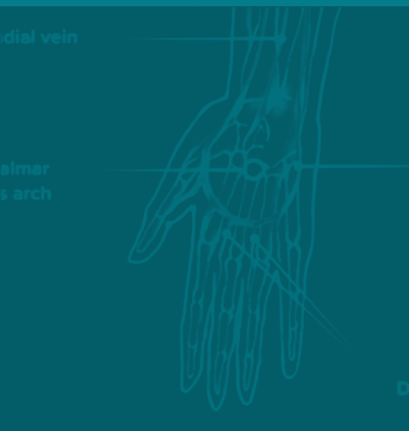


PLTW GUIDE TO ONLINE LEARNING



Teachers

Table of Contents

About This Guide

Key Terms

Introduction

PLTW Distance Learning Support

Online and Blended Learning

The Online Learning Environment

Your Role as Online or Blended Teacher

Our Work Together

1

1

3

3

7

8

10

23

About This Guide

Project Lead The Way (PLTW) would like to thank the following individuals and organizations for their contributions to the development of this guide:

- Dr. Kathryn Kennedy, an education consultant specializing in online, blended, and digital learning. The foundation of the guide is based on work done by Michigan Virtual™, through its Michigan Virtual Learning Research Institute®, where Dr. Kennedy served as Director from 2013 - 2018.
- PLTW partners Amazon Web Services, ArcelorMittal, Chevron, Toyota, and Verizon for their generous support that has enabled PLTW to effectively serve its network of schools and districts in a distance learning environment.
- Last but not least, PLTW Team Members, who represent years of experience in the classroom and as administrators, and bring significant expertise in instructional design, activity-project-problem-based content development, student engagement, and teacher professional development.

Expanded to include additional resources, this guide was created for PLTW-certified 6th-12th grade teachers in PLTW Network Districts and Schools as they support their 6th-12th grade students and caregivers who engage with PLTW curriculum in online and blended learning environments. As a professional in the field, the reader should use their best judgment; this Guide is solely a reference tool that may be helpful throughout the year. The guide includes PLTW-specific recommendations for high fidelity implementation of PLTW programs as well as general information about 6th-12th grade online and blended learning. One of eight guides, this resource details the world of online learning from the perspective of the stakeholders who are integral to creating a supportive learning experience based on research-based best practices. The other seven guides are focused on [Program Coordinators, Site Coordinators, and Administrators](#), [Other Educators](#), [Teachers \(Grades PreK-5\)](#), [Caregivers \(Grades PreK-5\)](#), [Caregivers \(Grades 6-12\)](#), [Students \(Grades PreK-5\)](#), and [Students \(Grades 6-12\)](#), and can be found [HERE](#). Footnotes throughout feature free no-cost, practical resources and research for a more in-depth study of important aspects of online and blended teaching and learning.

Key Terms

The following words or phrases are frequently used when engaging in discussions about online learning:

Blended Learning

[The Christensen Institute](#) defines [blended learning](#) as a formal education program, in which a student learns 1) at least in part through online learning, with some element of student control over time, place, path, and/or pace; 2) at least in part in a supervised brick-and-mortar location away from home; and 3) the modalities along each student’s learning path within a course or subject are connected to provide an integrated learning experience.



Learning Management System (LMS)

Some schools/districts have LMSs. The LMS can house online/blended learning and/or courses. Through the LMS, students can access courses, documents, and activities; depending on the capabilities of the LMS, assignments can be exchanged between students, the teacher, and other educators; and communication among students and the teacher can take place.

Online Learning

Online learning is characterized by a structured learning environment designed to enhance and expand educational opportunities, providing instruction that is teacher-led, and may be synchronous (communication in which participants interact in the same time-space such as videoconferencing) or asynchronous (communication that is separated by time, such as email or online discussion forums), and accessed from multiple settings (in school and/or out of school buildings).

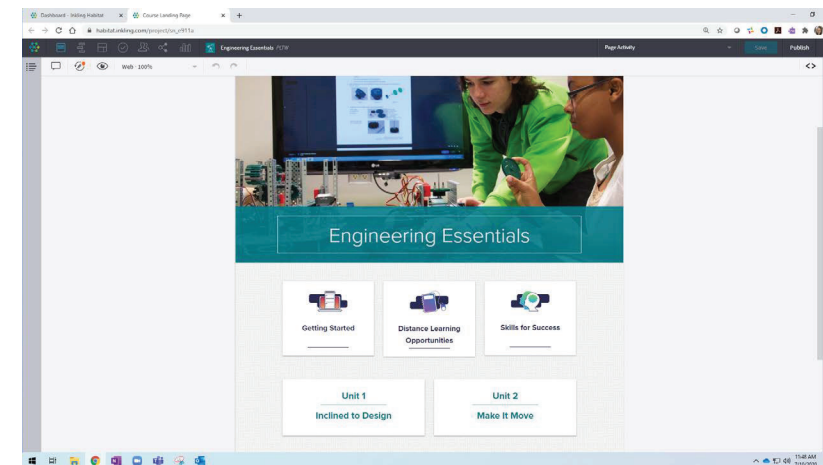


Introduction

Similar to schools, districts, and organizations around the world, COVID-19 caused Project Lead The Way (PLTW) to make a fast decision to quickly embrace online learning not only for PLTW Core Training but also for student courses and teacher guides. We know you have had to make similar shifts. We are here to support you and have provided specifics about your role in an online learning environment (see “Your Role” section). PLTW’s goal with distance learning support for 2020-21 is to provide a seamless experience for network schools, educators, caregivers, and students regardless of where learning takes place.

