

# PLTW Assessments

## Administration Manual

Spring 2024

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# Table of Contents

<b>INTRODUCTION .....</b>	<b>4</b>
<b>Established Value in the End-of-Course Assessment .....</b>	<b>4</b>
Unbiased Scores .....	4
Ease of Use .....	4
College Credit .....	4
<b>Defining the PLTW EoC Assessment .....</b>	<b>5</b>
<b>Defining the Informative Assessment Tool (IAT).....</b>	<b>6</b>
<b>Testing Windows .....</b>	<b>7</b>
<b>New This Year .....</b>	<b>7</b>
<b>Preparation Milestones.....</b>	<b>7</b>
Complete Student Profiles .....	7
Administer Practice Quizzes.....	7
Manage Testing Schedules.....	8
<b>PREPARING FOR THE TEST.....</b>	<b>9</b>
<b>Fair Testing – Avoid Surprises .....</b>	<b>9</b>
<b>Technology Requirements .....</b>	<b>10</b>
Whitelists and Firewalls .....	10
Kite Student Portal .....	10
Technical System Check .....	10
<b>myPLTW .....</b>	<b>10</b>
Rostering Students in a PLTW Course .....	11
Updating the Student Profile to Include all Required Fields.....	11
<b>PLTW Kite Educator Portal.....</b>	<b>12</b>
Navigating the Home Page.....	12
<b>Accommodated Test Administration.....</b>	<b>14</b>
Paper Testing Forms.....	14
Braille Testing Forms .....	14
Additional Accommodations and Universal Design .....	14
<b>Confirming “Assessment Ready” Status .....</b>	<b>15</b>
<b>EOC ASSESSMENT TEST DAY .....</b>	<b>16</b>
<b>EoC Assessment Test Security.....</b>	<b>16</b>
Allowable Items .....	16
Prohibited Items .....	16

Prohibited Behavior.....	16
<b>Before You Start.....</b>	<b>17</b>
Obtaining a Daily Access Code .....	17
Usernames and Passwords.....	18
Emergencies During Testing .....	18
Managing Technical Irregularities .....	19
Student Directions for Taking the Test (Read Aloud).....	19
<b>Starting the Test Session .....</b>	<b>20</b>
Electronic Monitoring During the Session.....	21
<b>Ending the Test .....</b>	<b>21</b>
<b>AFTER THE TEST .....</b>	<b>22</b>
Accessing Score Reports .....	22
Use and Interpretation of EoC Assessment Scores .....	23
Item Challenge.....	23
<b>USING THE IAT .....</b>	<b>24</b>
Creating Quizzes in the IAT .....	24
Assigning Quizzes in the IAT .....	25
Managing Quizzes in the IAT.....	25
Delivering Quizzes in the IAT .....	26
Reviewing IAT Quiz Results.....	26
Test Summary Report.....	26
Student Report .....	27
<b>HOW EOC ASSESSMENTS ARE DEVELOPED - TEACHER RECRUITMENT.....</b>	<b>29</b>
<b>RESOURCES .....</b>	<b>31</b>
Tutorial Videos.....	31
PDF Document Links.....	31
EoC Assessment Blueprints .....	31
Sample EoC Assessment Score Reports.....	32

# Introduction

## Established Value in the End-of-Course Assessment

PLTW assessments are designed to provide a valuable service for schools engaged in our high school courses.

### ***Unbiased Scores***

The End of Course (EoC) Assessment is a standardized test that allows students and administrators to report course performance using results from a tool that is developed by a nationally recognized provider and administered in the schools in a standardized setting.

### ***Ease of Use***

- Student rosters transfer automatically from PLTW courses to the PLTW Kite platform.
- A secure exam browser (SEB) is available for download to maintain standardized administration.
- Scores are generally available within 24 hours.

### ***College Credit***

PLTW's high-quality assessment **design and development process** enables many colleges and universities to offer PLTW students higher educational opportunities, which may include admissions preferences, recruitment opportunities, waiver of first-year course requirements, or even an offer of transcriptable college credit. This may help lower college and university tuition fees for students who participate in EoC Assessments.

American Council on Education (ACE) Learning Evaluations has evaluated and recommended college credit for seven PLTW courses: Civil Engineering and Architecture, Cybersecurity, Digital Electronics, Human Body Systems, Principles of Biomedical Science, Medical Interventions, and Principles of Engineering.

Founded in 1918, ACE is the major coordinating body for all the nation's higher education institutions, representing more than 1,600 college and university presidents and more than 200 related associations nationwide.

All seven courses are now listed on the [ACE National Guide](#). As college credit opportunities are solidified, all information will be listed on PLTW's [Student Opportunities page](#)

**PROJECT LEAD THE WAY, INC.**

Project Lead The Way (PLTW) equips PreK-12 students for a STEM-driven world with teacher-empowered curriculum in computer science, engineering, biomedical science, and more. For over 25 years, PLTW's curriculum coupled with its best-in-class professional development has supported teachers in creating an environment to make every student STEM successful. As a national nonprofit organization, PLTW is proud to reach 2.5 million students in elementary, middle and high schools in all 50 states. With over 100,000 trained teachers nationwide, PLTW brings relevant, hands-on learning to classrooms across the country.

<https://www.pltw.org>

Search in this Organization [SEARCH] OTHER WAYS TO SEARCH  
 ADVANCED SEARCH | BROWSE ORGANIZATIONS

Filter results:

Type: [SELECT] Active:  From: [SELECT] To: [SELECT] FILTER CLEAR ALL

Title	ACE ID	Organization's ID	Start Date	End Date	Total Recommended Credits
Civil Engineering and Architecture	PLTW-0006		09/01/2023	09/31/2026	3
Cybersecurity	PLTW-0007		09/01/2023	09/31/2026	3
Digital Electronics	PLTW-0005		09/01/2023	09/31/2026	3
Human Body Systems	PLTW-0002		09/01/2023	09/31/2026	3
Medical Interventions	PLTW-0003		09/01/2023	09/31/2026	3
Principles of Biomedical Science	PLTW-0001		09/01/2023	09/31/2026	3
Principles of Engineering	PLTW-0004		09/01/2023	09/31/2026	3

## Goals for PLTW System of Assessments

### Student Learning

A philosophy of assessment for learning enables students to develop lifelong learning skills. Engagement in a variety of assessment practices allows students to evaluate, improve, and ultimately become owners of their education.

### Teacher Empowerment

Teachers engage students in various assessment activities (informal, formal, formative, summative, etc.). Student-level reporting enables teachers to improve instruction, differentiate learning, and facilitate student success.

### Administrator Support

Aggregated assessment data specifically curated to inform school and district leadership.

## Defining the PLTW EoC Assessment

The EoC Assessment is designed as a summative test for PLTW high school courses. **All PLTW schools are required, per the agreed upon participation agreement, to administer the EoC Assessment for high school courses** (except capstone courses such as EDD and BI). Exceptions were extended during the Covid pandemic and the immediate recovery year for schools that were unable to ensure fidelity to the required standards. The exceptions have expired.

