

# **Connecticut Next Generation Science Standards Assessment**

**2020–2021**

## **Volume 5: Test Administration**



CONNECTICUT STATE  
DEPARTMENT OF EDUCATION

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## 1. TEST INTERVALS, OPTIONS, AND ADMINISTRATIVE ROLES

### 1.1 TESTING WINDOWS

The 2020–2021 Connecticut Next Generation Science Standards (NGSS) Assessment testing window spanned approximately two and a half months for the summative assessments and eight months for the interim assessments. The paper-pencil fixed-form tests for summative assessments were administered concurrently during the two-and-a-half-month online summative window. Due to the Covid-19 pandemic, Connecticut also offered a remote administration of the NGSS assessment.

### 1.2 TEST OPTIONS AND ADMINISTRATIVE ROLES

The Connecticut NGSS Assessments are administered primarily online. To ensure that all eligible students in the tested grades were given the opportunity to take the Connecticut NGSS Assessments, a number of assessment options were available for the 2020–2021 administration to accommodate students’ needs. Table 1 lists the testing options that were offered in 2020–2021. Once a testing option was selected, it applied to all tests in the content area.

*Table 1. Summary of Tests and Testing Options in 2020–2021*

Assessments	Test Options	Test Mode
Summative Assessments	English	Online/Remote
	Braille	Online
	Spanish (toggle)	Online/Remote
	Paper-Pencil Large-Print Fixed-Form Test*	Paper-Pencil
	Paper-Pencil Braille Fixed-Form Test*	Paper-Pencil
Interim Assessments	English	Online

*Note.* \*For the paper-pencil fixed-form tests, all student responses on the paper-pencil tests were entered in the Data Entry Interface (DEI) by test administrators.

To ensure standardized administration conditions, teachers (TEs) and test administrators (TAs) followed procedures outlined in the NGSS *Test Administration Manual* (TAM). TEs and TAs reviewed the TAM prior to the beginning of testing in order to ensure that the testing room was prepared appropriately (e.g., removing certain classroom posters, arranging desks). Make-up procedures were established for any students who were absent on the day(s) of testing. TEs and TAs followed required administration procedures and directions and read the boxed directions verbatim to students, ensuring standardized administration conditions.

#### 1.2.1 Administrative Roles

The key personnel involved with the test administration for the Connecticut State Department of Education (CSDE) are District Administrators (DAs), District Test Coordinators (DCs), School Test Coordinators (SCs), Teachers (TEs), and Test Administrators (TAs). The main responsibilities of these key personnel are described in the following subsections. More detailed

descriptions can be found in the TAM provided online at <https://ct.portal.cambiumast.com/resources/>.

### **District Administrator**

The District Administrator (DA) may add users with District Test Coordinator (DC) roles in the Test Information Distribution Engine (TIDE). For example, a director of special education may need DC privileges in TIDE to access district-level data for the purposes of verifying test settings for designated supports and accommodations. DAs have the same test administration responsibilities as DCs. Their primary responsibility is to coordinate the administration of the Connecticut NGSS Assessments in the district.

### **District Test Coordinator**

The District Test Coordinator (DC) is primarily responsible for coordinating the administration of the Connecticut NGSS Assessment at the district level.

DCs are responsible for the following:

- Reviewing all NGSS policies and test administration documents
- Reviewing scheduling and test requirements with SCs, TEs, and TAs
- Working with SCs and Technology Coordinators (TCs) to ensure that all systems, including the secure browser, are properly installed and functional
- Importing users (including SCs, TEs, and TAs) into TIDE
- Verifying all student information and eligibility in TIDE
- Scheduling and administering training sessions for all SCs, TEs, TAs, and TCs
- Ensuring that all personnel are trained on how to properly administer the Connecticut NGSS Assessments
- Monitoring the secure administration of the tests
- Investigating and reporting all testing improprieties, irregularities, and breaches reported by the TEs and TAs
- Attending to any secure material according to CSDE policies

### **School Test Coordinator**

The School Test Coordinator (SC) is primarily responsible for coordinating the administration of the Connecticut NGSS Assessment at the school level and ensuring that testing within his or her school is conducted in accordance with the test procedures and security policies established by the CSDE. SC responsibilities include the following:

- Based on test administration windows, establishing a testing schedule with DCs, TEs, and TAs

- Working with technology staff to ensure timely computer setup and installation
- Working with TEs and TAs to review student information in TIDE to ensure that student information and test settings for designated supports and accommodations are correctly applied
- Identifying students who may require designated supports and test accommodations and ensuring that procedures for testing these students follow CSDE policies
- Attending all district trainings and reviewing all CSDE policies and test administration documents
- Ensuring that all TEs and TAs attend school or district trainings and review online training modules posted on the portal
- Establishing secure and separate testing rooms if needed
- Downloading and planning the administration of the classroom activity with TEs and TAs
- Monitoring secure administration of the tests
- Monitoring testing progress during the testing window and ensuring that all students participate, as appropriate
- Investigating and reporting all testing improprieties, irregularities, and breaches reported by the TEs and TAs
- Attending to any secure material according to CSDE policies

## **Teacher**

A teacher (TE) who is responsible for administering the Connecticut NGSS Assessments must have the same qualifications as a Test Administrator (TA). TEs also have the same test administration responsibilities as TAs. TEs are able to view their own students' results when they are made available. This role may also be assigned to teachers who do not administer the test but will need access to student results.

