CSDE

CONNECTICUT STATE
DEPARTMENT OF EDUCATION

USING ACCOUNTABILITY RESULTS TO GUIDE IMPROVEMENT

March 2016

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.

Table of Contents

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 have been made to the accountability system.

- Several new indicators 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 have been added.

- 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).

- Subgroup 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".

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.

INDICATOR 1: ACADEMIC ACHIEVEMENT (STATUS)

Indicator	Weight	
	Year 1	Years 2 and 3*
Subject Performance Index (0-100) in ELA, Math, and Science • All Students • Students in *High Needs Subgroup*	 300 300	 150 150

*Points for schools where longitudinal academic growth (Indicator 2) cannot be evaluated (e.g., 9-12 high schools) will retain Year 1 point values for years 2 and 3.

Description (What): This indicator will produce 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 beginning in 2015-16, the Connecticut Alternate Assessments (CTAA) in all available tested grades (i.e., 3 through 8 and 11) in the district/school. Science index scores will be generated based on results from the Connecticut Mastery Test (CMT) assessments and the Connecticut Academic Performance Test (CAPT) assessments (both the standard form and Skills Checklist) in all available tested grades (i.e., 5, 8, and 10) in the district/school. This indicator weights tested subjects equally.

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, 10 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 prior approach to the index:

First, though the index was an enhancement to the AYP approach of looking solely at 'proficient' and 'not proficient', it still didn't capture improvement *within* performance levels. Furthermore, with Smarter Balanced assessments offering four achievement levels as opposed to five in the CMT/CAPT assessments, practitioners are concerned that the index will 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 will be prorated based on the percentage of the ultimate target (75) achieved.

Subject-specific index scores will be generated and reported for the following groups as long as the minimum subgroup N of at least 20 students is reached:

- All students
- All race/ethnicities
- Both genders
- Low income
- English Language Learners (ELL)
- Students with Disabilities (SWD)
- High Needs supergroup (i.e., a student belongs to at least one of the following ESEA subgroups – Low income, English Language Learner or Students with Disabilities).

Though index scores will be reported for all student subgroups, the High Needs supergroup will be the subgroup used in accountability calculations. This will hold more schools accountable for the subgroup performance of many more students.

Lowering subgroup N size from 40 to 20 in the first iteration of ESEA Flexibility made many subgroups visible across Connecticut; utilizing the High Needs group will further increase the number of schools and the number of students in those individual subgroups that are held accountable for subgroup 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 both ELA and mathematics. Instead, Connecticut will include 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 will be used in the achievement status and growth measures of the accountability system.

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 subgroup* and the *Non-High Needs 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 2: ACADEMIC GROWTH (LONGITUDINAL)

Indicator	Max Points	
	Year 1	Years 2 and 3
Percentage of students in grades 4 through 8 meeting growth targets (½ SB-ELA; ½ SB Math) • All Students • Students in *High Needs Subgroup*	N/A N/A	200 200

Description (What): In Connecticut, the Smarter Balanced (SB) Assessment in English Language Arts/Literacy (ELA) and Mathematics will be used for measuring student achievement growth. In spring 2015, Connecticut students took the SB ELA/Literacy 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 will utilize 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 each tested subject. Desired and achievable growth targets will be set in ELA/Literacy and Mathematics for all students entering grades 4 through 8 to reach in that year. The CSDE has a proven track record of successfully creating a vertical scale score based growth model on the CMT. Connecticut will utilize a similar approach for its growth model using the Smarter Balanced assessment.

The primary aggregate metric that is expected to be generated from the growth model is termed the "Success Rate"; it is the percentage of students in the group (e.g., district, school, subgroup, class) who meet their individual growth targets in the subject.

The individualized targets in ELA/Literacy and Mathematics will be established through ongoing collaborations with various stakeholders including classroom teachers, subject matter experts, school principals, superintendents, CSDE staff, policy leaders, and measurement experts. CSDE will begin the process of engaging stakeholders after it receives the results from the first operational assessment. CSDE will finalize the model after the second administration of the Smarter Balanced assessment. This model will serve as an important component of the

statewide school accountability system and also inform the educator evaluation and support process starting with the 2016-17 school year.

Rationale (Why?): The vertical scale enables the evaluation of growth achieved by the same kids 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 each will be earned for the All Students group *and* the High Needs Subgroup based on the percentage of students who achieve their growth targets. Weighting the High Needs subgroup separately in addition to the All Students group rightly over-weights subgroup growth. The ultimate target for this indicator will be established after the second Smarter Balanced administration in spring 2016.

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**
   - CT Core Standards for English language arts and mathematics http://ctcorestandards.org/?page_id=5181
   - Unpacking Alignment (Achieve the Core) http://achievethecore.org/aligned/category/unpacking-alignment/
   - Curriculum Designers Home Page on CTCoreStandards.org website http://ctcorestandards.org/?page_id=5181
   - 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
   - Strengthening Lessons for the Common Core (video) https://www.teachingchannel.org/videos/better-common-core-lessons-equip

- District Common Core Implementation Self-Assessment (U.S. Education Delivery Institute) https://www.deliveryinstitute.org/webform/district-ccss-rubric
- Models, Samples, and Exemplars of Curriculum Units and Lessons *(rated by CSDE)* *http://ctcorestandards.org/?page_id=475*
- Basal Alignment Project (Achieve the Core). http://achievethecore.org/page/751/bap-project-page

2. **CT Core Standards Professional Development Massive Online Open Courses (MOOCs) for Educators**
   - Connecticut Professional Learning Online Modules (CSDE). http://surveys.pcgus.com/s3/CT-Links
   - Education and Teacher Training Courses (Edx). https://www.edx.org/course?search_query=education

3. **CT Standards For All Subject Areas**
   - CSDE Website http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&Q=320954
   - CT Core Standards Website http://ctcorestandards.org/?page_id=475

4. **Parent and Community Resources for CT Core Standards** including translated materials in five languages http://ctcorestandards.org/?page_id=32

INSTRUCTION (how the curriculum will be taught)

1. **Tier 1 – Core Instruction**

   - CSDE English Learner Resources http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320848
   - CSDE Special Education Resources http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&Q=320730
   - Principal "Look For" Guide to Classroom CT Core Standards implementation http://www.sde.ct.gov/sde/lib/sde/pdf/backtoschool/ccss_principal_look_fors_flipbook.pdf

2. **Tier 1 Reading Instructional Resources**

   - CSDE Early Literacy http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320888
   - CSDE Menu of Grade K-3 Reading Assessments
   - International Reading 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.
- Foorman, B. R., & Siegel, A. (Eds.). (1986) Acquisition of reading skills: Cultural constraints and cognitive universals. Mahwah, NJ: Lawrence Erlbaum.
- Moats, L.C., & Foorman, B.R. (in press). Literacy achievement in the primary grades in high poverty schools: Lessons learned from a five-year research program. In S.B. Neuman (ed.), *Literacy achievement for young children from poverty.* Baltimore: Brookes Publishing Co.
- 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).