The tests are machine-scored and generally provide results within 24 hours of completion. EoC Assessments are developed following professional best practices for creating standardized assessments. Administration of the EoC Assessment follows

process and security procedures that support college and university award of credit for specified exam scores, including the use of a Secure Exam Browser (SEB) to prevent copy and paste of secure materials or access to external resources during the test.

## **Defining the Informative Assessment Tool (IAT)**

The IAT includes items similar in content and style to those used for the EoC Assessment. Teachers may preview and select items to create quizzes. New this year is the option to configure rationale review after each item. Each quiz may be offered multiple times for use as either a self-paced learning tool OR a graded quiz.

## Testing Windows

May 1, 2024	EoC Assessment available for POE
June 30, 2024	End of 2023-24 PLTW Assessments Administration

## New This Year

HBS: Course updates are reflected in the EoC Assessment.

POE: POEL (legacy) became available December 1, 2023. The EoC Assessment for POE (reflecting 2024 updates) will be available May 1, 2024. Final scores for the new POE EoC Assessment will be available after the test window has closed.

Software: Kite 4.0 is required to administer the EoC Assessment in 2023-24. The underlying software has released essential updates. The newer app version brings better security and improved functionality to protect student data. To ensure the best and most secure testing experience possible, Kite 3.0 has been removed from our supported list.

IAT: Teachers may now enable the display of rationales when using the IAT. When rationales are enabled, students will see the correct answer to each item immediately after responding and may change their responses before scoring. Teachers may also select a preview that displays or hides the correct answers when creating a quiz.

## Preparation Milestones

### ***Complete Student Profiles***

Statistical analysis of test results helps ensure against systematic bias across student subgroups. To support the post-administration analysis student profiles must include first and last name, grade, date of birth, gender, race, and Hispanic ethnicity. Students may select "Prefer Not to Say" for the gender, race, and Hispanic ethnicity profiles.

Students who have completed a student profile will have a checkmark by their name in the "Assessments Ready" column in your myPLTW class roster. Complete rosters are transferred to Kite automatically. Teachers may also confirm that an EoC Assessment has been assigned through the Kite Educator Portal.

### ***Administer Practice Quizzes***

Students benefit from practice with items that require higher-order thinking and synthesis of information. Scenarios in the IAT are designed to help students to think deeply about course topics and challenge them to consider solutions that are not immediately apparent.

Real world scenarios may not map precisely onto curriculum content because such scenarios are intended to determine that students can generalize what they know to

new settings and situations. Encourage your students to consider responses based on learning across multiple lessons. Including rationales in the stimulates consideration of alternate solutions.

### ***Manage Testing Schedules***

Each section of the EoC Assessment will include approximately 25 questions. Please ensure enough time for students to read carefully and thoughtfully as they consider their responses. We recommend a full class period (a minimum of 50 minutes) and encourage making allowances for students that require more time.



# PREPARING FOR THE TEST

PLTW EoC Assessments are designed to measure more than rote memorization skills or equations that are divorced from real-world applications. The test design includes scenarios like those one might encounter in the given field of study. Each scenario is accompanied by a block of test questions related to the scenario. Teachers and subject matter experts from higher ed and professionals from the field of study develop scenarios aligned to the curriculum. Test items sample student competency across multiple domains addressed in the PLTW course. A **Test Blueprint** for each course identifies relative weights for various skill cluster groupings.

## Fair Testing – Avoid Surprises

According to the Joint Committee on Testing Practices<sup>1</sup>, students must be informed before the test event of what material will be on an assessment and what they will be able to do with the results. While the student portal is designed for ease of use, students should be offered an opportunity to practice test navigation before the day of the test. Prepare your students early in the school year to help them understand the connections between what they are learning and what they will see on the EoC Assessment.

1. Review Test Blueprints and Sample Score Reports with your students to make them aware of test content and its alignment to their course of study. **Test Blueprints and Sample Score Reports** are linked for each course later in this document. These documents offer a definitive outline of material covered on the EoC Assessment and the weight each skill cluster has been assigned by the subject matter experts who designed the assessment.
2. The IAT provides practice using the online testing platform and allows teachers to engage students in discussions that model synthesis and higher order processing. Students may not be familiar with this approach to testing in high school, and the EoC Assessment (and the preparation tools available in the IAT) will help prepare them for the type of tests they will encounter in the future.
3. Explain why students will choose to complete the EoC Assessment each year, including the options for college credit based on successful completion of the course and qualifying EoC scores. Share a **Sample Score Report** as you review potential student opportunities. See more details on the Student Opportunities page at [PLTW.org](https://www.pltw.org).<sup>2</sup>

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<sup>1</sup> Joint Committee on Testing Practices, Code of Fair Testing Practices in Education, available at <https://www.apa.org/science/programs/testing/fair-testing.pdf>

<sup>2</sup> Connecting Students to College- and Career-Focused Opportunities, <https://www.pltw.org/experience-pltw/student-opportunities>

# Technology Requirements

## *Whitelists and Firewalls*

To support schools in protecting internal networks, PLTW provides a comprehensive list of internet sites that may be required for the administration of the EoC Assessment. Updated documentation for establishing whitelists and configuring firewalls may be download at [PLTW Kite Portal Whitelisting and Firewall Information](#).

## *Kite Student Portal*

The PLTW Secure Kite Student Portal is available for Windows, Macs, iPads, and Chromebooks. Administration of the EoC Assessment requires Kite version 4.0, which is available for download and installation from the [PLTW Software](#) webpage.

To ensure the best and most secure testing experience possible, Kite 3.0 has been removed from our supported list. The underlying software has released important updates. The newer version of the app brings better security and improved functionality to protect student data.

A nine-minute video – [PLTW Kite Portal Technology Training](#) – is available to support network and device readiness for school-owned equipment.

## *Technical System Check*

Teachers and Technology support staff may log in to the installed Kite Secure Student Portal to check the functionality of the network and device configurations. The sample includes all item types and navigation tools in the PLTW Kite Student Portal. You can use the technical system check multiple times with username demo.1 and password DEN65.

## myPLTW

To access the myPLTW home page:

1. Log in to your account at [mypltw.org](http://mypltw.org).
2. Enter user credentials and select Log in.
3. Click My Sites in the top left.
4. Click the name of your school from the list to enter your Classes page.

You may manually manage your rosters, enter the Educator Portal, or view EoC Assessment results from previous years from the Classes page.