## **Test Administrator**

A Test Administrator (TA) is primarily responsible for administering the Connecticut NGSS Assessments. The TA's role does not allow access to student results and is designed for TAs, such as technology staff, who administer tests but do not have access to student results.

TAs are responsible for the following:

- Completing NGSS test administration training
- Reviewing all CSDE policy and test administration documents before administering any Connecticut NGSS Assessments

- Viewing student information before testing to ensure that a student receives the proper test with the appropriate supports and reporting any potential data errors to SCs and DCs, as appropriate
- Administering the Connecticut NGSS Assessments
- Reporting all potential test security incidents to the SCs and DCs in a manner consistent with CSDE, and district policies

### 1.2.2 Online Test Administration

Within Connecticut’s testing window, schools can set testing schedules, allowing students to test in intervals (e.g., multiple sessions) rather than in one long test period, minimizing the interruption of classroom instruction and efficiently utilizing its facility. With online testing, schools do not need to handle test booklets and address the storage and security problems inherent in large shipments of materials to a school site.

SCs oversee all aspects of testing at their schools and serve as the main point of contact, while TEs and TAs administer the online assessments only. TEs and TAs are trained in the online testing requirements and the mechanics of starting, pausing, and ending a test session. Training materials for the test administration are provided online.

To start a test session, the TE or TA must first enter the TA Interface of the online testing system using his or her own computer. A session ID is generated when the test session is created. Students who are taking the assessment with the TE or TA must enter their State Student Identification Number (SSID), first name, and session ID into the Student Interface using computers provided by the school. The TE or TA then verifies that the students are taking the appropriate assessments with the appropriate accessibility feature(s); see Table 2 in Section 5.2.4, Non-Embedded Accommodations, for a list of accommodations. Students can begin testing only after the TA or TE has confirmed the settings. The TA or TE then reads aloud the *Directions for Administration* in the NGSS TAM to the students and guides them through the login process.

Once an assessment has started, the student must answer the test question presented on a page before proceeding to the next page. Skipping questions is not permitted. For the online computer test, students are allowed to scroll back to review and edit previously answered items, as long as these items are in the same test session and this session has not been paused for more than 20 minutes. Students may review and edit responses they have previously provided before submitting the assessment. During an active online computer test session, if a student reviews and changes the response to a previously answered item, then all items that follow to which the student already responded remain the same. If a student changes the answers, no new items are assigned. For example, a student pauses for 10 minutes after completing item 10. After the pause, the student goes back to item 5 and changes the answer. If the response change in item 5 changes the item score from wrong to right, the student’s overall score will improve; however, there will be no change in items 6–10.

For the summative test, an assessment can be started on one day and completed on another. For the online computer test, the assessment must be completed within 45 calendar days of the start date or the assessment opportunity will expire.

During a test session, TEs or TAs may pause the test for a student or group of students to take a break. It is up to the TEs or TAs to determine an appropriate stopping point; however, to ensure the integrity of test scores or testing, the online computer test cannot be paused for more than 30 minutes. If that happens, the student must begin a new test session, which starts from where the student left off. Previous responses are no longer available for viewing or editing.

The TAs or TEs must remain in the room at all times during a test session in order to monitor student testing. Once the test session ends, the TAs or TEs must ensure that each student has successfully logged out of the system. Then the TAs or TEs must collect and send for secure shredding any handouts or scratch paper that students used during the assessment.

Due to the COVID-19 pandemic, in-person testing was not an option for all students. For the Spring 2021 test administration, CSDE allowed students to take the test remotely using the remote testing tools provided by Cambium Assessment, Inc. (CAI). A remote form was created for each grade and administered to any student who needed to take the assessment remotely. Prior to the summative remote administration, teachers and students were encouraged to practice using the remote tools when taking the interim and practice tests so that both teachers and students were familiar with the remote set-up before the summative assessments took place.

### **1.2.3 Paper-Pencil Test Administration**

The paper-pencil versions of the Connecticut NGSS Assessments are provided as an accommodation for students for whom the online test is not accessible. For Connecticut students, paper-pencil tests were offered only in braille and large print as documented in their IEP or Section 504 plan.

The DA must order the accommodated test materials on behalf of the students who need to take the paper-pencil test via the Test Information Distribution Engine (TIDE). Based on the paper-pencil orders submitted in TIDE, the testing contractor ships the appropriate test booklets and the paper-pencil TAM to the district.

After the student has completed the assessment, the TEs and TAs enter the student responses into the Data Entry Interface (DEI) and return the test booklets to the testing vendor. The tests submitted via the DEI are then scored.

### **1.2.4 Braille Test Administration**

The Science fixed-form braille test was available with the same test blueprint.

The braille interface is described below:

- The braille interface included a text-to-speech component for mathematics consistent with the read-aloud assessment accommodation. The Job Access with Speech (JAWS) screen-reading software provided by Freedom Scientific was an essential component that students used with the braille interface.
- Science items were presented to students in UEB Contracted with Nemeth Braille code.



Before administering the online summative assessments using the braille interface, TEs or TAs ensured that the technical requirements were met. These requirements applied to the student’s computer, the TE’s or TA’s computer, and any supporting braille technologies used in conjunction with the braille interface.