PLTW Distance Learning Support

Distance Learning Enhancements in Student Courses & Teacher Guides



To support you in school, at home, or anywhere in between, PLTW made enhancements in student courses and teacher resources. The student courses include a welcome page that links to new student resources dedicated to distance learning guidance. Additionally, in-page navigation buttons within the curriculum lead directly to distance learning support, such as alternate versions of activities, projects, and problems, and additional supporting information. The teacher guides include a map of the distance

learning options, guidance on course-wide software changes, equipment and supply information, strategies for collaboration, and more. Additionally, links to all PLTW’s distance learning support resources are available.

Distance Learning Resources

In addition to the embedded distance learning support in student courses and teacher resources, PLTW is providing a variety of support (see Table 1) for the 2020-21 school year.



Table 1. PLTW’s Distance Learning Support Descriptions

PLTW’s Distance Learning Support	Description
PLTW Educator Forums	PLTW Educator Forums will allow anyone in the PLTW network to submit questions, collaborate with PLTW teachers and Master Teachers, and share stories and best practices related to distance learning and the PLTW curriculum.
PLTW Distance Learning Webinar Series	Just-in-time, online professional learning focused on content implementation, distance learning best practices, tips, and tools. Topics will be based on the needs of the network.
DSE Office Hours	Meetings held as-needed by PLTW Directors of School Engagement (DSEs) for network members in a specific region to discuss pressing topics and issues around program implementation with Program Coordinators, Site Coordinators, teachers, and administrators. [Available to network schools only]
Blog posts	Just-in-time informative posts with support, guidance, and ideas for PLTW-related instruction.
Guides to Online Learning	Eight guides providing information about PLTW’s distance learning support, as well as guidance on creating a supportive online and blended learning experience based on research-based best practices. The eight guides focus on (1) Program Coordinators, Site Coordinators, and Administrators , (2) teachers (grades PreK-5) , (3) teachers (grades 6-12) , (4) other educators , (5) caregivers (grades PreK-5) , (6) caregivers (grades 6-12) , (7) students (grades PreK-5) , and (8) students (grades 6-12) and are located HERE .

PLTW’s distance learning support is available [HERE](#).



PLTW Hardware and Software Requirements

PLTW has technology hardware and software requirements for each pathway and course. For guidance on PLTW hardware and software, visit <https://www.pltw.org/pltw-software>.

Rostering Students

Rostering students is an important step for PLTW schools to complete. Students that are rostered will be able to access PLTW curriculum through Courses. PLTW is partnering with Clever to facilitate teacher and student single sign-on to make access to courses quick and easy beginning this August. If you need to roster students prior to this release, the current rostering process using a CSV file is available. For instructions detailing how to roster students prior to the integration of Clever Single Sign On, follow the link below.

[myPLTW Student Rostering Instructions](#)

We will share more information about the new rostering process in the coming months.

Accessing PLTW Courses

Once teachers sign into their myPLTW page, they’ll have access to Courses, where the student course and teacher guide are located. Some teachers choose to have their students sign directly into myPLTW and have that open alongside the LMS that their school uses. Other teachers embed the links from myPLTW Courses pages directly into their LMS. When students click on the embedded link, they will be prompted to sign into myPLTW to access the curriculum.

Sharing PLTW Curriculum Online

PLTW’s contract language prohibits teachers and other educators from sharing our proprietary content online. Instead of sharing it openly online, consider sharing in Community.

APB Approach



PLTW is dedicated to offering students a transformative learning experience. The backbone of the PLTW experience is the APB approach, which stands for Activity-, Project-, and Problem-based learning.



The APB approach is a progression that sets students up for success in developing solutions to complex challenges. To support you and your students in school, at home, or anywhere in between, PLTW made enhancements to student courses. The student courses include a welcome page that links to new student resources dedicated to distance learning guidance. Links to all PLTW's distance learning support resources are available [HERE](#).

Formal Summative Assessment

PLTW provides opportunities for student assessment throughout the curriculum. Many of the Gateway units, including Medical Detectives, Design and Modeling, Flight and Space, App Creators, and CS for Innovators and Makers, provide End-of-Lesson Interim and End-of-Unit Summative assessments. The distance learning enhancements will maximize alignment to the established Knowledge and Skills and Learning Objectives, so educators can continue to use these assessments with students both inside and outside of school to the extent that meets their needs.



For High School pathways, the PLTW End-of-Course (EoC) Assessments are widely respected as an indicator of student achievement in both curriculum content and transportable skills; they are developed with the same rigor as other college admissions tests or industry certifications. Students can use EoC Assessment scores as credible evidence of highly sought-after skills, such as communication, creative thinking, collaboration, and ethical reasoning. With qualifying scores, students may have the opportunity to earn credits from nationally-accredited colleges and universities. EoC Assessments are available for 15 of PLTW's pathway courses.

