Education

Intel® Education Transforming Learning

Introduction to Tablets in the Classroom

January 2015

Intel® Education Transforming Learning: Introduction to Tablets in the Classroom

For additional information visit www.intel.com/teachers. It is a website for 21st century teaching that includes free professional development, online tools, and resources that help K-12 teachers engage students with effective use of technology promoting problem-solving, critical thinking, and collaboration skills.

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Intel® Education Transforming Learning

Introduction to Tablets in the Classroom

Welcome

Welcome to Introduction to Tablets in the Classroom, a course designed to help you elevate your teaching expertise and your students' learning experiences. Tablet computers and effective technology integration strategies can inspire your teaching and encourage your students to think deeply, increase productivity, grow creatively, stay on task, and connect safely and effectively with the real world.

Course Goals

This course provides a foundation for integrating tablets into your classroom and expands your educator's toolkit. It provides guided hands-on experience, opportunities to explore, and practical knowledge about tablets in the classroom. You will explore:

- Tablet hardware, connectivity, and file storage
- Tablet applications and software, including app stores and the Intel® Education Solutions software suite
- Tablet integration as a tool for student response systems and assessment
- Classroom management strategies to ensure tablets serve as effective learning tools

About the Course

Introduction to Tablets in the Classroom is designed as a hands-on course for teachers who plan to implement tablets in a mobile teaching and learning environment. This training will empower you with new understanding about:

- Tablets
- Applications, including Intel Education Solutions
- File management
- Instructional strategies
- Assessment
- Classroom management

You will also be introduced to new collaborative models for teaching and learning in mobile environments that meet the needs of all students.

Your manual for this course is displayed in an *eReader* provided with your tablet. Familiarity with your eReader's tools will help you use the manual throughout the course.

E-Reader
A device or application to facilitate or enhance the reading of a digital version of a print book which can be downloaded from the Internet.

Navigating your Manual

Intro to Tablets course manual is digital and uses an eReader. Most eReaders have built-in features that allow you to personalize your digital manual with your own notes, bookmarks, highlights, and more. In addition, many digital manuals have a navigation pane with a table of contents.

Throughout the course, you will have the opportunity to use various features in your digital manual, such as highlighting and underlining text, adding notes, looking up words in a dictionary, or bookmarking pages that are important to you.

To become more familiar with the manual, locate the following features in your digital manual and read their descriptions:

- **Contents**: Typically a digital manual displays links that you can use to quickly navigate to certain sections in the course. If you are using a touch device, then you can also swipe side to side in the main viewing area to scroll through the course.
- **Bookmark**: A bookmark saves your current location so you can easily return to the location later. Electronic bookmarks are just like bookmarks you use in a book. You can tap a bookmarked link to return to the section you marked. To create a bookmark, select text, and then select the Bookmark button to add your location to a list of bookmark links.
- **Highlighter**: The highlighter tool allows you to use various colors to highlight information in the manual. To highlight content, select text and then tap the Highlighter button. The text will be highlighted in the color that matches the pen color shown on the button.
- **Highlight Color Palette**: The highlight color palette allows you to change the highlight color.
- **Font Style**: You can choose the font style used to display the manual's text.
- **Font Size:** You can adjust the font size displayed in the manual's text.
- **Print** (if available): Use the Print button to print the manual, comments, and/or notes.
- **Show/Hide Table of Contents**: The table of content's navigation pane can be hidden or shown to control the size of the reading area. The show or hide pane feature may be indicated by a small arrow along the edge of the navigation bar.
- **Resource Documents**: Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

Getting Started

Using Your Tablet Computers

Overview

You may have noticed that many of today's students learn about technology by exploring. This course opens with a Getting Started section that takes that same approach and gives you the opportunity to explore before more formal instruction begins. Follow your facilitator's directions to settle in, and then let your curiosity and creativity lead the way during the next few minutes of exploration.

Resource Documents

Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

Learning Objectives

In this section, you will:

- Explore a drawing program and create a digital name card
- Participate in class introductions
- Understand the course goals and structure

Resources

- Painting and Drawing application
- Cloud Storage

Activity 1
Digital Name Cards Exploration

One way to overcome technology jitters is to dive right in. Therefore, before you introduce yourself to the class, take a few moments to get to know your tablet. Your tablet comes pre-installed with software applications and tools optimized for use in your classroom.

One of these applications is a drawing and painting app. Drawing and painting on a touch device can almost feel like the paper and paint experience. Drawings often help audiences understand information quickly.

Step 1: Open and Explore

Often, preliminary exploration is a good way to start learning about new software. Emulate your students approach to new technology and spend a few minutes experimenting with the tools and color palette before moving on.

1. On your tablet's Start window, tap the drawing and painting icon. This opens the app.
2. Look for the Tool palette and look for the Color palette.
3. Tap a drawing tool in the Tool palette to select it. You can change your drawing tool at any time.
4. Tap a color on the Color palette to select it. Explore how you can tap or drag or modify your color selection. You can change the color at any time.
5. Use your finger to draw a line, squiggle, or shape in the white area, which is your drawing canvas.
6. Change your tool and color selections, and then draw again. Notice how colors blend and overlap. Try to find another tool to further smear or blend colors on your canvas.
7. Spend 5 minutes playing with different tools, colors, and drawing motions. Explore and have fun! It's OK if your canvas is a mess—a messy canvas is a badge of learning.

Step 2: Create Your Name Card

To prepare for today's class introductions, create a name card that you will share during your introduction. Plan to present your name and an interesting fact about yourself during your introduction. Use your interesting fact to guide your artwork on your name card.

This is an opportunity for you to show what you learned during your exploration and to experience how digital artwork can enhance communication, even during a typical introduction exercise.

1. Clear the drawing canvas without saving your exploration painting. To do this:

a. Tap File on the menu bar, and then tap New Painting. The Save Painting dialog box opens.

b. Tap Don't Save.

c. In the New Painting dialog box, click OK to display a new blank drawing canvas. Remember to save your new painting.

2. Use the tools and colors to write your name in large letters so you can easily share your name with others.

3. Add artwork that illustrates the interesting fact you plan to share during introductions.

4. If time permits, add additional artwork or designs to increase your familiarity with drawing programs' capabilities and to enhance your name card.

Activity 2
Introductions

Technology provides a means to enhance and increase sharing and communication. Digital name cards can serve as a starting point for getting to know other people in the course. Observe how introductions accompanied by digital drawings compare to traditional oral introductions.

Working in a small group or as a class, follow your facilitator's directions to introduce yourself. Share your digital name card by showing or projecting your tablet screen to your peers. Then, state your name and briefly describe your interesting fact, making sure to point out how your artwork relates to the fact and represents you.

Module 1

Tablet Fundamentals

Overview

In this first module, you will begin to envision a more personalized and mobile classroom environment for you and your students. You will explore tablets' hardware, navigation, and collaborative possibilities. By integrating tablets' effective technology workflow, you can inspire your students to think more deeply, enable them to become more productive and creative, and allow them to connect with the real world.

Learning Objectives

In this module, you will:

- Evaluate the Getting Started name card experience and write a short reflection
- Learn about tablet hardware and software
- Understand networking features and data storage
- Apply new and existing knowledge to share content on a collaborative document

Resources

- Intel Tablet Visual Guide—Windows
- Intel Tablet Visual Guide—Android
- How to Create a Google* Shared Collaborative Document
- Classroom Challenge: Cloud Storage
- Free Cloud Storage Tools for Teachers
- Sharing Folders in OneDrive

Resource Documents
Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

Activity 1
Getting Started Reflection

As you learned in the Getting Started section, your digital manual has several features for personalization with your own notes, bookmarks, highlights, and more. Specifically:

- **Navigation**: You can find and move to any module or activity in your manual by tapping the links in the navigation bar.
- **Personal Notation**: You can use tools to add comments, bookmarks, and highlights in the manual.
- **Resources and examples**: You can access resource files and course links.
- **Save and Print**: You may be able to save and print all your bookmarks and comments.

To begin this module, let's use a note taking feature that comes with your tablet. Take 2 or 3 minutes to reflect on how you felt when you were asked to create a digital name card in the opening activity:

- Were you excited to try a new device or app?
- Were you anxious about your lack of experience?
- How do you feel about using technology in your classroom?
- Imagine how students may feel when they are placed in a similar situation of being asked to use a new device and software. How might you help students overcome their concerns?

Now, write one or two sentences on your reactions and one or two sentences related to your students' possible reactions. Record your thoughts in the class note taking application, an online document, or on paper.

Activity 2
Tablet Features and Navigation Techniques

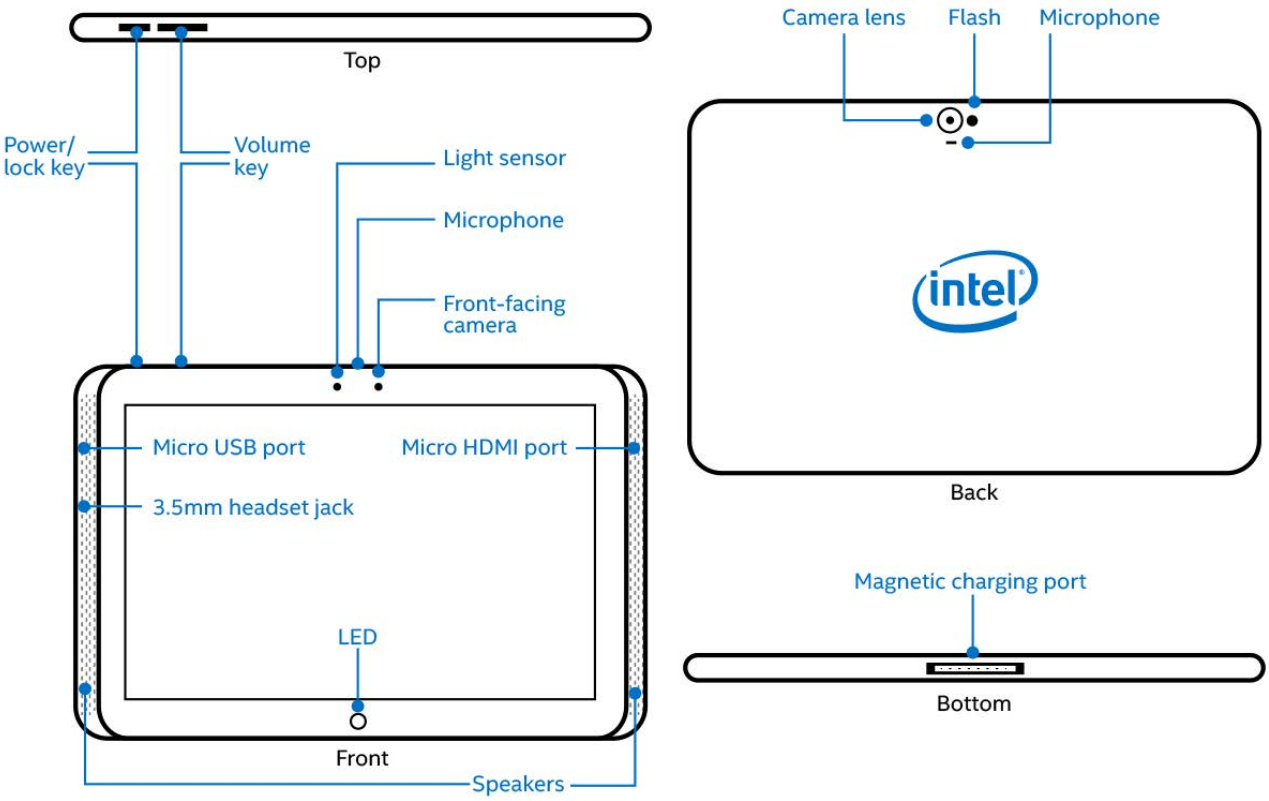
Let's now move beyond the self-directed exploration stage and look more systematically at tablet features and navigation techniques. Most tablets have over 20 main physical features. Most of these are similar to the features on laptop computers, with the exception that they are condensed into a more portable device for touch interaction.