## **2. TRAINING AND INFORMATION FOR TEST COORDINATORS AND ADMINISTRATORS**

All DAs, DCs, and SCs oversaw all aspects of testing at their schools and served as the main points of contact, and TEs and TAs administered the online assessments. The online CAI TA Certification Course, webinars, user guides, manuals, and training sites were used to train TEs and TAs about the online testing requirements and the mechanics of starting, pausing, and ending a test session. Training materials for test administration were provided online.

### **2.1 ONLINE TRAINING**

Multiple online training opportunities were offered to key staff.

#### **2.1.1 TA Certification Course**

CAI's online TA Certification Course was available as an optional course to any user in TIDE. This web-based course was about 30–45 minutes long and covered information on testing policies and steps for administering a test session in the online system. This interactive course required participants to actually start test sessions under different scenarios. Throughout the training and at the end of the course, participants were required to answer multiple-choice questions about the information provided.

In addition to the online TA certification course, CAI also offered a certification course that focused on remote testing. This web-based course was about 20 minutes long and covered information on testing policies and steps for administering a remote test session in the online system.

#### **2.1.2 Office Hour Webinars**

During the testing window, the CSDE and CAI held office hours every Thursday from 3:00 p.m. to 4:00 p.m. During office hours, the CSDE and CAI staff provided brief, weekly assessment updates and were available for phone support to answer questions from districts. All office-hour sessions were recorded, and the recordings were posted to the portal.

#### **2.1.3 Practice Site**

In October 2018, a practice site was opened for TEs/TAs and students. TEs and TAs could practice administering assessments and starting and ending test sessions on the TA Training Site, and students could practice taking a short online assessment on the Student Practice and Training Site. The Connecticut NGSS Assessment practice tests contained the same item types (stand-alone and clusters) students would encounter on the Connecticut NGSS Summative Assessments. The practice tests were designed to provide students and teachers with opportunities to quickly familiarize themselves with the software and navigational tools they would use for the Connecticut NGSS Summative Assessments. Practice tests were organized by grade bands (grades 5, 8, and 11). The practice test was refreshed in August 2021.

A student could log in directly to the practice and training test site as a guest without a TA-generated test session ID, or the student could log in through a practice test session created by the TE or TA.

## 2.1.4 Manuals and User Guides

The following manuals and user guides were available on the Connecticut portal, <https://ct.portal.cambiumast.com/>.

The *Test Coordinator Manual* (Appendix A) provided information for DCs and SCs regarding policies and procedures for the 2021 NGSS assessments.

The NGSS *Test Administration Manual* (Appendix B) provided information for TEs and TAs administering the NGSS online summative assessments. It included screenshots and step-by-step instructions on how to administer the online tests.

The *Assistive Technology Manual* provides an overview of the embedded and non-embedded assistive technology tools that can be used to help students with specific accessibility needs complete online tests in the Test Delivery System (TDS). It includes lists of supported devices and applications for each type of assistive technology that students may need, as well as setup instructions for the assistive technologies that require additional configuration in order to work with TDS.

The technology resource manuals contain technology requirements and instructions that will assist technology coordinators in preparing computers and devices for online testing. A guide is created for each of the approved operating systems (Windows, Mac, iPad, Linux, ChromeOS).

The *Test Information Distribution Engine User Guide* was designed to help users navigate TIDE. It provided information on managing user account information, student account information, student test settings and accommodations, appeals, and voice packs.

The *Centralized Reporting System User Guide* provided information about the Centralized Reporting System (CRS), including instructions for viewing score reports, accessing test management resources, creating and editing rosters, and searching for students for both interim and summative assessments.

The *Test Administrator User Guide* was designed to help users navigate the TDS, including the Student Interface and the TA Interface, and to help TEs/TAs manage and administer online testing for students.

The *Assessment Viewing Application User Guide* provided an overview of how to access and use the Assessment Viewing Application (AVA). AVA allows teachers to view items on the NGSS interim assessments.

All manuals and user guides pertaining to the 2020–2021 online assessments were available on the portal, and DAs, DCs, and SCs used the manuals and user guides to train TAs and TEs in test administration policies and procedures.

## 2.1.5 Brochures and Quick Guides

The following brochures and quick guides were available on the CT portal, <https://ct.portal.cambiumast.com/>.

*Accessing Participation Reports:* This brochure provided instructions on how to extract participation reports for the NGSS assessments.

*Accessing TIDE:* This brochure provided a brief overview of user management in the Test Information Distribution Engine (TIDE) and instructions on how to log in to the system. School personnel needed to use TIDE account credentials to access all secure online systems used to administer Connecticut Comprehensive Assessment Program online assessments.

*Embedded and Non-Embedded Designated Supports for English Learners:* This brochure provided recommendations for students who were English learners (ELs) on what supports they might benefit from when participating on the Connecticut statewide assessments. These designated supports were intended as a language support for students with limited English language skills, whether or not they were identified in PSIS as EL or EL with a disability. The use of these supports may have resulted in the student needing additional overall time to complete the assessment.

*How to Access the Data Entry Interface (DEI):* This brochure described how to access the Data Entry Interface (DEI) in order to submit the NGSS paper-pencil tests.