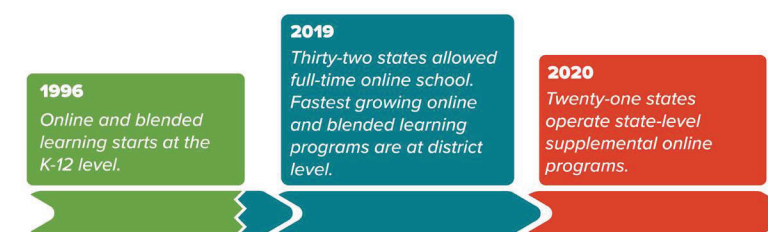
Teachers are encouraged to administer the EoC Assessments in person when possible. The EoC Assessments are flexible, allowing for social distancing. The Assessments may be given in multiple sessions to accommodate smaller student groups and are split into smaller sections to support an extended period on a given day, or across shorter class periods and/or across multiple days. Teachers may also administer the EoC Assessments to students remotely with the addition of a third-party vendor to ensure that the Assessment is securely proctored. Internet service at the testing location must support continuous connection with sufficient bandwidth during the test session; students must have access to an appropriate testing environment, and required accommodations must be offered. More information about distance administration of PLTW EoC Assessments is forthcoming.

In addition to the PLTW-specific support mentioned above, PLTW also recognizes that network schools might need additional support in online and blended learning in general. The remainder of this guide provides guidance and resources based on research-based best practices in online and blended learning.



Online and Blended Learning

Online learning for K-12 schools emerged into mainstream education in 1996. Beginning with full-time online as well as supplemental models, these programs were typically started at the state level, in universities, or via private companies. In 2019, 32 states allowed full-time online schools to operate. As of 2020, 21 states operate their own state-level supplemental virtual school, with some offering full-time options. In 2017, the fastest growing online and blended learning programs were located within districts, and post-COVID, the number of homegrown district-level online and blended learning programs is growing exponentially. Additionally, multiple districts within states started realizing the power of working together consortia-style to lower costs of hardware, software, and content.



Before COVID-19, students chose online learning for a number of reasons, some of which are listed below¹:

- Schedule flexibility for non-academic activities (sports, dance, music, theater)
- Mental health support
- Bullying
- Credit recovery
- Pregnancy or parenting
- Desired courses not available
- Scheduling conflicts
- Physical health
- Employment responsibilities
- Family responsibilities (e.g., caring for siblings, parent health issues)
- Individual learning preferences
- Advanced coursework
- Expanding the range of courses
- Individualized education
- Bridging gap for students performing below grade-level

Pandemics, such as COVID-19, as well as natural disasters like hurricanes and earthquakes, have also highlighted how online learning can provide the bridge for student learning while communities are quarantining or concentrating on recovery and rebuilding efforts.

¹ [Why do students choose blended and online schools?](#) The “end of average” requires personalized learning environments. (2017). The Foundation for Blended and Online Learning and Evergreen Education Group.



Research has shown that online and blended learning are academically effective when planned for and implemented in intentional ways and can provide continuity of learning options for schools, educators, caregivers, and students. Research has also shown what works and doesn't work when implementing online and blended learning². One key finding that pertains to district- and school-level recommendations is the need for support. Quality implementation of online and blended learning depends greatly on the structure in place to support all of the moving parts and stakeholders. Using this series of guides, which all include the latest research-based best practices in online and blended learning, educators can provide the support that students need to be successful in their PLTW courses and beyond wherever learning takes place.

The Online Learning Environment

Each school/district implements online and blended learning differently. This section provides you guidance related to the online and blended learning environment using research-based best practices. Secure workspaces - both physical and online - that are conducive to being a healthy productive teacher. In order to relieve stress, it is essential for you to develop and maintain organized physical and online workspaces that promote maximum efficiency and help you locate what you need more readily. Being efficient in managing your time when teaching online may be the key to balancing your work and personal life.

Create a Physical Space

- Choose space that will allow for quiet and privacy.
- Consider a door with a lock or a "do not disturb" sign if you live with others.
- Make sure your space is clean and organized, so you can focus on your students and their learning.

Reflection Questions:

- What do I need for my physical space?
- How am I best supporting myself in my physical space in order to best serve my students and colleagues?



- Make sure you have high speed Internet service and antivirus and malware protection software to protect your system(s).
- Clear your virtual desktop. Get all those icons off the startup menu that make your system run slower.
- Scan paper documents, when possible, and place them in folders.
- Use clear file names so you can easily retrieve them later. Alphabetize file names and be consistent in your filing system.

² Kennedy, K., & Ferdig, R. (Eds.). (2018). *Handbook of Research on K-12 Online and Blended Learning*. Pittsburgh, PA: ETC Press.

- Get the folders for all the classes you teach set up and organized as soon as possible.
- Create bookmarks for frequently-visited websites.
- Archive emails in folders labeled with the course name and term.
- Create shortcuts on your desktop for programs, folders, and websites you use frequently.
- Use a calendar with deadlines and note priorities.
- Set up a solid organizational and workflow email management strategy, so you can stay engaged with students and other stakeholders on a daily basis.
- If you use the same email accounts for work and non-work, consider opening a separate account to maintain boundaries on your time.

