocacy http://eida.org/
• Spear-Swerling, L. (2014) The Power of RTI and Reading Profiles: A Blueprint for Solving Reading Problems. This text explains why RTI is today's best approach for preventing reading difficulties—and how research on reading profiles can enhance the power of RTI. For practitioners, the book provides a complete, evidence-based blueprint for using RTI and reading profiles in tandem to plan effective core literacy instruction and help struggling readers in Grades K-6, whether they have disabilities or issues related to experience (e.g., ELLs, children from poverty backgrounds).

• The CSDE maintains a list of resources designed to address identification and assessment as well as instruction and intervention for students with specific learning disabilities and dyslexia. https://portal.ct.gov/SDE/Special-Education/Specific-Learning-Disability-and-SLD---Dyslexia

3. Reading Instructional Resources and Materials
• Leveled Articles, Differentiation Ideas, and Curriculum Ladders (For the Teachers). http://www.fortheteachers.org
• Leveled Text, Units, and Lessons (ReadWorks). http://www.readworks.org/
• Leveled Articles and Text Sets (NewsELA). www.newsla.com
• Fiction and Nonfiction Texts (CommonLit). http://www.commonlit.org/
• Primary Source Resources (Library of Congress). http://www.loc.gov/teachers/
• Primary Source Resources and Museum Collections (Smithsonian Education). http://www.smithsonianeducation.org/educators/
• Reading Rockets http://www.readingrockets.org/
• CSDE Family Literacy Resources https://portal.ct.gov/SDE/Language-Arts/Literacy-English-Language-Arts/Related-Resources
4. **Tier 1 Writing Instructional Resources**
   - In Common: Effective Writing (Achieve the Core) [http://achievethecore.org/page/507/in-common-effective-writing-for-all-students](http://achievethecore.org/page/507/in-common-effective-writing-for-all-students)
   - ODELL Literacy (ODELL) [http://odelleducation.com/](http://odelleducation.com/)
   - Pros and Cons of Controversial Issues (ProCon) [http://www.procon.org/](http://www.procon.org/)

5. **Tier 1 Mathematics Instructional Resources**
   - Examples of Instructional Material [https://www.achieve.org/equip/examples](https://www.achieve.org/equip/examples)
   - Curriculum alignment: Interactive Coherence Map (Achieve the Core) [http://achievethecore.org/page/1118/coherence-map](http://achievethecore.org/page/1118/coherence-map)
   - Curriculum resources/rich tasks: Mathematics Assessment Project [http://map.mathshell.org/](http://map.mathshell.org/) (Secondary)
   - Illustrative Mathematics [https://www.illustrativemathematics.org/](https://www.illustrativemathematics.org/)
   - Illuminations (NCTM) [https://illuminations.nctm.org/](https://illuminations.nctm.org/)
   - Achieve the Core Classroom Resources [http://achievethecore.org/](http://achievethecore.org/)
   - Student mathematics practice - Khan Academy [https://www.khanacademy.org/](https://www.khanacademy.org/)
   - IXL [https://www.ixl.com/](https://www.ixl.com/)
   - Youcubed [https://www.youcubed.org/](https://www.youcubed.org/)
   - LearnZillion [https://learnzillion.com/p/](https://learnzillion.com/p/)

6. **Tier 1 Science Instructional Resources**
   - **NGSS Evidence Statements (Executive Summary) (Introduction and Overview) (Grades K-5) (Grades 6-8) (Grades 9-12)** NGSS Evidence Statements provide educators with additional detail on what students should know and be able to do. These Evidence Statements are statements of observable and measureable components that, if met, will satisfy NGSS performance expectations.
   - **NGSS Appendices** - 13 essays detailing elements of the NGSS based upon the recommendations in the *Framework for K-12 Science Education* (National Research Council, 2012).
   - **The Five Tools and Processes for Translating the NGSS** - The *Next Generation Science Standards* (NGSS) challenge teachers to think deeply about learning and
teaching with the goal of developing a clear vision of science education that is coherent, focused, and rigorous. These tools are designed to help professional development leaders’ work with teachers on curriculum, instruction, and assessment. (American Museum of Natural History in collaboration with BSCS and the K-12 Alliance at WestEd.) https://www.amnh.org/explore/curriculum-collections/five-tools-and-processes-for-ngss

- **Building Towards NGSS Classroom Series** - These Teaching Channel videos, developed in partnership with Achieve, help teachers’ transition classroom instruction to meet the goals of NGSS. The series includes:
  - First Steps Towards Transitioning to the NGSS
  - Making Claims From Evidence, Energy & Matter Across Science Disciplines
  - Working as a Team
  https://learn.teachingchannel.com/video/transition-to-ngss-achieve

- **Bozeman Science – Generation Science Standards Video Series** Next Generation Science Standards Video Series covers the concepts contained within the K-12 Science Framework. The 60 videos contain: an NGSS overview, 8 practices, 7 crosscutting concepts, and 44 disciplinary core ideas.
  https://www.youtube.com/playlist?list=PLllVwaZQkS2rtZG_L7ho89oFsaYL3kUWq

- **Talk Science Professional Development** This component of The Inquiry Project (TERC) is designed to increase the effectiveness of discourse in Grades 3 through 5 science classrooms. The focus is on meaning-making and strategies to support productive discussion. Video case studies are included.
  https://inquiryproject.terc.edu/prof_dev/pathway/

- **NGSS Storylines**
  Next Generation Science Storylines project is dedicated to providing tools that support teachers in developing, adapting, and teaching with strongly aligned NGSS materials in classrooms around the country. The latest NGSS Storylines can be found at http://www.nextgenstorylines.org

7. **Tier 1 - Reaching ALL learners**

- Accessibility Toolkit for Math
  http://www2.edc.org/accessmath/resources/strategiesToolkit.pdf

- Recommendations for Targeted Math Support and Interventions

- Culturally Responsive Teaching

- CSDE English Learner Resources

- CSDE Special Education Resources
  https://portal.ct.gov/SDE/Special-Education/Special-Education-Resources-for-Educators
• Universal Design for Learning
  https://portal.ct.gov/SDE/CT-Core-Standards/Universal-Design-for-Learning
• Differentiation, Protocols, and Other Resources (EL Education)
  http://commoncoresuccess.eleducation.org/resources
• Leveled Articles, Differentiation Ideas, and Curriculum Ladders (For the Teachers).
  http://www.fortheteachers.org
• Leveled Text, Units, and Lessons (ReadWorks). http://www.readworks.org/
• Leveled Articles and Text Sets (NewsELA). www.newsla.com
• Fiction and Nonfiction Texts (Commonlit). http://www.commonlit.org/
• Teacher practices: NCTM’s Principles to Actions: Ensuring Mathematical Success for All
  http://www.nctm.org/PtA/
• Resource aligned to the CT Common Core of Teaching Rubric for Effective Teaching
  2016 for use by teachers with ELs in their classes
  Coaching and Self Reflection Tool for Competency in Teaching English Learners
• SRBI and ELs Handbook
  Scientific Research-Based Interventions for English Learners

8. Tier 2 and 3 Intervention – Supplemental and Intensive Instruction and Supports
• CSDE Framework for RTI
  https://portal.ct.gov/-/media/SDE/Press-Room/Files/RTI_Executive_Summary.pdf
• RTI Action Network http://www.rtinetwork.org/
• Center on Response to Intervention http://www.rti4success.org/
• Scientific Research-Based Interventions for English Language Learners:
  A Handbook to Accompany Connecticut’s Framework for RTI
• National Center on Intensive Intervention https://intensiveintervention.org/
• What Works Clearinghouse https://ies.ed.gov/ncee/wwc/
• Evidence for ESSA https://www.evidencetoressa.org/
• CSDE Evidence-Based Practice Guides https://portal.ct.gov/SDE/Connecticut-State-
  Department-of-Education-Evidence-Based-Practice-Guides
• SRBI and ELs Handbook
  Scientific Research-Based Interventions for English Learners
Where can I get more information?

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<tbody>
<tr>
<td>Best Practices and Resources for Improving ELA</td>
<td>Joanne White</td>
</tr>
<tr>
<td>Curriculum and Instruction</td>
<td>Phone: 860-713-6751</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:Joanne.White@ct.gov">Joanne.White@ct.gov</a></td>
</tr>
<tr>
<td>Best Practices and Resources for Improving</td>
<td>Jennifer Michalek</td>
</tr>
<tr>
<td>Mathematics Curriculum and Instruction</td>
<td>Phone: 860-713-6557</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:jennifer.michalek@ct.gov">jennifer.michalek@ct.gov</a></td>
</tr>
<tr>
<td>Best Practices and Resources for Improving</td>
<td>Ronald Michaels</td>
</tr>
<tr>
<td>Science Curriculum and Instruction</td>
<td>Phone: 860-713-6851</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:ronald.michaels@ct.gov">ronald.michaels@ct.gov</a></td>
</tr>
<tr>
<td>Best Practices and Resources for Supporting</td>
<td>Megan Alubicki Flick</td>
</tr>
<tr>
<td>English Learners</td>
<td>Phone: 860-713-6786</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:megan.alubicki@ct.gov">megan.alubicki@ct.gov</a></td>
</tr>
<tr>
<td>Academic Growth Calculations</td>
<td>Renee Savoie</td>
</tr>
<tr>
<td></td>
<td>Phone: 860-713-6858</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:renee.savoie@ct.gov">renee.savoie@ct.gov</a></td>
</tr>
</tbody>
</table>
INDICATOR 3: PARTICIPATION RATE

Description (What): This indicator will evaluate participation rates on all assessments for ELA, Mathematics, and Science for All Students group and the High Needs supergroup. Students in the High Needs group must be an English learner, a student with disabilities, or a student eligible for free or reduced price lunch at the time of testing.

Rationale (Why): High participation rates for all students across groups is critical if accountability reports are to be representative of all students. The validity of conclusions one can derive from assessment results is partly dependent on the percentage of students who participated in the assessment. For example, one cannot make generalizations about a school’s performance if a large number of eligible students did not participate in the test. Additionally, without high participation rates, fair comparisons across schools and years cannot be made.

Applicability (Who): This indicator is applicable to all schools and districts with at least one tested grade (i.e., grades 3 through 8, or 11).

Methodology: Every school and district is expected to meet/exceed the 95% participation rate standard for the All Students group and the High Needs group in all the tested subjects. If a school that would otherwise have been classified in Category 1 or 2 has a participation rate that is less than 95% for either the All Students group or the High Needs group in any tested subject, it will be classified into the next lower category.

Data Source: State assessment data files and Public School Information System (PSIS) for student demographic (e.g., race/ethnicity, gender) and program (EL, FRPL, disability) data.

RESOURCES FOR ENSURING ASSESSMENT PARTICIPATION ACROSS THE SCHOOL COMMUNITY

The key to ensuring high participation rates lies in communication with teachers, students, and families. Everyone needs to know what to expect in terms of content, the delivery system, and time demands while also understanding how results will be used. Throughout communication it is essential to maintain perspective. School and district leaders must strike a balance between communicating the importance and value of assessment data while not creating undue anxiety about a single summative test score. In a 180-day school year, the state assessment is a very small component of the instructional program, lasting less than eight hours across all content areas for the average student taking mathematics, English language arts/literacy, and science assessments.

Connecticut SAT resources including a template letter to parents as well as frequently asked questions are available at http://portal.ct.gov/SDE/Student-Assessment/SAT/Connecticut-SAT-School-Day/Related-Resources.

The CSDE has created a page of resources designed for parents. The page includes materials for the Smarter Balanced Assessment, the Connecticut SAT School Day, the Connecticut Alternate Science Assessment (CTAS), the Connecticut Alternate Assessment (CTAA), the Next Generation Science Standards (NGSS) Assessment, the English language proficiency assessment (LAS Links), and the Connecticut Physical Fitness Assessment. The parent resource page is available here: https://portal.ct.gov/SDE/Student-Assessment/Main-Assessment/Parent-Resources/Documents

The National PTA has created a range of free online resources that can be customized for local use to help parents understand the purpose and stakes associated with state assessments including Smarter Balanced. The organization effectively describes the relationship between content standards for local curricula and the summative assessment through a variety of short videos and parent guides.

In an effort to encourage schools to sponsor informational events for families, the National PTA has created a Parent Assessment Event Toolkit. The toolkit includes a facilitator’s guide, presentation templates, anticipated questions, suggested take-home tools for parents in Spanish and English, and sample announcements. To access the toolkit and other resources, visit: https://www.pta.org/home/family-resources/College-and-Career-Readiness/State-Assessments/Parent-Assessment-Event-Toolkit

Achieve the Core offers resources you can use to speak to parents and community members about the content standards. The site offers guides, documents, and parent videos. http://achievethecore.org/page/2736/talking-with-parents

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<td>Strategies for Ensuring Assessment Participation</td>
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<td>Participation Rate Calculations</td>
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**Indicator 4: Chronic Absenteeism**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
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<tbody>
<tr>
<td>Percentage of students chronically absent</td>
<td>50</td>
</tr>
<tr>
<td>• All Students</td>
<td>50</td>
</tr>
<tr>
<td>• Students with <em>High Needs</em></td>
<td>50</td>
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</tbody>
</table>

**Description (What):** A district/school/student group chronic absenteeism rate is the percentage of students missing ten percent or greater of the total number of days enrolled in the school year for any reason. It includes both excused and unexcused absences. For example, children who are enrolled for the full school year (e.g., 180 days) become chronically absent if they miss at least 18 days of school for any reason. Because aggregate school/district-wide attendance rates can mask the extent of individual absenteeism, chronic absenteeism is a better indicator of student attendance.

**Rationale (Why?):** Students need to attend school daily to succeed and data must guide local efforts to improve student attendance. In 2018-19, 10.4% of all students statewide were chronically absent. Great disparities exist in chronic absenteeism rates among student groups. For example, the 2018-19 chronic absenteeism rate for students eligible for free lunch (18.2%) was more than three times that of their peers who were not eligible for lunch subsidies (5.5%). In the same year, 19.2% of students with disabilities were chronically absent while 8.8% of their non-disabled peers were identified as chronically absent. Regardless of student group membership, national reports/research as well as state-level data analyses highlight the association of chronic absenteeism to student academic achievement and high school graduation.

**Applicability (Who):** The chronic absenteeism indicator is applicable to all districts and schools with at least one grade between K and 12, inclusive.

**Input/Feedback:** This indicator has gained increasing acceptance statewide. Many districts and schools have begun to track and monitor chronic absenteeism voluntarily. The Connecticut legislature has established a Strategic Action Group around this issue that is serving as a centralizing force for disseminating promising new practices, promoting communication and collaboration among critical state agency and community-based partners, and reporting to the legislature on statewide progress. The CSDE’s district/school turnaround initiatives (Alliance District program and Commissioner’s Network) incorporate chronic absenteeism as an important indicator.

**Methodology (How):** Points will be earned for the All Students group *and* the High Needs group based on the percentage of students who are chronically absent. It is important to weight student group absenteeism rates separately because disparities in chronic absenteeism rates
among student groups exist in a vast majority of districts/schools throughout the state. The CSDE’s expectation is that no district/school will have a chronic absenteeism rate that is greater than 5%; therefore, full points will be awarded if the chronic absenteeism rate is 5% or lower. Conversely, no points will be awarded if the chronic absenteeism rate is 30% or greater. To recognize incremental improvement in the reduction of chronic absenteeism, rates between 30% and 5% will be awarded proportional points.

The following formula is used to convert the chronic absenteeism rate into points:

\[
\frac{(30\% - \text{Chronic Absenteeism Rate})}{25\%} \times 50
\]

For example, a school with an “all students” chronic absenteeism rate of 15% would earn 30 of the possible 50 points for the “all students” component of Indicator 4. The calculation is as follows:

\[
\frac{(30\% - 15\%)}{25\%} \times 50 = \frac{15\%}{25\%} \times 50 = \frac{3}{5} \times 50 = 30 \text{ points}
\]

Data Source: June PSIS
RESOURCES FOR IMPROVING ATTENDANCE

- Connecticut State Department of Education staff have assembled a collection of timely and relevant resources focused on understanding potential causes of chronic absenteeism, the impact of lost instructional time, and practical approaches to ensuring that students are attending school ready to learn. The Reducing Chronic Absenteeism in Connecticut Schools webpage is updated regularly with new information and resources for schools and districts to use to reduce chronic absence. www.ct.gov/sde/chronicabsence.