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.newsela.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/
- CSDE Family Literacy Resources
  http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320764

4. **Tier 1 Writing Instructional Resources**

- Graham, S. & Harris, K., A Path to Better Writing: Evidence-Based Practices in the Classroom, *The Reading Teacher*, January/February 2016 (Vol. 69, #4, p. 359-365),
  http://onlinelibrary.wiley.com/doi/10.1002/trtr.1432/abstract

- In Common: Effective Writing (Achieve the Core)
  http://achievethecore.org/page/507/in-common-effective-writing-for-all-students
- ODELL Literacy (ODELL) http://odelleducation.com/literacy-curriculum
- Writing for Understanding Common Core Resources for Teachers (The Vermont Writing Collaborative). http://vermontwritingcollaborative.org/Resources.html
- Pros and Cons of Controversial Issues (ProCon) http://www.procon.org/
- NY Times Debatable Topics (NY Times). http://www.nytimes.com/roomfordebate

5. **Tier 1 Mathematics Instructional Resources**

- Curriculum alignment: Interactive Coherence Map (Achieve the Core)
  http://achievethecore.org/page/1118/coherence-map
- Curriculum resources/rich tasks: Mathematics Assessment Project
  http://map.mathshell.org/ (Secondary)
- Illustrative Mathematics https://www.illustrativemathematics.org/,
- Illuminations (NCTM) https://illuminations.nctm.org/
- Achieve the Core http://achievethecore.org/about-us
- Student mathematics practice - Khan Academy https://www.khanacademy.org/
- IXL https://www.ixl.com/

6. **Tier 1 Science Instructional Resources**

- Tools for Ambitious Science Teaching (University of Washington)
  http://ambitiousscienceteaching.org/get-started/
- Tweed, A. (2009). *Designing Effective Science Instruction: What Works in Science Classrooms*. Arlington, VA: NSTA Press.
- Rothstein D. and Santana, L. (2011). *Make Just One Change: Teach Students to Ask Their Own Questions*. Cambridge, MA: Harvard Press.
- Zwiers, J. and Crawford, M. (2011). *Academic Conversations.* Portland, ME: Stenhouse Publications.
- Fathman, A. and Crowthers, D. (2009). *Science for English Language Learners.* Arlington, VA: NSTA Press.

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

- Culturally Responsive Teaching http://ceedar.education.ufl.edu/wp-content/uploads/2014/08/culturally-responsive.pdf
- CSDE English Learner Resources
  http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320848
- CSDE Special Education Resources
  http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&Q=320730
- Universal Design for Learning http://ctcorestandards.org/?page_id=7773

- 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.newsela.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/*

8. **Tier 2 and 3 Intervention – Supplemental and Intensive Instruction and Supports**
   - CSDE Framework for RTI http://www.sde.ct.gov/sde/lib/sde/pdf/pressroom/SRBI_full.pdf
   - RTI Action Network   http://www.rtinetwork.org/
   - Center on Response to Intervention http://www.rti4success.org/

Where can I get more information?	
QUESTIONS	**CSDE CONTACTS**
Best Practices and Resources for Improving ELA Curriculum and Instruction	Melissa Hickey Phone: 860-713-6680 Email: Melissa.Hickey@ct.gov
Best Practices and Resources for Improving Mathematics Curriculum and Instruction	Jennifer Michalek Phone: 860-713-6557 Email: jennifer.michalek@ct.gov
Best Practices and Resources for Improving Science Curriculum and Instruction	Ronald Michaels Phone: 860-713-6851 Email: ronald.michaels@ct.gov
Performance Index Calculations	Diane Murphy Phone: 860-713-6891 Email: diane.murphy@ct.gov

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.

Rationale (Why): High participation rates for all students across subgroups 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, 10 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.

CSDE has provided Communication Tools for the Smarter Balanced assessments. http://www.sde.ct.gov/sde/cwp/view.asp?a=2748&q=335628.

Connecticut SAT resources which include a template letter to parents as well as frequently asked questions is available at http://www.sde.ct.gov/sde/cwp/view.asp?a=2748&q=335780.

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: http://www.pta.org/advocacy/content.cfm?ItemNumber=4311&navItemNumber=4610.

Achieve the Core offers resources you can use to speak to parents and community members about the new standards. The site offers guides, documents, and parent videos.
http://achievethecore.org/dashboard/409/search/3/1/0/1/2/3/4/5/6/7/8/9/10/11/12

Where can I get more information?	
QUESTIONS	CSDE CONTACTS
Strategies for Ensuring Assessment Participation	Mary Anne Butler Phone: 860-713-6753 Email: MaryAnne.Butler@ct.gov
Rate Calculations	Diane Murphy Phone: 860-713-6891 Email: diane.murphy@ct.gov

INDICATOR 4: CHRONIC ABSENTEEISM

Indicator	Max Points – All Years
Percentage of students chronically absent • All Students • Students in *High Needs Subgroup*	50 50

Description (What): A district/school/subgroup 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 2013-14, 10.7% of all students statewide were chronically absent. Great disparities exist in chronic absenteeism rates among student subgroups. For example, the chronic absenteeism rate for students eligible for free lunch (19.9%) is more than three times that of their peers who are not eligible for lunch subsidies (6.1%). 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 subgroup based on the percentage of students who are chronically absent. It is important to weight subgroup absenteeism rates separately because disparities in chronic absenteeism rates among student subgroups 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.