Unlike laptops, tablets typically have limited physical *data storage*, which is why *cloud storage* is helpful for storing, distributing, and receiving digital content, especially in education. You will learn more about cloud storage after you review tablets' physical features.

Data Storage
The location where the digital information on your device is stored; includes hard drive, flash memory, or external devices such as USB drives.

Cloud Storage
The use of applications and resources on the Internet to store data rather than on individual computers. Users use Internet applications, such as Google* apps to create, share, and store their work.

Step 1: Tablet Features



In this activity, you will explore tablets' main physical features to become familiar with their locations and purposes. Begin by viewing the visual guide for your tablet—either Windows or Android.

The elements illustrated in the feature guide are shown in the following list. After you view them, work with a partner or as a whole group to "quiz" each other on tablets' physical features, and demonstrate your knowledge by pointing out where each element is located on your tablet.

> **Note**: Most likely, your tablet will have most but not all of these features. Knowing about available features, regardless of whether they are on your current tablet, will give you a broad knowledge of features that you can tap into when you are working with students and their tablets.

- **Power Button**. Turns your tablet on and off.
- **Power Button LED**. Lights up when your tablet is on. If you are not using your tablet for a while and want to conserve energy, you can make sure your tablet is all the way off by checking this light. If the light is on, press and hold the power button until the light goes off.
- **Home Button**. Displays the Start screen when tapped.
- **Illumination Sensor**. Automatically adjusts the LCD screen brightness. If you cover the sensor with your hand, your screen will become dimmer.
- **Front and Back Cameras**. Allows you to take still photos and digital video.
- **Camera Operating Indicator**. Lights up when your camera is in use so you can easily tell when you are using your camera.
- **Camera Flash**. On Windows tablets, accompanies the back camera to provide extra light when needed, similar to a flash on any other camera device.
- **Microphone**. Transmits or helps you record sounds.
- **Speakers**. Allows you to hear audio without using headphones.
- **Volume Control**. Controls the sound playback on the tablet. Most volume control buttons are built so that if you press the top of the button, the volume increases, and if you press the bottom of the button, the volume decreases.
- **Headset Jack**. Permits you to plug in a single set of ear buds or earphones and to listen to an audio file without disturbing others. You can also plug in an *audio splitter* to allow for multiple ear buds/headphones to be plugged in to one device so several individuals can listen at once.
- **USB 2.0 Port**. Enables you to connect USB devices to your tablets, such as a keyboard, mouse, digital camera, external drives (for file storage), and so forth.
- **Micro HDMI Port**. Enables you to connect your tablet to a computer or television.
- **Micro SD Card Slot**. Allows you to insert an SD card to transfer files, such as documents, videos, audio files, or photos to and from your device.
- **SIM Card Slot**. Allows you to insert and access SIM cards. SIM cards are typically used in cell phone to store data.

- **Power Supply Plug-in**. Allows you to connect a power supply so you can recharge your tablet.
- **Power Supply Cord**. Connects the tablet to an electrical outlet so you can recharge your tablet.
- **Dock Connector**. Enables the tablet to be connected to a keyboard docking station.
- **Rotation Lock**. Controls whether the screen automatically rotates according to the orientation of the product. By default, the screen rotates when you turn your tablet.
- **NFC Antenna**. Provides near field communication (NFC) for transferring data between devices. Devices must be within inches of each other and have NFC capabilities to use this feature.
- **Touch Screen**. Responds to finger and stylus touch to interact and manipulate what is displayed on the tablet. It is both an input and output feature of your tablet.
- **Stylus**. Allows you to enter information on your touch screen using a pen-like device. A stylus offers a more precise pointing device than your finger.
- **Stylus Pen Slot**: Provides a place to store your stylus when you are not using it.
- **Temperature Probe**. Allows you to measure and digitally record temperature changes.
- **Microscope Lens**. Snaps onto the back camera on some tablets or Classmate PCs and magnifies the view using the camera to observe, take pictures, or create videos.

How did you do? Did you find all of the features on your own tablet? (Optional)

Audio Splitter
A peripheral device that splits audio line into multiple channels or into separate identical lines for multiple users.

Step 2: Navigation Experience

Touch screens and tablets let you navigate, create, and provide input by using touch, gestures, and add-in devices, such as a stylus or keyboard. This step provides an overview of how tablets can be used to distribute, share, and receive digital content. Let's start with a quick tapping, zooming, and scrolling exercise:

1. Sometimes, your tablet may be on but asleep, so first, tap on the Home button (Windows) or quickly press the Power button (Android) to awaken it from sleep mode.
2. On the Windows machine, swipe the touch screen to go to the Start screen and log in. On an Android, swipe the picture of the locked lock to the right to the picture of the unlocked lock.
3. Tap to launch a search engine, or a browser to access the Internet.
4. Tap in the Search text box. Notice an onscreen keyboard, called a *soft keyboard*, displays automatically.

5. Type Intel Education in the search box and press Search.
6. Tap the Intel Education link in the search results to visit the Intel Education website.
7. Now, try zooming in and out:

a. Using two fingers, such as your thumb and index finger, place them together on the screen and then separate them. The view zooms in (gets bigger).

b. To zoom out (make the view smaller), place your fingers apart on the screen and then pinch your fingers back together.

c. Practice zooming in and out a few times.

8. Try using one finger to tap a link and swipe to scroll up and down.

Soft Keyboard
Often referred to as on on-screen keyboard.

These same basic gestures also work for documents, applications, ebooks, graphics—anything you will view on your tablet.

Additional Input Devices

You can also use input devices to navigate and enter data, such as your stylus and keyboards, as well as data gathering devices like the temperature probe and microscope lens.

A stylus might be preferred when you are drawing or need to precisely select information. A stylus also works well in text-to-type applications, such as Notes Mobile, an app that you can write notes on and it will automatically convert your handwritten notes to typed text.

Activity 3
Data Storage and Sharing

You can store, *distribute*, and receive digital content on a tablet computer in many ways. Some options include emailing, sharing on a cloud, and sharing through an application installed on your tablet. By default, most tablets have an email app pre-installed. To use it, you need to add your email information. Note that you can also use web mail, such as Outlook.com or gmail, by using a browser on your tablet or downloading a custom app.

Distribute
To give out information, apps, or hardware.

Step 1: Set Up Cloud Storage

Whether you are working on a tablet or laptop, you have many free cloud storage options, including Microsoft OneDrive*, Dropbox*, and Google Drive*. You can read about some cloud storage options on the Educational Technology and Mobile Learning blog or https://engage.intel.com/message/133422.

In the course resources there are directions for setting up a cloud storage account for Microsoft OneDrive and Google Drive. Your facilitator may provide directions for working with a different cloud storage account. Follow your facilitator's instructions and set up your account. You will continue to follow the directions and upload your digital nametag.

You facilitator will share a folder of class work with everyone in the course. If your facilitator is projecting, you should be able to see other participants' shared artwork populating your facilitator's shared folder. If your class is using the Intel Classroom Management tool, your facilitator may share a view of the shared folder so you can see the folder being populated by looking at your tablet.

Quick Mindset Check

Take a brief moment to observe your current mindset. How are you feeling? Are you feeling enthusiastic about your progress? Anxious about understanding? Note your feelings and remember your experiences during this course when you help students set up or access services and apps on their tablets. A little empathy can go a long way when dealing with the complexities of technology. Remember too that this is all important learning that will set you and your students up for success with tablets.

TIP

Note that schools use different types of cloud storage, and OneDrive and Google Drive are only two solutions. Follow your school's direction and use the preferred cloud service.

If you are using a Windows device, OneDrive may already be installed. Swipe the right edge, tap Search, and tap Apps to view all installed apps. If OneDrive displays, tap it to open it. On your Android device, Google Drive may already be installed. Pull up all apps by touching the top right app icon and swipe to find the Google Drive icon and tap to open it.

Activity 4
Reflection Using an Online Collaborative Document

In addition to sharing files in the cloud, you can collaborate on documents online.

You can use Google Docs* through Google Drive*. To do this, you will have to set up Google accounts and download the Google Drive app or log in to Google Drive through a browser before collaborating.

If your tablet has Microsoft Office* installed, you can easily collaborate on Word documents in OneDrive. If you do not have Office installed, you can download a free office app, such as WPS Office*, which will enable you to work on shared documents in OneDrive, including Microsoft Word documents.

Your facilitator will lead this brief activity by sharing an online collaborative document in the course's shared folder. Here, you will discover the power of online collaboration and document creation by working on one document with all of your peers.

Online Collaborative Document
A document or file shared and accessed by multiple users across the Internet.

1. Open the shared folder and open the document that has been shared with you.
2. Respond to the questions in the document by typing in the document.
3. Watch as the shared document is automatically updated with responses. Notice that the shared document does not require a Save button. Online documents are continuously saved and updated. Students and teachers can use online documents and files for many purposes. Documents and files can be private, shared between an individual student and teacher, shared in small groups, shared among the entire class, or shared with the public.

If time permits, discuss some ways you might be able to use shared documents or files in your class.

Module 2

Educational Applications and Software

Overview

The learning potential of using a tablet and educational applications and software in the classroom is unlimited. Tapping into this potential means you need to understand the purpose of educational apps and how they support and connect students to content in the classroom and the real world.

The Intel® Education Solutions applications and software is a great place to start discovering tablets' benefits. This module provides the opportunity to explore the Intel tools, participate in a Media Camera activity, create a Visual Classroom Dictionary using digital photos, investigate how to find and install applications, and evaluate educational apps based on its educational value. These learning experiences are designed to help you model digital citizenship skills in an online environment back in the classroom, and help select the appropriate resources to personalize instruction for students with tablet computers.