Connecticut-specific resources include:

- Reducing Chronic Absence in Connecticut’s Schools: A Prevention and Intervention Guide for Schools and Districts. The Prevention and Intervention Guide is designed to support the work in districts, schools, and communities to develop and implement effective strategies to reduce chronic absence. Organized in an easy-to-read manner, the guide is rich with links to research, resources, and toolkits. It also provides examples of local strategies, state, and national resources and a multi-tiered approach to addressing chronic absence. A recording of a webinar providing an overview of the guide is also available. http://portal.ct.gov/SDE/Publications/Reducing-Chronic-Absence-in-Connecticuts-Schools


Youth Service Bureau Referral for Truancy and Defiance of School Rules Form - The Connecticut State Department of Education, with its partners, has developed a Youth Service Bureau Referral for Truancy and Defiance of School Rules Form to assist districts in developing a system to formally refer students who are truant to the community’s Youth Service Bureau. [https://portal.ct.gov/-/media/SDE/Truancy/Youth-Service-Bureau-Referral-for-Truancy-and-Defiance-of-School-Rules-Form.pdf?la=en](https://portal.ct.gov/-/media/SDE/Truancy/Youth-Service-Bureau-Referral-for-Truancy-and-Defiance-of-School-Rules-Form.pdf?la=en)


Attend Today/Achieve Tomorrow Attendance Awareness Campaign. This statewide campaign is designed to provide districts, schools and community partners with resources and artwork with the Attend Today, Achieve Tomorrow slogan and design work. A webpage, [https://www.preventionworksct.org/resources/school-based-prevention-resources/attendance-works-toolkit.html](https://www.preventionworksct.org/resources/school-based-prevention-resources/attendance-works-toolkit.html), with printable and downloadable resources is now available, including social media graphics, banners, badges, and handouts for parents and others. Many of the materials are in English and Spanish. On this site, you will also find information on how mentoring can be used as an intervention strategy for chronic absenteeism in your schools.

Other resources include:


- The Governor’s Prevention Partnership (GPP) supports schools and businesses as well as community and faith-based organizations in ensuring that children are in safe, quality mentoring relationships. Quality mentoring programs can be an effective intervention for reducing chronic absenteeism. The staff at GPP can provide technical assistance and support to districts and schools to establish quality mentoring programs. [https://www.preventionworksct.org/what/increase-connections-with-adults/](https://www.preventionworksct.org/what/increase-connections-with-adults/)

- The National Mentoring Partnerships provides resources for implementing a mentor program and research-based evidence of the power of mentoring on improving attendance.
absenteeism, improving attitudes toward school, and likelihood of enrolling in college.  
http://www.mentoring.org

- Attendance Works has developed a range of resources specific to grades served (i.e., elementary, middle, secondary) and aligned to five important strategies designed to improve attendance: recognizing good and improved attendance; engaging students and parents; monitoring attendance data and practice; providing personalized early outreach; and developing programmatic responses to barriers. A few examples include:
  - Leading Attendance: A Toolkit for Principals  
    http://www.attendanceworks.org/tools/schools/principals/
  - Teaching Attendance 2.0: Everyday Strategies to Help Teachers Improve Attendance and Raise Achievement  
    http://www.attendanceworks.org/tools/schools/teaching-attendance/
  - Bringing Attendance Home: Engaging Parents in Preventing Chronic Absence  
  - Make Every Day Count: Sending the Right Message About Attendance to Parents and Students  
    http://www.attendanceworks.org/tools/for-public-messaging/
  - Relationships Matter: A Toolkit for An Elementary Success Mentor Attendance Initiative  
    http://www.attendanceworks.org/tools/for-school-districts/elemsuccessmentortoolkit/

Where can I get more information?

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>CSDE CONTACTS</th>
</tr>
</thead>
</table>
| Resources, Strategies, and Best Practices      | Kari Sullivan  
Phone: 860-807-2041  
Email: kari.sullivan@ct.gov | |
| Data Collection and Reporting                  | Kendra Shakir  
Phone: 860-713-6896  
Email: kendra.shakir@ct.gov | |
## INDICATOR 5: PREPARATION FOR POSTSECONDARY AND CAREER READINESS – COURSEWORK

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students in grades 11 &amp; 12 participating in at least one of the following during high school: Two courses in AP/IB/dual enrollment; or Two courses in one of seventeen CTE categories; or Two workplace experience “courses” in any area.</td>
<td>50</td>
</tr>
</tbody>
</table>

**Description (What):** This is an access metric. It evaluates whether students in grades 11 and 12 have participated in coursework during high school that prepares them for success in college and/or careers. In recognition of the diverse pathways of our students, credit is awarded if students pursue traditional college-preparatory courses (e.g., Advanced Placement, International Baccalaureate), career-technical education courses, or workplace experience/internship opportunities. Students in Grade 12 include students with disabilities who are 18 to 21 years of age and are receiving transition only services. These students are engaged in workplace experience and will contribute positively to a school’s Indicator 5 calculation.

**Rationale (Why?):** Students cannot be expected to demonstrate success in college and careers if they aren’t receiving the requisite preparation.

**Applicability (Who):** This indicator is applicable to all districts and schools that offer grades 11 and/or 12.

**Input/Feedback:** The primary feedback to this indicator has been that the system should be inclusive to recognize opportunities beyond AP/IB that may be offered by districts. For example, many districts have partnerships with in-state colleges/universities (e.g., UCONN’s Early College Experience program, College Careers Pathways) that enable students to take college courses in high school and earn both high school and college credit. In response to this suggestion, the CSDE modified its data collection several years ago to collect information about dual enrollment courses.

**Methodology (How):** Points are awarded to the All Students group based on the percentage of 11th and 12th graders who meet the specified coursework participation thresholds. Points are prorated based on the percentage of the ultimate target (75%) achieved. For detailed calculation rules, see the Appendix.

**Data Source:** June PSIS (to establish 11th and 12th graders) and Teacher Course Student (for course participation)
INDICATOR 6: PREPARATION FOR POSTSECONDARY AND CAREER READINESS - EXAMS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students in grades 11 &amp; 12 achieving CCR benchmark on at least one of the following: SAT <em>or</em> ACT <em>or</em> AP <em>or</em> IB</td>
<td>50</td>
</tr>
</tbody>
</table>

**Description (What):** This metric evaluates whether students in grades 11 and 12 have attained benchmark scores on at least one of the most prevalent college/career readiness exams.

**Rationale (Why?):** In addition to looking at “access” (i.e., indicator 5), it is also important to evaluate “performance”. In recognition of the exam options available to students, this metric recognizes attainment of the benchmark score in any of those options.

**Applicability (Who):** This indicator is applicable to all districts and schools that offer grades 11 and/or 12.

**Input/Feedback:** As with coursework, the primary feedback to this indicator has been that the system should be inclusive and recognize that students may demonstrate college/career readiness through different exam options.

**Methodology (How):** Points will be awarded to the All Students group based on the percentage of 11th and 12th graders who meet the following benchmark scores on the respective exams:

- SAT (effective March 2016) – Evidence-Based Reading and Writing score of at least 480 and a Math score of at least 530 on the Redesigned SAT; or
- ACT – meeting benchmark on 3 of 4 exams (English=18, Reading=22, Math=22, Science=23); or
- AP – 3 or higher on an AP exam; or
- IB – 4 or higher on an IB exam.

Points are prorated based on the percentage of the ultimate target (75%) achieved.

**Data Source:** June PSIS (to establish 11th and 12th graders), SAT/AP from College Board, ACT from ACT, Inc., and IB from International Baccalaureate Organization.
RESOURCES TO PREPARE STUDENTS FOR POSTSECONDARY SUCCESS

This accountability system values increasing student access to rigorous coursework while striking a balance with outcomes based on a variety of nationally recognized assessments. Research shows that students who enroll in challenging coursework in high school are more likely to graduate and are better positioned for success in college (Achieve, 2015). It acknowledges that challenging coursework can take many forms including dual enrollment, CTE coursework, and workplace experience.

Teachers and school counselors play a critical role in helping students to select appropriate coursework to meet student needs and provide an appropriate level of challenge. Schools that administer the PSAT to all students also have access to the College Board’s AP Potential tool. AP Potential is a free web-based tool that allows schools to identify all students with a high probability of success in an AP course based on PSAT performance. In 2013-14, the Connecticut State Department of Education began the practice of annually notifying students who demonstrate AP potential and encouraging them to consider enrolling in challenging courses such as AP, dual enrollment, or IB courses. The AP Potential tool provides school personnel with another resource that can be used to remove barriers and invite more students of all backgrounds to participate in college-aligned coursework. Additional information about the tool and guidelines for proper use are available here: https://apppotential.collegeboard.org/app/welcome.do

Other College Board Resources:

The information, resources, and tools on the College Board website can help educators prepare students to take the SAT, PSAT/NMSQT, PSAT 10, and PSAT 8/9. Educators can get information about student scores, classroom connections, test design, and sample questions. https://collegereadiness.collegeboard.org/educators/k-12

Students can get information about AP courses and the benefits of AP such as college credit, skipping introductory courses and building college skills. https://apstudent.collegeboard.org/home?navId=aru-ap

The College Board’s Big Future provides resources for students to prepare for college. Additionally the site provides educators handouts and other college planning resources to share with students and families. There is a section for parents and families as well with information regarding financial aid and preparing for college. https://bigfuture.collegeboard.org/?navId=aps-cp
Increasingly districts are realizing the value of high-quality CTE programs of study. Research shows a strong positive relationship between participation in CTE and other measures of academic achievement. Additionally, the applied nature of CTE is appealing to students, keeping them motivated and engaged in their learning. Advance CTE has collected information about program designs that work in different community types throughout the country. To review “effective models,” visit http://careertech.org/papers-effective-models.

- **Career Technical Education Programs** Engaging and rigorous career-technical education programs that focus on providing industry certifications and dual credit opportunities for CTE completers. For more information and resources for quality career-technical programs in high school, see:
  - CSDE CT Core Standards website, CTE page: https://portal.ct.gov/SDE/CT-Core-Standards/Materials-for-Teachers/Career-and-Technical-Education
  - Advance CTE: https://careertech.org
  - Association for Career and Technical Education: https://www.acteonline.org/

EnvisionIT is a no-cost, customizable, evidence-based, standards-aligned, college and career readiness curriculum developed at the Ohio State University and funded by the U.S. Department of Education, Office of Special Education Programs. It is designed for use in middle and high schools and focuses on four key areas:

1. Transition Planning/Career Readiness;
2. Information Technology Literacy;
3. Reading/Writing; and

The research supporting the Envision IT curriculum and all related materials are available here: https://nisonger.osu.edu/research/envision-it/
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<thead>
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</table>
| Resources, Strategies, and Best Practices related to College Board products including PSAT, SAT, and AP | Michelle Rosado  
Phone: 860-713-6748  
Email: michelle.rosado@ct.gov |
| Resources, Strategies, and Best Practices for CTE, Dual Concurrent Enrollment, Industry Recognized Credentials, and Pre-Apprenticeship | Suzanne Loud  
Phone: 860-713-6748  
Email: suzanne.loud@ct.gov |
| Resources, Strategies, and Best Practices for Student Success Plans                                | Kylie Freeman  
Phone: 860-713-6592  
Email: kylie.freeman@ct.gov |
| Resources, Strategies, and Best Practices for Work-Based Learning                                | Harold Mackin  
Phone: 860-713-6779  
Email: harold.mackin@ct.gov |
| Resources, Strategies, and Best Practices for Supporting Students with Disabilities Receiving Transition Only Services | Jay Brown  
Phone: 860-713-6918  
Email: jay.brown@ct.gov |
| Data Collection and Reporting for Coursework (Indicator 5)                                      | Keryn Felder  
Phone: 860-713-6833  
Email: keryn.felder@ct.gov |
| Data Collection and Reporting for Exams (Indicator 6)                                              | Charles Martie  
Phone: 860-713-6809  
Email: charles.martie@ct.gov |
**INDICATOR 7: GRADUATION - ON-TRACK IN 9TH GRADE**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of 9th graders earning at least five full-year credits in the year.</td>
<td>50</td>
</tr>
</tbody>
</table>

**Description (What):** Since initial implementation in 2014-15, this indicator calculates the percentage of 9th graders earning at least five full-year credits in the year. In the future, CSDE will consider adding the criteria that there be no more than one failing grade in English, Mathematics, Science, or Social Studies in the school year. Additionally, given that Connecticut General Statutes 10-221a requires that students graduating in 2023 and beyond earn a minimum of 25 credits to graduate, this indicator may be revised for 2019-20 accountability reporting.

**Rationale (Why?):** Ninth grade is a critical year. The University of Chicago’s Consortium on Chicago School Research “identifies students as on-track if they earn at least five full-year course credits and no more than one semester F in a core course in their first year of high school. On-track students are more than three and one-half times more likely to graduate from high school in four years than off-track students. The indicator is a more accurate predictor of graduation than students’ previous achievement test scores or their background characteristics.”

**Applicability (Who):** This indicator is applicable to all districts and schools that offer grade 9. It is also applied to districts/schools where the 9th graders had been enrolled in 8th grade in order to serve as an indicator of how well the middle school is preparing students for success in the first year of high school.

**Input/Feedback:** During initial implementation, some questioned if the five credits in grade 9 represented being on-track since the total credits required to graduate in many high schools exceeded the state minimum at the time of 20 credits. Others suggested considering course passage instead of credit accumulation. Some administrators of K-8 schools districts were also concerned that this metric was holding them accountable for student success in an educational system outside their own.

**Methodology (How):** The total number of students in 9th grade who earn at least five full year credits is expressed as a percentage of all 9th graders.

The ultimate target for this indicator is 94% (same as that for the four-year cohort graduation rate). Points are prorated based on the percentage of the ultimate target achieved.

For detailed calculation rules, see the [Appendix](#).
**Data Source:** June PSIS (to establish current year 9th graders and prior year 8th graders) and Teacher Course Student (for credit data).

**RESOURCES FOR KEEPING STUDENTS ON-TRACK TO GRADUATION**

The on-track definition used by the University of Chicago’s Consortium on Chicago School Research has been adopted and customized in districts across the nation. State accountability system indicators are always lagging indicators, but at the local level, districts and schools have the opportunity to track and respond to relevant data quickly before serious problems emerge and on-time graduation for a student is compromised.

The Consortium in partnership with the Network for College Success have conducted extensive research about the importance of Grade 9 and identified factors that predict the likelihood of graduation. The on-track rate in Chicago Public Schools has risen from 57 percent for the Class of 2008 to 84 percent for the Class of 2018. The To & Through Project website includes videos, recorded webinars, and targeted reports focused on helping first-generation college students and high needs stay on-track to graduation. All resources can be accessed here: https://toandthrough.uchicago.edu/.

The early warning indicator research identifies as many as 110 distinct indicators that have been used to predict which students are at risk of failing to complete high school (Bowers, Sprott, & Taff, 2013). The majority of these indicators have been constructed based on readily available data on “the ABC’s” of student attendance, behavior, and course performance (Allensworth & Easton, 2007; Balfanz, Herzog, & Mac Iver, 2007; Frazelle, Negel, & Northwest, 2015; Roderick, 1993).

The increased focus on student success in Grade 9, has driven many high schools to implement early warning systems (EWS) to identify at-risk students. The National High School Center, funded through a grant from the U.S. Department of Education, developed a free online EWS tool using Excel that can be downloaded and customized to meet a school’s needs. Using timely and accurate local data, school personnel can identify patterns and address potential problems proactively. In addition to the EWS designed for high schools, there is a middle school tool available. Both resources and supporting documentation are available through the College and Career Readiness Center at American Institutes for Research here:

http://www.earlywarningsystems.org/

The Educator’s Practice Guide for Dropout Prevention provides recommendations that focus on reducing high school dropout rates. Strategies presented include identifying and advocating for at-risk students, implementing programs to improve behavior and social skills, and keeping students engaged in the school environment. https://ies.ed.gov/ncee/wwc/PracticeGuide/9
While Indicator 7 focuses on credits and grades earned by a student, the on-track indicator is closely linked to Indicator 4: Chronic Absenteeism. The Chicago research and the EWS tools acknowledge the importance of attendance in Grade 8 and Grade 9 as predictors of success in high school and recommend monitoring attendance and other “warning signals” students provide to us as part of a comprehensive approach to keeping students on-track.