Indicator 4 (Chronic Absenteeism)

Indicator 4 Points Earned
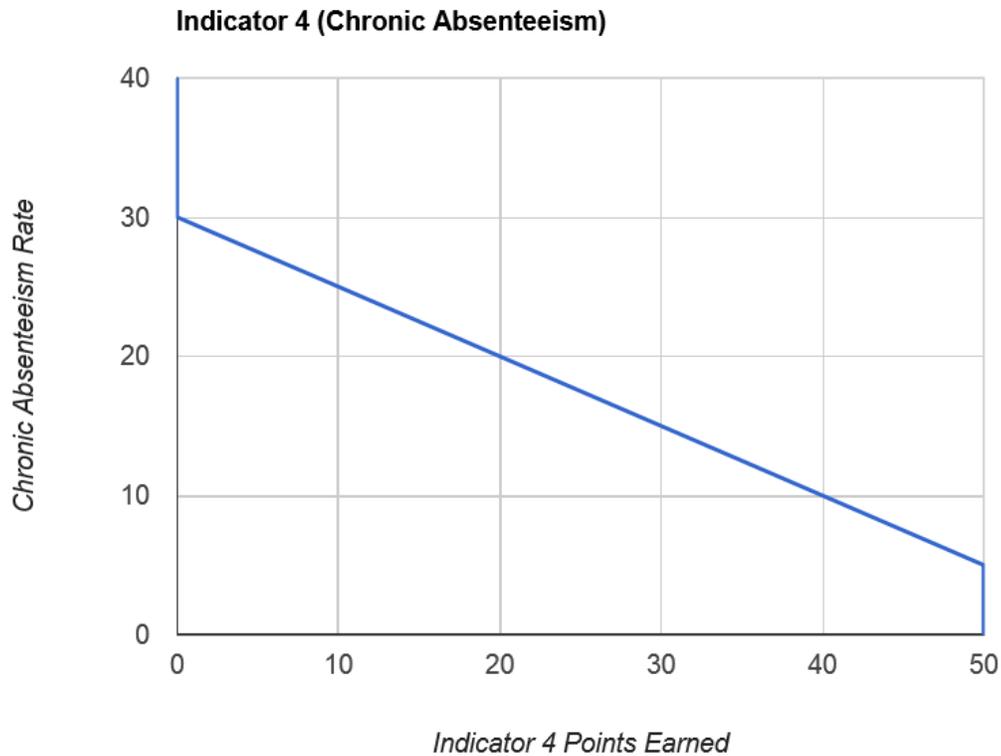
The following formula is used to convert the chronic absenteeism rate into points:

$$\frac{(30\% - Chronic\ Absenteeism\ Rate)}{25\%} \ x\ 50$$

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:

$$\frac{(30\% - 15\%)}{25\%} \ x\ 50$$

$$= \frac{15\%}{25\%} \ x\ 50 = \frac{3}{5} \ x\ 50 = 30 \ points$$

Data Source: June PSIS

RESOURCES FOR IMPROVING ATTENDANCE

- 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. http://www.preventionworksct.org/what/mentoring/

- Guidelines for Implementation of the Definitions of Excused and Unexcused Absences and Best Practices for Absence Prevention and Intervention. Connecticut State Department of Education. http://www.sde.ct.gov/sde/lib/sde/pdf/publications/guidelines_excused_and_unexcused_absences.pdf.

- CSDE Family and Community Engagement Resources: http://www.sde.ct.gov/sde/taxonomy/v4_taxonomy.asp?DLN=45424&sdeNav=|45424|&sdePNavCtr=|45493|#45493

- Collaborative Approaches to Reducing Absenteeism among K-12 Students, Policy Fact Sheet. John W. Gardner Center for Youth and Communities. This policy brief provides suggestions for engaging and collaborating with diverse stakeholders to reduce truancy and chronic absenteeism. Examples of community wide attendance campaigns are provided. John W. Gardner Center for Youth and Their Communities. (2012, April). http://jgc.stanford.edu/resources/policy_fact_sheets/Absence_Interventions_PFS.pdf

- Get Schooled http://jgc.stanford.edu/resources/policy_fact_sheets/Absence_Interventions_PFS.pdf. The organization uses a digital platform, gamification and a recipe it calls 'sizzle and substance' to inspire and engage students. Students set up personal accounts and have access to important information and motivation to attend school https://getschooled.com/dashboard?q=attendance

- The National Mentoring Partnerships provides resources for 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. http://www.mentoring.org

- Attendance Works is a national and state initiative that promotes awareness of the important role that school attendance plays in achieving academic success. The Director of Attendance Works, Hedy Chang, and Johns Hopkins researcher Robert Balfanz are considered two of the nation's experts on absenteeism and strategies that work. In collaboration with partners, they have published many reports that include success

stories from schools around the country. The three titles below are examples of materials available through www.attendanceworks.org.

- o Balfanz, Robert and Byrnes, Vaughan (2013), *Meeting the Challenge of Combating Chronic Absenteeism*, Everyone Graduates Center, Johns Hopkins University School of Education.
  This report examines the impact of New York City Mayor Michael Bloomberg's task force on truancy, chronic absenteeism and school engagement, a program that spanned 2010 to 2013 and reached more than 60,000 students in NYC public schools. The study found that students who missed at least 20 days of school per year — the definition of chronic absenteeism — had lower grades and were more likely to drop out than students with better attendance. Yet, the researchers also found these effects of absenteeism are reversible with the help of mentors, incentive programs and awareness campaigns.
  http://www.attendanceworks.org/wordpress/wp-content/uploads/2014/01/NYC-Chronic-Absenteeism-Impact-Report-Nov-2013.pdf

- o Balfanz, Robert and Byrnes, Vaughan (2012), *The Importance of Being in School: A Report on Absenteeism in the Nation's Public Schools*, Johns Hopkins University Center for Social Organization of Schools.
  This report analyzes data on chronic absenteeism at the state level to begin the process of mapping its extent and characteristics. Although currently only a handful of states collect data on chronic absenteeism, results from a sample of states suggest that an estimated 10-15% of students in the U.S. are chronically absent each year. The report also highlights some promising practices among cities, school districts and nonprofits to combat chronic absenteeism. The authors offer policy recommendations on tracking and reporting chronic absence data and evidence-based interventions.
  http://new.every1graduates.org/wp-content/uploads/2012/05/FINALChronicAbsenteeismReport_May16.pdf