Reflection Questions:

- What do I need for my online space?
- How am I best supporting myself in my online space in order to best serve my students and colleagues?

Cultivate Health and Wellbeing



- Set up your space to be [ergonomically sound](#).
- Make sure to take breaks to rest your eyes, wrists, and back.
- Get up and move your body and stretch periodically. Set a timer as a reminder.
- Make sure you have good light in your work space.
- Maintain an upright posture. Slumping and rounding your shoulders can lead to fatigue more quickly, especially when sitting for long periods of time.
- Drink lots of water and eat healthily.
- Get dressed for work.
- Establish healthy boundaries by using a calendar to block work and non-work time.
- Establish professional connections with fellow teachers online to ask questions, share best practices, and check in on wellbeing.

Reflection Questions:

- How am I taking care of my health and well-being?
- How am I setting boundaries for myself to maintain my health and well-being?

Set a Routine

- Maintain a routine.
- Establish goals for the day.
- Check and answer email and phone/text messages.
- Compose a weekly group email to the entire class. For the first week, request a response to ensure your messages are received and get students started interacting with you via email. For younger students, this might be through web conferencing or phone calls with caregivers.



- Grade student work.
- Make phone calls to caregivers, mentors, and students to build support for helping the student be successful.
- Send regular updates to caregivers.
- Track student progress.
- Help students learn time management skills through use of any pacing elements available in your learning environment.
- Make expectations clear.
- Reach out to colleagues to seek the wisdom of those who have lived and breathed online teaching before you.

Reflection Questions:

- What goals am I setting each day, and are they realistic?
- How am I spending my day? Is it as efficient as it could be to maintain a healthy work/life balance?

Establish Online Learning Environment Schedule, Rules, and Procedures

- Do not recreate what is done in the school and classroom schedule-wise. Instead, in online and blended learning environments, transition your interaction with students from whole group instruction to a combination of one-on-one meetings with students as well as small group meetings. This allows you more targeted time for differentiating and meeting the needs of each student based on where they are.
- Divide content in smaller pieces (15-30 minutes) when possible.
- Make your expectations clear for the online learning environment from the start to save you time and energy down the road.
- Remember that many of your students are new to the online learning environment, so you will have to guide them in terms of appropriate behavior, your expectations, and protocols.
- Create a safe learning environment that is conducive to learning and respectful of everyone in it.
- Keep your learning environment rules positive, short, and to the point. If possible, co-create them with your students.

Reflection Questions:

- How am I creating a safe learning environment where everyone feels respected?
- Knowing that it's best practice in online learning not to recreate what I do in my in-school learning environment, what am I doing to establish a schedule that works for myself and my students online?

Your Role as Online or Blended Teacher

Pre-COVID, teachers had many reasons for choosing to teach in online and blended settings, including but not limited to the following:

- Life changes (pregnancy, young children, relocation, health concern(s), family concern(s), etc.) preventing them from working outside of their home;
- Home location in an area with an unreasonable commute to a school;
- Desire to be challenged with a new modality of teaching;
- Aspirations to reach a wide demographic of students who are interested in a specialty area of learning that the teacher can provide;
- Encouragement to teach online by a school/district leader to expand their professional growth and experience or to participate in a district online program; and
- Seeking more flexible hours or supplemental income.



Because of COVID, many teachers were thrown into remote learning, which many have mistook for online learning. True online learning takes intentional planning and includes human elements of collaboration, relationships, community building, supports, teacher presence, communication, and interaction. Similarly, online teaching takes professional learning to understand and gain the additional skills and knowledge required for this work. When designed using research-based best practices, many teachers and students report that online learning offers the opportunity to develop close relationships. There are research-based best practices for online teaching and learning that are highlighted in the strategies and tips below.

Assess Students

- Offer feedback on student written work in a collaborative document during their drafting process.
- Embed short quizzes in between new learning modules to help you and students understand where they are and where they need to be before moving forward.
- Set up a discussion board where students reflect on their learning and you respond with both acknowledgments of evidence of their learning as well as questions to extend their thinking.
- Use discussion based assessments via web conferencing to make sure students can explain what they know.

Reflection Questions:

- How am I assessing my students in meaningful ways in online and blended learning?
- How am I learning to effectively use the platforms available to my school/district to assess my students?

Build Relationships

One distinguishing feature of online learning is that all interactions must be sought out intentionally and supported. Online learning environments do not have the affordance of natural social opportunities that in-school environments do. When teaching online, teachers don't always have the ability to read





body language and see students visibly struggling. Instead, teachers need to create a trusting and meaningful relationship with their students, as well as with their caregivers. This can be accomplished through effective individual and group communication, encouraging engagement in the learning environment, productive and growth-focused feedback, and multiple opportunities for students to ask questions.

Reflection Questions:

- What steps am I taking to build relationships with my students online?
- How is my communication and feedback with students helping to cultivate my relationships with them?

Communicate

Communicating is one of the most important (as well as most frequent) activities teachers engage in when teaching online. Communication can make or break your students' experience.

Setting the Tone

In your online learning environment, you will want to be the first one to communicate because you are responsible for setting the tone for the type of experience students will have. The first contact is when and where that begins. You must take a number of actions to officially welcome students and caregivers to the online experience.