- The Everyone Graduates Center, a research program of Johns Hopkins University, is committed to studying the dropout problem by identifying barriers and developing tools and models that states, communities, districts, and schools can use to support all students through high school graduation. Visit the Analytics section of their website to learn more about identifying students who are sending “warning signals” and improving data-based decision making and actions. [http://new.every1graduates.org/analytics/on-and-off-track-indicators/](http://new.every1graduates.org/analytics/on-and-off-track-indicators/)

- Educators recognize the important role social-emotional learning (SEL) plays for student success in school, work, and life. In a recent national study, the majority of educators stated that giving SEL a greater emphasis in schools will help improve academic achievement, student interest in schools, and student behavior (Bridgeland, Bruce, & Hariharan, 2013). To promote a greater emphasis on SEL, authors of a recent brief published by the Center on Great Teachers and Leaders (GTL Center) recommended integrating SEL with other state and district initiatives, including the Common Core State Standards and teacher evaluation systems. [https://gtlcenter.org/products-resources/integrating-social-emotional-learning-state-and-district-policies](https://gtlcenter.org/products-resources/integrating-social-emotional-learning-state-and-district-policies)

- MTSS is an evidence-based framework that uses data-based problem-solving to integrate academic and behavioral instruction and intervention. The integrated instruction and intervention is delivered to students in varying intensities (multiple tiers) based on student need. MTSS addresses the needs of the whole child to remove non-academic barriers to academic achievement and ensure that students achieve their full potential. To learn more about MTSS, visit [http://www.rtinetwork.org/essential/tieredinstruction/tier1/accurate-decision-making-within-a-multi-tier-system-of-supports-critical-areas-in-tier-1](http://www.rtinetwork.org/essential/tieredinstruction/tier1/accurate-decision-making-within-a-multi-tier-system-of-supports-critical-areas-in-tier-1)

- National Mentoring Partnerships provides resources for implementing a mentor program and research-based evidence of the power of mentoring on reducing absenteeism, improving attitudes toward school, preventing the start of risk-taking behavior, and increasing the likelihood of enrolling in college. [http://www.mentoring.org/](http://www.mentoring.org/)

  - The Governor’s Prevention Partnership Youth Mentoring Program. Through a partnership with MENTOR/National Mentoring Partnership, this Connecticut program partners with schools, businesses, community and faith-based organizations to ensure that children are involved in safe, quality mentoring.
relationships:
http://www.preventionworksct.org/what/mentoring/introduction.html


- **Career-Themed Smaller Learning Communities**. Nonprofit organizations can assist schools by providing research-based best practices, including but not limited to:
  - Southern Regional Education Board’s *High Schools That Work, Making Middle Grades Work* and *Technology Centers that Work*.
  - Regional Educational Laboratory Program [https://ies.ed.gov/ncee/edlabs/](https://ies.ed.gov/ncee/edlabs/)

- **Buck Institute for Education** Engaging students in authentic project-based learning. Assists teachers in developing engaging project-based learning and assisting schools in creating a project-based learning school-wide effort. [http://bie.org/](http://bie.org/)

- **Connecticut’s Guidelines for Mastery-Based Learning** [http://portal.ct.gov/SDE/Mastery-Based-Learning/Resources-for-Schools-and-Educators](http://portal.ct.gov/SDE/Mastery-Based-Learning/Resources-for-Schools-and-Educators)

- **The Collaborative for Academic, Social, and Emotional Learning (CASEL)** advances the practice of promoting integrated academic, social, and emotional learning for all children in preschool through high school. [http://www.casel.org/](http://www.casel.org/)

- **Career Technical Education Programs** Engaging and rigorous career-technical education programs that focus on providing industry certifications and dual credit opportunities for CTE completers. For more information and resources for quality career-technical programs in high school, see:
### Where can I get more information?

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>CSDE CONTACTS</th>
</tr>
</thead>
</table>
| Resources, Strategies, and Best Practices | Kimberly Traverso  
Phone: 860-807-2057  
Email: kimberly.traverso@ct.gov |
| Data Collection and Reporting       | Keryn Felder  
Phone: 860-713-6833  
Email: keryn.felder@ct.gov       |
**INDICATOR 8: GRADUATION – FOUR YEAR ADJUSTED COHORT GRADUATION RATE – ALL STUDENTS**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of first time 9th graders who graduate with a regular high school diploma in four years or less – All Students</td>
<td>100</td>
</tr>
</tbody>
</table>

**Description (What):** The four year adjusted cohort graduation rate represents the percentage of first time 9th graders who graduate with a regular high school diploma in four years or less. It is based on the nationally consistent method defined in 34 C.F.R. § 200.19 (73 FR 64508 (Oct. 29, 2008)).

**Rationale (Why?):** Graduating from high school is an important milestone in a student’s education. The inclusion of the specific four-year adjusted cohort graduation rate is a requirement of the Every Students Succeeds Act (ESSA).

**Applicability (Who):** This indicator is applicable to all districts and schools that offer at least one grade between 9 and 12, inclusive.

**Input/Feedback:** Among all the indicators in the accountability model, this is one that continues to irk many district/school leaders. While a vast majority of students do graduate in four years, practitioners adamantly (and one might say rightly) contend that some students (e.g., English learners who newly arrive in the country in middle/high school, low income students who may need to work part-time to support their family, some students with disabilities) benefit from having an extra year or two to complete high school; consequently, they claim it is unfair that these non-graduates are counted as a “failure” in the four-year rate which has become the “de-facto graduation rate.”

**Methodology (How):** The four-year adjusted cohort graduation rate is based on the nationally consistent method as defined in 34 C.F.R. § 200.19 (73 FR 64508 (Oct. 29, 2008)). The ultimate target for all students remains at 94%. Districts/schools can earn up to 100 points based on the pro-rated percentage of the ultimate target (94%) achieved by All Students. For example, a school with a graduation rate of 84.6 (i.e., 90% of the ultimate target of 94%) will earn 90 out of 100 points.

**Data Source:** PSIS Registration and Collection
Indicator 9: Graduation – Six Year Adjusted Cohort Graduation Rate – High Needs

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of first time 9th graders who graduate with a regular high school diploma in six years or less – High Needs group</td>
<td>100</td>
</tr>
</tbody>
</table>

**Description (What):** The six-year adjusted cohort graduation rate represents the percentage of first time 9th graders who graduate with a regular high school diploma in six years or less. It is based on the nationally consistent method defined in 34 C.F.R. § 200.19 (73 FR 64508 (Oct. 29, 2008)).

**Rationale (Why?):** For a variety of reasons, some students (e.g., English learners who newly arrive in the country in middle/high school, low income students who may need to work part-time to support their family, student with disabilities who need additional “transition only services” to facilitate the transition from school to adult life) benefit from having an extra year or two to complete high school. Unlike in the four-year rate, the graduation accomplishment of these students can be counted as a success in the six year rate. The results below for the 2015 cohort illustrate why the six-year is a more fair and complete reflection of the successes of all students and student groups.

**Four-, Five-, and Six-year Graduation Rates for the 2015-16 Graduation Cohort**

<table>
<thead>
<tr>
<th>Category</th>
<th>4-Year Rate</th>
<th>5-Year Rate</th>
<th>6-year Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
<td>87.4</td>
<td>90.0</td>
<td>90.9</td>
</tr>
<tr>
<td>English Learner</td>
<td>67.3</td>
<td>75.1</td>
<td>76.4</td>
</tr>
<tr>
<td>Special Education</td>
<td>65.2</td>
<td>72.8</td>
<td>77.9</td>
</tr>
<tr>
<td>Eligible for Free Meals</td>
<td>74.4</td>
<td>79.4</td>
<td>80.6</td>
</tr>
<tr>
<td>High Needs</td>
<td>76.8</td>
<td>81.6</td>
<td>83.3</td>
</tr>
<tr>
<td>Male</td>
<td>84.3</td>
<td>87.7</td>
<td>88.8</td>
</tr>
<tr>
<td>Female</td>
<td>90.6</td>
<td>92.5</td>
<td>93.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>76.4</td>
<td>80.8</td>
<td>82.0</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>89.0</td>
<td>89.7</td>
<td>91.0</td>
</tr>
<tr>
<td>Asian</td>
<td>94.6</td>
<td>96.0</td>
<td>96.9</td>
</tr>
<tr>
<td>Black</td>
<td>78.8</td>
<td>84.0</td>
<td>84.9</td>
</tr>
<tr>
<td>Hawaiian or Pacific Islander</td>
<td>83.8</td>
<td>91.9</td>
<td>91.9</td>
</tr>
<tr>
<td>White</td>
<td>92.5</td>
<td>94.1</td>
<td>94.9</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>87.7</td>
<td>88.1</td>
<td>89.6</td>
</tr>
</tbody>
</table>
Applicability (Who): This indicator is applicable to all districts and schools that offer grade 12.

Input/Feedback: The six-year rate elicits a very different reaction from that of the four-year rate. This extended graduation rate is viewed very favorably by all constituents and stakeholders.

Methodology (How): The six-year adjusted cohort graduation rate is based on the nationally consistent method as defined in 34 C.F.R. § 200.19 (73 FR 64508 (Oct. 29, 2008)). The ultimate target for all students and student groups remains at 94%. Districts/schools can earn up to 100 points based on the pro-rated percentage of the ultimate target (94%) achieved by High Needs students. For example, a school with a six-year graduation rate of 84.6 (i.e., 90% of the ultimate target of 94%) will earn 90 out of 100 points.

Data Source: PSIS Registration and Collection

Graduation Rate Gap: A district/school is identified as having a graduation rate gap if the size of its six-year graduation rate gap between the High Needs group and the Non-High Needs group (or 94% if that’s lower) is at least one standard deviation greater than the statewide gap.

RESOURCES FOR REDUCING DROPOUT AND INCREASING GRADUATION

- **GradNation.** For those working to increase high school graduation rates, GradNation provides data, insight and analysis; information about effective and promising practices; plus opportunities to connect and learn from one another. [http://gradnation.americaspromise.org/reports-resources](http://gradnation.americaspromise.org/reports-resources)

- **The National Dropout Prevention Center/Network (NDPC/N).** Since 1986, the NDPC/N has served as a clearinghouse on issues related to dropout prevention and offered strategies designed to increase the graduation rate in America’s schools. The organization is a well-established national resource for sharing solutions for student success. [http://dropoutprevention.org/effective-strategies/](http://dropoutprevention.org/effective-strategies/) [http://dropoutprevention.org/resources/](http://dropoutprevention.org/resources/)

- **The National Mentoring Partnerships** provides resources or implementing a mentor program and research-based evidence of the power of mentoring on improving absenteeism, improving attitudes toward school, and likelihood of enrolling in college. Resources include tips for starting and mentoring program and elements of effective practices for mentoring. [http://www.mentoring.org/](http://www.mentoring.org/)

• **Career-Themed Smaller Learning Communities.** Nonprofit organizations can assist schools by providing research-based best practices, including but not limited to:
  - Southern Regional Education Board’s *High Schools That Work, Making Middle Grades Work* and *Technology Centers that Work*.
  - Regional Educational Laboratory Program [https://ies.ed.gov/ncee/edlabs/](https://ies.ed.gov/ncee/edlabs/)

• **The Buck Institute for Education** Engaging students in authentic project-based learning is the leading expert in assisting teachers in developing engaging project-based learning and assisting schools in creating a project-based learning school-wide effort. [http://bie.org/](http://bie.org/)

• The Everyone Graduates Center, a research program of Johns Hopkins University, is committed to studying the dropout problem by identifying barriers and developing tools and models that states, communities, districts, and schools can use to support all students through high school graduation. The organization’s website, [http://www.every1graduates.org/](http://www.every1graduates.org/), has a section devoted to sharing what is working across the country. This *Tools and Models* section has information organized in six sections: Early Warning and Response Systems; Comprehensive Whole-School Reform Models; New School Designs; Innovations in Curriculum and Instruction; School, Family, and Community Partnerships; and Pathways to College and Career. The Everyone Graduates Center recognizes that students are on a path to graduation well before high school so there are resources designed for use in the middle grades as well.

• Pathways to Education ([https://www.pathwaystoeducation.ca/](https://www.pathwaystoeducation.ca/)) is a community-based program with a variety of locations throughout Canada. The Pathways model is a coordinated partnership that includes schools, government, community partners, volunteers, and the commitment of students and their families. Pathways was founded in 2001 and since that time has demonstrated impressive results in reducing dropouts among economically-disadvantaged students and providing support to ensure successful post-secondary transitions.

• The California Dropout Research Project (CDRP) has been conducting research designed to inform policymakers, educators, and the general public about the dropout issue for nearly a decade ([http://www.cdrp.ucsb.edu/](http://www.cdrp.ucsb.edu/)). Given the percentage of California
students who are English learners, the CDRP delves deeper into the risks for this group of students and suggests reforms that show promise in this report: [http://www.cdrp.ucsb.edu/researchreport19.pdf](http://www.cdrp.ucsb.edu/researchreport19.pdf)

- The *Transition Bill of Rights for Parents of Students Receiving Special Education Services* describes the criteria necessary for students with disabilities to access “transition only” services upon completion of academic requirements for graduation.

<table>
<thead>
<tr>
<th>Where can I get more information?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUESTIONS</strong></td>
</tr>
</tbody>
</table>
| Resources, Strategies, and Best Practices for School Counselors to use in supporting all students | Kimberly Traverso  
Phone: 860-807-2057  
Email: kimberly.traverso@ct.gov |
| Resources, Strategies, and Best Practices for Supporting Students with Disabilities | Jay Brown  
Phone: 860-713-6918  
Email: jay.brown@ct.gov |
| Resources, Strategies, and Best Practices for Supporting English Learners | Megan Alubicki Flick  
Phone: 860-713-6786  
Email: megan.alubicki@ct.gov |
| Data Collection, Rate Calculations, and Reporting | Francis Apaloo  
Phone: 860-713-6832  
Email: francis.apaloo@ct.gov |
**INDICATOR 10: POSTSECONDARY ENTRANCE RATE – ALL STUDENTS**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of graduating class who enrolled in a 2- or 4-year postsecondary institution any time during the first year after high school graduation</td>
<td>100</td>
</tr>
</tbody>
</table>

**Description (What):** This rate is the percentage of all students in a graduating class who enrolled in a 2 or 4-year postsecondary institution any time during the first year after high school graduation.

**Rationale (Why?):** In addition to evaluating the extent of preparation for college/career, it is important to also evaluate attainment of that outcome.

**Applicability (Who):** This indicator is applicable to all districts and schools that offer grade 12.

**Input/Feedback:** Some practitioners are supportive of this indicator because it encourages school staff to extend their efforts beyond the school building to support student success. Others are less supportive because they consider this indicator as being shaped more by factors beyond the influence of school staff (e.g., personal choice, family economics); some of these objectors are amenable to its inclusion so long as it is not weighted too heavily and the ultimate target is reasonable.

The CSDE has heard from the field and acknowledges data limitations associated with this indicator. Currently, the Department does not have access to information about important post-secondary outcomes for students including but not limited to evidence of full-time employment immediately following graduation, entry into the military, enrollment in private occupational schools, and transition to apprenticeships.

**Methodology (How):** Points are awarded based on the percentage of All Students from the graduating class who enter a 2 or 4-year postsecondary institution any time during the first year after high school graduation. Points are prorated based on the percentage of the ultimate target (75%) achieved.

**Data Source:** PSIS and National Student Clearinghouse
RESOURCES FOR IMPROVING POSTSECONDARY ENTRANCE

In September 2015, the White House released an annual report referencing “summer melt.” This phrase is used to describe what happens to students who are accepted to college but during the months between high school graduation and the first day of college classes, the student does not complete tasks necessary to begin school (e.g. course enrollment forms). According to the report, 20 to 30 percent of high school graduates in urban communities who intend to attend college following graduation do not enroll.