- o Ginsburg, Alan, Phyllis Jordan and Hedy Chang (2014), Absences Add Up: How School Attendance Influences Student Success, Attendance Works, August 2014. This state-by-state analysis of national testing data demonstrates that students who miss more school than their peers consistently score lower on standardized tests, a result that holds true at every age, in every demographic group, and in every state and city tested. The analysis is based on the results of the 2013 National Assessment of Educational Progress (NAEP). It compares attendance rates and NAEP scores for every state and for 21 large urban areas.
  http://www.attendanceworks.org/wordpress/wp-content/uploads/2014/09/Absenses-Add-Up_September-3rd-2014.pdf

- 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: Everyday Strategies to Help **Teachers** Improve Attendance and Raise Achievement
    http://www.attendanceworks.org/tools/schools/teaching-attendance-toolkit/
  - Bringing Attendance Home: Engaging **Parents** in Preventing Chronic Absence
    http://www.attendanceworks.org/tools/for-parents/bringing-attendance-home-toolkit/

Where can I get more information?	
QUESTIONS	**CSDE CONTACTS**
Resources, Strategies, and Best Practices	Kari Sullivan Phone: 860-807-2041 Email: kari.sullivan@ct.gov
Data Collection and Reporting	Marquelle Middleton Phone: 860-713-6877 Email: marquelle.middleton@ct.gov

Indicator 5: Preparation for Postsecondary and Career Readiness – Coursework

Indicator	Max Points – All Years
Percentage of students in grades 11 & 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 seven CTE categories; *or* Two workplace experience "courses" in any area.	50

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.

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) 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 to begin collecting information about dual enrollment courses.

Methodology (How): Points will be awarded to the All Students group based on the percentage of 11th and 12th graders who meet the specified coursework participation thresholds. Points will be prorated based on the percentage of the ultimate target (75%) achieved.

Calculation Steps

1. Start with June Collection to determine 11th and 12th graders and their facility1codes. Pull in certified TCS records from Fall of Years 2011, 2012, 2013, and 2014 for SASIDs with the same facility1code as in PSIS June Collection.

2. AP/IB courses are flagged by the NCES course name. Dual enrollment courses are flagged by having a dual enrollment code. The AP/IB/Dual Enrollment flags are all summed by SASID and facility1code. SASID and facility1code combinations whose flags sum to >=2 receive credit for Indicator 5.
   a. NCES Course Names and Codes can be viewed under the "Secondary School Course Classification System" Header on the TCS help site: http://www.csde.state.ct.us/public/tcs/downloads.asp
   b. More information regarding Dual Enrollment Codes are available on page 15-16 of the TCS User Guide: http://www.csde.state.ct.us/public/tcs/downloads.asp

3. Workplace Experience courses are flagged by the NCES course name. The Workplace Experience flags are summed by SASID and facility1code. SASID and facility1code combinations whose flags sum to >=2 receive credit for Indicator 5
   a. NCES Course Names and Codes can be viewed under the "Secondary School Course Classification System" Header on the TCS help site: http://www.csde.state.ct.us/public/tcs/downloads.asp

4. CTE courses are identified into 1 or more cluster by NCES. There are 17 clusters. Each cluster has a unique flag. Each unique CTE flag is summed by SASID and facility1code. If the sum of the unique CTE flag is >=2 in any cluster, then the student receives credit for Indicator 5.
   a. Career Technical Education Course Codes & Clusters can be viewed under the "Secondary School Course Classification System" Header on the TCS help site: http://www.csde.state.ct.us/public/tcs/downloads.asp

5. The unique count of SASIDs and facility1codes receiving credit for Indicator 5 is summed by facility1code to determine the school-level numerator for indicator 5.

6. Students identified as meeting Indicator 5 in any of steps 2-4 are summed by their reporting district to determine the district-level numerator for indicator 5.

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

Indicator	Max Points – All Years
Percentage of students in grades 11 & 12 achieving CCR benchmark on *at least one* of the following: Smarter Balanced 11th *or* SAT *or* ACT *or* AP *or* IB	50

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:
- Smarter Balanced – Level 3 or higher on both ELA and Math
- SAT – composite score of 1550 or higher
- ACT – meeting benchmark on 3 of 4 exams (benchmark varies based on subject)
- AP – 3 or higher on an AP exam
- IB – 4 or higher on an IB exam

Points will be 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., IB from International Baccalaureate Organization, and Smarter Balanced from state assessment data files.

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://appotential.collegeboard.org/app/welcome.do

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. The National Association of State Directors of Career Technical Education Consortium (NASDCTEc) 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 CTE webpage: http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320802
  - CSDE CT Core Standards website, CTE page: http://ctcorestandards.org/?page_id=1336
  - Association for Career and Technical Education, The National Research Center for Career and Technical Education at SREB, http://www.nrccte.org/

- Southern Regional Education Board's *High Schools that Work* and *Advanced Careers* http://www.sreb.org/page/1608/Advanced_Career.html

Where can I get more information?	
QUESTIONS	CSDE CONTACTS
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 and Dual Enrollment	Lee Marcoux Phone: 860-713-6768 Email: lee.marcoux@ct.gov
Resources, Strategies, and Best Practices for Work-Based Learning	Harold Mackin Phone: 860-713-6779 Email: harold.mackin@ct.gov
Data Collection and Reporting for Coursework (Indicator 5)	Jennifer Leeper Phone: 860-713-6832 Email: jennifer.leeper@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

Indicator	Max Points – All Years
Percentage of 9th graders earning at least five full-year credits in the year *and* no more than one failing grade in English, Mathematics, Science or Social Studies	50

Description (What): For 2014-15, this indicator calculates the percentage of 9th graders earning at least five full-year credits in the year. In the future, it will add the criteria that there be no more than one failing grade in English, Mathematics, Science or Social Studies in the school year.

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 will also be applied to districts/schools where grade 8 is the terminal 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: Some questioned if the five credits in grade 9 represents being on-track since the total credits required to graduate in many high schools exceed the state minimum of 20. Others suggested 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 will be prorated based on the percentage of the ultimate target achieved.