Welcome Letter

You should send your students and their caregivers a welcome letter containing at least the following:

- Your contact info
- Office hours
- Learning start and end dates
- Learning requirements and expectations

Keep in mind that your students and others involved in their support will see you as a real individual if you share information about yourself, including your interests and outside activities. This helps your students see you as a real person. In addition to a welcome letter, video announcements are an opportune way to personalize your learning environment.

Reflection Questions:

- In what ways are you communicating with your students?
- How are you showing your students you are a real person through your communication?



Continue Learning

- Become familiar with your school's LMS and/or the online and blended learning environment to best support students, caregivers, and other educators.
 - Join Professional Learning Communities (PLCs) to stay informed and tackle just-in-time issues related to online and blended learning. Invite other stakeholders to join, such as teachers, other educators, caregivers, students, and administrators.
 - Participate in ongoing professional learning. Because technology, pedagogy, and best practices are changing very rapidly, ongoing professional learning is critical. It is imperative for educators to participate in professional learning in order to provide the optimum learning environments for the students, teachers, other educators, caregivers, and the community that they serve.
- Share resources on best practices and guidance. When educators exhibit knowledge of and support for best practices in online and blended learning, others feel more comfortable exploring new strategies and techniques.



Reflection Questions:

- How am I continuing my learning about online and blended learning?
- How am I engaging and collaborating with others to learn more?

Detect and Prevent Plagiarism Online

- Conduct a web search by copying and pasting several lines of the document into the search engine to find a match on the Internet. Follow your teacher radar if an assignment doesn't feel right and raises a red flag with you.
- Check the time and date stamp of when the assignment was submitted. Most LMSs provide time and date stamps for all assignments submitted within the learning environment. If a student submits several assignments within a very short time frame, this may be an indication of inappropriate assignment sharing with another individual.
- Ask if the student is using a flash drive to save his/her work and then submits all work at the same time.
- Ask the student if the author of the document is a relative who registered the software (like Word, PowerPoint, etc.) on the computer the student uses for online classes.
- Be sure students understand what constitutes plagiarism and how to cite sources.
- Provide students your expectations for the assessment setting (e.g., no phones, browsers closed).
- Develop good relationships with students.
- Use discussion based assessments so that students have to share their knowledge with you through web conferencing.
- Emphasize learning and mastery over accountability and completion.
- If possible, where the course design provides a test bank of questions which can be randomly



selected for each test taker or the order of the questions can be rearranged, take advantage of those options to help maintain the integrity of an assessment.

Reflection Questions:

- How am I preventing students from plagiarizing?
- How am I emphasizing learning and mastery over accountability and completion?

Engage and Motivate Students

Online teachers can influence student engagement and bring back enthusiasm for learning or inspire it for the first time. To get some ideas about how to engage and motivate students, check out this [slideshow from an online teacher](#). As teachers, we can influence motivation through the learning environment we create. We can encourage and support students and contribute to their motivation through tangible extrinsic rewards for a job well done or more personal intrinsic rewards related to students' interest that will propel a student to push forward and succeed. In the field of brain-based research, studies show that providing a learning environment that is safe—where students feel comfortable taking risks and sharing their thoughts—promotes learning. Personalizing their learning and providing them voice and choice can help. Additionally, build in metacognitive exercises³ that allow students to reflect on past learning as well as transfer knowledge and skills.

Reflection Questions:

- How am I engaging my students?
- How am I factoring in student interests, voice, and choice into my learning environment?

Ensure Academic Integrity and Digital Citizenship

- Develop an understanding of copyright law and fair use to support other educators and students.^{4,5}
- Develop strategies for preventing cheating in online and blended learning.⁶
- Teach and/or guide students to perform safe and effective Internet searches and to evaluate resources.⁷

3 Edutopia - How Metacognition Boosts Learning - <https://www.edutopia.org/article/how-metacognition-boosts-learning>

4 ISTE blog post - "What every teacher should know about copyright law" <https://www.iste.org/explore/featured-videos/what-every-teacher-should-know-about-copyright-law>

5 Copyright Law and Fair Use Guidelines for Teachers - Hall Davidson - <https://halldavidson.app.box.com/s/5ct0wrbdqz43vrmszbh2q5nma5uis97>

6 ISTE blog post - "8 ways to prevent cheating in the digital age" <https://www.iste.org/explore/in-the-classroom/8-ways-to-prevent-cheating-in-the-digital-age>

7 ISTE blog post - "Today's news: Real or fake? [Infographic]" [https://www.iste.org/explore/Digital and media literacy/Today's news: A Real or fake](https://www.iste.org/explore/Digital%20and%20media%20literacy/Today%27s%20news%3A%20Real%20or%20fake)



Reflection Questions:

- What steps am I taking to develop my understanding of copyright law and fair use?
- How am I supporting my students in preventing cheating in online and blended learning?

Ensure Access, Minimize Opportunity Gaps, and Build Equity

- Advocate for students who need accommodations and support for and equitable access to technology and connectivity.
- Become familiar with and share contacts for technological support for students, caregivers, and educators.
- Support the instructional needs of English language learners (ELLs) in online and blended learning.