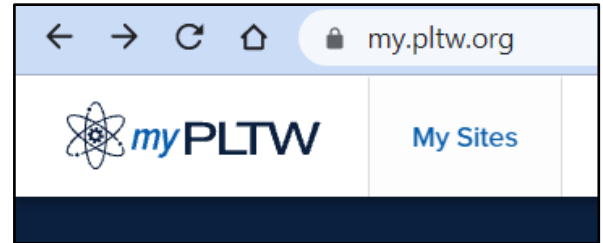
### Technical System Check

Username: demo.1

Password: DEN65

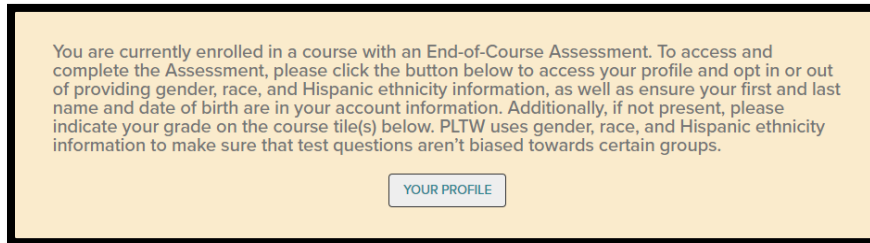
## ***Rostering Students in a PLTW Course***

PLTW rosters will be automatically transferred to Kite, allowing student access to PLTW assessments. Rostering guides are available to support teachers using Clever or the CSV upload process by contacting the PLTW Solution Center.



## ***Updating the Student Profile to Include all Required Fields***

To be assigned an EoC Assessment, a student must have completed all data fields: first and last name, grade, date of birth, gender, race, and Hispanic ethnicity. PLTW uses gender, race, and Hispanic ethnicity information to ensure all items are fair across racial and ethnic groups. If this information is not on file, students will be prompted to enter it when they log in to myPLTW. See the sample below.



By clicking on Your Profile, a student can provide this information. Teachers may also complete this information for all students.

A screenshot of the 'My Profile' page. At the top left, there is a '< Home' link. The page title is 'My Profile'. Below the title is a section titled 'Account Information'. This section contains three input fields: 'First Name', 'Last Name', and 'Username'. The 'Username' field is pre-filled with the text 'lemonfrog9861'. The 'First Name' and 'Last Name' fields are empty.

Demographic Information

You are currently enrolled in a course with an End-of-Course Assessment. To access and complete the Assessment, please provide the gender, race, and Hispanic ethnicity section below. PLTW uses this information to make sure that test questions aren't biased towards certain groups. If you do not wish to share this information with PLTW, please choose "Prefer Not to Say."

What is your gender?

Female       Male       Gender Not Listed Here

Prefer Not to Say

What is your race?

White       Black or African American       Asian

American Indian       Native Hawaiian or Pacific Islander       Two or More Races

Prefer Not to Say

Are you of Hispanic ethnicity?

Yes       No       Prefer Not to Say

## PLTW Kite Educator Portal

The Kite Educator Portal is used to:

- Create and assign quizzes using the IAT.
- Locate a list of Kite student passwords.
- Configure additional online tools through the Personal Needs Profile (PNP).
- Monitor testing sessions.

### *Navigating the Home Page*

The Kite Educator Portal is role-based to protect sensitive student data.

- Teachers will have access to records for their rostered students.
- Site coordinators will have access to student records across their site/school.
- Program coordinators will have access to student records for students across their district.

The following steps correspond to numbers shown in red on the figure below.

1. Your name will show on the upper right of the screen where you see "Logged in as."
2. Role, Organization, and Assessment Program appear in drop-down menus under your name. If you have more than one role or organization, you can switch between them using the drop-down menus.

- **Home** – This house icon returns you to the home page of the Kite Educator Portal.
- **Settings** – Used to view rosters.
- **Manage Tests** – Allows you to see how students are progressing through a session or to download the daily access code required each day for the EoC Assessment.
- **Interim** – Allows you to create and assign Informative quizzes and view student results.
- **Reports** – Contains data extracts available in the PLTW Kite Educator Portal.
- **Dashboard** – Displays summaries of administrations, reactivations, testing outside hours, and error messages.
- **Help** – User manuals.



3. My Profile section of the home screen allows you to quickly update your displayed name and your password.
4. The Quick Links icons access frequently used areas.

Teachers will be prompted to read and agree to an on-screen security statement, similar to the one shown below, at the beginning of each school year when accessing the PLTW Kite Educator Portal.

Overview	Edit Display Name	Change Default Role	Security Awareness	Security Agreement	Security Renewal/Expiration
<p>The Kite Suite provides opportunities for flexible assessment administration; however, all assessments delivered during the school year are secure.</p> <p>Test administrators and other educational staff who support implementation are responsible for following the Kite test security standards:</p> <ol style="list-style-type: none"> <li>1. Assessments (testlets) are not to be stored or saved on computers or personal storage devices; shared via email or other file sharing systems; or reproduced by any means.</li> <li>2. Except where explicitly allowed as described in the Test Administration Manual, electronic materials used during assessment administration may not be printed.</li> <li>3. Those who violate the Kite test security standards may be subject to their state's regulations or state education agency policy governing test security.</li> <li>4. Educators are encouraged to use resources provided by Kite Suite, including practice activities and released testlets, to prepare themselves and their students for the assessments.</li> <li>5. Users will not give out, loan or share their password with anyone. Allowing others access to an Educator Portal account may cause unauthorized access to private information. Access to educational records is governed by federal and state law.</li> <li>6. The PLTW EoC Assessment Administration Manual contains important information that is required to be followed by both teachers and students. By clicking below, you verify that you have read the PLTW EoC Assessment Administration Manual and confirm that you agree to follow policies contained within the document.</li> </ol> <p>Questions about security expectations should be directed to the local assessment coordinator.</p> <p><input checked="" type="checkbox"/> I have read this security agreement and agree to follow the standards.</p> <p style="text-align: center;"><a href="#">Save</a></p>					

# Accommodated Test Administration

## ***Paper Testing Forms***

PLTW will provide paper forms if required by a student with an Individualized Education Plan (IEP), Section 504 Plan (504 Plan), or Individual Learning Plan (ILP). You must notify PLTW four weeks in advance of your anticipated test date to allow processing time for printing and shipment to your school. Requests should include the name of the course and the anticipated test date (not the student's name) emailed to [pltwassessment@pltw.org](mailto:pltwassessment@pltw.org). Schools will receive an electronic authorization form through a secure document management system (DocuSign) to collect the student's name while protecting personally identifiable information.

## ***Braille Testing Forms***

PLTW will provide Braille forms if required. Braille forms are produced by a specialized vendor, so schools must request them at least six weeks in advance of the anticipated test date. Requests should include the name of the course and the anticipated administration date (not the student's name) emailed to [pltwassessment@pltw.org](mailto:pltwassessment@pltw.org). Schools will then receive an electronic authorization form through a secure document management system (DocuSign) to protect personally identifiable information.

## ***Additional Accommodations and Universal Design***

PLTW designs assessments are designed to be broadly accessible to all students. The most frequently requested accommodations are distraction free environment and extra time. Both requests are managed by the individual schools. Be sure that all students are proctored during the test. If a student is testing in a private room, a proctor must supervise that room during the testing session. If a student requires additional time, the time allotted for testing should be sufficient for them to complete each session without leaving the proctored setting.