Learning Objectives

In this module, you will:

- Investigate and review the Intel Education Solutions applications and software focusing on how to best personalize instruction and target student thinking and learning outcomes
- Participate in a group activity to create a visual product using the media camera
- Work with an online collaborative document to share reviewed educational apps

Resources

- Educational App Evaluation Rubric
- Student Job Task Cards
- Student Job Task Cards Template
- Alphabet and Number Cards
- Setting Up Cloud Storage
- Intel® Education: Classroom Management Software
- Educational Apps and Software Resources
- Interesting Ways to Use Google* Documents in the Classroom
- How to Create a Google* Shared Collaborative Document
- Twenty-one ways to Investigate What Students Are Learning
- Free Cloud Storage Tools for Teachers

Resource Documents
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Activity 1
Working with Educational Applications

To begin your understanding of why tablets are an important classroom resource, you will read a Tablet Overview, and then explore an assigned Intel® Education Solutions tool.

Step 1: Educational Apps and Tablet Computers

First, let's define the term *app*, which is short for application and is a very common word associated with mobile technology. We hear a lot about apps, but what exactly is an app and how is it different from computer software? While an app can refer to any type of application, it typically refers to a small, specialized software program that can be downloaded onto mobile devices. For example, a cell phone might have a camera app for taking pictures and a weather app for seeing weather conditions around the world. Apps also are:

- Designed for touch-screen interaction and single or two-handed operation
- Created to provide a singular tool or focus on very specific features
- Designed for smaller screens
- Flexible—they may or may not require network connectivity
- Designed for quick, easy access and convenience
- Resources that offer reduced functionality of computer software programs
- Designed to be used in short time intervals
- Created for built-in device features (such as, GPS, camera, accelerometer)
- Free or inexpensive to purchase
- Device-specific, or designed to work only with certain operating systems or brands

App
A self-contained program or piece of software designed to fulfill a particular purpose; especially as downloaded by a user to a mobile device.

Tablet Overview

Beyond being a media player, a web browser, an expensive organizer, and a gaming console, the tablet computer has another use, one that's perhaps more important than any of the others—it's a natural tool for teaching and for collaborative and self-directed learning. Review the following points to learn more about tablets' benefits in the education world.

- **Tablets are simple to use.** Using a tablet is intuitive. For children, even toddlers, many tablet-based activities barely need explanation, and children are unlikely to accidentally corrupt the software. Therefore, students can use tablets with minimal supervision and will learn basic computer skills from exploration alone, which helps students become tech savvy at a relatively early age.

- **Tablets have an abundance of apps.** App developers recognized the potential of mobile devices early on, and hundreds of child-friendly educational apps and games have sprung up as a result. Many apps are suitable for children as young as two, and they teach nearly every subject covered in schools and more. From math to science, geography to foreign language, to special education—a multitude of educational apps are available to meet the needs of every child. You can even find app repositories, which are collections of apps grouped together by common purpose, audience, or subject matter. These online repositories offer you an area where you can preview apps from other educators. Sometimes, you can review an app via a video clip so you can see how it can be used in an educational setting. If time allows, your facilitator will show you how these repositories work.
- **Tablets make learning fun.** In addition to the wide availability of educational apps, tablets are also an innovative tool for learning because many apps are designed for game-based learning. Games motivate children and youth to learn, and they challenge students to excel by providing increasing levels of difficulty. Students also benefit from game-based apps' instant progress-based feedback.
- **Tablets benefit teachers and parents, too.** Tablets give teachers and parents additional tools to collaborate and provide interactive hands-on learning and communication experiences for students, families, and the community as a whole. There are apps that can help track household chore assignments, monitor household budgets, and messaging apps that make it easy for teachers to send home important notes and updates about the day's classroom learning experiences.
- **Tablets enable mobile learning.** The portability and connectivity of tablets combined with the rich supply of quality apps opens students up to a new world of content, experts, original source materials, online collaborators, and more.

Step 2: Intel® Education Solutions Applications

Now, you will have the opportunity to work with a partner to discover the learning potential of the Intel Education Solutions tools.

Work with an assigned partner to explore one application and become experts. Take notes while you explore using the class note-taking application, an online document or paper. Use the following guiding questions to investigate the tool:

- What tool did you explore?
- How might you use this tool in the classroom?
- What features did you find interesting as you explored?
- Did you find any obstacles as you explored the resource?
- How could this tool be used to best personalize instruction?
- How might you use the tools to target student thinking and learning outcomes?

The Intel Education Solutions tools that will be explored in the jigsaw activity include:

Lab Camera: Promotes scientific inquiry and makes abstract concepts tangible for students. It provides a cost-effective way to enhance STEM curriculum.

Media Camera: Allows students to easily capture and edit pictures or video, and to make annotations to create their own multimedia presentations for project-based learning.

Pixlr: Allows students to transform their photos into works of art as well as annotate images.

ArtRage Studio: Simulates the process of creating art with traditional media (like oils or watercolors) with realistic representations of artistic tools, such as brushes and palette knives. The analog interface helps students draw connections between traditional and digital creative processes while fostering their creative thinking and artistic skills.

Sketchbook Pro: A professional-grade drawing, sketching and painting application

Kno: Provides intuitive tools to navigate and search across a variety of course materials, e-textbooks, and sources. Students can efficiently organize reading materials using the term- and course-management functions. Flexible annotation tools enable educators and students to add notes, links, drawings, and other references.

SparkVue: Allows students to collect, evaluate, and analyze data interactively, while increasing problem-solving and critical-thinking skills. The application makes use of devices' built-in cameras and sensors to collect data. As the data is collected, the application visually represents the data in a graph, table, meter, or digital display—making science and math concepts come to life. The application comes with a number of pre-configured lab experiments with instructions to make it easy for educators to get started.

Evernote: Tablets include note-taking apps that allow typing, drag-and-drop information gathering, and pen input. Pen input enables students to use their tablet or notebook as a real notepad. Pen technology in the classroom allows students to create and customize documents in which they can draw, insert pictures, and take notes with their own handwriting using a stylus or finger. The written text can be converted to typewritten text.

Foxit: is a small, fast, and feature-rich PDF viewer which allows students to view, annotate, print, and manage PDF documents and books.

Step 3: Share Explored Intel® Education Solutions Tool

As experts, share your assigned tool with the rest of the class using the guiding questions and notes to present the findings. Take notes as other pairs share through a class discussion.

- What tool did you explore?
- How might you use this tool in the classroom?
- What features did you find interesting as you explored?
- Did you find any obstacles as you explored the resource?
- How could this tool be used to best personalize instruction?
- How might you use the tools to target student thinking and learning outcomes?

Visit www.intel.com/edusw to find lesson ideas, classroom videos, app details and user guides for all the Intel Education Software apps.,

Activity 2
Trying Out a Student-Centered Activity

Digital artwork, like any artwork, opens a broader avenue for communication beyond oral or written expression. Through artwork, including photographs, students can more fully demonstrate their understanding and communicate concepts and ideas. Teachers may want to encourage students to use drawing programs to brainstorm as well as illustrate concepts and ideas in projects. Using the Intel Media Camera or Pixler software, your team will participate in a student-centered collaborative learning project and create an illustrated and annotated digital alphabet book.

Step 1: Teams and Jobs

For this activity, the class is divided into teams of four. Once your team is formed, have each team member randomly draw a student job task card to select a job: photographer, annotator, publisher, and student team leader. Your facilitator will assign you letters of the alphabet. As a team, your task is to create and publish annotated photographs that represent your team's assigned letters of the alphabet. Your team will work together to create the team alphabet products using the roles describe here:

- The photographer takes photos of objects selected by the team to represent each alphabet letter assigned. The photographer also edits photos by cropping, resizing, and so forth for best quality visuals.
- The annotator annotates the formatted photos with text to connect the object to the alphabet letter it represents.
- The publisher saves the annotated photos in the tablet's photo gallery, and publishes the photos to a cloud resource that generates a URL. The publisher shares the URL with the student team leader.
- The student team leader guides and supports each team member with their task, checks on alignment with other teams, troubleshoots problems, and ensures the final digital product of the photos is delivered to the facilitator's shared drive.

Step 2: Visual Classroom Dictionary

Once jobs are assigned, the team identifies appropriate objects that represent the assigned letter. Follow the directions below for each person's task.

Student Team Leader Task

The student team leader coordinates the team planning and execution of the task. The leader also makes sure that the final photograph has been uploaded correctly and the photos are shared with the facilitator. The leader:

1. Leads initial team planning and task organizing discussion.

2. Opens the shared drive folder to ensure the picture is there.

3. Verifies that the picture has been shared with the facilitator.

Photographer's Task

Choice 1: Media Camera

The photographer locates the Media Camera on the tablet computer and takes pictures. Use the following steps to complete the photographer's task:

1. Open the Media Camera app.
2. Tap the Presenter icon.
3. Tap to open the camera.
4. Tap the blue camera icon in the left-hand corner of the camera screen to take a picture.
5. Resize and crop the photograph as desired.
6. Give the tablet to the annotator.

Choice 2: Pixlr

The photographer locates the tablets camera and takes pictures. Use the following steps to complete the photographer's task:

1. Open the camera on the tablet.
2. Tap the camera icon to take a picture.
3. Open Pixler
4. Go to "File", "Open" and navigate to the picture.
5. Resize and crop the photograph as desired.
6. Give the tablet to the annotator.

Annotator's Task

The annotator adds descriptive text on top of the photo that has been taken. Use the following steps to complete the annotator's task:

1. Tap the "Type" button in the left navigation bar.
2. Type the annotation. Change the font style, font size, color and any other changes you want to make.
3. Press and hold the text box to drag the annotation to the desired location on the photograph. You may try to use any of the other advanced features if time allows
4. Click apply
5. Give the tablet to the publisher.

Publisher's Task

1. The publisher's job is to make sure the digital photo has been saved into the photo gallery and shared with the facilitator. Use the following steps to complete the publisher's task:
2. Go to "file", "save as"
3. Save the photograph.
4. Locate the photo gallery on the tablet.
5. Find the saved photograph in the photo gallery.
6. Share the photograph with the facilitator using the cloud storage directions provided by the facilitator. Use the Setting up Cloud Storage resource to assist in sharing the photos. This is the same process that was used in Module 1.
7. Give the tablet to the student team leader.

Repeat the Process

The team members repeat this process of creating annotated digital photos for all their alphabet cards. If desired, team members can switch roles for each photograph taken.

Once all annotated photos have been received, the facilitator may place them into a photo album on their tablet to play them back into a visual slideshow from the tablet and showcase for all participants.

Step 3: Activity Reflection

With a partner, reflect on individual learning, the team's collaboration and participation, and key takeaways for the set-up of successful student activities.

Activity 3
Evaluating Educational Apps

Over the past few years, the number of educational apps for tablet computers has grown significantly. New apps appear daily and are designed to provide support, information, and learning for teachers of every subject and grade level.