Reflection Questions:

- How am I advocating for access to technology and Internet for students who do not have it?
- Where do I direct stakeholders who need technological support?
- How am I serving the needs of ELLs in online and blended learning?

Ensure Accessibility

- Make sure students have what they need for accommodations to access online and blended learning.
- Support students with Individualized Education Programs (IEPs), Section 504 Plans, and Individual Learning Plans (ILPs) to make sure their needs are met in online and blended learning environments.^{8,9}
- Monitor and take action related to student supports needed for students with identified (or unidentified) disabilities and for those who are in traditionally underserved populations.
- Use Universal Design for Learning¹⁰ in designing and developing online and blended learning.

Reflection Questions:

- How am I advocating for accommodations for students in online and blended learning?
- How am I supporting students with IEPs, 504s, and ILPs in online and blended learning?
- How can I best support traditionally underserved populations in online and blended learning?

8 Digital Learning Collaborative - Students with Disabilities <https://www.digitallearningcollab.com/students-with-disabilities>

9 Edutopia - How to Improve Distance Learning for Students with IEPs - <https://www.edutopia.org/article/how-improve-distance-learning-students-ieps?fbclid=IwAR0I5RnjthDOoCRdYBPnrvTsvYclmarepU4aotO-y9muqqQSP8SVf9LrYo>

10 Universal Design for Learning <http://www.cast.org/our-work/about-udl.html>



Ensure Online Safety, Non-bullying, and Data Privacy

- Model and encourage respectful communication and engagement in online and blended learning.
- Model and promote online safety and non-bullying principles in all learning environments.
- Model and encourage the use of digital citizenship competencies.¹¹ Provide guidance on developing digital citizenship - recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world, and act and model in ways that are safe, legal, and ethical.
- Review FERPA, acceptable use, security, anti-bullying, plagiarism, and other school policies.

Reflection Questions:

- How am I modeling and encouraging respectful communication and engagement in online and blended learning?
- How am I ensuring online safety and non-bullying principles?

Evaluate Continuously

- Conduct iterative evaluation of your learning environment to ensure online and blended learning efforts are serving their intended purpose for your students and their caregivers.
- Use quality standards for online and blended learning in evaluation processes. (See National Standards for Quality Online Learning¹² and Blended Teaching Framework.¹³)

Reflection Questions:

- How are you seeking feedback related to online and blended learning efforts from all stakeholders?
- What quality assurance indicators are you using to hold yourself accountable for meaningful implementation of online and blended learning?

Facilitate Discussions Online to Create Community

Discussions can happen in real time or through a discussion board. When facilitating discussions in real time, teachers should aim to do these using small groups rather than the whole class. When discussions are occurring in a discussion board or forum, here are some tips to provide a safe space for exchanging ideas.

- Provide a model response in the general discussion instructions/rubric initially to show students what you expect.
- Encourage students to adhere to the same standards of behavior online as they would in school -

¹¹ ISTE Digital Citizenship <https://www.iste.org/explore/in-the-classroom/8-ways-to-prevent-cheating-in-the-digital-age>

¹² The National Standards for Quality Online Learning. <https://www.nsqol.org/>

¹³ iNACOL Blended Learning Teacher Competency Framework. <https://aurora-institute.org/wp-content/uploads/iNACOL-Blended-Learning-Teacher-Competency-Framework.pdf>



emphasize the importance of being honest, respectful, and polite.

- Tell students to:
 - take time to think about their response before they begin typing.
 - re-read their initial post and response before posting.
 - be brief but clear and concise.
 - if you would like to share a long article, post the URL and citation for it.
 - move the discussion forward by adding to or expanding on comments already made.
 - link to prior knowledge or make personal connections.
 - incorporate key terms and other vocabulary from the content.
 - avoid generalizations about entire groups of people, including racial, ethnic, religious, gender, sexual preference, or other stereotypes.
- Always monitor online discussions and contribute when appropriate. Your presence as a teacher will help maintain positive expectations for student behavior, circumventing instances of inappropriate comments or bullying.
- Ask clarifying questions to encourage students to dig deeper into their understanding of a concept.
- Encourage students to support their opinions by linking back to the lesson content or citing their sources.
- Teach students that if they agree or disagree with a comment, they should state why.
- Teach students to evaluate the validity of arguments.
- Use the online discussion as a tool to challenge students' thinking and help the group generate new or expanded ideas.
- Provide grading rubrics for discussion board posts that include all expectations and examples of moving the discussion forward.



Reflection Questions:

- What steps am I taking to build community in my online and blended learning environments?
- How can I most effectively facilitate a discussion with my students online?

Help all Stakeholders in Supporting Students

For all stakeholders:

- Check in on wellbeing.
- Provide and maintain student support resources – academic, technological, and human (mentors, counselors, special services) -- and a team of adults who are focused on students' success. It takes time and effort to help students stay involved and on pace to complete their learning.
- Establish and communicate clear expectations and guidelines for your role in supporting student learning.
- If not already available, create accountability agreements for caregivers and students for student success while learning online.



Reflection Questions:

- What am I doing to provide information and resources for students and caregivers for tech support?
- What other stakeholders are needed to fully support each student's learning process in online and blended learning?