Extended online options such as modified color overlay and text-to-speech audio may be selected for any student and must be configured at least 24 hours in advance through the individual student Personal Needs Profile (PNP) in the PLTW Kite Educator Portal. Please use the sample Text to Speech demo to preview the automated text-to-speech format.

### **Sample Text-to-Speech Demo**

Username: demo.pnp

Password: SAUCE

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**Note:** Student accommodation configurations in Kite Educator Portal must be updated at least 24 hours before the testing. For more information, please view the [PLTW Kite Portal User Manual – Teacher View](#).

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To update PNP accommodation configurations in the Educator Portal:

1. Click on Settings.
2. Select Students from the main menu.
3. Locate the Student Record.
4. Click No Settings.
5. Select Edit Settings.

## Confirming “Assessment Ready” Status

Teachers should confirm student profiles are complete and that EoC Assessments are assigned to each student in their class using the Assessment Ready feature on the Classroom page of their myPLTW account. To access the Classroom page, click My Sites from the myPLTW homepage, and then choose your school and class. If there is a checkmark in the Assessment Ready column, no further action is required, and the student is ready to test. If you do not see a checkmark in that column, click the Assessment Ready Detail button to determine incomplete fields. For more instructions on using the [Assessment Readiness](#) report, download the instructions provided.

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**Note:** A manual EoC Assessment assignment may require several hours, so please confirm readiness several days before the anticipated administration date.

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# EoC Assessment TEST DAY

## EoC Assessment Test Security

### ***Allowable Items***

- Scratch paper: Provided by the school.
- Calculator: On screen or personal (not cell phone).
- Engineering Formula Sheet: On screen or provided by the school using the PDF provided.

### ***Prohibited Items***

- Cell phones
- Smartwatches
- Cameras
- Tablets
- Audio or video recording devices
- Other connected devices

### ***Prohibited Behavior***

- Listening to recorded or streaming music on a headset
- Recording, transmitting, or discussing the test content during or after the test
- Leaving the classroom before completing an entire testing session

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**For test security reasons, access to the test will be revoked after 90 minutes of inactivity.**

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Follow test security rules in place for your district and state related to the administration of standardized assessments (those assessments used for accountability purposes). Report any suspected academic misconduct to school administrators immediately.

In the case of suspected academic dishonesty, the use of prohibited items, or any prohibited behavior, please discontinue the testing session for that student and contact the PLTW Solution Center immediately.

Do not allow the student to continue testing or to start another session until the situation has been resolved. PLTW reserves the right to invalidate scores if the test or the testing session may have been compromised.



## Before You Start

### ***Obtaining a Daily Access Code***

The daily access code is a test security measure to limit the risk of unintended access to the EoC Assessment. Only the proctor responsible for monitoring the event and students who will be actively testing in that session should see these codes.

Codes are available for download beginning 3:30 p.m. local time for the next day of testing. Codes change daily and are unique for each course. Students must enter a different daily access code for each section of the test, even if both sections are administered on the same day.

The security notice below will be shown before a teacher or administrator may view the daily access code.

**EoC Security Agreement** ✕

- I have received training on secure test administration from my district, state assessment offices, or from my PLTW program or site coordinator.
- I understand that test administrators are required to actively monitor during the entire testing session.
- I will not discuss or solicit the contents of the EoC with anyone before, during, or after the test administration.
- I will not copy, record, electronically capture, post, or distribute any part of the EoC.
- I understand that each section of the EoC requires a full 50-minute session.

Click 'Agree' to agree with the statements above.

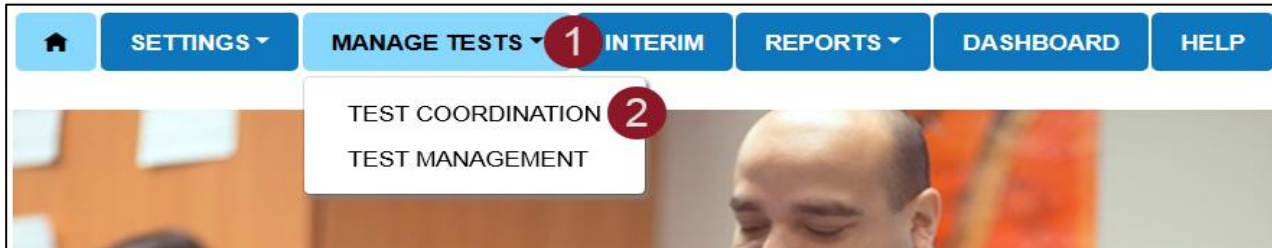
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**Note:** If you will be sharing daily access codes with other teachers or staff, please be sure they understand the safeguards required when providing daily access codes to their students.

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1. Select the **Manage Tests** tab and then Test Coordination.
2. Select the **View Daily Access Codes** tab and complete the fields.

You will then select the checkboxes to identify the Daily Access Codes you would like to print, click on the **View Access Codes** button, and click on Done.



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**Note:** Do not provide the daily access code for both sections unless students have time to complete both sections.

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### ***Username and Passwords***

1. To download usernames and passwords, access the PLTW Kite Educator Portal and navigate to **Reports and Data Extracts** and find **the Student Login Usernames/Passwords** extract.
2. Download the most recent CSV and/or PDF by clicking **New File** in the student usernames and passwords extract row.
3. The PLTW Kite Student Portal usernames match students' myPLTW usernames, but the Kite passwords will be unique to Kite.

For additional detail about downloading student usernames and passwords or learning more about the other data extracts available in the PLTW Kite Educator Portal, see [PLTW Kite Portal User Manual – Teacher View](#).

### ***Emergencies During Testing***

**Emergency Situations:** If a local emergency (e.g., fire alarm, weather emergency, student illness, etc.) causes an interruption during testing, the student should close the session by pressing the device power button to stop the Kite application.

Student responses are automatically saved to the cloud as they are submitted. In case of emergency (fire alarm, power outage, etc.) previous responses are protected.

## ***Managing Technical Irregularities***

**Power or Internet Outage:** Items answered before an outage will be saved. If the power or internet restores within 90 minutes, students may log in to Kite and continue the test, starting where they left off. If the delay is longer than 90 minutes, please contact the PLTW Solution Center for further instructions.

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*PLTW Solution Center – 877.335.7589*

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**Local Low Bandwidth/Computer Device Issues:** The EoC Assessment is designed to display on a wide variety of devices. Extremely low bandwidth or high internet latency may cause certain simulations or graphic images to display improperly. Confirm device and network configurations and notify the PLTW Solution Center immediately if display issues impact the student testing experience.

### ***Student Directions for Taking the Test (Read Aloud)***

To maintain test security and avoid student coaching, all administrators must read the script below to students prior to starting each EoC Assessment testing session.

Today, you will be taking the PLTW End-of-Course Assessment. The EoC Assessment is based on the PLTW course you are completing and is designed to allow you to show your understanding of the course material as it applies to real-world situations. Be sure to read each question carefully and scroll, if necessary, to see the entire screen.