Step 1: Review and Explore Educational Apps

Explore a collection of top educational apps and use an app rubric to review its educational value and learning impact. Select three apps of your choice from an app list or search for apps on your own. Then, identify the purpose and educational impact of each app, and note how and why you would use this to differentiate and personalize instruction for students through an online collaborative document.

1. Launch the app store icon on your tablet.

2. Register for the app store.

3. Search for apps by completing one or more of the following suggestions:

a. Type keywords to search for apps related to a particular subject or content area.

b. Look for specific sections. For example, in Google Play Store*, there is a Classroom Tools section that contains apps targeted towards teachers, and in the Windows store, you can scroll to find an Education > section.

c. Browse the top free apps. Be aware that there are two types of apps—free and paid. Free apps can be installed and downloaded to the device for free. Paid apps need to be purchased for varying dollar amounts before they can be downloaded and installed. To install and download free and paid for apps, the user must be registered in the app store.

4. Tap an app in the app store to see a detailed description and reviews, watch informational videos, and see screenshots of the app.

5. Once you find an app of interest, tap the Install button on the screen. You may be asked to log in to the app store or it may allow you to download and install the app to your tablet if you are already logged in.

6. Locate the downloaded app on the tablet and tap to open.

7. Open the Educational App Evaluation Rubric and get familiar with the review criteria educational apps. Evaluate the app using the rubric.

8. Follow the preceding steps for at least two more apps. Your goal is to review three apps during the allotted time.

Step 2: Share Your Reviews

In this step, you will share your reviews.

1. Access the shared document according to your facilitator's directions.
2. Add your reviews to the class collaborative document.
3. Enter data about the app you reviewed into the columns associated with your name.
4. Remember, you may not need to tap a Save button. Most shared documents continuously save information.

Module 3

Tablet Integration and Student Assessment

Overview

Tablet integration in the classroom can open doors to many new experiences for you and your students, enhancing how you design instruction and approach assessment. In Module 2, you participated in activities that illustrated just how well tablets can provide active and engaging learning for your students. This module will takes integration one step further as you explore student response systems using the tablet and expand tablet use to help facilitate assessment throughout the learning process.

Learning Objectives

In this module, you will:

- Be introduced to student response systems as an innovative method to gather data
- Participate in an activity using a student response system
- Consider way in which a student responses system can be integrated into curriculum areas
- Review some formative assessment strategies
- Explore student response systems as a tool for implementing formative assessment

Resources

- Curriculum Integration Planner
- Socrative
- Mobile Scenario For K-12: Blog + Survey=Homework Completed
- Mobile Scenario For K-12: Natural or Manmade
- Socrative User Guide Video
- Online Socrative User Guide
- Purpose of Assessment
- Types of Assessments
- Intel's Assessing Projects
- Intel's Visual Ranking Online Tool and app

Resource Documents

Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

Activity 1
Curriculum Integration

Student Response Systems Defined. A *student response system* allows instructors to easily collect feedback digitally from their students and display, review, and compare whole class responses immediately. While the tried and true "raise your hand" for responses has been used for ages, today, student response systems vary from highly sophisticated clicker based audience response systems used in universities, to free online tools used increasingly in K-12 classrooms. The accessibility of these tools is growing daily and is becoming an effective and efficient option for collecting data from students.

Student Response System
A hand-held response pad that allows students to reply to classroom questions.

Step 1: Introduction to Student Response Systems

Raise your hand to show your response to the following question and observe the class responses:

- Have you ever used a digital student response system?
- Now, briefly discuss the advantages and disadvantages of gathering student responses this way.

In this step, you will explore a free online app called Socrative* as an example of a student response system for educational exercises, assessments, and games to help you better understand how student response systems can be used in your classroom.

Socrative app has a teacher and student app. Teachers register, download and log in through their device and select types of student response activities and set up the flow of questions and games. Students download the app, log in with their device and interact in real time with the content. Student responses are visually displayed for multiple choice, true/false, and short answer questions. Use the follow steps to explore Socrative:

1. Install the App. To install the Socrative Student app, first, launch the App Store on your tablet. Type in the search field Socrative Student. Find and select the Socrative Student app from the list by tapping once on the app icon, and then clicking Install to download and install the app on your tablet. Once it is downloaded, open the app. Enter the classroom number given to you by your facilitator.
2. Complete the Survey and Discuss. Answer the questions in the survey and then consider the following questions:

- How might you use a survey like this within a lesson?
- Would you use it before, during or after a lesson?

Step 2: Integration of Student Response System

Now that you have been introduced to one student response system and how it can be used to collect data, brainstorm ways to make this technology work for you! Consider the following on your own before discussing with a partner:

- In what ways could a survey tool facilitate learning? Think about how this type of tool could be used, before, during or after a lesson.

After your discussion, record your ideas for integrating a data collection tool into your curriculum. Open the Curriculum Integration Planner and use the guiding questions in the document to help kick-start your creativity. Share ideas with a participant who teaches a similar level.

Step 3: Share

Share with the whole group how you have integrated a student response system into your curriculum activity. Your facilitator will project a document to record your ideas. This document will become your take-away resource at the end of the module.

Activity 2
Assessing with Tablets

As you discussed in Activity 1, there are various forms of student response systems and many ways to integrate them into the curriculum. To take this one step further, this activity explores other mobile assessments as tools for implementing formative assessment.

Step 1: Formative Assessment Strategies

First, let's define *formative assessment*. Formative assessments serve as indicators to monitor student progress and engagement throughout learning activity, and to keep you, the instructor connected to your students' learning needs. These types of assessment should be ongoing through every phase of a lesson or project.

Formative Assessment
Assessment that occurs before and during a unit of study. It is used to gauge student needs, encourage self-direction and collaboration, monitor progress, check understanding, and demonstrate understanding.

1. To begin, read an article on the Purpose of Assessment and the Types of Assessments from the Intel Education Assessing Projects website.

2. Next, refer to the summary of strategies and examples of formative assessment noted on the website. Consider how you use these strategies in the classroom now. Share your assessment strategies briefly with a partner. Then, share with the class.

Purposes	Strategies
Gauging Student Needs	Examining Student Work Analyzing Graphic Organizers Brainstorming
Encourage Self-Direction	Self-Assessment Peer Feedback Cooperative Grouping
Monitoring Progress	Informal Observations Anecdotal Notes Learning Logs
Check for Understanding	Journals Interviews Informal Questioning

Step 2: Mobile Assessment

Mobile assessments are any assessment that can be conducted or completed using a mobile device, such as a tablet. Mobile assessments are ideal for implementing formative assessments throughout a lesson because they offer a way to:

- Collect real-time data to gauge student understanding
- Provide instantaneous feedback
- Store data to a central location instantly
- Differentiate instruction on demand

Student response systems, like the Socrative app, are just one example of a mobile assessment. Take some time to explore some other mobile assessment tools.

1. Review the following tools:

- Intel Education Assessing Projects
- Intel Education Visual Ranking Tool & Visual Ranking app

2. After reading about these tools, discuss the following with a partner:

- In what ways could these tools be used to accomplish formative assessment?

3. To see some practical, creative examples of how to implement mobile assessments into the curriculum, read one of the following Mobile Learning Scenarios, ideally with someone who teaches a similar grade or subject:

- Blog + Survey=Homework Completed
- Natural or Manmade

4. After you read the scenarios, discuss the following questions:
5. What mobile assessment tools are the teachers in the scenarios using?
6. What opportunities does mobile technology offer in order to extend and enhance formative assessment?
7. With the remaining time, download the Intel Education Mobile Scenarios app. The app contains a large collection of classroom scenarios similar to the one you just reviewed. You can search the collection by subject, grade level, and type of mobile tools. To download and explore the app, go to your app store, search for Mobile Scenarios, install the app, and then launch it.

Activity 3
Reflection

To complete this module, discuss the following as a class:

- What opportunities and challenges do you see with implementing mobile assessments in the classroom?

Module 4

Effective Tablet Management in the Classroom

Overview

Classroom management is the backbone of teaching all grade levels and subject areas. Managing the environment and student expectations directly affects the learning that happens throughout the day. Classroom management is equally as important when using tablets with students. The best practices you use for setting expectations and establishing routines and consequences apply even when you are integrating technology. With that said, a few additional specific considerations are needed in a mobile classroom, such as where the tablets are stored and safety considerations. This module will help you plan for using tablets effectively with students.

Classroom Management
Classroom management is a term used by teachers to describe the process of ensuring that classroom lessons run smoothly despite disruptive behavior by students.

Learning Objectives

In this module, you will:

- Plan strategies for managing tablets in the classroom
- Consider key safety topics when using tablets with students
- Understand the main idea of the Intel Classroom Management tool

Resources

- 10 Tablet Classroom Management Techniques
- Effective Classroom Tablet Management Ideas
- Total Participation Techniques (TPT) to Engage All Students
- Intel "Kids Talk about Cyber Safety" Video
- iKeepSafe
- Policy of Protection
- Student Participation and Active Learning
- Webonauts

Resource Documents
Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

Activity 1
Classroom Management with Tablets

In both a traditional classroom and a mobile classroom, teachers need to have strong classroom management skills to teach effectively. You will be able to apply your current practices when you integrate technology, but you will also need to think about and plan for some specific details when using tablets.

Review two documents: 10 Tablet Classroom Management Techniques and Effective Classroom Tablet Management Ideas. Take notes about how you could adapt relevant classroom management tips to your classroom.

In small groups, share ideas with other participants who teach a similar level. Their ideas may inspire you! Take notes about any new strategies that are introduced.

Activity 2
Safety Considerations

Safety is an important classroom management topic to consider when using tablets with students. You need to be prepared to discuss safety topics from the start.

Step 1: Safety Resources

Follow your facilitator's instructions to form a group of four participants. Assign each group member a safety resource to review. These resources are in different formats, which are ways you could present this information to your own students:

- Video: "Kids Talk about Cyber Safety"
- Website: iKeepSafe
- Document with Links: "Policy of Protection"
- Online Game: Webonauts

While you review your resource take notes about what are the most important safety topics to talk about with your class.

Step 2: Key Safety Topics

Summarize the resource for your group. What were the benefits of how the format delivered information? What were the important safety tips presented?

As a group, come up with a list of Five Key Safety Topics to cover with your students. Make a list of your group's safety topics using the course's note-taking app, in an online document, or on paper.