Major cities across the country have been exploring different ways of supporting their students from graduation to college entrance for many years. The uAspire organization focuses on college affordability and assisting students with developing a plan to pay for college, one of the most formidable barriers to college enrollment. uAspire has served Boston-area students for three decades and expanded nationally ten years ago. Information about services provided to students, families, and practitioners can be found on their website: https://www.uaspire.org/

The College Access Program (DC-CAP), a non-profit organization in Washington, D.C. partners with all schools in the District and is available to all students. DC-CAP reports that the percentage of students enrolling in college was 30 percent in 1999 and increased dramatically to 62 percent in 2014. DC-CAP attributes this improvement to comprehensive supports for students and their families leading up to and beyond graduation. To find out more about DC-CAP and strategies used with students and families, visit http://www.dccap.org/

The Strategic Data Project’s Summer Melt Handbook provides users with a range of different approaches to effectively measure and develop systems to combat summer melt and improve college enrollment. The handbook acknowledges that school districts have different resources available, so the suggested interventions range from well-developed partnerships with community organizations to simple digital outreach customized and targeted to students and their families. The handbook includes a variety of case studies to showcase the impact of different strategies and provides practical resources including sample templates used for tracking and outreach. The handbook and related research are available here: https://hwpi.harvard.edu/files/sdp/files/sdp-summer-melt-handbook_0.pdf

Achieve is an independent, nonpartisan, nonprofit education reform organization strongly committed to ensuring all students graduate from high school “college and career ready” or, in other words, fully prepared academically for any and all opportunities they choose to pursue. To achieve this goal, states need a coherent and aligned policy framework anchored in the goal of graduating all students ready for credit-bearing, college-level coursework and the 21st-century workplace. The policy framework must, at a minimum, include college- and career-ready standards, graduation requirements, assessments, and data and accountability systems and have strong alignment with policies set in the postsecondary and economic development sectors.
### Where can I get more information?

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>CSDE CONTACTS</th>
</tr>
</thead>
</table>
| Resources, Strategies, and Best Practices | Kimberly Traverso  
  Phone: 860-807-2057  
  Email: kimberly.traverso@ct.gov |
| Data Collection and Reporting    | Charles Martie  
  Phone: 860-713-6809  
  Email: charles.martie@ct.gov    |
**INDICATOR 11: PHYSICAL FITNESS**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students meeting/exceeding the “Health Fitness Zone Standard” in all four areas of the CT Physical Fitness Assessment</td>
<td>50</td>
</tr>
</tbody>
</table>

**Description (What):** The Third Generation CT Physical Fitness Assessment (CPFA) is focused on health-related fitness. The program mirrors options in the President’s Challenge Physical Fitness Program and FitnessGram/ActivityGram. The assessment includes four health-related physical fitness tests designed to assess muscular strength and endurance, flexibility, and cardiovascular fitness. Criterion-referenced standards associated with good health are used rather than normative standards. Since the early 1990’s, the assessment has been administered to all students in grades 4, 6, 8, and 10. Effective 2016-17, high schools were granted flexibility (explained below) allowing the assessment to be administered in other grades. For an explanation of the rationale for the test items, descriptions of the standards, and answers to common question, see the Test Administrator’s Manual for the assessment.

**Rationale (Why?):** The Connecticut State Board of Education is committed to the physical development of Connecticut’s students and focused on outcomes and specific performance objectives that evidence attainment of that goal.

**Applicability (Who):** This indicator is applicable to all districts and schools that offer grades 4, 6, 8, or 10.

**Input/Feedback:** Though cardiovascular fitness has been shown to correlate with improved academic performance, stakeholders accept a metric that looks at standard-attainment in all four assessment areas because the focus is health/fitness. Some stakeholders wondered if this area was weighted too heavily.

High schools requested flexibility from the requirement to test Grade 10 students. In April 2016, CSDE announced the following increased flexibility to high schools regarding the administration and reporting of the Connecticut Physical Fitness Assessment results:

- Effective 2016-17, the expectation is that high school(s) must administer the physical fitness assessment at least once to every student anytime during Grades 9 through 12.
- The administration of the assessment does not necessarily need to be tied to student participation in a physical fitness class.
- High schools may also use summer school physical fitness courses as an opportunity to administer the assessment.
For accountability purposes, the CSDE will continue to use the Grade 10 enrollment numbers to calculate the estimated participation rate.

In September 2018, in response to requests from the field, the CSDE offered additional flexibility with regard to when the Connecticut Physical Fitness Assessment may be administered for all applicable grades. In the past, there were specific designated testing windows for the assessment. Educators shared that the testing windows limited schools and teachers in providing the best possible instruction. As a result, the new flexibility allows for the administration to happen at any time during the school year.

**Methodology (How):** The calculation for this indicator consists of two parts. First, to account for variation in estimated participation rates, the following participation rate multipliers are established.

- If the estimated participation rate is at least 90%, the multiplier is 1. This standard was achieved by approximately 82% of all schools in 2014-15.
- If the estimated participation rate is at least 70% but less than 90%, the multiplier is 0.5 (approximately 11% of schools).
- If the estimated participation rate is at least 50% but less than 70%, the multiplier is 0.25 (approximately 3% of schools).
- If the estimated participation rate is less than 50%, no points will be awarded for this indicator.

The second step in the calculation is to determine the percentage of students meeting/exceeding the “Health Fitness Zone Standard” in all four areas of the CT Physical Fitness Assessment. This is reported by districts to the CSDE using the ED165: Connecticut School Data Report. The ultimate target on this measure for a school or district is set at 75%.

Points are prorated based on the percentage of the ultimate target achieved as adjusted by the participation rate multiplier. Three examples are included below.

- **Example 1:** An elementary school has a 92% estimated participation rate, and the percentage of those tested meeting the “Health Fitness Zone Standard” in all four areas is 76%. This school earns all 50 eligible points.
- **Example 2:** An elementary school has a 97% estimated participation rate, and the percentage of those tested meeting the “Health Fitness Zone Standard” in all four areas is 70%. This school earns 93.3% of the possible 50 eligible points, which is 46.7 points.
- **Example 3:** An elementary school has a 55% estimated participation rate, and the percentage of those tested meeting the “Health Fitness Zone Standard” in all four areas is 80%. This school earns 12.5 of 50 eligible points.

**Data Source:** ED165 (fitness data) and June PSIS (enrollment)
RESOURCES FOR IMPROVING PHYSICAL FITNESS

- Instructional Framework for fitness education in physical education (SHAPE America) 

- Healthy and Balanced Living Curriculum Framework for Physical Education (CSDE) 

- Guidelines for a Coordinated Approach to School Health 

- Linking Health to Achievement (Centers for Disease Control and Prevention) 

<table>
<thead>
<tr>
<th>Where can I get more information?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUESTIONS</strong></td>
</tr>
</tbody>
</table>
| Resources, Strategies, and Best Practices | Donna Heins  
Phone: 860-807-2082  
Email: donna.heins@ct.gov |
| Data Collection and Reporting | Raymond Martin  
Phone: 860-713-6876  
Email: raymond.martin@ct.gov |
INDICATOR 12: ARTS ACCESS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students in grade 9 through 12 participating in at least one dance, theater, music, or visual arts course in the school year</td>
<td>50</td>
</tr>
</tbody>
</table>

**Description (What):** This is an “access” metric that evaluates the extent to which students in high school participate in at least one arts course in the school year in dance, theatre, music, or the visual arts.

**Rationale (Why?):** The Connecticut State Board of Education believes every student needs and deserves a high-quality education in the arts, including dance, music, theater and the visual arts. The arts are an integral component of the comprehensive curriculum provided to all Connecticut students at every grade.

**Applicability (Who):** This indicator is applicable to all districts and schools that offer any grade between 9 and 12, inclusive.

**Input/Feedback:** Traditionally, access to the arts has been measured through instructional hours offered. District/school administrators indicate that self-reported arts instructional hours are not comparable across schools. With the availability now of course-level data, the extent to which students avail of arts opportunities can be empirically known and compared across districts/schools.

The CSDE has heard from the field that students are engaged in important arts-related activities that are not captured through this indicator. The Department acknowledges that many students participate in school- or community-based art programs and activities outside of the school day. At this time, there is not a way to capture that information in this system.

Additionally, stakeholders have requested that the definition of arts coursework be expanded to courses that incorporate the use of technology including computer-aided design. For now, this system will remain focused on dance, theater, music and the visual arts, but beginning in 2019-20, courses that align with the fifth artistic discipline of the National Core Arts Standards: Media Arts (e.g. Web Design, Interactive Game Design, Media Literacy) will be included in Indicator 12 calculations.

**Methodology (How):** Points can be earned for the percentage of All Students in grades 9 through 12 who enroll in at least one “Fine and Performing Arts” course during the school year. A complete list of NCES Course Names and Codes along with a corresponding subject (e.g. “Fine and Performing Arts”) can be viewed under the “Secondary School Course Classification”
RESOURCES FOR IMPROVING ACCESS TO THE ARTS

Why is arts access important?
A project of the Arts Education Partnership, ArtsEdSearch compiles and summarizes high quality research studies and explores implications for educational policy and practice. ArtsEdSearch is a rich resource for districts seeking to bolster their arts programming. Below is the organization’s summary for arts access research:

Research suggests that access to arts education provides an academic advantage to students. Students in schools with extensive and broad offerings in the arts not only are able to learn the arts—a core academic subject—but also do better on state and district standardized tests and are provided with more opportunities to achieve and succeed than students in schools lacking robust arts programs. Arts-rich schools graduate higher percentages of students, who in turn are more likely to complete college and to be socially active in their communities in adulthood. Studies also find that, in arts-rich schools—particularly schools that offer both discipline-based arts classes and integrated arts instruction—students are more engaged and teachers are more effective. Policymakers concerned with educational equity should consider access to rich arts education programming a significant factor in a high-quality education for all students. See more at: https://www.artsedsearch.org/

What can districts do to improve arts access?
From Snapshot Arts Access in U.S. Schools and the Arts Education Partnership:
- Provide a wider variety of arts courses at all levels, particularly high school (including theatre, dance, and/or media arts);
- Provide a higher level frequency of instruction at all levels;
- Provide comprehensive, standards-based instruction aligned vertically throughout the district, with classes taught by certified teachers;
- Engage the arts as a part of high quality support and professional learning programs for the entire educator workforce; and
- Increase opportunities to engage the community in student art performances or projects.
1. Standards

2. Arts Integration
   - Connecticut Office of the Arts (COA) https://portal.ct.gov/DECD/Content/Arts-Culture/About_Arts_Office/About-Office-of-Arts;
   - Project Zero at Harvard http://www.pz.harvard.edu/
   - Kennedy Center resources for teaching in, through and about the arts - http://artsedge.kennedy-center.org/educators.aspx
   - Arts and Social Studies connections http://www.ctsocialstudies.org/

Other resources of note:
   - Music Education: http://www.nammfoundation.org/support-music
   - Visual Arts Education: http://www.arteducators.org/advocacy
   - Theatre Education: http://schooltheatre.org/advocacy
   - Dance Education: https://www.ndeo.org/content.aspx?page_id=0&club_id=893257

<table>
<thead>
<tr>
<th>Questions</th>
<th>CSDE Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources, Strategies, and Best Practices</td>
<td>Melissa Hickey</td>
</tr>
<tr>
<td></td>
<td>Phone: 860-713-6680</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:melissa.hickey@ct.gov">melissa.hickey@ct.gov</a></td>
</tr>
<tr>
<td>Data Collection and Reporting</td>
<td>Keryn Felder</td>
</tr>
<tr>
<td></td>
<td>Phone: 860-713-6833</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:keryn.felder@ct.gov">keryn.felder@ct.gov</a></td>
</tr>
</tbody>
</table>
APPENDICES

PERFORMANCE INDEX CALCULATION RULES

Overview
Subject-level indices are calculated at the student-, student group-, school- and district-levels. To calculate an index, a student’s score in each subject based on the Smarter Balanced Assessment (SB), SAT, the CT Alternate Assessment (CTAA), the Next Generation Science Standards (NGSS) assessment, or the Connecticut Alternate Science (CTAS) must first be transformed into an index score. Detailed information regarding the calculation of each test specific score can be found in the section titled “Calculating the Performance Index”.

Student Individual Performance Indices (IPIs) are derived separately for each subject (Math, English Language Arts, and Science).

School Performance Indices (SPIs) are calculated by averaging all of a given school’s valid and non-excluded Student IPIs for the applicable subject. Only students enrolled in the school on October 1st of the testing year are included in SPI calculations.

District Performance Indices (DPIs) are calculated by averaging all of a given district’s valid and non-excluded Student IPIs for the applicable subject. Note that students who are enrolled in ‘Programs’ or are outplaced are included in a given Public School Information System (PSIS) “Reporting District’s” DPI. Only students enrolled in the district on October 1st of the testing year are included in DPI calculations.

- Connecticut excludes scores of “recently arrived” ELs from SPI and DPI calculations. “Recently arrived” ELs are defined as any EL enrolled for the first time in a U.S. school for fewer than 24 calendar months at the time of testing. Assessment scores for ELs who have attended U.S. schools for more than two years are included in the SPI and DPI calculations. For additional information, please see the section titled “Connecticut Assessment and Accountability Reporting of "Recently Arrived" English Learners”.

Participation Rates are calculated by dividing the number of students who attempted and/or completed the assessment by the total number of students who should have been administered the subject-level assessment. Details regarding whether students were participants or non-participants is contained in the section titled “Participation and Achievement Inclusion Rules.”

File Preparation
All demographic data included in the assessment files were extracted from the CSDE frozen PSIS Registration File on the last day of the testing window. Only students in grades 3 through 8, and
grade 11 are included in calculations for the standard and alternate ELA and mathematics assessments. Students in grades 5, 8, and 11 are included in calculations for the standard and alternate science assessments.

- **English Learner (EL) “Flex” Group:**
  As part of the Every Student Succeeds Act (ESSA), students who do not belong to the EL student group at the time of testing but who have been members of the EL group any time up to four years prior are included in the EL flexibility group used for Indicator 1 calculations. The previous student group status is determined using the EL PSIS Collection variable from the October, January and June collections of the current and four prior school years. Additionally, the testing demographic file is reviewed for all available and relevant years. (Note: The January PSIS collection was discontinued in 2017-18.)

The completion of a Learner Characteristics Inventory (LCI) was required for participation in any alternate assessment through 2018-19. Any CTAA student record or Connecticut Alternate Science Assessment (CTAS) without a completed LCI was invalidated. These students were included as non-participants on the standard assessment. In cases where a standard assessment record existed for a student with a completed LCI, the standard assessment record was invalidated and the student was included as a non-participant on the alternate assessment.

**Participation and Achievement Inclusion Rules**
Accountability reporting requires a series of decision rules that specify whether a student is included in performance index and participation rate calculations. The tables on the following pages provide a comprehensive list of the assessment status rules used for accountability calculations for all summative assessments.
### Smarter Balanced Assessment Data File Rules

<table>
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<tr>
<th>Assessment</th>
<th>Test Status</th>
<th>Attempted Flag</th>
<th>Participation Numerator (Total Tested)</th>
<th>Participation Denominator (Total Students)</th>
<th>Accountability Achievement</th>
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<td>Yes: SS</td>
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<td></td>
<td>Expired (started, not submitted)</td>
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<td>Yes: P</td>
<td>Yes</td>
<td>Yes: SS</td>
</tr>
<tr>
<td></td>
<td>Invalidated</td>
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<td>Yes: P</td>
<td>Yes</td>
<td>exclude</td>
</tr>
<tr>
<td></td>
<td>Completed</td>
<td>P= Logged in, did not complete any items</td>
<td>No: NP</td>
<td>Yes</td>
<td>exclude</td>
</tr>
<tr>
<td></td>
<td>Expired</td>
<td></td>
<td>Yes: P</td>
<td>Yes</td>
<td>Yes: LOSS</td>
</tr>
<tr>
<td></td>
<td>Invalidated</td>
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</tr>
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<td>Yes: SS</td>
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<td>exclude</td>
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<td>Yes: P</td>
<td>Yes</td>
</tr>
<tr>
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<td>No record in testing file</td>
<td>No: NP</td>
<td>Yes</td>
<td>exclude</td>
<td></td>
</tr>
</tbody>
</table>

**Legend**

Test Status:
- **Completed** = exam completed and submitted to be scored
- **Expired** = exam started but not submitted
- **Invalidated** = test invalidated
- **Pending** = One segment of the two part math exam never started or was reset by the test administrator (Pending exists for Smarter Balanced Math only)
- **<>** = Blank, no exam started by student
**SUB-Statuses for Math exam** (Sub-status is required because the exam has two segments: Multiple Choice and Performance Task)

- c = Completed; subtest submitted to be scored
- e = Expired; subtest not submitted
- i = Subtest invalidated
- r = Reset; subtest reset after started. Temporary test segment status only (typically occurs when appropriate accommodations have not been set in TIDE)
- n = No Activity; subtest status only. Never started/logged into the subtest; displays as blank.
- s = Scored; Completed subtest

**Attempted Flag:**

- Y = student attempted items within the exam
- P = student logged into exam but did not complete any items
- <> = Blank, no exam started by student OR exam invalidated before submitted for scoring

SS = Scale Score included in accountability calculations

LOSS = Record is assigned the Lowest Obtainable Scale Score (LOSS) and included in accountability calculations

Exclude = Record is excluded from inclusion in accountability calculations

### Connecticut Alternate Assessment (CTAA) Data File Rules

<table>
<thead>
<tr>
<th>Test Status</th>
<th>Attempted Flag</th>
<th>Participation Numerator (Total Tested)</th>
<th>Participation Denominator (Total Students)</th>
<th>Accountability Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
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### Next Generation Science Standards Assessment (NGSS) and the Connecticut Alternate Science Assessment (CTAS) Data File Rules

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<th>Participation Numerator (Total Tested)</th>
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<th>Accountability Achievement</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Yes: P</td>
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<td>Yes: SS</td>
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<td>Yes: LOSS</td>
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### SAT Data File Rules

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<th>SAT Student Participated Indicator = Y</th>
<th>Participation Numerator (Total Tested)</th>
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<td>&lt; &gt;</td>
<td>&lt; &gt;</td>
<td>No: NP</td>
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</table>
PERFORMANCE INDEX METHODOLOGY

Background

Connecticut first implemented a performance index for school and district accountability purposes in 2012. The performance index was calculated by converting Connecticut Mastery Test (CMT) and Connecticut Academic Performance Test (CAPT) achievement levels to a scale of 0 to 100. This approach recognized and valued improvement in student achievement at all performance levels, not just from ‘not proficient’ to ‘proficient’. It raised expectations by setting the target that all students perform at the higher ‘goal’ level versus the ‘proficient’ level.