For students:

- Prepare relevant orientation resources for students.
- Set up regular communication with students.
- Provide guidance on setting up and organizing the online learning environment.
- Offer suggestions for setting up and organizing a physical learning environment.
- Support students by helping them build time management skills.
- Hold students accountable for their learning.
- Make sure students have devices and technological support and connectivity.
- Point students to tech support as they need it.
- Advocate for students' needs.
- Promote students' self advocacy.
- Provide guidance as needed for students when they are communicating with others.
- Assist students in setting learning goals.
- Check in with students regularly, not just when they are not doing well academically.
- Establish rapport with students and encourage academic success and promote persistence.
- Use the [Online Learner Readiness Rubric](#) to understand what supports students need to be successful in online learning.
- Connect students with support services - other teachers, mentor, ed tech, librarian, tech staff, peers, others.
- Encourage students to ask for help and clearly describe any problems they are having.
- Teach and encourage students to be self-directed, independent, and responsible for their learning; ensure resources and support are available to help them do so, such as goal sheets, calendars, etc.
- Help students build study habits.
- Meet with students (and their caregivers if possible) one-on-one to orient them to the learning environment and the supports they have.
- Walk students and caregivers through online and blended learning and the systems that support it.

Reflection Questions:

- What am I doing to provide information and resources for students and caregivers for tech support?
- What other stakeholders are needed to fully support each student's learning process in online and blended learning?

For caregivers:

- Establish an online learning agreement with caregivers to ensure student success.
- Communicate policy, procedures, and other information related to online learning to caregivers.
- Cultivate relationships with caregivers, knowing that parental involvement and support of online



and blended learners is extremely important.

- Encourage caregivers to work with their student to use the [Online Learner Readiness Rubric](#) to understand what supports students need to be successful in online learning.
- Connect caregivers with support services - teacher, mentor, ed tech, librarian, tech staff, peers, others.
- Encourage caregivers involvement in supporting their students in online and blended learning.
- Support caregivers with their responsibilities in their students' success. See [Guide to Online Learning for Caregivers \(Grades 6-12\)](#) for more ideas.
 - Monitor student performance and progress;
 - Motivate students to more fully engage in learning activities;
 - Organize and manage student learning at home; and
 - Assist students as they work on assignments.
- Determine how caregivers will monitor or access their students' course content in the LMS, if they will be provided a role with login credentials to monitor their students' progress and assist in their work, and if there will be planned or automated progress reporting to caregivers from the student data within the LMS.
- Provide an orientation that includes both caregivers and students so they hear the same message together. Record these interactions so they can be shared with those who could not attend and archived as support materials.
- Encourage caregivers to ask for help.
- Maintain regular contact with caregivers and invite them to be involved in online and blended learning efforts and planning.
- Introduce caregivers early to your online learning options, policies, and contact people.
- Help caregivers as they learn how to monitor student progress in the LMS.
- Provide resources – print, online, and in person – for caregivers' ongoing engagement in their students' online experience.¹⁴

Reflection Questions:

- How am I best supporting caregivers in online and blended learning?
- How am I communicating about online learning to caregivers?
- Are there orientation opportunities for caregivers and students?

Other educators:

- Emphasize the importance of building relationships and community in online and blended learning.
- Work together with other educators to understand how best to serve them and their work with students in online and blended learning.
- Work with all stakeholders (caregivers, teachers, other educators, and school leaders) to ensure program success.
- Set up regular communication with other educators.

¹⁴ Oliver, W. (2019). *Not your Mama's classroom: What you need to know as a parent about your child's digital education*. Lifewise Books.



- Differentiate and personalize learning online.
- Provide resources for online and blended teaching and learning.^{15,16,17,18}
- Establish and communicate clear expectations, guidelines, boundaries, and roles with the other educators and caregivers in supporting student learning.

Reflection Questions:

- How am I best supporting other educators in online and blended learning?
- How am I working with other educators to best meet the needs of students in online and blended learning?

Humanize the Learning Experience

- Bond with the student so they see you as a real person who is there to help them.
- As mentioned above, create a personal welcome in the learning environment, and introduce yourself to students.
- Make navigational materials readily available.
- Make fun videos to keep students engaged and interested.
- Provide quick turnaround of assignments while material is fresh in students' minds.
- Make regular contact just to see how students are doing.
- Contact students who are lagging behind.
- Encourage students when they are struggling.
- Acknowledge bright spots.
- Set up times to meet with students and caregivers to discuss challenges.
- Provide “re-navigation” ideas to help students get back on pace.
- Send out calendars with remaining weeks for students to reorganize the remaining work and make a plan for completion.
- Maintain a high level of encouragement to complete learning well.
- Support interaction in online and blended learning.
 - Student-to-Teacher
 - Student-to-Content
 - Student-to-Student
 - Peer to peer learning, examples:
 - Elbow partners for check-ins
 - Small group sessions for presentations, discussions
 - Peer reviews (use rubrics and clear guidelines)

¹⁵ Digital Learning Collaborative - Continuity of Learning Resources <https://www.digitallearningcollab.com/covid19-overview>

¹⁶ Handbook of Research on K-12 Online and Blended Learning https://figshare.com/articles/Handbook_of_Research_on_K-12_Online_and_Blended_Learning_Second_Edition_/6686813

¹⁷ K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration <https://edtechbooks.org/k12blended>

¹⁸ Christensen Institute - Blended Learning <https://www.christenseninstitute.org/blended-learning/>



- Student-to-Other Experts
- Student-to-Systems
- Support collaboration in online and blended learning.
- Support communication amongst stakeholders in online and blended learning.