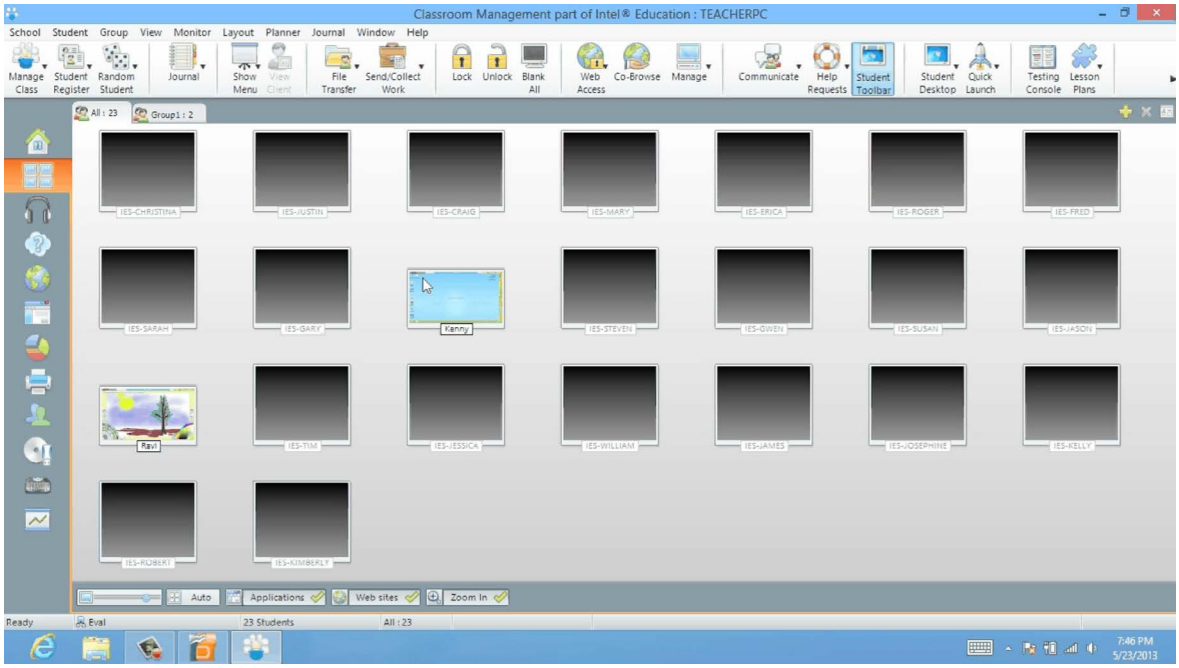
Activity 3
Overview of the Intel Classroom Management Tool

The Intel Education Solutions software suite includes the Intel Classroom Management tool to help you with many aspects of your tablet classroom management. This tool enables teachers to manage students' activities and access to content, which assists with student engagement and routines. To become familiar with these tools, let's walk through some of the features that can help you manage your classroom mobile learning.

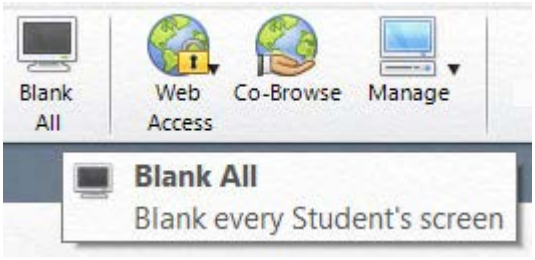
TIP

The Classroom Management Extension Module explores the tool's features in more depth.

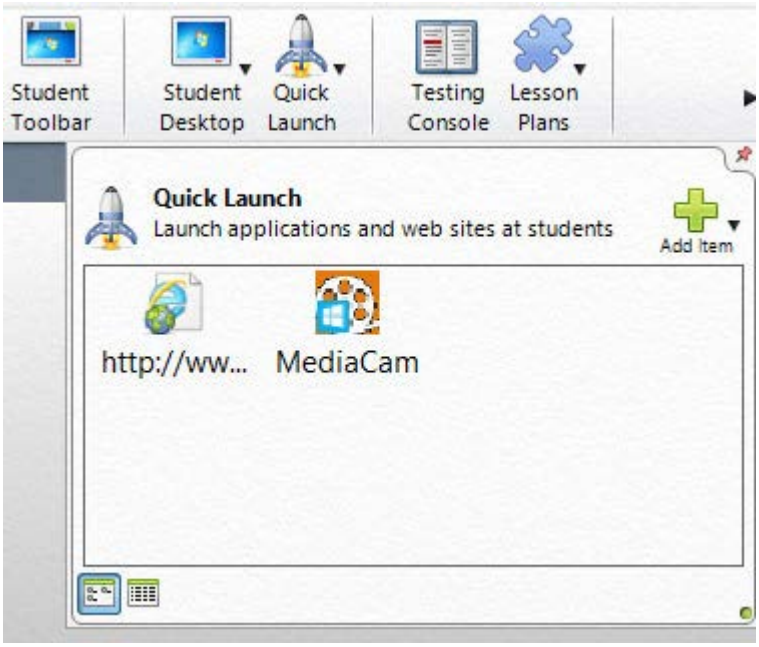
Using the tool, you can see which students are logged on and who is ready to work. You can see a list or graphical display of tablets. You can also view each student's screen to monitor his or her activity.



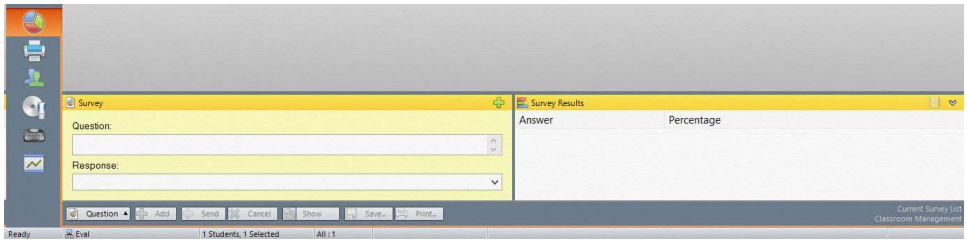
When you are ready for instruction, you can blank all screens to limit distractions.



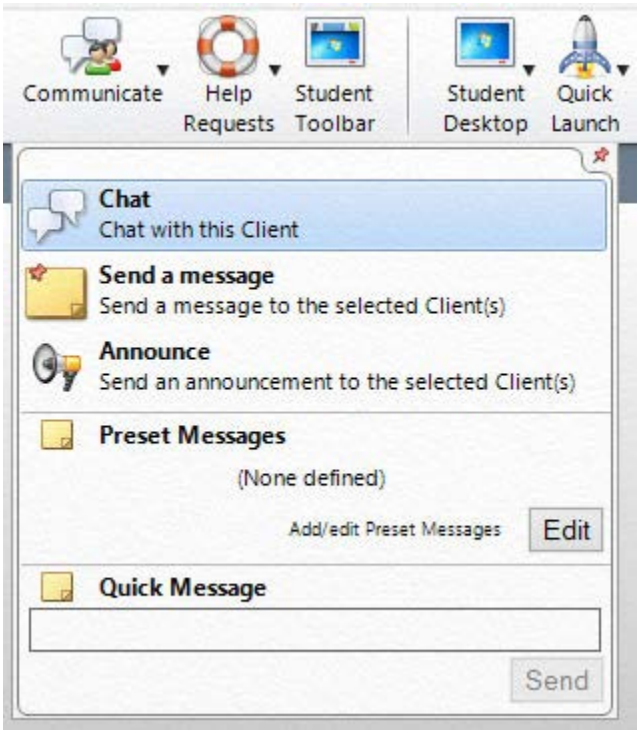
To add to your lesson, you can share a website with every student's tablet.



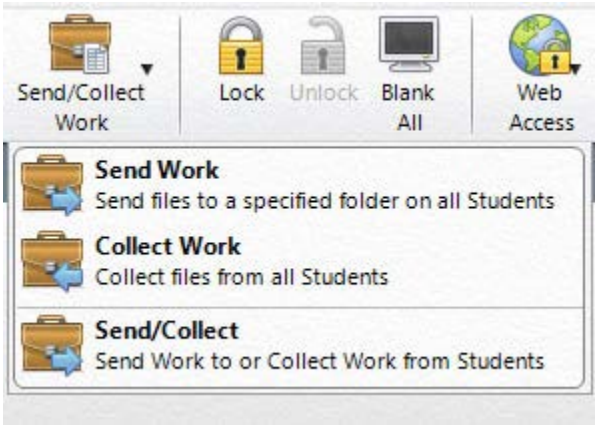
After students have had some time to explore, you can send quiz or survey questions to students' tablets. The results are quickly received and interpreted.



If a specific student needs help, you can send them a private chat message to their tablet, where you and the student can communicate about their questions.



When you are ready, you can assign homework to your students to help them practice with the concepts they have learned. You can send work directly to students' tablets.



Activity 4
Reflection

Classroom Management is an important part of teaching every subject, including mobile learning. You will now have a chance to reflect what you have learned about using tablets in your classroom.

The facilitator will guide you in completing a survey. Please navigate to the URL provided by your facilitator. You will answer some questions about your level of comfort with tablet computers, review some tips about managing tablets in your classroom, and have the opportunity to ask questions or provide comments about the course.

Wrap-Up

Final Reflections on Tablets in the Classroom

Overview

Now that you have explored the fundamentals of using tablets in the classroom, you will create a digital reflection about your learning and participate in a celebration of stories. This course provides the basic foundation you need to get started using tablets with students. The next step is to apply this information to your own classroom, grade-level, and subject-area.

Learning Objectives

In this wrap-up, you will:

- Apply tablet course information to specific classroom needs
- Reflect on tablet course information
- Share your thoughts and experiences

Activity 1
Reflections

Step 1: Video Reflections (optional)

Using video, create a short, one-minute segment explaining how you will apply information from this course to your specific classroom. This video will be shared with other participants, so it should help inspire other teachers who are in similar teaching environments as you!

Ideas to consider:

- Grade level
- Subject area
- Classroom management constraints or ideas
- Lesson ideas
- Favorite apps
- Assessment
- Curriculum integration

When you have completed your video, follow your facilitator's instructions to upload it to the course's shared folder or free video sharing app. Then, you may review other participants' videos after class on your own time.

Step 2: Celebration of Stories

As a closing activity, gather in a large group and form a circle so everyone is facing one another. Share a closing reflection as a "Burst of Inspiration" that could be a newly gained tablet skill, an instructional approach, or a dynamic student-centered activity that you will be putting into practice immediately. Each "Burst of Inspiration" from each participant should be no longer than a 45 second share-out to keep the pace moving and wrap up our day in a positive "celebration of stories" way.

Extension Module 1

Tablet Productivity Tools

Overview

Tablets and innovative tools provide many opportunities to take new approaches in your classroom for student engagement and deeper learning. This module explores how your curriculum can take new directions while using familiar productivity tools, including word processing, spreadsheet, multimedia, and note-taking. With productivity tools on tablets, students can share, show, display, and record information in more efficient and effective ways. Integrating these tools in routines and lessons can engage students in critical-thinking, increase their productivity, expand their collaboration, widen their network and audience, and allow for individual expression and ownership of learning.