*Next Generation Science Standards Interim Assessment Quick Guide:* This document provided a step-by-step guide on how to start a test session for the NGSS interim assessments. It included a complete list of all interim test labels as they appeared in the TA Interface.

*Managing Student Test Settings Brochure:* This brochure provided a brief overview on how to manage student test settings in TIDE. Students' embedded accommodations, non-embedded accommodations, and designated supports were set in TIDE prior to test administration so that these settings could be reflected in the test delivery system.

*Monitoring Test Progress: Test Status Code Report and Test Completion Rates:* This brochure contained instructions for generating Test Status Code Reports and Test Completion Rates in TIDE. These are excellent tools that should be used to track test completion for students at both the district and school level.

*User Role Permissions for Online Systems Brochure:* This brochure outlined the user roles and permissions for each secure online testing system used to administer the online assessments for the Connecticut Comprehensive Assessment Program. These systems included the Test Information Distribution Engine (TIDE), Centralized Reporting System (CRS), Test Administration (TA) Interface, Data Entry Interface (DEI), and Assessment Viewing Application (AVA).

*Understanding and Creating Rosters:* Rosters are groups of students associated with a teacher in a particular school. Rosters typically represent entire classrooms in lower grades, or individual classroom periods in upper grades. This document provided instructions on how to create, view, and modify rosters in TIDE and in the CRS.

## **2.2 DISTRICT TEST COORDINATOR TRAINING WORKSHOPS**

District Test Coordinator (DC) training workshops were held remotely from January 20 – 22, 2022. Training was provided for the administration of the Connecticut NGSS Assessments. During the training, DCs were provided with information to support training of the SCs, TEs, and TAs.

### 3. TEST SECURITY

All test items, test materials, and student-level testing information are considered secure materials for all assessments. The importance of maintaining test security and the integrity of test items is stressed throughout the webinar trainings and in the user guides, modules, and manuals. Features in the testing system also protect test security. This section describes system security, student confidentiality, and policies on testing improprieties.

#### 3.1 STUDENT-LEVEL TESTING CONFIDENTIALITY

All secure websites and software systems enforce role-based security models that protect individual privacy and confidentiality in a manner consistent with the Family Educational Rights and Privacy Act (FERPA) and other federal laws. Secure transmission and password-protected access are basic features of the current system and ensure authorized data access. All aspects of the system—including item development and review, test delivery, and score reporting—are secured by password-protected logins. Our systems use role-based security models to ensure that users may access only the data to which they are entitled and may edit data only in accordance with their user rights.

There are three dimensions related to identifying that students are accessing appropriate test content:

1. *Test eligibility* refers to the assignment of a test to a particular student.
2. *Test accommodation* refers to the assignment of a test setting to specific students on the basis of need.
3. *Test session* refers to the authentication process of a TE/TA creating and managing a test session, the TE/TA reviewing and approving a test (and its settings) for every student, and the student signing on to take the test.

FERPA prohibits public disclosure of student information or test results. The following are examples of prohibited practices:

- Providing login information (username and password) to other authorized TIDE users or to unauthorized individuals
- Sending a student’s name and SSID number together in an email message (If information must be sent via email or fax, include only the SSID number, not the student’s name.)
- Having students log in and test under another student’s SSID number

Test materials and score reports should not be exposed to identify student names with test scores except by authorized individuals with an appropriate need to know.

All students, including homeschooled students, had to be enrolled or registered at their testing schools in order to take the online, paper-pencil, or braille assessments. Student enrollment information, including demographic data, was generated using a CSDE file and uploaded nightly via a secured file transfer site to the CRS during the testing period.

Students logged in to the online assessment using their legal first name, SSID number, and a test session ID. Only students could log in to an online test session. TEs/TAs, proctors, or other personnel were not permitted to log in to the system on behalf of students, although they were permitted to assist students who needed help logging in. For the paper-pencil versions of the assessments, TEs and TAs were required to affix the student label to the student’s answer document.

After a test session, only staff with the administrative roles of DA, DC, SC, or TE were permitted to view their students’ scores. TAs did not have access to student scores.

## **3.2 SYSTEM SECURITY**

The objective of system security is to ensure that all data are protected and accessed appropriately by the designated user groups. It is about protecting data and maintaining data and system integrity as intended, including ensuring that all personal information is secured, that transferred data (whether sent or received) is not altered in any way, that the data source is known, and that any service can be performed only by a specific, designated user.

*A Hierarchy of Control:* As described in Section 1.2.1, Administrative Roles, all DAs, DCs, SCs, TAs, and TEs have defined roles and levels of access to the testing system. When the TIDE testing window opens, the CSDE provides a verified list of DAs to the testing contractor, who uploads the information into TIDE. DAs are then responsible for selecting and entering the DTs’ and SCs’ information into TIDE, and the SC is responsible for entering TA and TE information into TIDE. Throughout the year, the DA, DC, and SC are also expected to delete information in TIDE for any staff members who have transferred to other schools, resigned, or no longer serve as TAs or TEs.

*Password Protection:* All access points by different roles—at the state, district, school principal, and school staff levels—require a password to log in to the system. Newly added SCs, TAs, and TEs receive separate passwords through their personal email addresses assigned by the school.