Reflection Questions:

- How am I incorporating interaction in online and blended learning?
- How am I encouraging collaboration in online and blended learning?
- How am I ensuring communication in online and blended learning?

Prioritize Stakeholder Wellbeing

- Check in with students and caregivers regularly to see how they are doing.
- Encourage wellbeing with other teachers and educators in your online and blended learning environment.

Reflection Questions:

- How am I prioritizing stakeholder wellbeing in online and blended learning?
- Am I providing consistent wellness checks on all stakeholders?

Provide Feedback

Grading, providing feedback, and the communication that accompanies these two tasks are probably where online teachers spend 90% of their time and energy. It's also difficult to describe grading and feedback as a discrete activity, as they incorporate so many facets of teaching: relationship building, coaching, instructing, correcting, redirecting, encouraging, communicating with various stakeholders, and more.

Meaningful Feedback

How can we stimulate our online learners to be actively engaged in our learning environments throughout the academic year? Beyond an enthusiastic warm welcome letter, interesting and helpful announcements, and encouraging participation in class discussions, grading and feedback can effectively result in students feeling motivated.

Components of Meaningful Feedback

The acronym REPLY is a practical way to organize the key components of quality online feedback on assignments and assessments:

R = Responsive

Instructors should establish, publicize, and maintain expectations for grading and providing feedback for student assignment submissions. Timely feedback is critical because students may have forgotten what they submitted if the feedback takes too long. The idea behind timely feedback is to capture



and use the students’ connection to their work while they still care about it. Capitalize on the students’ interest in the work before they move on in their learning. Timely feedback also allows the student to incorporate that feedback into future work.

E = Effective

At best, a teacher reflects back to students a realistic picture of their progress. Therefore, feedback should be very specific. Make comments that speak to the assignment’s objectives, keeping in mind the context of what the student has been learning. If you incorporate the use of rubrics, use them to assess student work. Avoid general, broad comments such as “Good job.”

P = Positive

Feedback should not be merely corrective. Always acknowledge when the student is making an effort and what the student is doing well so that they continue with those behaviors. Make sure you maintain a positive tone throughout your writing. Read (and reread) your comments to assure that a positive tone is maintained, even if the nature of your feedback may be primarily corrective.

L = Learning

Expand the learning opportunity for students. Point out a few suggestions for improving the assignment. Fill in any perceived gaps in student understanding. At the same time, don’t overwhelm the student (and yourself) by pointing out every little thing that can be improved. Make your feedback positive, helpful, and memorable by focusing on a limited number of attainable improvements for the student to consider. Provide an opportunity for growth by allowing students to learn from your feedback and try the assignment again. Remember, an environment in which students feel safe to try to alleviate the highly motivational fear of failure. The goal is for students to master the content, not simply move on in their learning.

Y = You (Personal)

Personal feedback helps you build a relationship with each student. Students who feel you care about them and their success are more likely to be successful. Use greetings and closings. Use their name. It makes the students feel valued and communicates that you are speaking specifically to them, not using a canned response.

- R Responsive—Provide a timely response to student questions.
- E Effective—Offer specific comments aligned to the assignment’s objectives.
- P Positive—Use words that give off a positive connotation.
- L Learning—Include suggestions for how the assignment can be improved.
- Y You—Make it personal and not just a standard response.



Other Types of Meaningful Feedback



Praise and Encouragement

Much of your instructional tasks are reactive, such as answering emails and grading assignments. However, the skilled teacher will be proactive, reaching out to students when instructor contact can be helpful and taking time to celebrate student achievement.

Consider making a quick phone call or email each week to encourage students who have done an outstanding job on their coursework, have shown sound character, or who have made solid steps to improve their progress. You could schedule a task like this into your online calendar as a recurring appointment so that you’re reminded to do it each week. Such tasks do not take long, yet they may yield great results in terms of encouraging students to continue their focus and stay on pace. This type of activity also helps to strengthen the teacher-student relationship, which in turn becomes an important element in the students’ motivation to learn.

Redirection and Clarification

While grading student work, you may find that students are missing some key knowledge or skills needed to succeed in a lesson. Perhaps they are missing essential prior knowledge, there is an academic integrity issue, or they seem to have some real difficulties in navigating the online course. In situations like these, mere feedback isn’t enough. Don’t let a situation like this continue for long. Pick up the phone or open your email and contact the caregiver and student. When you take the initiative to contact them to address the issue early, it’s much more likely that the student will have a successful and enjoyable experience in your online learning environment.

Our Work Together

The PLTW-specific guidance and research-based best practices for online and blended learning shared in this guide provide teachers (grades 6-12) a comprehensive perspective from which to implement and review online and blended learning practices and take steps to improve student learning and caregiver support. Working alongside caregivers, students, other educators, and administrators, teachers can increase the efficacy of their online and blended learning efforts to improve student lives through meaningful and intentional learning experiences.