You may not use your cell phone during the test.

The EoC Assessment has two sections, each with approximately 25 questions. Each section is designed to be completed in approximately 50 minutes.

You may mark items for review or skip them and go on to the next question. You will have a chance to return to those you have skipped or marked for review, as time allows, before you submit the current section of the test for scoring. You must complete section one before you begin section two of the EoC Assessment. Scores are generally available within 24 hours after you have completed the second section.

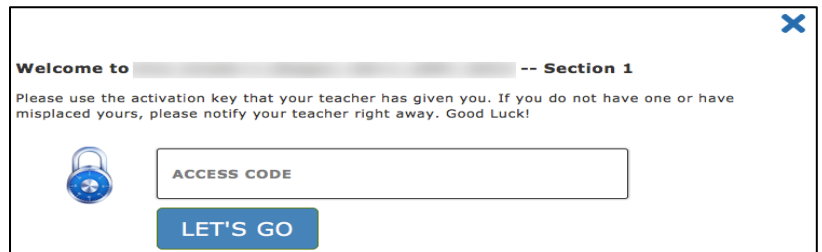
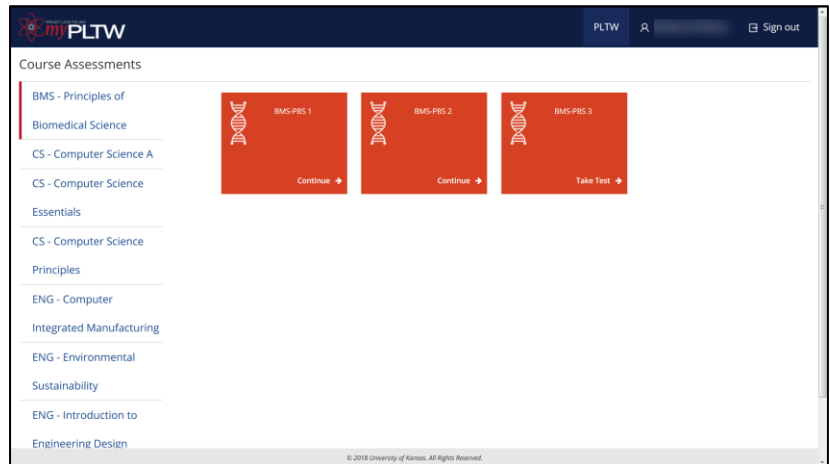
If you experience any technical difficulties during the test, please notify the teacher or test proctor immediately.

Get started when you are ready!

# Starting the Test Session

The EoC Assessment requires a Secure Exam Browser (SEB) on each student testing device to prevent copy and paste functions or access to unauthorized internet sites.

1. Students will initiate the browser through the PLTW Kite Student Portal installed on their testing device.
2. If the student is taking more than one PLTW course, they must select a course name from the menu on the left side of the screen.
3. Students may have multiple tiles available if you have assigned quizzes from the IAT. They should select the tile for the EoC Assessment.
4. Click *Take Test* or *Continue*.
5. When the following screen displays, the students should type the daily access code in the *ACCESS CODE* field and click *LET'S GO*.
6. Click *BEGIN* (or *NEXT*).



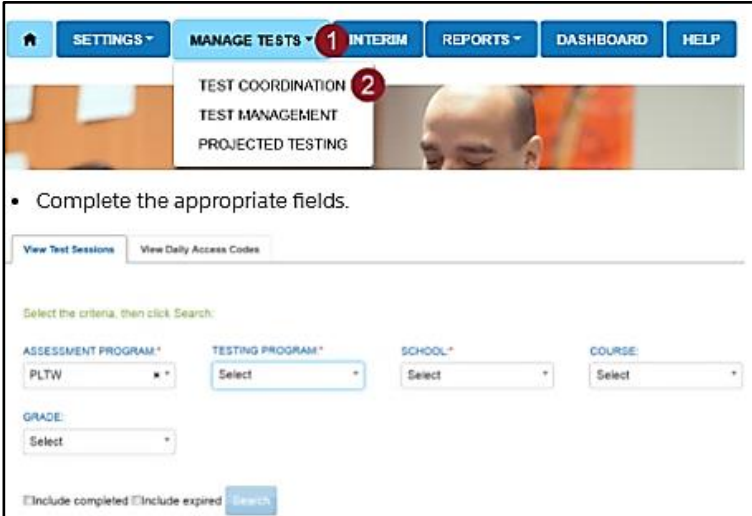
Full instructions on the use of the PLTW Kite Student Portal, including descriptions of each function, are available in the [PLTW Kite Portal User Manual – Student View](#). A five-minute video is available to showcase the [student experience](#).

## Electronic Monitoring During the Session

The steps correspond to numbers on the figure below. Teachers may monitor sessions to view student progress. Specific items or responses will not show on the screen.

1. Click the **Manage Tests** menu.
2. Click **Test Coordination**
  - Complete appropriate fields
  - Click **Search**
  - In the **Test Session Name** column, click the name of the session.
  - Click the **Monitor** tab.

The Status column indicates whether the student has started a test. Each numbered column corresponds to a question on the test. The solid blue circles indicate that the student has completed the question. An empty circle indicates that the student has not completed the question. Two asterisks (\*\*) indicate that the student was not assigned the question.



The screenshot shows the 'MANAGE TESTS' menu with a red circle '1' next to 'INTERIM'. The 'TEST COORDINATION' option is highlighted with a red circle '2'. Below the menu, there is a search form with the following fields:

- ASSESSMENT PROGRAM\*: PLTW
- TESTING PROGRAM\*: Select
- SCHOOL\*: Select
- COURSE: Select
- GRADE: Select

At the bottom, there are checkboxes for 'Include completed' and 'Include expired', and a 'Search' button.

---

**Note:** Use the **Test Administration Data Extract** to easily view test session status for multiple students in the same screen view.

---

## Ending the Test

When a student navigates past the final item on a test section, they will be presented with a review screen. The review screen will identify items that are unanswered or flagged for review. Students may return to any item and may change answers as part of their review. Students may end their test by selecting **END** and verify their intention to submit for scoring by selecting **YES** on a second screen.

# AFTER THE TEST

- Proctors are responsible for collecting all scratch paper and/or formula provided during the EoC Assessment.
- Remind students that they must not discuss specific EoC Assessment content with others, even after the session. If students want to share comments or report a specific issue to PLTW, encourage them to contact the PLTW Assessment Team directly by email at [pltwassessment@pltw.org](mailto:pltwassessment@pltw.org).

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**EoC Assessment content is protected by law. Do not include direct quotes from test items in an unsecured email transmission.**

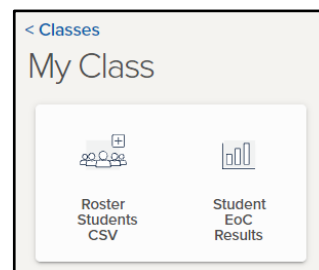
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## Accessing Score Reports

Scores for the current year are available in several different formats, including individual student score report PDFs and aggregated score reports in CSV. Students must submit both sections of the EoC Assessment before scoring.