*Secure Browser:* A key role of the Technology Coordinator (TC) is to ensure that the secure browser is properly installed on the computers used for the administration of the online assessments. Developed by the testing contractor, the secure browser prevents students from accessing other computers or Internet applications and from copying test information. The secure browser suppresses access to commonly used browsers, such as Internet Explorer and Firefox, and prevents students from searching for answers on the Internet or communicating with other students. The assessments can be accessed only through the secure browser and not by other Internet browsers.

## **3.3 SECURITY OF THE TESTING ENVIRONMENT**

### **3.3.1 Duties of Testing Personnel**

The SCs, TEs, and TAs work together to determine appropriate testing schedules based on the number of computers available, the number of students in each tested grade, and the average amount of time needed to complete each assessment.

Testing personnel are reminded in the online training and user manuals that assessments should be administered in testing rooms that do not crowd students. Good lighting, ventilation, and freedom from noise and interruption are important factors to consider when selecting testing rooms.

TEs and TAs must establish procedures to maintain a quiet environment during each test session, recognizing that some students may finish more quickly than others. If students are allowed to leave the testing room when they finish, TEs or TAs are required to explain the procedures for leaving and where students are expected to report once they leave without disrupting others. If students are expected to remain in the testing room until the end of the session, TEs or TAs are encouraged to prepare some quiet work for students to do after they finish the assessment.

If a student needs to leave the room for a brief time during testing, the TAs or TEs are required to pause the student’s assessment. For the ONLINE COMPUTER TEST, if the pause lasts longer than 20 minutes, the student can continue with the rest of the assessment in a new test session, but the system will not allow the student to return to the items answered before the pause. This measure is implemented to prevent students from using the time outside of the testing room to look up answers.

### **3.3.2 Room Preparation**

The room should be prepared prior to the start of the test session. Any information displayed on bulletin boards, chalkboards, or charts that students might use to help answer test questions should be removed or covered. This rule applies to rubrics, vocabulary charts, student work, posters, graphs, content area strategies charts, and other materials. The cell phones of both testing personnel and students must be turned off and stored in the testing room out of sight. TAs are encouraged to minimize access to the testing rooms by posting signs in halls and entrances in order to promote optimum testing conditions; they should also post “TESTING—DO NOT DISTURB” signs on the doors of testing rooms.

### **3.3.3 Seating Arrangements**

TEs and TAs should provide adequate space between students’ seats. Students should be seated so that they will not be tempted to look at the answers of others. Because the online computer test is Linter on the Fly, it is unlikely that students will see the same test questions as other students; however, through appropriate seating arrangements, students should be discouraged from communication with each other.

### **3.3.4 After the Test**

At the end of the test session, TEs or TAs must walk through the classroom to pick up any scratch paper that students used and any papers that display students’ SSID numbers and names together. These materials should be securely shredded or stored in a locked area immediately.

For the paper-pencil versions, specific instructions on how to package and secure the test booklets to be returned to the testing contractor’s office are provided in the *Paper and Pencil Test Administration Manual*.

## **3.4 TEST SECURITY VIOLATIONS**

Everyone who administers or proctors the assessments is responsible for understanding the security procedures for administering them. Prohibited practices as detailed in the NGSS TAM are categorized into three groups:

*Impropriety:* This is a test security incident that has a low impact on the individual or group of students who are testing and has a low risk of potentially affecting student performance on the test, test security, or test validity (for example: student[s] leaving the testing room without authorization).

*Irregularity:* This is a test security incident that impacts an individual or group of students who are testing and may potentially affect student performance on the test, test security, or test validity. These circumstances can be contained at the local level (for example: disruption during the test session, such as a fire drill).

*Breach:* This is a test security incident that poses a threat to the validity of the test. Breaches require immediate attention and escalation to the CSDE. Examples may include such situations as exposure of secure materials or a repeatable security/system risk. These circumstances have external implications (for example: administrators modifying student answers, or students sharing test items through social media).

District and school personnel are required to document all test security incidents in the test security incident log. The log serves as the document of record for all test security incidents and should be maintained at the district level and submitted to the CSDE at the end of testing.

## **4. STUDENT PARTICIPATION**

### **4.1 ELIGIBILITY**

All students (including retained students) enrolled in grades 5, 8, and 11 at public schools in Connecticut were required to participate in the Connecticut NGSS Assessments. Students had to be tested in the enrolled grade assessment; out-of-grade-level testing was not allowed for the administration of Connecticut NGSS Summative Assessments.

### **4.2 HOMESCHOOLED STUDENTS**

Home-schooled students are not public-school students and are not eligible to be administered state assessments.

### **4.3 EXEMPT STUDENTS**

The following students were exempt from participating in the Connecticut NGSS Assessments:

- Students who are hospitalized or homebound due to illness should be tested unless there are medical constraints that prevent them from testing and the student has received an approved medical exemption.

## **5. ONLINE TESTING FEATURES AND TESTING ACCOMMODATIONS**

The *CSDE Assessment Guidelines* are intended for school-level personnel and decision-making teams, including Individualized Education Program (IEP) and Section 504 Plan teams, as they prepare for and implement the Connecticut NGSS Assessments. The *Guidelines* provide



information for classroom teachers, English language development educators, special education teachers, and instructional assistants to use in selecting and administering universal tools, designated supports, and accommodations for those students who need them. The *Guidelines* are also intended for assessment staff and administrators who oversee the decisions that are made in instruction and assessment.