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 On*Track* website includes videos, recorded webinars, and targeted reports focused on helping English language learners and students with disabilities stay on-track to graduation. All resources can be accessed here: http://ontrack.uchicago.edu/

With an increased focus on student success in Grade 9, many high schools have developed 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/resources-tools

While this indicator 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 as part of a comprehensive approach to keeping students on-track.

- **On Track for Success: The Use of Early Warning Indicators and Intervention Systems to Build a Grad Nation**, is designed to help educators implement a system that can increase educators' effectiveness by helping them use data to identify those students who are on track to graduate, and those who are falling behind, far enough in advance to provide appropriate interventions.
  http://every1graduates.org/images/pdfs/on_track_for_success.pdf.

- **Evidence Based Resources for Keeping Students on Track to Graduation**, George Washington University Center for Equity and Excellence in Education (January 2012) Provides resources for school wide, targeted, and intensive interventions designed to address attendance, behavior, and course failure.

http://www.doe.virginia.gov/support/school_improvement/title1/1003_g/resources/evidence_based_resources.pdf.

- **National Mentoring Partnerships** provides resources for 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. http://www.mentoring.org/

- Poliner, Rachel A. and Lieber, Carol Miller (2004), *The Advisory Guide: Designing and Implementing Effective Advisory Programs in Secondary Schools*, Educators for Social Responsibility. ISBN-10: 0942349016. How to design and implement an advisory program focused on building community and promoting academic success, social-emotional learning and postsecondary planning.

- **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.*
    - Northwest Regional Education Lab
    - National Career Academies Network
    - Johns Hopkins University Talent Development
    - New Tech High

- **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/

- **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 CTE webpage: http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320802
    - CSDE CT Core Standards website, CTE page: http://ctcorestandards.org/?page_id=1336
    - Association for Career and Technical Education, The National Research Center for Career and Technical Education at SREB, http://www.nrccte.org/
    - Southern Regional Education Board's *High Schools that Work* and *Advanced Careers. http://www.sreb.org/page/1608/Advanced_Career.html*

- **Practice Guide: Dropout Prevention.** Institute of Education Sciences (IES) (September 2008). This guide provides recommendations that focus on reducing

high school dropout rates.
http://www.ies.ed.gov/ncee/wwc/pdf/practice_guides/dp_pg_090308.pdf

Where can I get more information?	
QUESTIONS	CSDE CONTACTS
Resources, Strategies, and Best Practices	Kimberly Traverso Phone: 860-807-2057 Email: kimberly.traverso@ct.gov
Data Collection and Reporting	Jennifer Leeper Phone: 860-713-6832 Email: jennifer.leeper@ct.gov

INDICATOR 8: GRADUATION – FOUR YEAR ADJUSTED COHORT GRADUATION RATE – ALL STUDENTS

Indicator	Max Points – All Years
Percentage of first time 9th graders who graduate with a regular high school diploma in four years or less – All Students	100

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 ESEA Flexibility.

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) 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

Indicator	Max Points – All Years
Percentage of first time 9th graders who graduate with a regular high school diploma in six years or less – *High Needs Subgroup*	100

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) 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 2012 cohort illustrate why the six-year is a more fair and complete reflection of the successes of all students and subgroups.

Four-, Five-, and Six-year Graduation Rates for the 2012 Graduation Cohort

Category	4-Year Rate	5-Year Rate	6-year Rate (prelim)
All Students	84.8	87.5	88.1
ELL	62.7	70.4	71.4
Special Education	64.4	72.0	75.3
Low Income	70.5	75.4	76.2
High Needs	71.4	76.4	77.7
Male	81.5	85.0	85.7
Female	88.3	90.2	90.7
Hispanic	68.6	73.5	74.3
Indian or Alaska Native	84.5	85.3	85.7
Asian	91.9	94.7	95.1
Black	73.0	77.8	78.9
Hawaiian or Pacific Islander	95.0	95.0	95.0
White	91.3	92.9	93.4
Two or More Races	83.4	86.7	87.1

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 subgroups 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 subgroup* 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

- **The Governor's Prevention Partnership Youth Mentoring Program.** Through a partnership with MENTOR/National Mentoring Partnership, this programs 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

- **Project GRAD** partners with communities interested in creating a rigorous college-bound culture for their students. It targets schools serving economically disadvantaged students with the aim of increasing high school graduation and college entrance rates. http://www.projectgrad.org/

- **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/

- Poliner, Rachel A. and Lieber, Carol Miller (2004), *The Advisory Guide: Designing and Implementing Effective Advisory Programs in Secondary Schools*, Educators for Social Responsibility. ISBN-10: 0942349016. How to design and implement an advisory

program focused on building community and promoting academic success, social-emotional learning and postsecondary planning.

- **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.*
    - Northwest Regional Education Lab
    - National Career Academies Network
    - Johns Hopkins University Talent Development
    - New Tech High

- **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/

- 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://new.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/) 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 National Dropout Prevention Center for Students with Disabilities (NDPC-SD) at Clemson University was established in 2004 by the Office of Special Education Programs (OSEP). The Center's website (http://www.ndpc-sd.org/) includes links to content selected for specific audiences including districts, parents, and students. The resources

include strategies for carefully tracking key factors that serve as early warning signs of a problem as well as evidence-based dropout prevention measures.

- 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/). 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

Where can I get more information?	
QUESTIONS	CSDE CONTACTS
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	Patricia Anderson Phone: 860-713-6923 Email: patricia.anderson@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

Indicator	Max Points – All Years
Percentage of graduating class who enrolled in a 2 or 4-year postsecondary institution any time during the first year after high school graduation	100

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 will be 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 will be 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: http://sdp.cepr.harvard.edu/summer-melt-handbook

Where can I get more information?	
QUESTIONS	**CSDE CONTACTS**
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

Indicator	Max Points – All Years
Percentage of students meeting/exceeding the "Health Fitness Zone Standard" in all four areas of the CT Physical Fitness Assessment	50

Description (What): The Third Generation CT Physical Fitness Assessment (CTPFA) 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. It is administered to all students in grades 4, 6, 8, and 10. Criterion-referenced standards associated with good health are used rather than the normative standards.

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.

Methodology (How): 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.
- 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 ultimate target for the percentage of All Students meeting/exceeding the "Health Fitness Zone Standard" in all four areas of the CT Physical Fitness Assessment for a school or district is set at 75%.