While practitioners were generally pleased with this index, they wondered if using scale scores to calculate the index instead of achievement levels would yield an even more precise measure of student achievement. Consequently, Connecticut State Department of Education (CSDE) staff consulted with faculty from the University of Connecticut to explore this possibility. The explanation that follows outlines the specific methodology for converting scale scores (or raw scores for the alternate assessments) for the various state assessments into Connecticut’s performance index.

Scale Scores Improve Index Calculations

Individual student results from the Smarter Balanced and SAT English language arts (ELA) and Mathematics assessments, and the Next Generation Science Standards (NGSS) assessment are reported in terms of scale scores and achievement levels. Results from the Connecticut Alternate Assessment (CTAA) and the Connecticut Alternate Science assessment (CTAS) are reported using raw scores and achievement levels. Achievement levels unique to each test are used as a way of categorizing student performance in a content area. The levels represent broad groupings of performance that are developed based on the judgment of content experts. Operationally, the levels are used as a starting point in discussing a student’s test scores; the scale scores (Smarter Balanced, SAT, and NGSS) and raw scores (CTAA and CTAS) are more precise measures of a student’s achievement on the performance continuum.

For district- and school-level accountability, Connecticut uses student scale scores (Smarter Balanced, SAT, and NGSS) and raw scores (CTAA and CTAS), not achievement levels, to calculate performance index scores in ELA, mathematics, and science. This approach to performance index calculation acknowledges that the assessments were not developed to solely classify students into broad achievement levels. On the contrary, they were developed to provide a more precise measure of student performance.

This approach of mapping scale scores instead of achievement levels to index values is consistent with the position paper released by the Smarter Balanced Assessment Consortium wherein they assert that...
“...they [achievement levels] will be less precise than scale scores for describing student gains over time or changes in achievement gaps among groups, since they do not reveal changes of student scores within the bands defined by the achievement levels. Furthermore, there is not a critical shift in student knowledge or understanding that occurs at a single cut score point. Thus, the achievement levels should be understood as representing approximations of levels at which students demonstrate mastery of a set of concepts and skills, and the scale scores just above and below an achievement level as within a general band of performance.”


The index calculation is more sensitive to changes in student performance over time and provides an improved assessment of aggregate growth of students at the group, school, and district levels.

The performance index calculation uses a 0-110 scale. Important considerations in defining the index are that it: (a) provides an aggregate measure of subject-specific performance across grades; (b) allows for a more accurate comparison of subgroup, school, and district performance, not only within a year, but also across years; (c) encourages a focus on all students, not just those at the cusp of an achievement level; and (d) ensures that the expected index performance of 75 falls solidly in the desired achievement level (i.e., Level 3).

To meet these requirements for ELA and mathematics, the individual student index will be set to zero if a student obtains the lowest obtainable scale score (LOSS) for the student’s grade, and 110 if the student obtains the highest obtainable scale score (HOSS). For the NGSS assessment, the individual student index is set to zero if a student obtains a score at or below the “low range” for the student’s grade, and 110 if the student obtains a score at or above the “high range.” Although the highest index value at the school, district, and group level is 100, assigning scores ranging from 100 to 110 to students who are the highest performing has the effect of rewarding these schools and districts by weighting these scores additionally in the computation of the subject-specific performance index.

Further information is provided in Tables 1-5, including the lowest and highest obtainable scores for Smarter Balanced ELA and Mathematics, the Connecticut Alternate Assessments (CTAA) in ELA and Mathematics, SAT Evidence-based Reading and Writing and Mathematics, and the Connecticut Alternate Science (CTAS) assessment. The scores defining the low and high ranges of the scale for the NGSS assessment are also included.
Calculating the Performance Index
The formula used to convert student scale scores (Smarter Balanced, CTAA, and SAT) to an index value is presented below.

\[
\text{Index} = \frac{\text{Scale Score} - \text{LOSS}}{\text{Range}} \times 110
\]

The following examples use information from Tables 1-3 to convert student scores to index values.

If a Grade 3 student earns a vertical scale score of 2400 on the ELA portion of the Smarter Balanced assessment, the index value for this score is 61.8. The calculation is performed as follows:

\[
\text{Index} = \frac{2400 - 2114}{509} \times 110 = 61.8
\]

If a Grade 8 student earns a scale score of 1276 on the Math portion of the CTAA assessment, the index value for this score is 92.9. The calculation is performed as follows:

\[
\text{Index} = \frac{1276 - 1200}{90} \times 110 = 92.9
\]

Finally, when a Grade 11 student earns a Mathematics scale score of 590 on the SAT, the index value for the score is 71.5. The calculation is performed as follows:

\[
\text{Index} = \frac{590 - 200}{600} \times 110 = 71.5
\]

The formula used to convert student scale scores from the NGSS assessment to an index value is presented below.

\[
\text{Index} = \frac{\text{Scale Score} - \text{Low Range Score}}{\text{Scale Score Range}} \times 110
\]

The following examples use information from Table 4 to convert student NGSS scale scores to index values.

If a Grade 5 student earns a scale score of 525 on the NGSS assessment, the index value for this score is 82.5. The calculation is performed as follows:
When a Grade 11 student earns a scale score of 1020 on the NGSS assessment (a score below the “low range” score), the listed “low range” score is used in place of the student’s earned score of 1020. The index value for any scale score at or below the “low range” score is 0. The calculation is performed as follows:

\[
Index = \frac{1030 - 1030}{130} * 110 = 0
\]

For students earning scores above the listed “high range” score, the high range value is used in the index calculation.

The index calculation using CTAS raw scores is similar. The individual student index will be set to zero if a student earns the lowest obtainable raw score of 0, and 110 if the student obtains the highest possible raw score, which varies by grade. All CTAS raw score ranges are included in Table 5.

The formula used to convert student raw scores from the CTAS to an index value is presented below.

\[
Index = \frac{Raw\ Score - Lowest\ Possible\ Raw\ Score}{Range} * 110
\]

The following examples use information from Table 5 to convert student raw scores to index values.

If a Grade 5 student earns a raw score of 30 on the CTAS, the index value for this score is 37.5. The calculation is performed as follows:

\[
Index = \frac{30 - 0}{88} * 110 = 37.5
\]

If a Grade 8 student earns a raw score of 54 on the CTAS, the index value for this score is 70.7. The calculation is performed as follows:

\[
Index = \frac{54 - 0}{84} * 110 = 70.7
\]
## Highest and Lowest Obtainable Scores and Score Range Tables

**Table 1.**
Smarter Balanced ELA and Mathematics
Highest (HOSS) and Lowest (LOSS) Obtainable Scale Scores and Range

<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
<th>LOSS</th>
<th>HOSS</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>3</td>
<td>2114</td>
<td>2623</td>
<td>509</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2131</td>
<td>2663</td>
<td>532</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2201</td>
<td>2701</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2210</td>
<td>2724</td>
<td>514</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2258</td>
<td>2745</td>
<td>487</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>2288</td>
<td>2769</td>
<td>481</td>
</tr>
<tr>
<td>MATH</td>
<td>3</td>
<td>2189</td>
<td>2621</td>
<td>432</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2204</td>
<td>2659</td>
<td>455</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2219</td>
<td>2700</td>
<td>481</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2235</td>
<td>2748</td>
<td>513</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2250</td>
<td>2778</td>
<td>528</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>2265</td>
<td>2802</td>
<td>537</td>
</tr>
</tbody>
</table>

**Table 2.**
Connecticut Alternate Assessment (CTAA) ELA and Mathematics
Highest (HOSS) and Lowest (LOSS) Obtainable Scale Scores and Range

<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
<th>LOSS</th>
<th>HOSS</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>3</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
<tr>
<td>MATH</td>
<td>HS</td>
<td>1200</td>
<td>1290</td>
<td>90</td>
</tr>
</tbody>
</table>
Table 3.
SAT Evidence-based Reading and Writing and Mathematics Highest (HOSS) and Lowest (LOSS) Obtainable Scale Scores and Range

<table>
<thead>
<tr>
<th></th>
<th>LOSS</th>
<th>HOSS</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence-Based Reading and Writing</td>
<td>200</td>
<td>800</td>
<td>600</td>
</tr>
<tr>
<td>Mathematics</td>
<td>200</td>
<td>800</td>
<td>600</td>
</tr>
</tbody>
</table>

Table 4.
Low Range and High Range Scale Scores and the Scale Score Range by Grade Level for the NGSS Assessment

<table>
<thead>
<tr>
<th>Grade</th>
<th>Low Range Score</th>
<th>High Range Score</th>
<th>Scale Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>405</td>
<td>560</td>
<td>155</td>
</tr>
<tr>
<td>8</td>
<td>715</td>
<td>860</td>
<td>145</td>
</tr>
<tr>
<td>11</td>
<td>1030</td>
<td>1160</td>
<td>130</td>
</tr>
</tbody>
</table>

Table 5.
Lowest and Highest Possible Raw Scores and the Raw Score Range by Grade Level for CTAS

<table>
<thead>
<tr>
<th>Grade</th>
<th>Lowest Possible Raw Score</th>
<th>Highest Possible Raw Score</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>84</td>
<td>84</td>
</tr>
</tbody>
</table>
CALCULATION RULES FOR INDICATOR 5: PREPARATION FOR POSTSECONDARY AND CAREER READINESS - COURSEWORK

Description:

Pro-rated percentage of students in grades 11 and 12 participating in at least one of the following: (a) Two courses in Advanced Placement (AP), International Baccalaureate (IB) and/or dual enrollment; (b) two courses in one of seventeen Career and Technical Education (CTE) categories; or (c) two workplace experience courses in any area. This indicator has a maximum of 50 points, and will be assessed in schools that teach eleventh and twelfth grade students. The target percentage for this indicator is 75%.

Formula for Calculation:

Each student, \( i \), will receive an individual score as follows:

\[
IS5_i = \begin{cases} 
0 & \text{has not completed at least one of the requirements} \\
1 & \text{completed at least one of the requirements} 
\end{cases}
\]

It is important to note when evaluating whether or not a student has met the requirements for indicator 5 that the three options cannot be mixed and matched. A student who has taken one AP course and one CTE class has not met the requirements for indicator 5.

These individual scores will then be attributed to the schools attended by each student. School scores will then be calculated by taking the sum of the student scores, dividing by the total number, \( N \), of eleventh and twelfth grade students. Points will be assigned as a prorated percentage of the target, out of a maximum of 50, as indicated in the formula below:

\[
\text{School Score} = \text{Min} \left( \frac{\sum IS5_i}{N} \cdot \frac{50}{0.75}, 50 \right).
\]

Data Flow Steps: Overview

Indicator 5 is calculated using the following data steps:

1. Course completion data is collected from the districts, then cleaned and validated.
2. The data is further sorted to check for any potential duplicates by Student ID, School ID, Course Description, or School Year. Resolved duplicates are combined with unique outcomes as well as validated data from previous school years.
3. All students meeting at least one of the requirements listed above are flagged in the data. The number of students flagged is counted for each school and district.
4. The total number of eleventh and twelfth graders on which each school and district is being evaluated is determined using the June PSIS collection from that year.
5. The number of students meeting the requirements for indicator 5 is divided by the total number of eleventh and twelfth grade students. If the ratio is 75% or greater, the school
receives the maximum score of 50 points. If the score is less than 75%, the score is then divided by 0.75 and multiplied by 50 to get their prorated score.

**Data Flow Steps in Detail:**

**Step 1: Course completion data is collected from the districts, then cleaned and validated.**

- **School districts submit course completion data.**

  School districts use National Center for Education Statistics (NCES) course classification codes\(^1\) to submit their course completion data using the Teacher-Course-Student (TCS) Data Collection Site\(^2\). Collection takes place between March and July at the end of each school year, however updates and corrections can be made up to the freeze date of September 30 to include summer school grades in the indicator calculations.

- **CSDE extracts data from TCS Data Collection Site.**

  Before extracting data from TCS, the following data tables are loaded for reference\(^3\):

  1. **Dual Enrollment Codes:** Each observation represents one university offering dual enrollment.
     - **Variables:** TCS Dual Enrollment Code (Primary Key), Dual Enrollment Codes, University Name, University Description
  2. **NCES Course Codes:** Each observation represents one potential course that could be offered.
     - **Variables:** TCS Course ID (Primary Key), NCES Course Description Code (five digits), Subject Area Code (two digits), Course ID Code (three digits), Subject Area Name, Course Name, Course Description, Elementary Flag (0 or 1), Secondary Flag (0 or 1), CSDE Created Course Flag (0 or 1)
  3. **NCES Course Levels:** Each observation represents a level of courses that could be offered.
     - **Variables:** TCS Course Level (Primary Key), NCES Course Level Code (one character), Level Name, Level Description, Elementary Flag (0 or 1), Secondary Flag (0 or 1)
  4. **Course Outcomes:** Each observation represents a potential course outcome, such as pass or fail.
     - **Variables:** TCS Grade Status (Primary Key), Grade Status Codes (one or two characters), Grade Status Name, Grade Description

\(^1\) For more information on NCES Course Classification Codes, see (secondary and non-secondary respectively): files.eric.ed.gov/fulltext/ED515113.pdf and nces.ed.gov/pubs2011/2011801.pdf.

\(^2\) For more information about TCS Data Collection, see https://portal.ct.gov/SDE/Performance/Data-Collection-Help-Sites/TCS-Help-Site/Documentation.

\(^3\) Throughout this document, variables and tables used exclusively for the purpose of managing updates are not included, such as district certification and last modification date/by whom. Also, variable and table names were modified to provide a descriptive understanding of the tables described, and may not necessarily represent the order in which the variables appeared in the table.
5. **Teacher Type:** Each observation represents a type of teacher that could be teaching a course.
   - **Variables:** TCS Teacher Type (Primary Key), Teacher Type Code (three digits), Teacher Type Description, Teacher Type Category, Teacher Type SubClass, Educator Identification Number Requirement Flag (0 or 1)

The following data tables can then be extracted from the TCS Data Collection Site:

6. **Course Offerings:** Each observation represents one course section in one school in one district.
   - **Variables:** TCS Course Offering ID (Primary Key), District ID, School/Facility ID, TCS Course ID (PK from Table #2), NCES Course Level (PK from Table #3), NCES Course Code, Available Credit, Grade Span (Low and High), Sequence (Location and Limit), and Section Code.