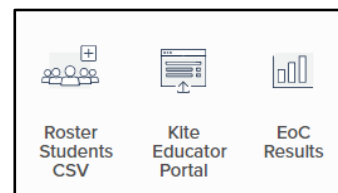
To view current results from the home page of your account in myPLTW:

1. Enter **My Sites** by selecting the tab located at the top left of the home page.
2. Select your school from the displayed list of PLTW program schools in your district.
3. Move to the **My Class** page by selecting your class roster.
4. Click **Student EoC Results**.
5. Select your preferred file format for download.
6. Click **Submit**.



Previous year results may be downloaded in an aggregated format from the home page of your account in **myPLTW**:

1. Enter **My Sites** by selecting the tab located at the top left of the home page.
2. Select your school from the displayed list of PLTW program schools in your district.
3. Select **EoC Results** from the box at the top left of the screen.
4. Select the school year from the drop-down box at the lower right of the screen and click **Download**.



Students may access their scores by clicking on the **Assessments** tab in the student's myPLTW account.

## Use and Interpretation of EoC Assessment Scores

Sample score reports for each course are available using links provided in the Appendix. For more information about use and interpretation of scores see [Understanding PLTW End-of-Course Assessment Results](#).

While the EoC Assessment is validated for measuring student achievement at the completion of each PLTW high school course, it has not been evaluated as a tool for the evaluation of instructors. If schools plan to use scores for any purpose outside of that which PLTW intends, it is the users' responsibility to validate scores for that specific use.

### Item Challenge

Students may want to ask teachers about specific test items during or after the test. Teachers should generally not view test items on screen, BUT if a technical issue arises, or students are confused by navigation, a teacher may be required to interact with a "live" item. The PLTW Assessments team makes every effort to review and edit items before they become part of the EoC Assessment, but if a student identifies an issue (punctuation, grammar, missing or inaccurate information) please encourage them to email their concern directly to [pltwassessment@pltw.org](mailto:pltwassessment@pltw.org). Their email should include the name of the course, the school's name, the test date, and if possible, the item number from their test. A brief description of the concern will help in reviewing the item.

To protect the standardized testing approach, PLTW team members cannot discuss specific items during the testing window. In the rare occurrence when rescoring is required, revised scores will be posted to the student account and modifications made to the aggregate records only after the annual content review and statistical analysis are complete.

Some items on each form are field test items, which means they will not be included in the student's final score on the test. Once an item has passed field testing and moved to an operational status, the item is included in the annual post-administration statistical analysis.



# USING THE IAT

The IAT allows teachers to offer quizzes with a variety of technology-enhanced items using the PLTW Kite digital testing platform. These quizzes offer content-rich testing opportunities in a low-stakes environment. This opportunity will be especially important for students who may be unfamiliar with the digital delivery of tests, or who have not used the Kite tool recently.

Most item blocks include a scenario and four to seven items aligned to various topics addressed in the course. Students may expect to find items requiring recall and varying degrees of synthesis in each item block. Technical content and transportable skills blend in the quiz, as in the real world.

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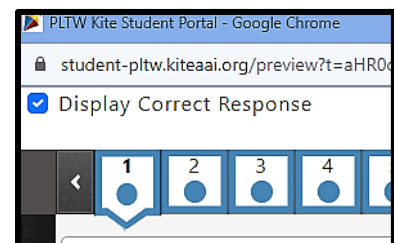
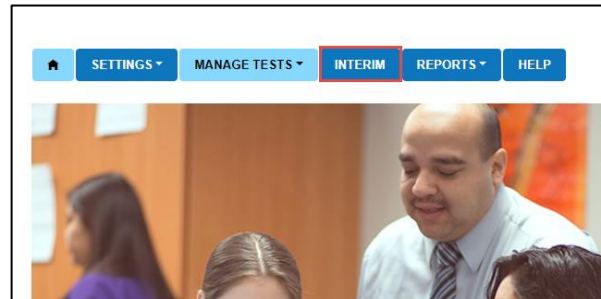
**New this year: Rationales are included for student review. This option is configurable (by the teacher) when the quiz is created.**

---

Teachers assemble and assign quizzes using one or several item blocks. The preview function allows teachers to see the items as they will display on student screens. The preview function will default to displaying correct responses. A secure browser is not required for administration of a quiz created using the IAT, and proctoring is optional, so students may test outside of the classroom. Teachers may also extend project-based collaboration by allowing students to respond in groups. Many PLTW teachers use the IAT to model test questions requiring higher order thinking.

## Creating Quizzes in the IAT

1. Select the **Interim** tab from within the PLTW Kite Educator Portal.
2. Select **Build or Copy a Test**.
3. On the **Build a Test** tab, select your course from the drop-down menu, and then select **Search**.
4. You will see a list of available item blocks displayed.
5. Click on the **Frameworks Tested** button to view the content frameworks represented in each item set.
6. You may preview individual item blocks before adding them to a quiz by clicking on the **Preview** button. Within the preview function, all items default to displaying correct answers. Teachers may deselect the default by clicking the box beside "Display Correct Response."
7. Add item block(s) to a quiz by selecting the **" +Add"** button. The title of the selected item set will move from





the list of **Available Tests** to the list of **Selected Tests**. Note that there may be more item blocks to choose from on additional page views.

8. Configure the quiz to enable rationales after a student responds to each question by selecting the **Enable Rationale** box at the bottom of the screen. Note that students may modify their response in a block, after seeing each rationale, so this may not be an appropriate setting for scored quizzes.
9. Confirm your selection using the **Save** button, and you will be able to name your test and enter a description.

## Assigning Quizzes in the IAT

After you select, name, and save a new test, you may assign the test by navigating to the **My Test** section of the **Interim** tab.

1. Select the tab to **Assign Tests**.
2. Select your State, District, and School from the drop-down menus.
3. Select the **Search** button.
4. Highlight your test name.
5. If you would like to assign the quiz to all students in your roster, select the test you want to assign, select **Automatically to Roster(s)**, choose the class roster, and then select **Assign**.
6. To assign a test to specific students or student groups select **Specific Student(s)**, choose the group or **individual student(s)**, and select **Assign**.

## Managing Quizzes in the IAT

After a quiz has been created it can be managed by clicking on the **Interim** tab and selecting My Tests. There are several additional actions available on the **Manage Tests** tab.

- **Start** – Activates the quiz in the PLTW Kite Student Portal.
- **Stop** – Inactivates the quiz in the PLTW Kite Student Portal
- **Monitor** – Allows the educator to monitor the progress of each student's session.
- **Tickets** – Provides a list of PLTW usernames and Kite passwords for students.
- **Delete** – Deletes a quiz you have created. Quizzes may not be deleted once responses have been saved for that test.
- **Preview** – View the test as a student will see it.
- **Frameworks Tested** – View domains, objectives, and knowledge and skills that align to the test.
- **View/Edit Feedback** – View or update previously provided student feedback.