Points will be prorated based on the percentage of the ultimate target achieved as adjusted by the participation rate multiplier. Two 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 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) http://www.shapeamerica.org/publications/resources/teachingtools/fitness_ed_resources.cfm

- Healthy and Balanced Living Curriculum Framework for Physical Education (CSDE) http://www.sde.ct.gov/sde/LIB/sde/PDF/deps/student/Healthy&BalancedLiving.pdf

- Guidelines for a Coordinated Approach to School Health (Section 3: Physical Education) http://www.sde.ct.gov/sde/LIB/sde/PDF/deps/student/Guidelines_CSH.pdf

- Monitoring Student Fitness Levels (Centers for Disease Control and Prevention) http://www.cdc.gov/healthyschools/physicalactivity/pdf/2014_09_12_14-249482-nihiser-collectingfitnessdata-final-508web_tag508_2.pdf

- Teacher's Toolbox Home (SHAPE America) http://www.shapeamerica.org/publications/resources/teachingtools/teachertoolbox/

- Let's Move! Active Schools www.letsmoveschools.org/

Where can I get more information?	
QUESTIONS	**CSDE CONTACTS**
Resources, Strategies, and Best Practices	Jean Mee Phone: 860-713-6542 Email: jean.mee@ct.gov
Data Collection and Reporting	Raymond Martin Phone: 860-713-6876 Email: raymond.martin@ct.gov

INDICATOR 12: ARTS ACCESS

Indicator	Max Points – All Years
Percentage of students in grade 9 through 12 participating in at least one dance, theater, music, or visual arts course in the school year	50

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 consideration will be given to expanding how this indicator is defined in future years.

Methodology (How): Points can be earned for the percentage of All Students in grades 9 through 12 who enroll in at least one arts course during the school year. Points will be prorated based on the percentage of the ultimate target achieved.

Data Source: June PSIS (to establish current year 9th through 12th graders) and Teacher Course Student (for course participation data)

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:
> http://www.artsedsearch.org/students/policy-implications

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**
   - CT Arts Standards http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320834
   - National Core Arts Standards http://nationalartsstandards.org/

2. **Arts Integration**
   - CT HOT Schools http://www.ct.gov/cct/cwp/view.asp?a=2212&q=293712;
   - Project Zero at Harvard   http://www.pz.harvard.edu/
   - Dance and Science integrated plan http://www.edutopia.org/pdfs/stw/edutopia-stw-bates-artsintegration-lessonplanvelocityaccel-presenta.pdf

- Mathematics and Art http://mason.gmu.edu/~jsuh4/math%20masterpiece.pdf
- 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:
- KCAEEN Arts Education Advocacy Toolkit: http://www.kennedy-center.org/education/kcaaen/resources/ArtsEducationAdvocacyToolkit.pdf
- Music Education: http://www.nammfoundation.org/support-music
- Visual Arts Education: http://www.arteducators.org/advocacy
- Theatre Education: http://schooltheatre.org/advocacy
- Dance Education: http://ndeo.org/content.aspx?page_id=22&club_id=893257&module_id=55775

Where can I get more information?	
QUESTIONS	CSDE CONTACTS
Resources, Strategies, and Best Practices	Jacqueline Coleman Phone: 860-713-6592 Email: jacqueline.coleman@ct.gov
Data Collection and Reporting	Jennifer Leeper Phone: 860-713-6832 Email: jennifer.leeper@ct.gov

APPENDICES

PERFORMANCE INDEX CALCULATION RULES

Overview

Subject-level indices are calculated at the student-, subgroup-, school- and district-levels. To calculate an index, a student's score in each subject on the Smarter Balanced Assessment (SB), National Center and State Collaborative Alternate Assessment (NCSC), Connecticut Mastery Test (CMT), Connecticut Academic Performance Test (CAPT) or the CMT/CAPT Skills Checklist 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" on page 7.

Student Individual Performance Indices (IPIs) are derived for each subject: Math, English Language Arts (ELA) 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.

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

Information from the following files is needed to calculate performance indices across each of the following assessments: SB, NCSC, CMT/CAPT and Skills Checklist (SKCK).

- SB and NCSC data files:
  - The demographic data were extracted from the CSDE frozen June 12, 2015 PSIS Registration File.
  - Only students in grades 3 through 8, and grade 11 are included in calculations.

- o Students with two records in either the SB file or NCSC file were reviewed to determine the appropriate record to include in calculations, the other record was suppressed.
  - o Students with two records across the SB and NCSC files were reviewed to determine the appropriate record to include in calculations, the other record was excluded.

- CMT, CAPT and SKCK data files:
  - o Student demographic data that originated in the PSIS January 2015 collection were used to prepopulate the Student Demographic Data Verification database (SDDV) for district review, correction and additions.
  - o Only students in grades 5, 8, and 10 are included in calculations.

- English Learner (EL) and Students with Disabilities (SWD) "Flex" Groups:
  - o As part of the Elementary and Secondary Education Act (ESEA), students who do not belong to the EL or SWD subgroups at the time of testing but who had been members of the EL or SWD subgroup in any time up to two years previous, are included in the EL flexibility and/or SWD flexibility subgroups. The previous subgroup status was determined using the EL and SWD PSIS Collection variables from October, January and June 2012-13 and 2013-14 collections, as well as the October and January 2014-15 collections.

The 1% Rule for NCSC and Skills Checklist

ESEA regulations allow states to administer alternate assessments to students with disabilities, provided certain criteria are met. This enables states, districts and schools to get credit within the accountability system for student performance on alternate assessments. Per federal regulations, the number of students who may be considered 'proficient' and 'advanced' based on alternate assessment scores cannot exceed 1% of all test records (standard and alternate versions).

Demographic Subgroups

The accountability demographic subgroups include:
1) Students with disabilities (SWD);
2) English Learners (EL);
3) All races and ethnicities; and
4) Students who are eligible for free or reduced price lunch.

In addition to these subgroups, the CSDE also creates a "High Needs" group. A student is a member of the High Needs group if that student is a member of any of the following subgroups: students with disabilities, English learners or students who are eligible for free or reduced price lunch. The High Needs subgroup is used in the Next Generation Accountability System.

Group Size

The minimum number of students needed to publish an index or participation rate is 20.