7. **Course Enrollment:** Each observation represents one student enrolled in one section of a course at one school in one district. Many students, especially in secondary, will have multiple observations.
   - **Variables:** Record ID (Primary Key), TCS Student ID (PK from Table #8), Course Offering ID (PK from Table #6), TCS Grade Status (PK from Table #4), TCS Dual Enrollment Code (PK from Table #1), Letter Grade, Credits Earned, and Course Sessions (Attended and Total)

8. **Student Matching:** Each observation represents one matching of a CT State Student ID (SASID), a District Student ID, and/or a Registration ID.
   - **Variables:** TCS Student ID (Primary Key), SASID, District ID, School ID, Registration ID, District Student ID

9. **Teacher Matching:** Each observation represents one matching of an Educator Identification Number (EIN) to a District Teacher ID.
   - **Variables:** TCS Teacher ID (Primary Key), EIN, District ID, District Teacher ID

10. **Course Teaching:** Each observation represents one teacher teaching in a section in a school in a district. As some sections may be co-taught, some sections may have multiple observations.
    - **Variables:** Record ID (Primary Key), TCS Teacher Type (PK from Table #5), TCS Course ID (PK from Table #2), and TCS Teacher ID (PK from Table #9)

- **Data is cleaned, filtered, and prepared for use.**

1. Data tables are filtered to remove non-public schools, universities, etc.
2. Data tables are joined with existing CSDE data to validate
   - a. School and district identification numbers, either missing, incorrect, or invalid
   - b. SASIDs, either non-uniquely assigned, incorrect, missing, or invalid
   - c. EINs, either incorrect, missing, or invalid
   - d. Matching of SASIDs and EINs with most recent school and district IDs
3. Course offering data is joined with course enrollment data and student data. In cases where the available credit is missing or less than 1.0, error checking is completed to determine
whether it is a partial year course, a middle or elementary school course (which would not assign credit), or a potential error.

4. At each stage, questionable observations are filtered into a separate data table for error checking.

_Resulting table from Step 1:_ Each observation contains one course outcome for one student.

- **Variables:** TCS Student ID (PK from Table #8), District ID, School ID, TCS Course ID (PK from Table #7), Grade, Grade Status Code, Credits Earned, Dual Enrollment Flag (0 or 1), Dual Enrollment Code

**Step 2.** The data is further sorted to check for any potential duplicates by Student ID, School ID, Course Description, or School Year. Resolved duplicates are combined with unique outcomes as well as validated data from previous school years.

Duplicate entries in the course offerings are resolved, either by aggregating marking periods into a full-year course or taking a single entry of several, depending on whether or not the start dates are the same. Once resolved to single course observations, these entries can be re-joined to the non-duplicated courses to create a data table with all courses. Students are then attributed to their current school using the June Public School Information System (PSIS) collection^4^. This data is then joined with similar data tables containing course completion information from the previous four school years so that four years of a twelfth grade student’s career can be taken into account, so long as the previous years of data belong to the same school as their current school.

**Step 3.** All students meeting at least one of the requirements listed above are flagged in the data. The number of students flagged is counted for each school and district.

The three distinct ways in which a student can meet the requirements of indicator five necessitates three sets of criteria to evaluate within the data.

- **AP, IB, and/or Dual Enrollment Courses:**

As AP and IB courses do not have a unique code, they are flagged using the NCES course name. Dual enrollment courses already have a flag in the enrollment table. The number of AP/IB/dual enrollment flags for each student-school combination is counted. When the count is two or greater, that student is considered to have met the requirement for that school on indicator five. AP/IB courses are flagged by the NCES course name. Student records for a course in which the student received both college and high school credit are flagged by having a dual enrollment code. (Note: Dual Enrollment courses, unlike AP/IB courses, are flagged at the student level. This means that, in the same course, some students could have dual enrollment flags while others do not.) The AP/IB/Dual Enrollment flags are all summed by student-school

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combination (i.e., a single student attending one school). When the count is two or greater, that student is considered to have met the requirement for that school on indicator five.

- **Workplace Experience Courses:**
Similar to AP and IB courses, Workplace Experience Courses are flagged using the NCES course name. The number of workplace experience flags for each student-school combination is counted. When the count is two or greater, that student is considered to have met the requirement for that school on indicator five.

- **CTE courses:**
CTE Courses fall into one of seventeen clusters in NCES codes, each of which has a unique flag. The number of CTE flags in each cluster, for each student-school combination, is counted. When any count is two or greater, that student is considered to have met the requirement for that school on indicator five. For a list of CTE courses and their corresponding clusters, see the TCS help site at [https://portal.ct.gov/SDE/Performance/Data-Collection-Help-Sites/TCS-Help-Site/Documentation](https://portal.ct.gov/SDE/Performance/Data-Collection-Help-Sites/TCS-Help-Site/Documentation).

- **Merge data to find final counts**
The three lists of students meeting a single requirement for indicator 5 are combined and duplicate entries (in the case of students who met more than one requirement) are removed, leaving only unique student entries. This data is aggregated to find the number of students in each school and district who met at least one requirement for indicator five, which is ∑ΙΙΙΙₕᵢ.

**Step 4. The total number of eleventh and twelfth graders on which each school is evaluated is determined using the June PSIS collection from that year.**

In this step, the total number of students on which the school or district will be evaluated, Nₙ, is calculated. To do this, all eleventh and twelfth grade students are counted for each school, whether or not they met the requirements for indicator five, in the June PSIS collection of that school year.

**Step 5. The number of students meeting the requirements for indicator 5 is divided by the total number of eleventh and twelfth grade students. If the ratio is 75% or greater, the school receives the maximum score of 50 points. If the score is less than 75%, the score is then divided by 0.75 and multiplied by 50 to get their prorated score.**

For each school or district, the number of students who met the requirements for indicator five is divided by the total number of students (∑ΙΙΙΙₕᵢ/N), which is the ratio of these values. This
ratio will necessarily be less than or equal to 1. If it is greater than or equal to 0.75, meaning that the school has met or exceeded the target score of 75%, the school or district score will be the maximum 50 points. If the ratio is less than 0.75, meaning that the school has not met the target score of 75%, the points awarded will be a prorated percentage of the target. This can be found by multiplying the ratio by 50 and dividing by 0.75.

**CALCULATION RULES FOR INDICATOR 7: ON-TRACK IN 9TH GRADE**

**Description:**
Pro-rated percentage of 9th grade students who earned at least five (5) full-year credits by the end of the school year. This indicator has a maximum of 50 points, and will be assessed for schools and districts that teach ninth grade students. Points will also be attributed back to the schools and districts that taught these students as eighth graders. The target percentage for this indicator is 94%.

**Formula for Calculation:**
Each student, \( i \), will receive an individual score as follows:

\[
I_{S7_i} = \begin{cases} 
0 & \text{4 or fewer full-year credits} \\
1 & \text{5 or more full-year credits}
\end{cases}
\]

These individual scores will then be attributed to the schools attended by each student in ninth and eighth grade. As such, it should be noted that the score for a school teaching eighth grade students will represent their students from the previous school year; for example, the 2017-18 scores will represent the eighth grade class from 2016-17 and the ninth grade class from 2017-18. School scores will then be calculated by taking the sum of the student scores, dividing by the total number, \( N \), of ninth grade (or eighth grade, as applicable) students. Points will be assigned as a prorated percentage of the target, out of a maximum of 50, as indicated in the formula below:

\[
\text{School Score} = \min \left( \frac{\sum I_{S7_i}}{N} \cdot \frac{50}{0.94}, 50 \right)
\]

**Data Flow Steps: Overview**

Indicator 7 is calculated using the following data steps:

1. Course completion data is collected from the districts in TCS, then cleaned and validated.
2. The data is further sorted to check for any potential duplicates by Student ID, School ID, Course Description, or School Year.
   a. In cases where duplicates appear to be multiple marking periods for a single year-long course, grades can be aggregated to the course level.
b. In cases where duplicates occur but the course is not a year-long course, the record with the maximum credits earned and maximum available credit is selected.

3. Resolved duplicates are combined with unique outcomes and aggregated by Student ID to find the sum of credits earned for each student. The results are then filtered to retain students with five or more credits.

4. All current ninth grade students are then attributed to a current high school and a previous middle school.

5. The results of steps three and four are counted to obtain the total number of students who earned five or more credits at each school as well as the total number of current ninth graders on which the school will be assessed.

Data Flow Steps in Detail:

Step 1. Course completion data is collected from the districts, then cleaned and validated.

- School districts submit course completion data.

School districts use National Center for Education Statistics (NCES) course classification codes\(^5\) to submit their course completion data using the Teacher-Course-Student (TCS) Data Collection Site\(^6\). Collection takes place between March and July at the end of each school year, however updates and corrections can be made up to the freeze date of September 30 to include summer school grades in the indicator calculations.

Before extracting data from TCS, the following data tables are loaded for reference:

1. **Dual Enrollment Codes:** Each observation represents one university offering dual enrollment.
   - **Variables:** TCS Dual Enrollment Code (Primary Key), Dual Enrollment Codes, University Name, University Description

2. **NCES Course Codes:** Each observation represents one potential course that could be offered.
   - **Variables:** TCS Course ID (Primary Key), NCES Course Description Code (five digits), Subject Area Code (two digits), Course ID Code (three digits), Subject Area Name, Course Name, Course Description, Elementary Flag (0 or 1), Secondary Flag (0 or 1), CSDE Created Course Flag (0 or 1)

3. **NCES Course Levels:** Each observation represents a level of courses that could be offered.

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\(^5\) For more information on NCES Course Classification Codes, see (secondary and non-secondary respectively): [files.eric.ed.gov/fulltext/ED515113.pdf](files.eric.ed.gov/fulltext/ED515113.pdf) and [nces.ed.gov/pubs2011/2011801.pdf](nces.ed.gov/pubs2011/2011801.pdf).

• **Variables**: TCS Course Level (Primary Key), NCES Course Level Code (one character), Level Name, Level Description, Elementary Flag (0 or 1), Secondary Flag (0 or 1)

4. **Course Outcomes**: Each observation represents a potential course outcome, such as pass or fail.

• **Variables**: TCS Grade Status (Primary Key), Grade Status Codes (one or two characters), Grade Status Name, Grade Description

5. **Teacher Type**: Each observation represents a type of teacher that could be teaching a course.

• **Variables**: TCS Teacher Type (Primary Key), Teacher Type Code (three digits), Teacher Type Description, Teacher Type Category, Teacher Type SubClass, Educator Identification Number Requirement Flag (0 or 1)

The following data tables are extracted from TCS:

6. **Course Offerings**: Each observation represents one course section in one school in one district.

• **Variables**: TCS Course Offering ID (Primary Key), District ID, School/Facility ID, TCS Course ID (PK from Table #2), NCES Course Level (PK from Table #3), NCES Course Code, Available Credit, Grade Span (Low and High), Sequence (Location and Limit), and Section Code.

7. **Course Enrollment**: Each observation represents one student enrolled in one section of a course at one school in one district. Many students, especially in secondary, will have multiple observations.

• **Variables**: Record ID (Primary Key), TCS Student ID (PK from Table #8), Course Offering ID (PK from Table #6), TCS Grade Status (PK from Table #4), TCS Dual Enrollment Code (PK from Table #1), Letter Grade, Credits Earned, and Course Sessions (Attended and Total)

8. **Student Matching**: Each observation represents one matching of a SASID, a District Student ID, and/or a Registration ID.

• **Variables**: TCS Student ID (Primary Key), SASID, District ID, School ID, Registration ID, District Student ID

9. **Teacher Matching**: Each observation represents one matching of an Educator Identification Number (EIN) to a District Teacher ID.

• **Variables**: TCS Teacher ID (Primary Key), EIN, District ID, District Teacher ID

10. **Course Teaching**: Each observation represents one teacher teaching in a section in a school in a district. As some sections may be co-taught, some sections may have multiple observations.

• **Variables**: Record ID (Primary Key), TCS Teacher Type (PK from Table #5), TCS Course ID (PK from Table #2), and TCS Teacher ID (PK from Table #9)

• **Data is cleaned, filtered, and prepared for use.**
1. Data tables are filtered to remove non-public schools, universities, etc.
2. Data tables are joined with existing CSDE data to validate
   a. School and district identification numbers, either missing, incorrect, or invalid
   b. SASIDs, either non-uniquely assigned, incorrect, missing, or invalid
   c. EINs, either incorrect, missing, or invalid
   d. Matching of SASIDs and EINs with most recent school and district IDs
3. Course offering data is joined with course enrollment data and student data. In cases where
   the available credit is missing or less than 1.0, error checking is completed to determine
   whether it is a partial year course, a middle or elementary school course (which would not
   assign credit), or a potential error.
4. At each stage, questionable observations are filtered into a separate data table for error
   checking.

**Resulting table from Step 1**: Each observation contains one course outcome for one student.

**Variables**: TCS Student ID (PK from Table #8), District ID, School ID, TCS Course ID (PK from
   Table #7), Grade, Grade Status Code, Credits Earned, Dual Enrollment Flag (0 or 1), Dual
   Enrollment Code

**Step 2. The data is further sorted to check for any potential duplicates by Student ID,
School ID, Course Description, or School Year.**

As credits earned twice for the same course cannot count twice toward the five-credit total,
duplicate observations must be removed from the data set. However, as some schools use
marking periods rather than full year credits when entering their course information, the
program must distinguish between these two cases.

1. When duplicate observations are found, the session dates are checked. If the session dates
   are the same, then the course is considered a duplicate. The program will select the
   observation with the maximum earned credits or maximum available credits if the earned
   credits are equal.
2. If the session dates are not the same, the program will aggregate the credits to create a
   single course record with the sum of the credits across the marking periods.

**Step 3. Resolved duplicates are combined with unique outcomes and aggregated by
Student ID to find the sum of credits earned for each student. The results are then
filtered to retain students with five or more credits.**

The total number of credits earned by each student is calculated. If a student has five or more
credits, they have met the requirements for indicator seven, and are retained in the numerator
data table. If they have four or fewer credits, they are removed.
Step 4. All current ninth grade students are attributed to a current high school and a previous middle school.

In a separate data table, all students, regardless of whether or not they met the requirements for indicator seven, are attributed to schools for their eighth and ninth grade school years. For students who attended more than one school during the school year, they will be attributed to the school they attended most recently.

Step 5. The results of steps three and four are counted to obtain the total number of students who earned five or more credits at each school as well as the total number of current ninth graders on which the school will be assessed.

The data from step 3 is aggregated at the school and district levels to determine the number of students who met the requirements for indicator seven, in other words, it calculates $\sum IS7_i$ for each school and district. The data from step 4 is aggregated at the school and district level to determine the number of students on which the school or district will be assessed. In other words, it calculates the denominator for each school and district. 7

Step 6. These counts are then divided by the number of students in the relevant grade as determined in the June PSIS collection. If the rate is 94% or greater, the school receives the maximum score of 50 points. If the rate is less than 94%, the rate is then divided by 0.94 and multiplied by 50 to get their prorated score.

7 If the number of students in the denominator, $N$, is less than 20, the calculation of the on-track rate is suppressed and the school or district gets no points awarded for this indicator. No possible points are attributed.
CALCULATION RULES FOR INDICATOR 12: ARTS ACCESS

Description:
Pro-rated percentage of students in grades nine through twelve participating in at least one dance, theater, music, or visual arts course during the school year. This indicator has a maximum of 50 points and will be assessed for all schools that teach students in grades nine through twelve. The target percentage for this indicator is 60%.

Formula for Calculation:
Each student, \( i \), will receive an individual score as follows:
\[
IS12_i = \begin{cases} 
0 & \text{not enrolled in any applicable arts course} \\
1 & \text{enrolled in at least one applicable arts course} 
\end{cases}
\]
These individual scores will then be attributed to the schools attended by each student. School scores will then be calculated by taking the sum of the student scores, dividing by the total number, \( N \), of students in grades nine through twelve. Points will be assigned as a prorated percentage of the target, out of a maximum of 50, as indicated in the formula below:
\[
\text{School Score} = \min \left( \frac{\sum IS12_i}{N} \cdot \frac{50}{0.60}, 50 \right). 
\]

Data Flow Steps: Overview
Indicator twelve is calculated using the following data steps:
1. Course completion data is collected from the districts in TCS, then cleaned and validated.
2. The data is further sorted to check for any potential duplicates by Student ID, School ID, Course Description, or School Year. Resolved duplicates are combined with unique outcomes.
3. All students enrolled in at least one applicable arts course are flagged in the data. The number of students flagged is counted for each school and district.
4. The total number of students in grades nine through twelve on which each school and district is being evaluated is determined using the June PSIS collection from that year.
5. The number of students meeting the requirements for indicator twelve is divided by the total number of students in grades nine through twelve. If the ratio is 60% or greater, the school receives the maximum score of 50 points. If the score is less than 60%, the score is then divided by 0.60 and multiplied by 50 to get their prorated score.