IAT quizzes may be reused multiple times and will be deleted at the end of each school year.

## Delivering Quizzes in the IAT

Quizzes may be accessed through the Kite Student Portal installed on each student device, or directly through the web. Using Firefox, Chrome, Safari, Firefox iOS, Chrome iOS, or Microsoft Edge, students can copy and paste the following URL into their browser: <https://student-pltw.kiteaai.org/TDE/logIn.htm>. Students will use their PLTW username and the Kite Student Portal password.



When used as a self-directed learning tool, the IAT may be configured to show the correct response and the rationale after each item. In the rationale viewing mode students may change answers at the item level, allowing them to achieve a perfect score on each item block. When used as a scored quiz, teachers may configure the quizzes without rationale, in which case students will see their scores after each item block and may not change answers after they have seen their scores. Teachers can access student IAT scores throughout the entire school year.

## Reviewing IAT Quiz Results

To view results, click the **Interim** tab and **View Results**.

There are four reports available for quizzes. Information may be sorted in columns by clicking on the three dots at the right of the column header. Reports may be exported using the **Export** button at the bottom of the report.

1. **Student Activity Report:** Summary of all quizzes within your organization.
2. **Student Test:** Comprehensive data for each student's performance on each item.
3. **Test Summary:** Data for each student's score per item and for the entire quiz.
4. **Test Items:** Data for each item with an aggregation of student responses.

### Test Summary Report

The test summary report shows the final percentage correct for students, or which items students performed well on and on which ones they performed poorly.

Teachers may also review individual items based on the information contained in this spreadsheet. For example, in the illustration shown almost every student performed better on item four than on item three.

Test Summary Report															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	First Name	Last Name	Student Id	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total Points	Total %
2	Student1	Test1	6608626	1	1	1	1	1	1	1	0	1	1	9	90%
3	Student10	Test10	6608635	1	0	0.25	0.83	0	0.67	0.6	1	1	0	5.35	53.50%
4	Student2	Test2	6608627	1	0	0.5	0.83	0	0.17	0	1	1	1	5.5	55%
5	Student3	Test3	6608628	0	0	0	0.83	1	0.67	0.2	0	0	0	2.7	27%
6	Student4	Test4	6608629	1	1	0	0.33	0	0.33	1	1	0	0	4.66	46.60%
7	Student5	Test5	6608630	0	1	0.5	1	0	1	1	0	1	1	6.5	65%
8	Student6	Test6	6608631	1	1	0.25	1	1	0.17	0	1	1	1	7.42	74.20%
9	Student7	Test7	6608632	1	1	0.5	0.17	0	0.67	1	0	0	0	4.34	43.35%
10	Student8	Test8	6608633	0	1	0.25	1	0	1	1	0	1	1	6.25	62.50%
11	Student9	Test9	6608634	1	0	0	1	1	1	1	1	0	0	6	60%
12															

To learn more about what this might mean for teaching and reteaching, teachers might revisit the quiz and look at the individual items. Looking at items three and four in this block, they might draw conclusions to suggest why students might have done better on item four than item three. However, they might want more information such as the answers students selected or input, or the knowledge and skills that each item is mapped to. For that level of information, examine the Student Report.

**Student Report**

Columns A-C in the figure below are the same as those presented on the Test Summary Report; these fields help identify the student. Note that the spreadsheet will be exported automatically with the test sorted by student. Rows two through eleven, in the screen capture from the Student Report shown below, provide information for the same student.

Student Report								
	A	B	C	D	E	F	G	H
1	First Name	Last Name	Student ID	Test	Total Points	Total %	Completion Date	Question
2	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q1
3	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q2
4	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q3
5	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q4
6	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q5
7	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q6
8	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q7
9	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q8
10	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q9
11	Student1	Test1	6608626	Drone Des 9		90%	Apr 16, 2020	Q10
12	Student10	Test10	6608635	Drone Des 5.35		53.5%	Apr 16, 2020	Q1
13	Student10	Test10	6608635	Drone Des 5.35		53.5%	Apr 16, 2020	Q2
14	Student10	Test10	6608635	Drone Des 5.35		53.5%	Apr 16, 2020	Q3
15	Student10	Test10	6608635	Drone Des 5.35		53.5%	Apr 16, 2020	Q4

Column I, in the section of the report shown below, shows student responses while column J shows the correct response. These columns are particularly helpful for determining trends in student responses. Some of the items have very straightforward responses. For example, item 10's correct answer is 60,411. Other responses – such as the response to item three – are a little more complex because they are technology-enhanced items (TEI) that use techniques such as drag and drop, matching, or sequencing. Just as was recommended with the Test Summary report, it is best to view these answers in the context of the assessment, referring back to the preview function used to create the quiz.

Columns K through O provide scoring information. There are many uses for this report, and it may be helpful to sort or filter to see data for only a single student or a single item.

Student Report							
H	I	J	K	L	M	N	O
Question	Student Response	Correct Response	Score	%	Item Type	Scoring Tyy	Max Score
Q1	Define the goal, assign responsibilities, and	Define the goal, assign responsibilities, a	1	100	MC-K	CORRECT	1
Q2	Contact the expert and ask if they are willing	Contact the expert and ask if they are wil	1	100	MC-K	CORRECT	1
Q3	Your group is sketching ideas in a	Your group is in the shop constru	1	100	ML	PARTIALCF	1
Q4	Keep a positive attitude. Encourage the team	Keep a positive attitude. Encourage the	1	100	MC-MS	MULTTRUI	1
Q5	detect and avoid objects	detect and avoid objects	1	100	MC-K	CORRECT	1
Q6	prevent collisions locate lost aircraft determ	prevent collisions locate lost aircraft	1	100	MC-MS	MULTTRUI	1
Q7			1	100	BG	PARTIALCF	1
Q8	Toadstool	Alliance	0	0	MC-K	CORRECT	1
Q9	60 FR	60 FR	1	100	MC-K	CORRECT	1
Q10	60411	NAME 1: Response1 CORRECT 1: 60411	1	100	CR	CORRECT	1
Q1	Define the goal, assign responsibilities, and	Define the goal, assign responsibilities, a	1	100	MC-K	CORRECT	1
Q2	Assign a team member to independently resi	Contact the expert and ask if they are wil	0	0	MC-K	CORRECT	1
Q3	Your group is sketching ideas in a	Your group is in the shop constru	0.25	25	ML	PARTIALCF	1
Q4	Encourage the team to move forward. Keep	Keep a positive attitude. Encourage the	0.83	83	MC-MS	MULTTRUI	1
Q5	measure and control current	detect and avoid objects	0	0	MC-K	CORRECT	1
Q6	prevent collisions	prevent collisions locate lost aircraft	0.67	67	MC-MS	MULTTRUI	1
Q7			0.6	60	BG	PARTIALCF	1
Q8	Alliance	Alliance	1	100	MC-K	CORRECT	1
Q9	60 FR	60 FR	1	100	MC-K	CORRECT	1
Q10	52000	NAME 1: Response1 CORRECT 1: 60411	0	0	CR	CORRECT	1
Q1	Define the goal, assign responsibilities, and	Define the goal, assign responsibilities, a	1	100	MC-K	CORRECT	1
Q2	Move forward with the solution and trust tha	Contact the expert and ask if they are wil	0	0	MC-K	CORRECT	1
Q3	Your group is in the shop constru	Your group is in the shop constru	0.5	50	ML	PARTIALCF	1
Q4	Praise the hard work that has been complet	Keep a positive attitude. Encourage the	0.83	83	MC-MS	MULTTRUI	1
Q5	measure and control current	detect and avoid objects	0	0	MC-K	CORRECT	1
Q6	track pilot work hours measure aircraft emis	prevent collisions locate lost aircraft	0.17	17	MC-MS	MULTTRUI	1
Q7			0	0	BG	PARTIALCF	1