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 below provide a comprehensive list of the assessment status rules used for accountability calculations.

Smarter Balanced Assessment Data File Rules					
Test Status	**Attemptedness Status**	**Included in Participation Rate Calculation?**		**Included in Performance Index Calculation?**	**Description**
		Numerator	Denominator		
Completed	Y	Yes: Participant	Yes	Yes Scale Score	This represents the vast majority of students who attempted and submitted both parts (CAT and PT) of the subject area test.
Expired	Y	Yes: Participant	Yes	Yes Scale Score	This represents students who attempted at least one item in both parts but did not submit the test by the end of the test window.
Expired	P	Yes: Participant	Yes	Yes Assigned to Lowest Obtainable Scale Score	This represents students who logged into both parts of the test but did not attempt at least one item in both parts.
Invalidated	Blank	Yes: Non-Participant	Yes	No	This represents fewer than 20 students statewide who had invalidated tests.
Pending	N	Yes: Non-Participant	Yes	No	This represents students who logged into only one part (either CAT or PT) of a subject area test.
Blank	Blank	Yes: Non-Participant	Yes	No	This represents the vast majority of students who were absent for all parts of a subject area test.

NCSC Assessment				
Participation Status	**Reporting Status**	**Participation**		**Achievement**
		Numerator	Denominator	
Tested	TES	Yes: Participant	Yes	Yes Scale Score
Early Stopping Rule	ESR	Yes: Participant	Yes	Yes Lowest Obtainable Scale Score
Early Stopping Rule: Misadministration	ESM	Yes: Participant	Yes	Yes Scale Score
Incomplete	INC	Yes: Participant	Yes	Yes Scale Score
Invalidated	INV	Yes: Participant	Yes	No
EL Exempt	ELL	No	No	No
Exempt (Medical)	EXE	No	No	No
Did Not Test	DNT	Yes: Non-Participant	Yes	No
Withdrew	WDR	No	No	No
No Longer Eligible	NLE	No	No	No

CMT/CAPT and Skills Checklist Science			
Test Status	**Participation**		**Achievement**
	Numerator	Denominator	
Absent	Yes: Non-Participant	Yes	No
Void	Yes: Participant	Yes	No
Exempt (Medical)	No	No	No
Left Blank	Yes: Participant	Yes	Yes Lowest Obtainable Scale Score
Invalid Score	Yes: Participant	Yes	No
ELL Exempt	Yes: Participant	Yes	No
Withdrew	No	No	No

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. This paper outlines the specific methodology for converting scale scores for the various state assessments into Connecticut's performance index.

Scale Scores Improve Index Calculations

Individual student results from the English language arts (ELA), Mathematics, and Science assessments are reported in terms of scale scores and achievement levels. Achievement levels 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.

Achievement levels are derived from underlying scale scores. The underlying scale or ruler provides a more continuous measure of student performance such that one student with a significantly greater scale score than another student in the same achievement level can be said to be performing higher.

For district- and school-level accountability, Connecticut uses student scale scores, not achievement levels, to calculate performance index scores in ELA, Mathematics, and Science. This new 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 new index calculation will be more sensitive to changes in student performance over time and will provide an improved assessment of aggregate growth of students at the subgroup, school, and district levels.

The new calculation moves the performance index to a 0-110 scale. Important considerations in defining the index are that it allows for: (a) a comparison of schools and districts not only within a year, but also across years, and (b) bonus points to be assigned for the highest performing students (100-110). To meet these requirements, 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). Although the highest index value at the school, district, and subgroup level is 100, giving scores ranging from 100 to 110 to students who are the highest performing will have the effect of rewarding these schools and districts by weighting these scores additionally in the computation of the new performance index. Further information is provided in Tables 1-4, including the lowest and highest obtainable scores for all state assessments (Smarter Balanced ELA and Mathematics, CMT and CAPT Science, CMT and CAPT Science Skills Checklists, and Connecticut Alternate Assessments (CTAA) ELA and Mathematics).

Calculating the Performance Index

The formula used to convert student scale scores (Smarter Balanced, CTAA, CMT/CAPT Science, CMT/CAPT Science Skills Checklists) to an index value is presented below. The approach for converting CMT/CAPT Skills Checklist Science scores is the same; however, highest and lowest obtainable raw scores (HORS and LORS) are used in place of scale scores.

$$Index = \frac{Scale\ Score - LOSS}{Range} * 110$$

The following examples use information from Tables 1-4 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:

$$Index = \frac{2400 - 2114}{509} * 110 = 61.8$$

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:

$$\textbf{Index} = \frac{\textbf{1276} - \textbf{1200}}{\textbf{90}} * \textbf{110} = \textbf{92.9}$$

If a Grade 5 student earns a scale score of 200 on the CMT Science assessment, the index value for this score is 36.7. The calculation is performed as follows:

$$\textbf{Index} = \frac{\textbf{200} - \textbf{100}}{\textbf{300}} * \textbf{110} = \textbf{36.7}$$

Finally, if a Grade 10 student earns a raw score of 40 on the CAPT Skills Checklist Science, the index value for this score is 73.3. The calculation is performed as follows:

$$\textbf{Index} = \frac{\textbf{40} - \textbf{0}}{\textbf{60}} * \textbf{110} = \textbf{73.3}$$

Highest and Lowest Obtainable Scores and Range Tables

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

Subject	Grade	LOSS	HOSS	RANGE		Subject	Grade	LOSS	HOSS	RANGE
ELA	3	2114	2623	509		MATH	3	2189	2621	432
	4	2131	2663	532			4	2204	2659	455
	5	2201	2701	500			5	2219	2700	481
	6	2210	2724	514			6	2235	2748	513
	7	2258	2745	487			7	2250	2778	528
	8	2288	2769	481			8	2265	2802	537
	HS	2299	2795	496			HS	2280	2862	582

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

Subject	Grade	LOSS	HOSS	RANGE
ELA & MATH	3	1200	1290	90
	4	1200	1290	90
	5	1200	1290	90
	6	1200	1290	90
	7	1200	1290	90
	8	1200	1290	90
	HS	1200	1290	90

Table 3.
Connecticut Mastery Test (CMT) and Connecticut Academic Performance Test (CAPT) Science
Highest (HOSS) and Lowest (LOSS) Obtainable Scale Scores and Range

Grade	LOSS	HOSS	RANGE
5	100	400	300
8	100	400	300
HS	100	400	300

Table 4.
Connecticut Mastery Test (CMT) and Connecticut Academic Performance Test (CAPT) Science
Skills Checklist Highest (HORS) and Lowest (LORS) Obtainable Raw Scores and Range

Grade	LORS	HORS	RANGE
5	0	60	60
8	0	48	48
HS	0	60	60

HOW TO READ 2014-15 ACCOUNTABILITY REPORTS

The sample report below shows a district's performance on all indicators reported for the 2014-15 school year. To support appropriate interpretation, a brief explanation for every column heading is provided below the table.