Data Flow Steps in Detail:
Step 1. Course completion data is collected from the districts, then cleaned and validated.
• **School districts submit course completion data.**

School districts use National Center for Education Statistics (NCES) course classification codes\(^8\) to submit their course completion data using the Teacher-Course-Student (TCS) Data Collection Site\(^9\). Collection takes place between March and July at the end of each school year, however updates and corrections can be made up to the freeze date of September 30 to include summer school grades in the indicator calculations.

• **CSDE extracts data from TCS Data Collection Site.**

Before extracting data from TCS, the following data tables are loaded for reference\(^10\):

1. **Dual Enrollment Codes:** Each observation represents one university offering dual enrollment.
   a. **Variables:** TCS Dual Enrollment Code (Primary Key), Dual Enrollment Codes, University Name, University Description

2. **NCES Course Codes:** Each observation represents one potential course that could be offered.
   a. **Variables:** TCS Course ID (Primary Key), NCES Course Description Code (five digits), Subject Area Code (two digits), Course ID Code (three digits), Subject Area Name, Course Name, Course Description, Elementary Flag (0 or 1), Secondary Flag (0 or 1), CSDE Created Course Flag (0 or 1)

3. **NCES Course Levels:** Each observation represents a level of courses that could be offered.
   a. **Variables:** TCS Course Level (Primary Key), NCES Course Level Code (one character), Level Name, Level Description, Elementary Flag (0 or 1), Secondary Flag (0 or 1)

4. **Course Outcomes:** Each observation represents a potential course outcome, such as pass or fail.
   a. **Variables:** TCS Grade Status (Primary Key), Grade Status Codes (one or two characters), Grade Status Name, Grade Description

5. **Teacher Type:** Each observation represents a type of teacher that could be teaching a course.
   • **Variables:** TCS Teacher Type (Primary Key), Teacher Type Code (three digits), Teacher Type Description, Teacher Type Category, Teacher Type SubClass, Educator Identification Number Requirement Flag (0 or 1)

---

\(^8\) For more information on NCES Course Classification Codes, see (secondary and non-secondary respectively): files.eric.ed.gov/fulltext/ED515113.pdf and nces.ed.gov/pubs2011/2011801.pdf.


\(^10\) Throughout this document, variables and tables used exclusively for the purpose of managing updates are not included, such as district certification and last modification date/by whom. Also, variable and table names are modified to provide a descriptive understanding of the tables described, and may not necessarily represent the order in which the variables appeared in the table.
The following data tables can then be extracted from TCS:

6. **Course Offerings**: Each observation represents one course section in one school in one district.
   - **Variables**: TCS Course Offering ID (Primary Key), District ID, School/Facility ID, TCS Course ID (PK from Table #2), NCES Course Level (PK from Table #3), NCES Course Code, Available Credit, Grade Span (Low and High), Sequence (Location and Limit), and Section Code.

7. **Course Enrollment**: Each observation represents one student enrolled in one section of a course at one school in one district. Many students, especially in secondary, will have multiple observations.
   - **Variables**: Record ID (Primary Key), TCS Student ID (PK from Table #8), Course Offering ID (PK from Table #6), TCS Grade Status (PK from Table #4), TCS Dual Enrollment Code (PK from Table #1), Letter Grade, Credits Earned, and Course Sessions (Attended and Total)

8. **Student Matching**: Each observation represents one matching of a CT State Student ID (SASID), a District Student ID, and/or a Registration ID.
   - **Variables**: TCS Student ID (Primary Key), SASID, District ID, School ID, Registration ID, District Student ID

9. **Teacher Matching**: Each observation represents one matching of an Educator Identification Number (EIN) to a District Teacher ID.
   - **Variables**: TCS Teacher ID (Primary Key), EIN, District ID, District Teacher ID

10. **Course Teaching**: Each observation represents one teacher teaching in a section in a school in a district. As some sections may be co-taught, some sections may have multiple observations.
    - **Variables**: Record ID (Primary Key), TCS Teacher Type (PK from Table #5), TCS Course ID (PK from Table #2), and TCS Teacher ID (PK from Table #9)

- **Data is cleaned, filtered, and prepared for use.**

1. Data tables are filtered to remove non-public schools, universities, etc.
2. Data tables are joined with existing CSDE data to validate
   a. School and district identification numbers, either missing, incorrect, or invalid
   b. SASIDs, either non-uniquely assigned, incorrect, missing, or invalid
   c. EINs, either incorrect, missing, or invalid
   d. Matching of SASIDs and EINs with most recent school and district IDs
3. Course offering data is joined with course enrollment data and student data. In cases where the available credit is missing or less than 1.0, error checking is completed to determine whether it is a partial year course, a middle or elementary school course (which would not assign credit), or a potential error.
4. At each stage, questionable observations are filtered into a separate data table for error checking.

**Resulting table from Step 1**: Each observation contains one course outcome for one student.
Variables: TCS Student ID (PK from Table #8), District ID, School ID, TCS Course ID (PK from Table #7), Grade, Grade Status Code, Credits Earned, Dual Enrollment Flag (0 or 1), Dual Enrollment Code

Step 2. The data is further sorted to check for any potential duplicates by Student ID, School ID, Course Description, or School Year. Resolved duplicates are combined with unique outcomes.

Duplicate entries in the course offerings are resolved, either by aggregating marking periods into a full-year course or taking a single entry of several, depending on whether or not the start dates are the same. Once resolved to single course observations, these entries can be re-joined to the non-duplicated courses to create a data table with all courses. Students are then attributed to their current school using the June Public School Information System (PSIS) collection11.

Step 3. All students enrolled in at least one applicable arts course are flagged in the data. The number of students flagged is counted for each school and district.

The NCES secondary course classification codes for all applicable arts courses begin with the subject area code 05. All students in grades nine through twelve enrolled in a course with this flag are flagged as having met the requirements for indicator twelve. This data is aggregated to find the number of students in each school and district enrolled in at least one arts course during the school year.

Applicable SAS Code: where TCSCourseDim.SubjectAreaCode = “05”

Step 4. The total number of students in grades nine through twelve on which each school and district will be evaluated is determined using the June PSIS collection from that year.

The total number of students on which the school or district will be evaluated, N, is calculated. To do this, all students in grades nine through twelve, whether or not they were enrolled in at least one arts course, in the June PSIS collection of that school year, are counted.

---

Step 5. The number of students meeting the requirements for indicator twelve is divided by the total number of students in grades nine through twelve. If the ratio is 60% or greater, the school receives the maximum score of 50 points. If the score is less than 60%, the score is then divided by 0.60 and multiplied by 50 to get their prorated score.

For each school or district, the number of students who were enrolled in at least one arts course is divided by the total number of students ($\Sigma S_{12_i} / N$), which is the ratio of these values. This ratio will necessarily be less than or equal to 1. If it is greater than or equal to 0.60, meaning that the school has met or exceeded the target score of 60%, the school or district score will be the maximum 50 points. If the ratio is less than 0.60, meaning that the school has not met the target score of 60%, the points awarded will be a prorated percentage of the target. This can be found by multiplying the ratio by 50 and dividing by 0.60.
 HOW TO READ ACCOUNTABILITY REPORTS

The sample report below shows a district’s performance on all indicators reported for the 2018-19 school year. To support appropriate interpretation, a brief explanation for every column heading is provided following the table.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Index/Rate</th>
<th>Target</th>
<th>Points Earned</th>
<th>Max Points</th>
<th>% Points Earned</th>
<th>State Average % Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. ELA Performance Index - All Students</td>
<td>73.1</td>
<td>75</td>
<td>46.8</td>
<td>50</td>
<td>97.5</td>
<td>90.2</td>
</tr>
<tr>
<td>1b. ELA Performance Index - High Needs Students</td>
<td>63.3</td>
<td>75</td>
<td>42.2</td>
<td>50</td>
<td>84.4</td>
<td>77.5</td>
</tr>
<tr>
<td>1c. Math Performance Index - All Students</td>
<td>69.1</td>
<td>75</td>
<td>45.1</td>
<td>50</td>
<td>92.2</td>
<td>84.1</td>
</tr>
<tr>
<td>1d. Math Performance Index - High Needs Students</td>
<td>59.4</td>
<td>75</td>
<td>39.6</td>
<td>50</td>
<td>79.2</td>
<td>70.2</td>
</tr>
<tr>
<td>1e. Science Performance Index - All Students</td>
<td>71.6</td>
<td>75</td>
<td>47.7</td>
<td>50</td>
<td>95.5</td>
<td>85.0</td>
</tr>
<tr>
<td>1f. Science Performance Index - High Needs Students</td>
<td>61.2</td>
<td>75</td>
<td>40.8</td>
<td>50</td>
<td>81.6</td>
<td>72.2</td>
</tr>
<tr>
<td>2a. ELA Academic Growth - All Students</td>
<td>62.1%</td>
<td>100%</td>
<td>62.1</td>
<td>100</td>
<td>62.1</td>
<td>59.0</td>
</tr>
<tr>
<td>2b. ELA Academic Growth - High Needs Students</td>
<td>56.4%</td>
<td>100%</td>
<td>55.4</td>
<td>100</td>
<td>56.4</td>
<td>55.1</td>
</tr>
<tr>
<td>2c. Math Academic Growth - All Students</td>
<td>64.9%</td>
<td>100%</td>
<td>64.9</td>
<td>100</td>
<td>64.9</td>
<td>62.5</td>
</tr>
<tr>
<td>2d. Math Academic Growth - High Needs Students</td>
<td>57.5%</td>
<td>100%</td>
<td>57.5</td>
<td>100</td>
<td>57.5</td>
<td>55.2</td>
</tr>
<tr>
<td>2e. Progress Toward English Proficiency - Literacy</td>
<td>72.8%</td>
<td>100%</td>
<td>38.4</td>
<td>50</td>
<td>72.8</td>
<td>60.0</td>
</tr>
<tr>
<td>2f. Progress Toward English Proficiency - Oral</td>
<td>67.4%</td>
<td>100%</td>
<td>33.7</td>
<td>50</td>
<td>67.4</td>
<td>52.1</td>
</tr>
<tr>
<td>4a. Chronic Absenteeism - All Students</td>
<td>4.1%</td>
<td>&lt;=3%</td>
<td>50.0</td>
<td>50</td>
<td>100.0</td>
<td>78.3</td>
</tr>
<tr>
<td>4b. Chronic Absenteeism - High Needs Students</td>
<td>6.5%</td>
<td>&lt;=3%</td>
<td>46.9</td>
<td>50</td>
<td>93.8</td>
<td>55.7</td>
</tr>
<tr>
<td>5. Preparation for CCR - Percent Taking Courses</td>
<td>82.9%</td>
<td>75%</td>
<td>50.0</td>
<td>50</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>6. Preparation for CCR - Percent Passing Exams</td>
<td>51.9%</td>
<td>75%</td>
<td>34.0</td>
<td>50</td>
<td>60.2</td>
<td>56.7</td>
</tr>
<tr>
<td>7. On-track to High School Graduation</td>
<td>94.5%</td>
<td>94%</td>
<td>50.0</td>
<td>50</td>
<td>100.0</td>
<td>93.6</td>
</tr>
<tr>
<td>8. 4-year Graduation: All Students (2018 Cohort)</td>
<td>93.1%</td>
<td>94%</td>
<td>99.0</td>
<td>100</td>
<td>99.0</td>
<td>93.9</td>
</tr>
<tr>
<td>9. 6-year Graduation: High Needs Students (2016 Cohort)</td>
<td>97.5%</td>
<td>94%</td>
<td>100.0</td>
<td>100</td>
<td>100.0</td>
<td>88.8</td>
</tr>
<tr>
<td>10. Postsecondary Entrance (Graduating Class 2018)</td>
<td>74.6%</td>
<td>75%</td>
<td>99.5</td>
<td>100</td>
<td>99.5</td>
<td>94.5</td>
</tr>
<tr>
<td>11. Physical Fitness (estimated participation rate = 93.7%)</td>
<td>53.2%</td>
<td>75%</td>
<td>35.5</td>
<td>50</td>
<td>70.9</td>
<td>70.6</td>
</tr>
<tr>
<td>12. Arts Access</td>
<td>55.0%</td>
<td>60%</td>
<td>45.5</td>
<td>50</td>
<td>93.0</td>
<td>86.5</td>
</tr>
</tbody>
</table>

Accountability Index: 1188.1 / 1450 = 81.5% / 74.2%
• **Indicator**: This column provides a brief explanation of what is being measured. A full explanation of every indicator is included in the main section of this document (*Using Accountability Results to Guide Improvement*). Every indicator in the system is assigned a number. When an indicator has subcomponents (e.g. All Students, High Needs Students) a lettering system is used alongside the number.

• **Index/Rate**: All components of indicator 1 are reported as performance indices. All other indicators are reported as rates (i.e. percentages). The values presented in this column are the performance indices and rates earned by this district on the associated indicators.

• **Target**: This value is the ultimate target established for all schools and districts statewide.

• **Points Earned**: This value represents the points earned on the relevant indicator for the district. In every case, points are prorated based on the district’s actual performance (i.e. index or rate) as compared to the target. The rules used for prorating points for each of the indicators are explained in the main section of this document.

• **Max Points**: This value is the maximum number of points possible on the associated indicator.

• **% Points Earned**: By indicator, this column shows the percentage of the “max points” earned by this district.

• **State Avg. % Points Earned**: By indicator, this column shows the percentage of the “max points” earned by the State.

Many schools have one or more indicators that cannot be measured. In these cases, school reports will display “.” in the Index/Rate field and there will be “.” in the Points Earned, Max Points, and % Points Earned cells for those indicators. The overall Accountability Index (in the district example above, 81.9) is the percentage of total possible points earned on all available indicators. All schools are classified into one of five categories. The school-level Accountability Index is the primary factor used to determine placement in categories 1, 2, and 3 with additional consideration given to participation rates, achievement gaps, and graduation rate gaps.

Note that the table above does not include Indicator 3, which is the participation rate for every subject for All Students and the High Needs group. Participation data are reported in a separate table within the report.
The gap table below shows the ELA and Math, and Science index scores for students with High Needs and the Non-High Needs group in this district. The size of the gap in index score points is reported and that difference is compared to the average gap across all districts statewide. Note that if the index for the Non-High Needs group exceeds the ultimate target of 75, the ultimate target is used when calculating the gap. If the district’s gap is more than one standard deviation beyond the state gap mean, then the district is reported as having an “outlier gap.” In the example below, the size of the gaps for ELA, Math, and Science are all less than the standard used to identify outliers.

Graduation rate gaps are determined in the same way. The graduation rate gap is based on the difference in 6-year graduation rates for students with High Needs and the Non-High Needs group. As shown in the table below, this district does not have a gap that is more than one standard deviation beyond the state gap mean and therefore there is N in outlier gap column.

While there are no points associated with the gap measures, these data are used when placing schools in one of five categories. Additionally, schools are not eligible to be a School of Distinction if reports indicate that the school has an achievement gap or graduation rate gap this is considered an outlier.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Non-High Needs Rate</th>
<th>High Needs Rate</th>
<th>Size of Gap</th>
<th>State Gap Mean +1 Stdev</th>
<th>Is Gap an Outlier?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA Performance Index Gap</td>
<td>75.0</td>
<td>63.3</td>
<td>11.7</td>
<td>15.4</td>
<td>N</td>
</tr>
<tr>
<td>Math Performance Index Gap</td>
<td>75.0</td>
<td>59.4</td>
<td>15.6</td>
<td>17.5</td>
<td>N</td>
</tr>
<tr>
<td>Science Performance Index Gap</td>
<td>75.0</td>
<td>61.2</td>
<td>13.8</td>
<td>16.1</td>
<td>N</td>
</tr>
<tr>
<td>Graduation Rate Gap (2016 Cohort)</td>
<td>94.0</td>
<td>97.5</td>
<td>-3.5</td>
<td>11.1</td>
<td>N</td>
</tr>
</tbody>
</table>

If the Non-High Needs Rate exceeds the ultimate target (75 for Performance Index and 54% for Graduation Rate), the ultimate target is used for gap calculations.
If the size of the gap exceeds the state mean gap plus one standard deviation, the gap is an outlier.
The participation rate table below includes all of the data for Indicator 3. The expectation for all tested subjects across all tests (i.e., Smarter Balanced, CTAA, Next Generation Science Standards Standard Assessment, Connecticut Alternate Science Assessment, and SAT) for All Students and High Needs students is at least 95%. Any rate less than 95% means that the district or school did not meet participation requirements. There are no points associated with Indicator 3, but like the gap indicators, these data are used when placing schools in one of five categories. Additionally, schools are not eligible to be a School of Distinction if reports indicate that the school has not met participation requirements.