The *Connecticut Assessment Guidelines* apply to all students. They emphasize an individualized approach to the implementation of assessment practices for those students who have diverse needs and participate in large-scale content assessments. They focus on universal tools, designated supports, and accommodations for the NGSS assessments. At the same time, the *Guidelines* support important instructional decisions about accessibility and accommodations for students who participate in the Connecticut NGSS Assessments.

The summative assessments contain universal tools, designated supports, and accommodations in both embedded and non-embedded versions. Embedded resources are part of the computer administration system, whereas non-embedded resources are provided outside of that system.

State-level users, DCs, and SCs have the ability to set embedded and non-embedded designated supports and accommodations based on their specific user role. Designated supports and accommodations must be set in TIDE before starting a test session.

All embedded and non-embedded universal tools will be activated for use by all students during a test session. One or more of the pre-selected universal tools can be deactivated by a TE/TA in the TA Interface of the testing system for a student who may be distracted by the ability to access a specific tool during a test session.

For additional information about the availability of designated supports and accommodations, refer to the Connecticut’s Assessment Guidelines for complete information at <https://ct.portal.cambiumast.com/resources>.

## **5.1 ONLINE UNIVERSAL TOOLS FOR ALL STUDENTS**

Universal tools are access features of an assessment or exam that are embedded or non-embedded components of the test administration system. Universal tools are available to all students based on their preference and selection and have been pre-set in TIDE. In the 2020–2021 test administration, the following features of universal tools were available for *all* students to access. For specific information on how to access and use these features, refer to the *Test Administrator User Guide* posted online at <https://ct.portal.cambiumast.com/>.

### **5.1.1 Embedded Universal Tools**

*Breaks:* The number of items per session can be flexibly defined based on students’ needs. Breaks of more than 20 minutes will prevent students from returning to items already attempted unless an appeal for a test-reopen is requested by the District Administrator. There is no limit on the number of breaks that students might be given. The use of this universal tool may result in the students’ needing additional time to complete the assessment.

*Desmos Calculator:* The Desmos Calculator is available for all students taking the Connecticut NGSS Assessments in grades 5, 8, and 11. Students may use a hand-held calculator (per the calculator descriptions stated in this manual) as a non-embedded universal tool.

*Digital Notepad:* Students may use this tool to make notes about an item. The digital notepad is item-specific and is available through the end of the test segment. Notes are not saved when the student moves on to the next segment or after a break of more than 20 minutes.

*Expandable Passages:* Students may expand passages or stimuli so that they take up a larger portion of the screen.

*Highlighter:* Students may use this tool to mark desired text, item questions, item answers, or parts of these with a color. Highlighted text remains available throughout each test segment.

*Keyboard Navigation:* Students may navigate through the test by using a keyboard. Students are provided with a document called *Keyboard Commands for Students* that explains the various keystrokes.

*Line Reader:* The student uses an onscreen universal tool to assist in reading by raising and lowering the tool, allowing the student to focus on a single line of text on the screen.

*Mark a Question for Review:* Students may flag items for future review during the assessment. Markings are not saved when the student moves on to the next segment or after a break of more than 20 minutes.

*Strikethrough:* Students may cross out answer options. If an answer option is an image, a strikethrough line will not appear, but the image will be grayed out.

*Take as Much Time as Needed to Complete a NGSS Assessment:* Testing may be split between two sessions so that the testing does not interfere with class schedules. The online computer test must be completed within 45 calendar days of its starting date.

*Writing Tools:* Selected writing tools (i.e., bold, italic, bullets, undo/redo) are available for all student-generated responses.

*Zoom:* Students may use this tool to enlarge text or graphics in a window or frame. The default size for all tests is 14-point font. Students can enlarge text and graphics using the Zoom In button or return to the default size using the Zoom Out button. The Zoom feature only changes the size of text and graphics on the current screen. To increase the default print size of the entire test (from 1.5X to 3.0X default size), the print size must be set for the student in TIDE prior to the start of the test. This is the only feature that Test Administrators can set. The use of this universal tool may result in the student's needing additional time to complete the assessment.

## **5.1.2 Non-Embedded Universal Tools**

*Breaks:* Breaks may be given at predetermined intervals or after completion of sections of the assessment for students taking a paper-pencil test. Sometimes, students are allowed to take breaks when individually needed in order to reduce cognitive fatigue when they experience heavy assessment demands. The use of this universal tool may result in the student needing additional overall time to complete the assessment.

*Calculator:* When the embedded Desmos Calculator is not suitable for a student participating in the NGSS, the provision of a battery-operated hand-held calculator may be appropriate. If a calculator is provided, proctors must ensure that the device is functional, has working batteries, and that the student is familiar and comfortable with how to use it.

*Scratch Paper/White Board with Marker:* Scratch paper may be provided to make notes, write computations, or record responses. Only plain paper or lined paper is appropriate for English language arts (ELA) tests. Graph paper is required beginning in grade 6 and can be used on all mathematics assessments. Any kind of paper can be used for science. A whiteboard with marker may be used as scratch paper.

## **5.2 DESIGNATED SUPPORTS AND ACCOMMODATIONS**

Designated supports for the Connecticut NGSS Assessments are features that are available for use by any student for whom the need has been indicated by an educator (or team of educators with parent/guardian and student). Scores achieved by students using designated supports will be included for federal accountability purposes. It is recommended that a consistent process be used to determine these supports for individual students. All educators making these decisions should be trained on the process and should understand the range of designated supports available. CSDE have identified digitally embedded and non-embedded designated supports for students for whom an adult or team has indicated a need for the support.