Learning Objectives

Participants will:

- Explore productivity tools on the tablet
- Complete exploration tasks using an assigned productivity tool
- Share exercise and exploration findings with the group
- Consider how to integrate productivity tools with tablet-based lessons

Resources:

- Microsoft.com*
- WPS Office*
- Google Drive*

Activity 1
Introduction to the Tools

Productivity tools come in many forms. They can be installed apps, online tools, plug-ins, and more. This activity focuses on getting to know word processing, spreadsheet, multimedia, and note-taking tools.

Step 1: Overview of Productivity Tools

The following productivity tools should be essential components in every student's digital toolkit. These tools will help students record, edit, collaborate, and present information and learning. Students will turn to these tools in the classroom, at home, in the workplace, and throughout their adult lives.

1. **Definitions of productivity tools.** Review the definitions of each productivity tool and follow your facilitators short demonstration of each tool:

a. **Word Processing:** A tool that allows for writing, editing, collaboration, peer reviews, and production of mostly text-based documents, such as reports, graphic organizers, stories, and so forth. On tablets, students often use online word processing tools for rapid and efficient document creation, revision, and sharing.

b. **Spreadsheets:** A tool that displays numerical data in cells in a worksheet of rows and columns in which hidden formulas can perform calculations on the visible data. Spreadsheets are often used to gather and record data as well as present data in charts and graphs.

c. **Multimedia:** A tool that integrates graphics, text, video, audio, animation, and presentation capabilities, such as slideshow presentations. Students often use multimedia tools to present their findings.

d. **Note-taking:** A tool that allows the ability to record notes, thoughts, ideas, and so forth. Many online note-taking tools allow students to share their notes with others.

2. Discuss prior experience with these tools. Before exploring productivity tools on the tablet, think about ways you presently use these productivity tools in the classroom and share your experiences in a whole group discussion.

Step 2: Jigsaw Groups to Explore Productivity Tools

This step uses a jigsaw grouping strategy to learn about each productivity tool in a short amount of time. Your facilitator will assign one productivity tool to explore in your Tool Group. Later, you will meet in your assigned Home Group to discuss your findings and mentor others. Follow your facilitator's instructions for setting up jigsaw groups.

Complete the exploration and exercise outlined for your assigned tool. Then, with your Tool Group discuss ways to use each tool in the classroom to prepare yourself to share what you have learned with your Home Group.

Exploration and Exercise. Complete the following steps based on the productivity tool that was assigned to you.

Word Processing

Exploration:

1. Open the word processing application and open a new document if necessary (in most programs, a new blank document opens by default).

2. Explore the features and functionality of the tool by trying the following:

a. Type in the document.

b. Change the color of the text.

c. Explore the menus and features of the tool.

d. Understand how to save your work.

Exercise:

1. Complete the following steps:

a. Find a partner who is also exploring the word processing tool.

b. On a new document, write the first few lines of a story.

c. Now, if your class is using cloud storage, such as OneDrive share your document with your partner on the cloud. Use track changes and comments to make edits and suggestions to your partner's story. If your class is not using cloud storage, swap tablets to complete the editing.

d. Review your story with the edits and finalize your story by accepting or declining the changes and revising as suggested.

e. Add a title to your story.

f. If applicable, insert a picture or clip art to the story.

g. Save your document to share your story with your Home Group.

h. With your Tool Group, discuss ways that text editing and revising can be used in your classroom. Think about how this tool can support writing in the classroom.

i. Be prepared to meet with your Home Group to share the writing exercise, what you learned about word processing, and your group's ideas for integrating word processing in classroom activities.

Spreadsheets

Exploration:

1. Open the spreadsheet application and open a new workbook if necessary (in most programs, a new blank workbook with blank worksheets opens by default).

2. Explore the features and functionality of the tool by trying the following:

a. Type numbers in some cells and text in other cells of the spreadsheet.

b. Explore the menus and features of the tool, including how to add a column of numbers and how to format text or add borders.

c. Understand how to save your work.

Exercise:

1. Complete the following steps. Use the example as a guide:

a. Develop a survey question with a finite number of answer options. For example, *How many days per week do you exercise?*

- 0 to 2 days
- 3 to 5 days
- 6 to 7 days

b. Type the question in the first row of the survey.

In the next row down, type each of the available answers, one in each column. Your chart should look similar to this:

How many days per week do you exercise?			
0 to 2	3 to 5	6 to 7	

Ask 5 people the question and record their answers by listing the number of people who responded to each answer option. For example if 2 people responded 0 to 2 and 2 more responded 3 to 5 and one person responded 6 to 7, your chart would look like this:

How many days per week do you exercise?			
0 to 2	3 to 5	6 to 7	
2	2	1	

c. If you have experience with spreadsheets, create a bar chart to display your data. Highlight all the cells that have information, and click the Chart button to insert a bar chart.

d. Save your spreadsheet to share your data with your Home Group

e. With your Tool Group, discuss ways collecting data with spreadsheets can be used in your classroom.

f. Be prepared to meet with your Home Group to share spreadsheet experience, what you learned about spreadsheets, and your group's ideas for integrating spreadsheets in classroom activities. Think about how this tool can support data analysis in the classroom

Multimedia

Exploration:

1. Open the multimedia tool application and open a new slideshow if necessary (in most programs, a new blank slideshow opens by default).

2. Explore the features and functionality of the tool by trying the following:

- Create a title slide.
- Add a slide.
- Explore the menus and features of the tool and try changing the font and inserting an image.
- Understand how to save your work.

Exercise:

1. Complete the following steps:

a. Take a picture of an object around you using the tablet's built-in camera.

b. Save the image.

c. Create a title slide for your presentation based on the image.

d. Add a slide and insert the image.

e. Write a description about your picture.

f. If applicable and time permits, add an audio clip or animation.

g. Save your presentation to share with your Home Group.

h. With your Tool Group, discuss ways that multimedia can be used in your classroom.

i. Be prepared to meet with your Home Group to share the multimedia experience, what you learned about multimedia, and your group's ideas for integrating multimedia in classroom activities. Think about how this tool change how students can do presentations in the classroom.

Note-Taking

Exploration:

1. Open the note-taking application and start a new note (in most programs, a new blank note or notebook opens by default).

2. Explore the features and functionality of the tool by trying some of the following:

- Type in the note.
- Explore the features of the tool.
- Understand how to save your notes.
- Understand how the tool allows note sharing (if applicable).

Exercise:

1. Complete the following steps:

a. Find a partner who is also exploring the note-taking tool.

b. Open a new note or notebook.

c. Take turns interviewing one another to get to know more about that person. As you interview, take notes about one another.

d. Save your notes and share them with your partner, if the program supports note sharing. You will give a short summary about the tool's capabilities and tell about your peer to your Home Group, based on your notes.

e. With your Tool Group, discuss ways that note-taking can be used in your classroom.

f. Be prepared to meet with your Home Group to share the note-taking experience, what you learned about note-taking, and your group's ideas for integrating note-taking in classroom activities. Think about how this tool can improve note-taking skills in your students.

Activity 2
Present to Home Groups

In this activity, your knowledge of productivity tools will multiply as you reassemble into your Home Groups to share what you have learned. Once Home Groups have formed, each member in your group should have knowledge of a different productivity tool.

1. Share your Tool. Each "tool expert" in your group should have a turn sharing the following information:

- Briefly describe your productivity tool exercise and present the example (story, presentation, chart, or notes) to the group.
- Share the ideas discussed in your Tool Group about ways to use the tool in the classroom.

2. Take Notes. Use the course note-taking application, online document, or paper to take notes or collect ideas on each of the tools as other participants share information.

- Word Processing
- Spreadsheets
- Multimedia
- Note-Taking

Activity 3
Reflection

As a final reflection for this activity, consider the benefits of using productivity tools with tablets in the classroom. Collect your thoughts on the following question as it applies to each tool: *How can using these tools increase productivity in the classroom?* Record your thoughts in the course's note-taking app, in an online document, or on paper.

Share your responses with a partner if time permits.

- Word Processing
- Spreadsheets
- Multimedia
- Note-Taking

Extension Module 2

Intel Classroom Management Tool

Overview

Mobile devices in classrooms can be considered *disruptive technologies*, or technologies that are changing how teachers teach and students learn. Keep in mind that change can be good, and disruptive technologies are not synonymous with disrupted classrooms. With the proper tools, technology greatly enhances education. The Intel® Education Solutions software suite includes the Intel® Classroom Management tool to help teachers manage and control technology in their classrooms.

Disruptive Technologies
A technology or innovation that helps create a new market and value network, and eventually goes on to disrupt an existing market and value network.

This module provides a hands-on demonstration of the Intel Classroom Management tool and shows you some of its key features, from both the teacher's and student's perspectives. You will see how the tool empowers teachers, engages students, and encourages productivity and collaboration.

Learning Objectives

Participants will:

- View the Intel Classroom Management tool from the teacher perspective
- Interact with the Intel Classroom Management tool from the student perspective
- Understand the benefits of using the Intel Classroom Management tool
- Use a student response feature to reflect on the tool

Resources

- Intel Education Classroom Management Tool (video)
- Intel® Education Teaching and Learning Ideas for Classroom Management
- Intel® Education Classroom Management User Guide

Resource Documents
Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

Activity 1
Classroom Routines

The Intel Classroom Management tool offers features that teachers can readily work into their classroom routines. In this activity, you will look at some familiar routines and tasks that can be completed in new ways.

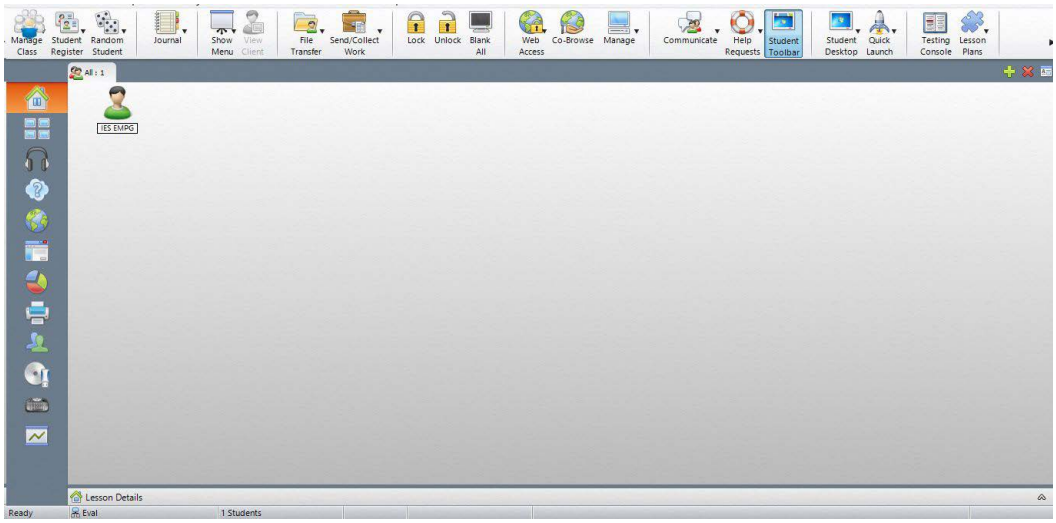
Note that throughout this module, your facilitator will project the teacher view for all to see while you experience the student view on your device. This will allow you to experience both sides of the interactions.