### Assessment Participation Rates

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Participation Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA - All Students</td>
<td>99.2</td>
</tr>
<tr>
<td>ELA - High Needs Students</td>
<td>98.7</td>
</tr>
<tr>
<td>Math - All Students</td>
<td>99.1</td>
</tr>
<tr>
<td>Math - High Needs Students</td>
<td>98.4</td>
</tr>
<tr>
<td>Science - All Students</td>
<td>99.6</td>
</tr>
<tr>
<td>Science - High Needs Students</td>
<td>99.0</td>
</tr>
</tbody>
</table>

Minimum participation standard is 95%.
### CONNECTICUT ASSESSMENT AND ACCOUNTABILITY REPORTING OF “RECENTLY ARRIVED” ENGLISH LEARNERS (ELS)

<table>
<thead>
<tr>
<th>Recently Arrived EL Definition</th>
<th>An EL enrolled for the first time in a U.S. school for fewer than 24 calendar months at the time of testing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Participation Requirements</td>
<td>All ELs, including all recently arrived ELs, must participate in all assessments. This includes mathematics, ELA and science as well as the English language proficiency assessment (i.e. LAS Links).</td>
</tr>
<tr>
<td>Assessment Reporting (typically in the summer months)</td>
<td>Federal law requires that all ELs be included in assessment reporting regardless of time in a U.S. school.</td>
</tr>
<tr>
<td>Accountability Reporting—Achievement Status</td>
<td>Scores earned by recently arrived ELs are not included in Achievement Status (Indicator 1) calculations.</td>
</tr>
<tr>
<td>Accountability Reporting—Achievement Growth</td>
<td>Recently arrived ELs who have participated in two Smarter Balanced administrations are included in growth calculations (Indicator 2a-d).</td>
</tr>
<tr>
<td>Accountability Reporting—Progress Toward English Language Proficiency</td>
<td>All English learners must take the LAS Links assessment annually. All English learners including those who are “recently arrived” with LAS Links scores in consecutive years are included in Progress Toward English Language Proficiency calculations (Indicators 2e and 2f).</td>
</tr>
<tr>
<td>Accountability Reporting—Participation Rates</td>
<td>All students are included in participation rate calculations for ELA, math, and science.</td>
</tr>
</tbody>
</table>

**Note regarding EL student group reporting:** When reviewing accountability reports and exploring group results for English learners in particular, keep in mind the “EL Flex” group for accountability. EL Flex includes students who were formerly identified as an EL. Specifically, any student who is not an EL at the time of testing but who had been a member of the EL student group in any time up to four years previous, are included in the EL flexibility group. For a detailed explanation of how the “EL Flex” group is established, see the “File Preparation” section of the Performance Index Calculation Rules in this document.
ASSIGNING SCHOOL CATEGORIES

As required under Connecticut General Statutes Section 10-223e, Connecticut has implemented a five category school classification system. A brief overview of the school classification system is provided in Connecticut’s approved ESSA plan (p. 47). All schools are placed into one of five categories.

In 2015-16 and 2016-17, Category 1 schools were those in the top quartile, Category 2 schools were those in the two middle quartiles and Category 3 schools were in the bottom quartile. The cut values from 2015-16 and 2016-17 informed the establishment of criterion-referenced cut points implemented for the first time as part of 2017-18 accountability reporting and continued for 2018-19. The table below shows the range of possible Accountability Index values associated with each school category based on the criterion-referenced cut points.

<table>
<thead>
<tr>
<th>School Category</th>
<th>Accountability Index Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85 – 100</td>
</tr>
<tr>
<td>2</td>
<td>70 – 84.9</td>
</tr>
<tr>
<td>3</td>
<td>0 – 69.9</td>
</tr>
</tbody>
</table>

As in prior years, low participation rates, achievement gaps, graduation rate gaps, and identification as a Turnaround or Focus school may result in a lower school category than the initial assignment based on Accountability Index.

In Winter 2018-19, the CSDE identified a new set of Turnaround and Focus Schools (Category 4 and 5 schools). Turnaround Schools are those with low overall performance while Focus schools are those with consistently lagging academic achievement, growth, or graduation rates for students with high needs. Schools newly identified as Turnaround or Focus Schools in the 2018-19 school year were placed in Category 4. Previously identified Turnaround or Focus schools that were re-identified in 2018-19 as Turnaround or Focus were placed in Category 5. Previously identified Turnaround or Focus Schools that were not identified as either in 2018-19 were exited and placed in Categories 1, 2, or 3.

None of the Turnaround or Focus schools identified in Winter 2018-19 have the opportunity to exit in 2019-20. Turnaround schools are expected to exit in four years or less, but they may not exit without two consecutive years of data showing substantial improvement and continued progress. Therefore, the first opportunity for current Turnaround schools to exit would be Winter 2020-21. No new Turnaround schools will be identified in Winter 2019-20. New Turnaround schools will be identified every three years (i.e., 2021-22, 2024-25, etc.) using the three most recent years of data available.

Although no Focus schools identified in Winter 2018-19 have the opportunity to exit in 2019-20, new Focus schools are identified annually. All new Focus schools identified in Winter 2019-20, are considered Category 4 schools. Focus schools identified in Winter 2018-19 will have their...
first opportunity to exit in Winter 2020-21 if they have shown two consecutive years of strong growth for students with high needs. Focus schools identified in Winter 2019-20 will have their first opportunity to exit in Winter 2021-22, depending on growth results in consecutive years for students with high needs.

The detailed rules for school classification are presented below.

To begin the school classification process, the following schools must be removed from the data file:
- Unified School District #1;
- Detention Centers; and
- Schools with 100 or fewer possible points on the Accountability Index.

Per the approved Connecticut State ESSA Plan, beginning in 2018, the identification of Turnaround and Focus schools is based on three school years of data.

Turnaround Schools are the first group of schools to be identified in the school classification process. The detailed rules for identifying Turnaround schools are as follows (NOTE: No new Turnaround schools will be identified until Winter 2021-22):

- Schools in which the highest grade is between 9 and 12 are in the high school identification group, and schools in which the highest grade is 8 or below are in the elementary/middle school identification group.
- Any school for which the three-year weighted average on the accountability index is less than or equal to the fifth percentile of Connecticut Title I Schools in their identification group is identified as a Turnaround School.
- Any high school with a six-year adjusted cohort graduation rate for all students that is less than 70% for each of the three most recent cohorts is identified as a Turnaround School.
- Any school identified as Turnaround in Winter 2018-19 that was already a Turnaround or Focus school in the prior year was placed in Category 5. Any school identified as

### Fifth Percentile Score for CT Title I Schools in 2018-19
Based on Three-Year Weighted Average of Accountability Index
(2015-16, 2016-17, 2017-18)

<table>
<thead>
<tr>
<th>Identification Group</th>
<th>Fifth Percentile Cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary/Middle Schools</td>
<td>53.4</td>
</tr>
<tr>
<td>High Schools</td>
<td>49.7</td>
</tr>
</tbody>
</table>

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Turnaround in Winter 2018-19 that was not a Turnaround or Focus school in the prior year was placed in Category 4.

- For the December 2018 identification ONLY, which used data from the 2015-16, 2016-17, and 2017-18 school years, any previously identified Turnaround School not identified as a Turnaround School using the above method exited the Turnaround category. This did not preclude the school from being identified as a Focus School during the 2018 identification.
- Identification of Turnaround Schools will occur every three years (i.e., December 2021, December 2024, etc.), and will use the three most recent years of data. For example, the 2021 identification will use data from the 2018-19, 2019-20, and 2020-21 school years.

The next step in the school classification process is to identify Focus schools for ELA and Focus schools for Math. Again, this identification process uses three school years of data. The detailed rules for identifying Focus schools are as follows:

- For the purposes of Focus English Language Arts (ELA) and Focus Math identification, the following identification groups apply:
  - Elementary Schools: Schools in which the highest grade is between 4 and 6.
  - Middle Schools: Schools in which at least one of the grades taught is 7 or 8, including those with 4-6 and/or 9-12 grade students, such as a grades 6-12 school.
  - High Schools: Schools in which all grades are between 9 and 12.

- For Focus ELA and Focus Math identification, the elementary and middle school identification groups are evaluated on their growth scores for students with high needs (Indicator 2b and 2d). The high school identification group is evaluated on their Subject Performance Index (SPI; Indicator 1) for students with high needs. Any school at which the ELA growth (or SPI) for students with high needs falls in the lower 10% of schools in their identification group for three consecutive years will be identified as a Focus ELA school. Focus Math schools will be similarly identified using Math growth (or SPI) scores. Since identification is based on three years of data, high schools cannot be identified as a Focus school based on science achievement until Winter 2021-22.
Bottom 10% Threshold Scores Used for Focus School Identification in 2019-20

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School: High Needs Growth (Avg. Percentage of Target Achieved)</td>
<td>42.8</td>
<td>50.1</td>
<td>47.5</td>
<td>46.4</td>
<td>49.9</td>
<td>49.6</td>
</tr>
<tr>
<td>Middle School: High Needs Growth (Avg. Percentage of Target Achieved)</td>
<td>36.8</td>
<td>43.1</td>
<td>43.2</td>
<td>39.9</td>
<td>40.6</td>
<td>40.3</td>
</tr>
<tr>
<td>High School: High Needs Subject Performance Index</td>
<td>42.2</td>
<td>42.7</td>
<td>42.2</td>
<td>38.4</td>
<td>39.6</td>
<td>38.0</td>
</tr>
</tbody>
</table>

- Additionally, a school that teaches at least one grade between 9 and 12 falls into the graduation rate identification group; this includes schools that also serve students below Grade 9, such as a 6-12 school, for example. Any school in this group with a six-year adjusted cohort graduation rate for high needs students that is less than 70% for each of the three most recent cohorts is identified as a Focus Graduation Rate school.
- Focus ELA, Focus Math, and Focus Graduation Rate identification are not mutually exclusive. A school may be identified as a Focus School in one, two, or all three categories.
- Any school identified as Focus in 2018 that was already a Turnaround (Category 4 or 5) or Focus (Category 5 only) school in the prior year was placed in Category 5. Any school identified as Turnaround or Focus in 2018-19 that was not a Turnaround (Category 4 or 5) or Focus school (Category 5 only) in the prior year was placed in Category 4.
- For the 2018-19 identification ONLY, which used data from the 2015-16, 2016-17, and 2017-18 school years, any previously identified Focus school that was not identified as a Focus school using the above method exited the Focus category. This did not preclude the school from being identified as a Turnaround school during the 2018-19 identification.
- Identification of Focus schools will occur annually (i.e., December 2019, December 2020, etc.), and use the three most recent years of data. For example, the December 2019 identification uses data from the 2016-17, 2017-18, and 2018-19 school years.
Following the identification of all Turnaround and Focus schools, the remaining schools must be initially placed into Category 1, 2, or 3 based on the Accountability Index. Again, the range of possible Accountability Index values associated with each school category are presented below.

<table>
<thead>
<tr>
<th>School Category</th>
<th>Accountability Index Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85 – 100</td>
</tr>
<tr>
<td>2</td>
<td>70 – 84.9</td>
</tr>
<tr>
<td>3</td>
<td>0 – 69.9</td>
</tr>
</tbody>
</table>

Schools initially placed in Categories 1 and 2 will drop one category (to Categories 2 and 3, respectively) if one or more of the following are present:

- an outlier achievement gap in ELA, Math, or Science;
- an outlier graduation gap based on the six-year adjusted cohort graduation rate; or
- an assessment participation rate below 95% in any subject for all students or students with high needs.

Schools in Categories 3, 4, and 5 maintain their classification regardless of these criteria.
IDENTIFYING SCHOOLS OF DISTINCTION 2018-19

Annually, the CSDE identifies a group of schools as Schools of Distinction based on a variety of factors. Beginning with identification in Winter 2018-19, the identification centers on overall performance, growth, and change in overall performance from one year to the next. The guidelines for each distinction type are included below.

HIGHEST PERFORMING

Elementary/middle and high schools are evaluated separately for the Highest Performing distinction. For each school type, the full list of Category 1-5 schools is sorted based on the Accountability Index from highest to lowest. The top 10% become eligible for distinction status.

To be named a School of Distinction in the Highest Performing category, an eligible school:
- must have data reported for Indicator 1 (Academic Achievement).
- must be in Categories 1, 2, or 3;
- must NOT have an outlier achievement gap based on the difference in index scores between the students with High Needs group and the non-High Needs group in ELA, Math, or Science;
- must NOT have an outlier graduation rate gap based on the six-year graduation rate difference between the students with High Needs group and the Non-High Needs group; and
- must NOT have an assessment participation rate below 95% for the All Students group or the students with High Needs group in ELA, Math, or Science.

HIGHEST GROWTH

Schools with Indicator 2 a-d (Academic Growth) values are evaluated separately from schools without Indicator 2 a-d. There are four Highest Growth distinction categories:
- Highest Growth for All Students—ELA;
- Highest Growth for All Students—Math;
- Highest Growth for Students with High Needs—ELA; and

In each case, the percentage of possible points earned for the corresponding category of Indicator 2 will be sorted from highest to lowest, and the top 10% of schools will become eligible for distinction status in that category.

To be named a School of Distinction in any of the Highest Growth categories, an eligible school:
- must be in Categories 1, 2, or 3;
- must NOT have an outlier achievement gap based on the difference in index scores between the students with High Needs group and the non-High Needs group in ELA, Math, or Science;
• must NOT have an outlier graduation rate gap based on the six-year graduation rate difference between the students with High Needs group and the Non-High Needs group; and
• must NOT have an assessment participation rate in 2018-19 or 2017-18 below 95% for the All Students group or the High Needs student group in ELA, Math, or Science.

GREATEST IMPROVERS

Schools without Indicator 2 a-d (academic growth) are evaluated separately for the “Greatest Improvers” distinction. These schools have shown the greatest percentage improvement in their Accountability Index. Percentage improvement is calculated for every school by subtracting the 2017-18 Accountability Index from the 2018-19 Accountability Index and dividing the difference by the 2017-18 Accountability Index. Then all of these schools are sorted from highest to lowest based on the percentage improvement in Accountability Index.

Schools in the top 10% of percentage improvement in Accountability Index are eligible for the Greatest Improver distinction. To be named a School of Distinction in the Greatest Improvers category, an eligible school:

• must have data reported for Indicator 1 (Academic Achievement);
• must be in Category 1, 2, or 3;
• must NOT have an outlier achievement gap in 2018-19 or 2017-18 based on the difference in index scores between the students with High Needs group and the non-High Needs group in ELA, Math, or Science;
• must NOT have an outlier graduation rate gap based on the six-year graduation rate difference between the students with High Needs group and the Non-High Needs group in the two most recent six-year cohorts; and
• must NOT have an assessment participation rate in 2018-19 or 2017-18 below 95% for the All Students group or the High Needs group in ELA, Math, or Science.
### Schools of Distinction 2018-19 Minimum Values by Distinction Type

<table>
<thead>
<tr>
<th>Distinction Type</th>
<th>Measure</th>
<th>Top 10 Percent Minimum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Performing: Elementary/Middle Schools</td>
<td>Accountability Index</td>
<td>86.6</td>
</tr>
<tr>
<td>Highest Performing: High Schools</td>
<td>Accountability Index</td>
<td>87.8</td>
</tr>
<tr>
<td>Highest Growth: All Students—ELA</td>
<td>Percentage of possible points earned for Indicator 2 ELA by the “All Students” group</td>
<td>77.7</td>
</tr>
<tr>
<td>Highest Growth: All Students—Math</td>
<td>Percentage of possible points earned for Indicator 2 Math by the “All Students” group</td>
<td>83.9</td>
</tr>
<tr>
<td>Highest Growth: High Needs—ELA</td>
<td>Percentage of possible points earned for Indicator 2 ELA by the “High Needs” group</td>
<td>71.4</td>
</tr>
<tr>
<td>Highest Growth: High Needs—Math</td>
<td>Percentage of possible points earned for Indicator 2 Math by the “High Needs” group</td>
<td>78.1</td>
</tr>
<tr>
<td>Greatest Improvers</td>
<td>Percentage improvement in the Accountability Index from 2017-18 to 2018-19</td>
<td>3.0</td>
</tr>
</tbody>
</table>