Accommodations are changes in procedures or materials that increase equitable access during the Connecticut NGSS Assessments. Assessment accommodations generate valid assessment results for students who need them; they allow these students to show what they know and can do. Accommodations are available for students with documented IEPs or Section 504 Plans. CSDE approved accommodations do not compromise the learning expectations, construct, grade-level standard, or intended outcome of the assessments.

### **5.2.1 Embedded Designated Supports**

*Color Contrast:* Students may adjust screen background or font color, based on needs or preferences. This may include reversing the colors for the entire Student Interface or choosing the color of font and background; options include Black on White; Yellow on Blue; Medium Gray on Light Gray; or Reverse Contrast.

*Masking:* Students may block off content that is not of immediate need or that may be distracting. Students can focus their attention on a specific part of a test item by masking. Masking allows students to hide and reveal individual answer options, as well as all navigational buttons and menus.

*Mouse Pointer (Size and Color):* Students may request that the size and color of the mouse pointer be changed. A Test Administrator sets the size and color of the mouse pointer before testing.

*Permissive Mode:* Students can use accessibility software, such as screen readers or magnifiers, during testing.

*Print Size Online:* Print size online allows the font size viewed by the student in the test delivery system to be preset for the entire test. This designated support is generally most beneficial for students with visual disabilities.

*Streamline:* This accommodation provides a streamlined interface of the test in an alternate, simplified format in which the items are displayed below the stimuli.

*Text-to-Speech:* Students may have the text read aloud via embedded text-to-speech (TTS) technology. The student can control the speed, as well as raise or lower the volume of the voice via a volume control.

*Spanish Presentation (Toggle):* Spanish translations are a language support available for select Spanish-speaking students. The item is presented in Spanish, but there is a button students can select that will enable them to toggle to the English version of the item translation. For students whose primary language is not English and who use dual language supports in the classroom, the use of the translation may be appropriate. This support should only be used for students who are proficient readers in Spanish but are not proficient in English.

*Turn Off Any Universal Tools:* The student may request that any universal tools that might be distracting, that student does not need to use, or that student is unable to use be disabled during testing.

## **5.2.2 Non-Embedded Designated Supports**

*Bilingual Dictionary:* A bilingual/dual language word-to-word dictionary is a language support. For students whose primary language is not English and who use dual language supports in the classroom, use of a bilingual/dual language word-to-word dictionary may be appropriate. Students participate in the assessment regardless of the language. The use of this support may result in the student's needing additional time to complete the assessment. Glossaries Authorized for Use by English Language Learners on MCAS and PARCC provide potential resources for word-to-word dictionaries and are allowed on Connecticut's statewide assessments.

*Color Overlay:* Color transparencies may be placed over a paper-based assessment. Students with attention difficulties may need this support to view test content. This support also may be needed by some students with visual impairments or other print disabilities (including learning disabilities). The student must have the print-on-demand accommodation or use a large-print test booklet in order to use this designated support. Choice of color should be informed by evidence of those colors that meet the student's needs.

*Magnification:* The size of specific areas of the screen (e.g., text, formulas, tables, graphics, and navigation buttons) may be adjusted by students who use assistive technology devices. Magnification allows the student to increase the size to a level not supported by the Zoom universal tool. Students who are used to viewing enlarged text, graphics, or navigation buttons may need magnification to comfortably view content. This support also may meet the needs of students with visual impairments and other print disabilities. The use of this designated support may result in those students' needing additional time to complete the assessment.

*Native Language Reader Directions Only:* All test directions may be read and clarified in English or the student's native language for English learner (EL) students who have been identified as needing this support. A non-certified or certified staff person may administer this accommodation.

*Noise Buffer:* Students may use ear mufflers, white noise, WhisperPhone, or other equipment to block external sounds. A student (not groups of students) may wear equipment to reduce

environmental noises. Students may have these testing variations if they regularly use them in the classroom. Students who use noise buffers will need headphones unless they are tested individually in a separate setting.

*Read-Aloud Stimuli and Items:* Text is read aloud to students by a trained and qualified human reader who follows the *Test Administration Manual*, security procedures, and *Read Aloud Guidelines*. All or portions of the content may be read aloud. Students who are struggling readers may need assistance gaining access to the assessment by having all or portions of the assessment read aloud. This support also may be needed by students with reading-related disabilities or by students who are blind and do not yet have adequate braille skills. If not used regularly during instruction, this support is likely to be confusing and may impede the performance on assessments. Readers must be provided to students on an individual basis, not a group of students. Students should have the option of asking a reader to slow down or repeat text. The use of this support may result in one or more students' needing additional time to complete the assessment, and they will need to be tested in a separate setting.

*Read-Aloud Stimuli and Items (Spanish):* Spanish text is read aloud to the student by a trained and qualified human reader who follows the instructions and security procedures outlined in the *Test Administration Manual* and the *Guidelines for Spanish Read Aloud, Test Reader*. Readers must be provided to students on an individual basis, not to a group of students.