Click to open the overview video in your browser

Step 1: Attendance and Class Readiness

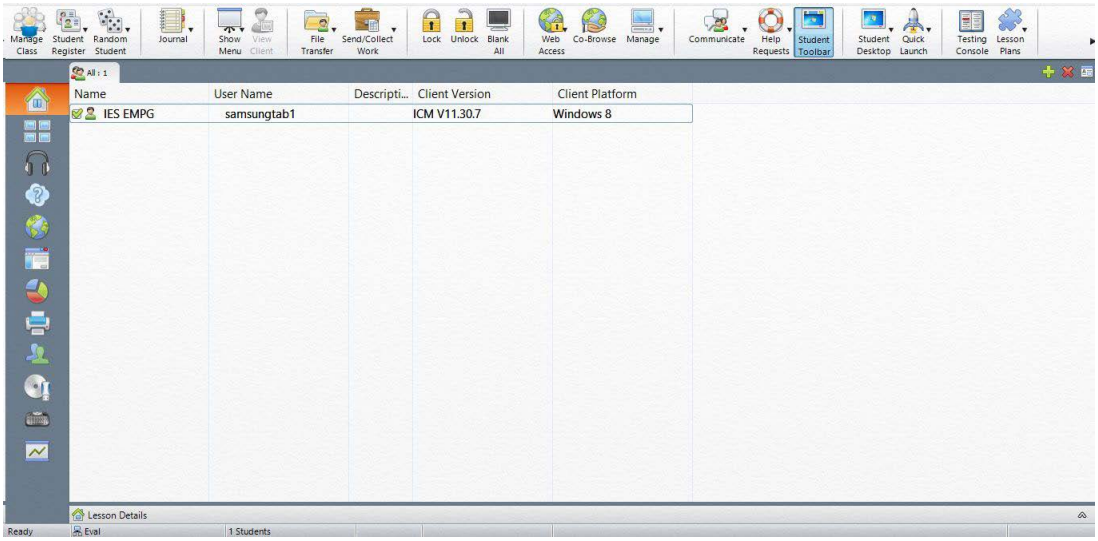
When you first open the Intel Classroom Management tool as a teacher, the Teacher Home screen displays. This view serves as command central for your classroom management. You should become familiar with the main tools available in the left navigation area and on the toolbar across the top. These tools will help you translate everyday activities to corresponding digital activities, including:

- Monitoring student engagement
- Keeping students on task
- Responding to students
- Sharing resources

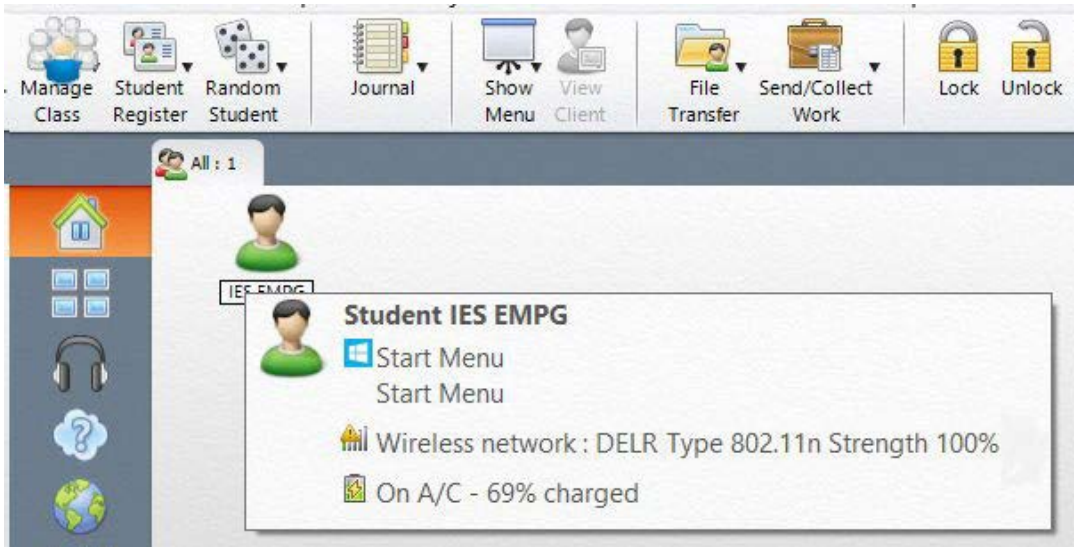


Follow along while your facilitator introduces basic features on the Teacher Home screen that correspond to beginning-of-class routines.

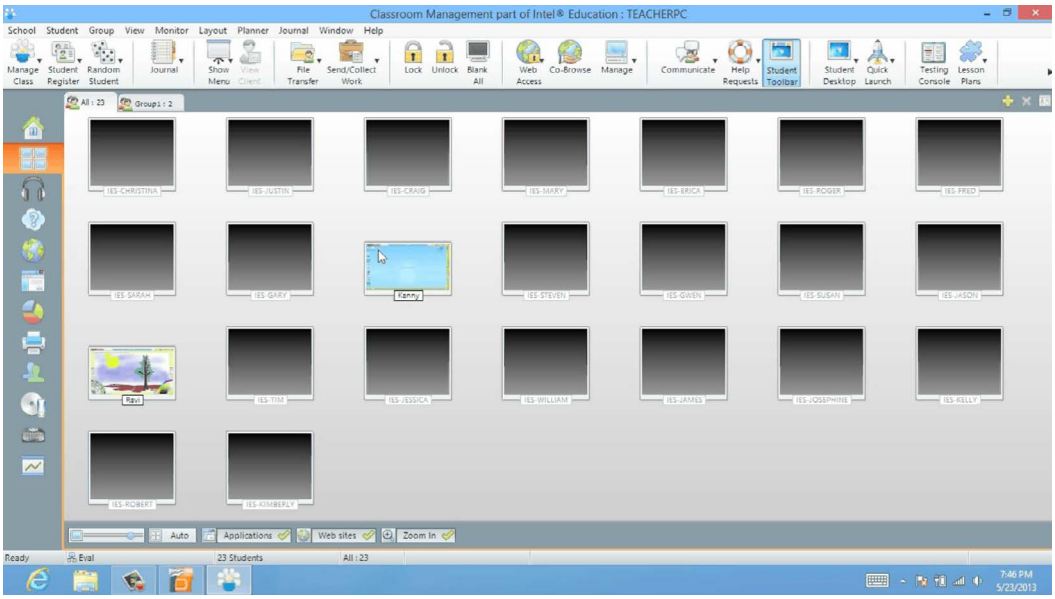
- **Taking attendance**—On the Teacher Home screen, you can see a list of students who are in your class. You can use a right-click menu or the View menu to show your class as large icons (shown previously) or in a list view (shown next). If the icon is in color they are online. If your students' icon is greyed out they are not online.



- **Making sure students have their "materials"**—By pointing to students in your class list, you can see the status of each student's network connectivity and device battery life.
- If a student is having connectivity issues or taking a while to get set up, you can use the Student menu or right-click the student and choose Connect to help them along.
- If a student's device shows a low battery life, you may want to recommend that the student plugs his or her device in before the lesson starts to avoid interrupting class.



- **Seeing who is ready to get started**—As students log on to their devices, you can tap the Monitor Student Machines icon (below the Teacher Home screen icon) in the left navigation bar. This changes the view so you can see the active desktop of every student's device.



- **Ensuring class readiness**—By default, the Student Toolbar option is selected in the teacher console's top toolbar. Having this option selected provides the student's Intel Classroom Management toolbar on their devices. The student toolbar shows the student's name, class and teacher name, and the student tools, shown in the following image. You should see this toolbar on the student device during this module.

TIP

Participants should see the Student Toolbar on their devices. Then, they should see how the Student Toolbar button in the teacher console can be used to hide and show the toolbar on students' devices.

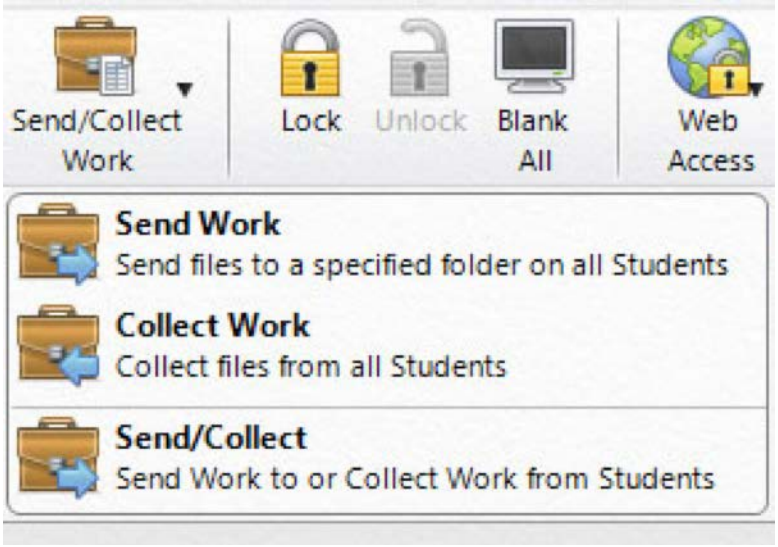
TIP

If devices go to sleep or drop offline, go to the Manage Class button and select Refresh.

Step 2: Assigning and Collecting Homework

A common routine in classrooms is assigning and collecting homework. Using the send/collect icon, the Intel Classroom Management tool allows teachers to send out a homework assignment to the class. The following day, while students get situated at the start of a class, teachers can collect homework. Teachers can quickly perform this task while students are preparing for the class. Follow the steps to send and collect assignments:

1. To send a homework assignment, use the Send/Collect work button on the toolbar. Choose Send Work, browse for the file you want to send them and specify the location. Tap send when done.



2. To collect homework, use the Send/Collect Work button in the toolbar. Choose the Collect Work option to collect work from all students. To use this feature, students will have to make sure they save their files in the location that they received it.