# How EoC Assessments Are Developed - Teacher Recruitment

PLTW EoC Assessments are developed using best practices in assessment that meet or exceed industry standards. Using valid and reliable measures of student competencies will support claims of student growth in technical skills and enduring practices such as communication and ethical reasoning. The EoC Assessments scores document student accomplishment and support district claims of fidelity of implementation for PLTW high school courses.

The diagram on the next page represents the steps followed by PLTW in creating the EoC Assessment. Select teachers are invited to participate in development and review of the items.

If you would like to be considered for part of this elite team of reviewers next year, please send an email with your qualifications to the PLTW Assessment Team at [pltwassessment@pltw.org](mailto:pltwassessment@pltw.org). Please include a list of PLTW courses you are qualified to teach, and the number of years of experience you have teaching each course, any related degrees earned, and a list of any professional experience in the field.

Any additional questions or comments regarding the assessments should be directed to the Assessment team at [pltwassessment@pltw.org](mailto:pltwassessment@pltw.org).



**Key:**

- Who is involved?
- What is involved?
- When does it occur?

## PLTW End of Course Assessment

**PLTW End of Course Assessment Purpose:** The purpose of the End-of-Course Assessment is to understand a student's overall achievement at the end of a PLTW course. PLTW's End-of-Course (EoC) Assessments are summative assessments that measure both subject-matter knowledge and mastery of in-demand, transportable skills in an objective, standardized way that adheres to industry standards and best practices.

### TEST DESIGN & EXPECTATIONS

- PLTW, Testing Vendor, PLTW HS Educators
- Following adoption of new content standards or other events that require a new or revised assessment.
- PLTW HS educators review and revise drafts of achievement level descriptors (ALDs), test blueprints, and item specifications.

### ITEM DEVELOPMENT

- PLTW, Testing Vendor Annually
- PLTW and the testing vendor work together to set item development goals. The vendor drafts items aligned to PLTW High School course content standards based on the test blueprints and item specifications. PLTW HS curriculum and assessment specialists review and revise initial drafts of the items.

### ITEM REVIEW

- PLTW, Testing Vendor, PLTW HS Educators
- Annually
- PLTW HS educators review test items to ensure that the questions are accessible and appropriate measures of the content standards for each grade level and content area.

### FIELD TESTING OF NEW ITEMS

- PLTW, Testing Vendor, PLTW HS Students Annually
- Items accepted by the item review committee are administered to PLTW HS students to check the quality and appropriateness of the items. These items may be placed on the operational test but do not count towards a student's score.

### EVALUATION OF FIELD TESTED ITEMS

- PLTW, Testing Vendor, PLTW HS Educators
- Annually
- PLTW HS educators review field tested items that were flagged for one or more statistical properties to ensure the items are valid and appropriate measures of the content standards for each grade level content area.

### SCORING OF FIELD TEST ITEMS

- PLTW, Testing Vendor, PLTW HS Students Annually
- Field tested items are scored, the statistical properties are analyzed, and results are compiled for additional educator review.

### STANDARD SETTING

- PLTW, Testing Vendor PLTW HS Educators
- Following the first operational administration of a new or revised assessment.
- PLTW HS educators review test content and student performance and provide recommendations regarding the cut scores for each achievement level.

### BUILDING OPERATIONAL TESTS

- PLTW, Testing Vendor Annually
- PLTW Assessment works with the testing vendor to select approved items for placement on operational test forms. Operational items count towards a student's score.

# RESOURCES

## Tutorial Videos

- [Using the IAT \(5-minute video for teachers\)](#)
- [PLTW EoC Student Experience \(5-minute video for students\)](#)
- [Preparing for the PLTW EoC \(20-minute video for teachers and administrators\)](#)
- [PLTW Kite Portal Installation and Technology Support \(9-minute video for school or district technology support staff\)](#)

## PDF Document Links

- [Assessment Readiness Report Instructions \(pdf\)](#)
- [Engineering Formula Sheet \(pdf\)](#)
- [Kite User’s Manual – Teacher View \(pdf\)](#)
- [Kite User’s Manual – Student View \(pdf\)](#)
- [Student Accommodations Guide \(pdf\)](#)
- [Understanding PLTW EoC Scores \(pdf\)](#)

## EoC Assessment Blueprints

Computer Science	Engineering	Biomedical Science
<p><b>Computer Science A</b></p> <p><b>Computer Science Essentials</b></p> <p><b>Computer Science Principles</b></p> <p><b>Cybersecurity</b></p>	<p><b>Aerospace Engineering</b></p> <p><b>Civil Engineering and Architecture</b></p> <p><b>Computer Integrated Manufacturing</b></p> <p><b>Digital Electronics</b></p> <p><b>Engineering Essentials</b></p> <p><b>Environmental Sustainability</b></p> <p><b>Introduction to Engineering Design</b></p> <p><b>Principles of Engineering</b></p>	<p><b>Human Body Systems</b></p> <p><b>Medical Interventions</b></p> <p><b>Principals of Biomedical Science</b></p>

## Sample EoC Assessment Score Reports

<b>Computer Science</b>	<b>Engineering</b>	<b>Biomedical Science</b>
<p><b>Computer Science A</b></p> <p><b>Computer Science Essentials</b></p> <p><b>Computer Science Principles</b></p> <p><b>Cybersecurity</b></p>	<p><b>Aerospace Engineering</b></p> <p><b>Civil Engineering and Architecture</b></p> <p><b>Computer Integrated Manufacturing</b></p> <p><b>Digital Electronics</b></p> <p><b>Engineering Essentials</b></p> <p><b>Environmental Sustainability</b></p> <p><b>Introduction to Engineering Design</b></p> <p><b>Principles of Engineering</b></p>	<p><b>Human Body Systems</b></p> <p><b>Medical Interventions</b></p> <p><b>Principals of Biomedical Science</b></p>