*Separate Setting:* Students who are easily distracted (or may distract others) may need an alternative location to be able to take the assessment. The separate setting may be a different room that allows the students to work individually or among a smaller group, or in the same room but in a specific location (for example, away from windows, doors, or pencil sharpeners; in a study carrel; with a WhisperPhone; near the teacher's desk; or in the front of a classroom). Some students may benefit from being in an environment that allows for movement, such as being able to walk around. In some instances, students may need to interact with instructional or test content outside of school, such as in a hospital or their home. A designated adult, employed by the school and trained in a manner consistent with the *Test Administration Manual* (TAM), including security procedures, may act as test proctor (Test Administrator) for the student. Some designated supports or accommodations require students to be assessed individually. These students would also require a separate setting. Examples include students who gain access to the Read Aloud designated support or accommodation, scribe, or speech-to-text.

### **5.2.3 Embedded Accommodations**

*Braille Type:* Access to braille (UEB Contracted + Nemeth), in conjunction with other technologies, is available through the online Test Delivery System when Permissive mode is set to YES in the student's Test Settings in TIDE. Technology, such as refreshable braille devices or the use of a braille embosser, is available on the Connecticut NGSS Assessments for students who use them.

### **5.2.4 Non-Embedded Accommodations**

*Alternate Response Options:* Alternate response options include, but are not limited to, adapted keyboards, large keyboards, StickyKeys, MouseKeys, FilterKeys, adapted mouse, touch screen, head wand, and switches. Students with some physical disabilities (including both fine motor and

gross motor skills) may need to use the alternate response options accommodation to gain access to the Connecticut NGSS Assessments. Some alternate response options are external devices that must be plugged in and must be compatible with the assessment delivery platform.

*Braille Booklet:* This accommodation is a fixed-form test booklet that provides all content in braille (UEB Contracted + Nemeth). It is typically used by students who have visual disabilities. Contracted or non-contracted forms of braille may be selected.

*Sign Language for Test Items:* The sign language accommodation for the Standard Science Assessment allows a qualified Test Administrator to sign the test directions or test content to a student who is deaf or hard of hearing. Students are tested individually, and, if necessary, a sign language interpreter may assist in test administration by providing directions and clarifying information.

*Large-Print Booklet:* This accommodation is a fixed-form test booklet that provides enlarged content. It is typically used by students who have visual disabilities.

*Print-on-Demand:* The accommodation for the provision of print-on-demand requires the Special Accommodations Procedure. Some students with disabilities may need paper copies of either passages/stimuli and/or items. A very small percentage of students need this accommodation. The use of this accommodation may result in students' needing additional time to complete the assessment. Permissive mode must be indicated within the TIDE system to gain access to this accommodation.

*Scribe:* The accommodation for the provision of a scribe requires the Special Accommodations Procedure. Teachers must be trained and must complete the Scribe Protocol provided by the CSDE when the special accommodation petition permission has been approved. Students dictate their responses to a qualified person who records verbatim what they dictate. These students may have significant processing or motor difficulties requiring a scribe for lengthy responses in instruction and assessment. This accommodation may result in students' needing additional time to complete the assessment.

*Specialized Calculator (Braille/Talking Calculator):* A specialized calculator (Braille/Talking Calculator) is typically used during instruction for students who are blind. A specialized calculator may also be used for those students who gain access to calculators by using assistive technology devices.

*Speech-to-Text:* The speech-to-text or voice-recognition software accommodation allows students to use their voices as input devices to the computer, to dictate responses, or to give commands (e.g., opening application programs, pulling down menus, saving work). Students use their own assistive technology devices, which generally include a microphone and headphones. Typically, students who have motor or processing disabilities (such as dyslexia) may use this accommodation and find it beneficial. Students need to be familiar with the software and have had many opportunities to use it during instruction. Speech-to-text software requires that students know writing conventions and that they have reviewing and editing skills; thus, experience with this accommodation prior to testing is essential. When students use their own assistive technology devices, all assessment content must be deleted from these devices after testing, for security purposes. Permissive mode must be indicated within the TIDE system to gain access to this accommodation.

Table 2 presents a list of universal tools, designated supports, and accommodations that were offered in the 2020–2021 administration of the Connecticut NGSS Assessments.

*Table 2. 2020–2021 Universal Tools, Designated Supports, and Accommodations*

Universal Tools	Designated Supports	Accommodations
<b>Embedded</b>		
Breaks Desmos Calculator Digital Notepad Expandable Passages Highlighter Keyboard Navigation Line Reader Mark a Question for Review Strikethrough Writing Tools Zoom	Color Contrast Masking Mouse Pointer (Size and Color) Permissive Mode Print Size Online Spanish Presentation (Toggle) Streamline Text-to-Speech Turn off Any Universal Tools	Braille Type
<b>Non-Embedded</b>		
Breaks Calculator Scratch Paper/White Board with Marker	Bilingual Dictionary Color Overlay Magnification Native Language Reader Directions Only Noise Buffers Read Aloud Stimuli and Items Read Aloud Stimuli and Items (Spanish) Separate Setting	Alternate Response Options Braille Booklet Sign Language for Test Items Large-Print Booklet Print-on-Demand Scribe Specialized Calculator (Braille/Talking Calculator) Speech-to-Text

*Note.* \*Unless otherwise noted, items shown are available for the Connecticut NGSS Assessments.