No:	Indicator	Index/ Rate		Target	Points Earned	Max Points	% Points Earned	State Avg Index/Rate
1a.	ELA Performance Index – All Students	60.7		75	80.9	100	80.9	67.9
1b.	ELA Performance Index – High Needs Students	57.1		75	76.2	100	76.2	56.7
1c.	Math Performance Index – All Students	51.7		75	69.0	100	69.0	59.3
1d.	Math Performance Index – High Needs Students	48.5		75	64.7	100	64.7	47.8
1e.	Science Performance Index – All Students	46.8		75	62.4	100	62.4	56.5
1f.	Science Performance Index – High Needs Students	43.6		75	58.1	100	58.1	45.9
4a.	Chronic Absenteeism – All Students	16.3%		<=5%	27.4	50	54.8	10.6%
4b.	Chronic Absenteeism – High Needs Students	19.3%		<=5%	21.3	50	42.7	17.3%
5	Preparation for CCR – % taking courses	75.9%		75%	50.0	50	100.0	66.1%
6	Preparation for CCR – % passing exams	20.9%		75%	13.9	50	27.8	37.3%
7	On-track to High School Graduation	88.8%		94%	47.2	50	94.5	85.6%
8	4-year Graduation All Students (2014 Cohort)	76.4%		94%	81.3	100	81.3	87.0%
9	6-year Graduation - High Needs Students (2012 Cohort)	79.7%		94%	84.8	100	84.8	77.6%
10	Postsecondary Entrance (Class of 2014)	59.4%		75%	79.2	100	79.2	72.8%
11	Physical Fitness (estimated part rate) and (fitness rate)	85.5%	38.0%	75%	12.7	50	25.3	87.6% 51.0%
12	Arts Access	39.8%		60%	33.1	50	66.3	45.7%
	Accountability Index				**862.4**	**1250**	**69.0**	

- **No**: 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.
- **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*).
- **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. Index/Rate**: The values presented in this column are the performance indices (Indicator 1) and rates earned by this district on the associated indicators.

Many schools have one or more indicators that cannot be measured. In these cases, school reports will display "N/A" in the Index/Rate field and there will be 0 in the Points Earned, Max Points, and % Points Earned cells for those indicators. The overall Accountability Index (in the district example above, 68.8) is the percentage of total possible points earned on all available indicators. When all schools are classified into one of five categories following the 2015-16 school year, the school-level Accountability Index will be the primary factor used to determine placement with additional consideration given to participation rates, achievement gaps, and graduation rate gaps.

Note that the table above does not include Indicator 2 or Indicator 3. Indicator 2 is growth, which will be reported for the first time following the 2015-16 school year. Indicator 3 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, Math, and Science index scores for High Needs students and Non-High Needs students 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. 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 in ELA, Math, and Science are all less than the standard used to identify outliers. The same approach is used at the school level with the size of the gap compared to the average gap across all schools statewide.

Graduation rate gaps are determined in the same way. The graduation rate gap is based on the difference in 6-year graduation rates for High Needs and Non-High Needs students. As shown in the table below, this district has a gap that is less than the standard used to identify graduation rate gap outliers.

While there are no points associated with the gap measures, these data will be used when placing schools in one of five categories following the 2015-16 school year. 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.

Gap Indicators	Non-High Needs Rate*	High Needs Rate	Size of Gap	State Gap Mean + 1 Stdev	Is Gap an Outlier?
Achievement Gap Size Outlier?					N
ELA Performance Index Gap	70.5	57.1	13.3	17.3	
Math Performance Index Gap	60.3	48.5	11.8	19.6	
Science Performance Index Gap	55.4	43.6	11.8	17.1	
Graduation Rate Gap	91.9%	79.7%	12.2%	15.2%	N

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, and CMT/CAPT Skills Checklist Science) 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 will be used when placing schools in one of five categories following the 2015-16 school year. Additionally, schools are not eligible to be a School of Distinction if reports indicate that the school has not met participation requirements.

Participation Rate	Rate
ELA – All Students	98.6%
ELA – High Needs Students	98.8%
Math – All Students	98.4%
Math – High Needs Students	98.2%
Science – All Students	97.1%
Science – High Needs Students	96.7%

The bar chart below provides an at-a-glance view of the percentage of points earned on every indicator. The bar at the top of the graphic is the Accountability Index, representing the percentage of total possible points earned on all *available* indicators.

Please note that the subject-specific index scores are measured against a target of 75. The percentage of points earned is based on what percentage of the target is met. Therefore the subject-specific percentages presented below are <u>not</u> index values. Additionally, it may be helpful for those sharing these reports to provide audiences with district or school context regarding how many students are represented in the All Students group and how many students are members of the High Needs group.

Percentage of Points Earned by Indicator

Indicator	Value
Accountability Index	68.8
Arts Access	66.3
Physical Fitness (estimated part rate) and (fitness rate)	25.3
Postsecondary Entrance (Class of 2014)	79.2
6-year Graduation - High Needs Students (2012 Cohort)	84.8
4-year Graduation All Students (2014 Cohort)	81.3
On-track to High School Graduation	94.5
Preparation for CCR – % passing exams	27.8
Preparation for CCR – % taking courses	95.4
Chronic Absenteeism – High Needs Students	42.7
Chronic Absenteeism – All Students	54.8
Science Performance Index – High Needs Students	58.1
Science Performance Index – All Students	62.4
Math Performance Index – High Needs Students	64.7
Math Performance Index – All Students	69.0
ELA Performance Index – High Needs Students	76.2
ELA Performance Index – All Students	80.9