STEP 3: Class Journal

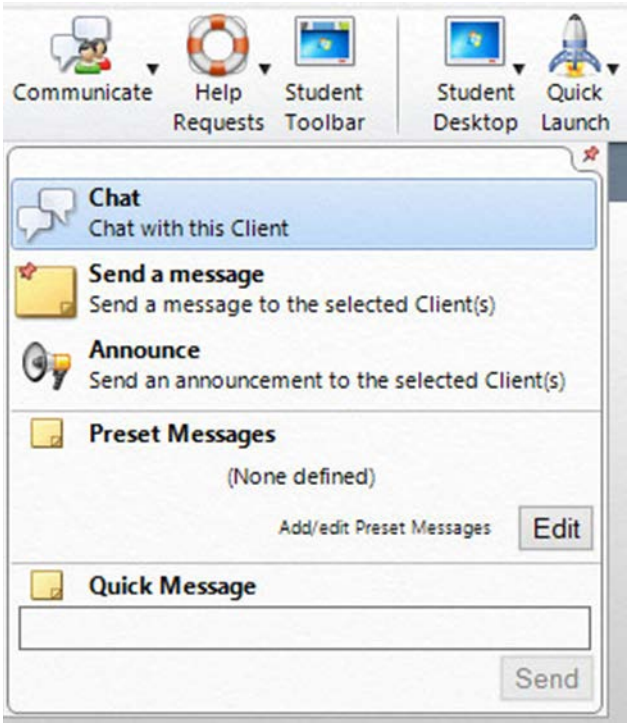
1. To start a class journal, use the Journal button in the toolbar. Choose Start, and then complete the Start Journal dialog box. You can add notes and items—such as links and survey results—to your journal throughout the class. When you stop the journal at the end of the class, a PDF resource is created for the teacher and students for future reference, sharing, or printing. For additional directions on working and sharing the journal see the Classroom Management User Guide in the Resources
2. As a class, discuss the benefits of using the journal feature. How might keeping a digital journal benefit your students? Your teaching practices? Your communication with parents and administrators? Record your thoughts in the course's note-taking app, an online document, or on paper.

Activity 2
Student Engagement

In any setting, technology can become a distraction. With the Intel Classroom Management tool, you can exchange communications directly with students using chat and other communication features that allow you to monitor and interact with students and their devices. You can also assign access to resources, applications, and web sites selectively to help streamline instruction.

Step 1: Digital Classroom Communication

Communication is a fundamental element of education. The Intel Classroom Management tool includes a number of features that encourage normal and enhanced classroom communication. Many of the communication options can be accessed by using the Communicate button on the toolbar. Review and use some of the ways teachers and students can use their devices and the Intel Classroom Management tool to communicate in class.



1. View a quick message that displays on your screen and then close the message. Quick messages allow a teacher to send a message to the entire class. If you would like to send a private message to a student or subset of students use a Send A Message option, and select the desired students.

a. Enter a comment in the chat tool. Then, chat with another participant. The chat can be initiated by either the teacher or the student. Chat can be with individual students or the whole class.

b. Listen to the facilitator's announcement.

c. View the Preset Messages option, which allows teachers to create messages before class. Then, during class, the teacher can send them at the appropriate times during the lesson. Note the preset messages go to the entire class.

d. Students can communicate directly with their teachers by using the Help feature. Tap the Help icon on the far right end of the student toolbar to open a message box. Send a message to your facilitator and observe what changes in the teacher view.

Classroom Connection: Think about how you will use the communication features in your classroom. Share your ideas with a partner.

TIP

Point out how messages boxes allow teachers to add communications to the active journal. To add the information to the journal, simply check the checkbox.

Step 2: Activity Monitoring and Student Direction

Technology tends to draw people in and take up much of their time. While that may be acceptable during a relaxing weekend, it is almost always unacceptable in an educational setting. Experience some of the ways teachers can monitor student access to technology by observing the following actions taken by the facilitator from the teacher view and then seeing how those actions affect the student view on your tablet.

- **Teacher action**: Tap the Monitor Student Screens icon to see all student computers
- **Teacher action**: Roll over a screen to get a larger view of a student's screen.
- **Teacher action**: If students are off task or need to focus elsewhere in the classroom, tap the Lock button to lock students' keyboards and pointing device capabilities. You can lock devices for an entire class, selected students, or a single student or group.
- **Student Action**: What happens on your tablet?
- **Teacher action**: To unlock students' computers, tap the Unlock button. Students' screens return to their previous view.
- **Student action**: What do you see?
- **Teacher action**: Tap the Web Access button to choose students' current access to the web. The options are Unrestricted, Approved Only, Block Restricted, and Restrict All. To identify approved and restricted web sites, use the Internet icon in the left navigation bar or tap the Web Sites button below the student view area.
- **Student action**: Web access varies as teacher selects options. What do you see on your screen? What happens when you try to open the browser or web site?
- **Teacher action:** If a student needs hands-on help, the teacher can double-click the student's screen to take control of the device. The teacher can then manipulate the student's device. To return access to the student, the teacher simply clicks off of the device.
- **Student action**: None unless your tablet is selected.

Observe how the Print, IM, and CD/DVD settings can be blocked or unrestricted to control various types of sharing among students.

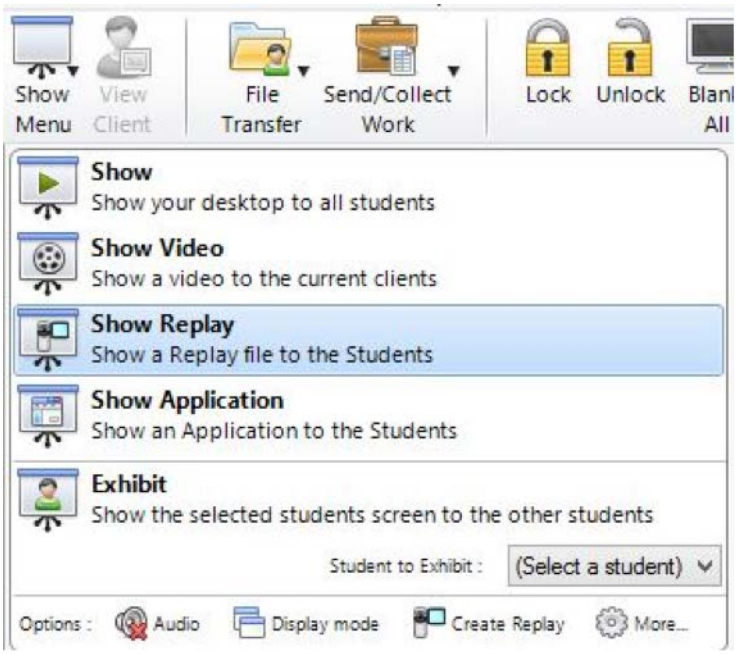
Classroom Connection: Choose one of the teacher actions and think about how that feature might be a useful tool to use in your classroom. Record your thoughts in the course's note-taking app, an online document, or on paper.

Activity 3
Digital Resources

Even though technology may sometimes seem to steal the limelight in your classroom, your lessons are the most significant aspect of your students' learning experiences. With the Intel Classroom Management tool, you can expand your lessons by digitally presenting information directly on your students' devices. You can show the entire class a presentation, share a file, and collaborate online.

During lessons, one of your routine tasks is to distribute or present information in various formats to students. You might, for example, have the class view an online video or you may distribute homework assignments. With the Intel Classroom Management tool, you can streamline distribution of digital content and resources. Follow along as your facilitator demonstrates.

1. Teachers can use the Show Menu button to present their desktop, videos, applications and other resources on students' devices. Watch as the desktop is shared to all participants in the classNote that studetns cannot exit your shared view.



2. Teachers can also send files directly to students' devices by using the File Transfer button or the Send/Collect Work button on the toolbar. Watch as a PDF file is transferred to your device's desktop.

3. Web sites can also be shared with the class. The Quick Launch tool allows teachers to add links and share them during the lesson, while the Co-Browse tool allows teachers to share and browse the web as a class.
4. Teachers can choose a student and show that student's screen to the rest of the class
5. Think about and share any questions or observations you have about sharing applications and files.

TIP

If time permits, use the sample lesson plan to quickly demonstrate how a prepared lesson plan can automate activities in the class. To do this, select the Lesson Plans button in the toolbar, and choose Execute Plan. Run the example.nlp lesson to experience as a class a number of the Intel Classroom Management features, such as opening an application on student devices and administering a test. To create a custom lesson plan, choose Manage Plans. Once a lesson is open, you can see the lesson progress bar below the toolbar in the Teacher view.

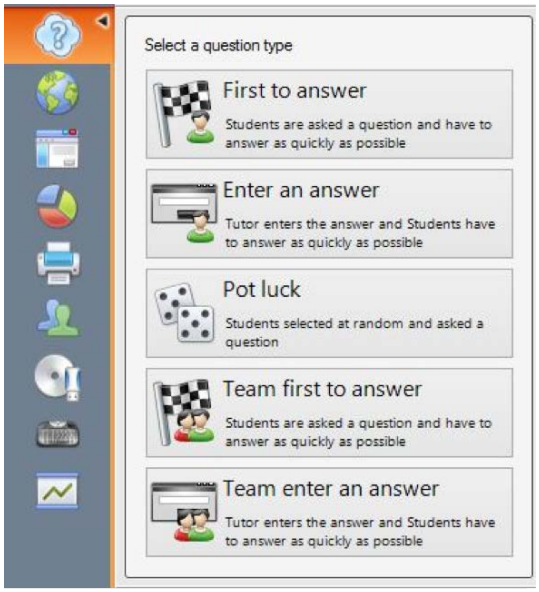
Activity 4
Assessment and Reflect

Assessment enables teachers and students to measure progress and success. Assessment comes in many forms, from classroom observations to structured, timed tests. The Intel Classroom Management tool includes features that enable teachers to send questions to the class, publish quick quiz questions to receive rapid responses, develop timed tests using the testing console, conduct surveys, and randomly select students to respond to a prompt. In the next few steps, you will experience a series of assessment features.

Step 1: Assessment Features

In this step, you will experience some student response features.

1. Respond to the survey question.
2. View the class results.
3. The question and answer module is a unique collaborative tool that enables teachers to reinforce key learning points and instantly gauge student understanding during a lesson.



4. Your facilitator will ask questions to demonstrate the features.

Step 2: Classroom Connection

Think about which features you will implement first in your classroom and create a plan to add additional features. Briefly record your thoughts in your note-taking application, in an online document, or on a piece of paper.

Step 3: End Class

The final step in a managed class is to stop the journal recording and exit the class. Observe how the teacher stops the journal and uses the Manager tool to log students out of their tablets.

Extension Module 3

Assessing Projects

Overview

Mobile technology at students' and teacher's fingertips provides access to learning and resources at any time, and connects and engages students throughout the learning process—whether students are at school, in the community, or at home. Tablets also allow teachers to be mobile while they use online resources to track and assess student performance, making tablets an efficient and effective avenue to accomplish formative assessment goals and gather student responses both in and out of the classroom.

In this module, you will explore an online Intel resource designed to help you use tablets while you assess student learning—Intel's free Assessing Projects resource.

Learning Objectives

Participants will:

- Explore and learn more about the Assessing Projects online resource
- Register for the teacher workspace in the Assessing Projects online tool

Resources

- Assessing Projects online resource
- Intel® Education: Assessing Projects Teacher Guide

Resource Documents
Throughout the course, you will use accompanying resources to support your learning. You may save these files to your computer for future reference. In most e-readers, if you want to insert comments, highlights, or modify a resource file in any other way, you must first save it to your computer and then re-open it before making changes. Open the Resources.

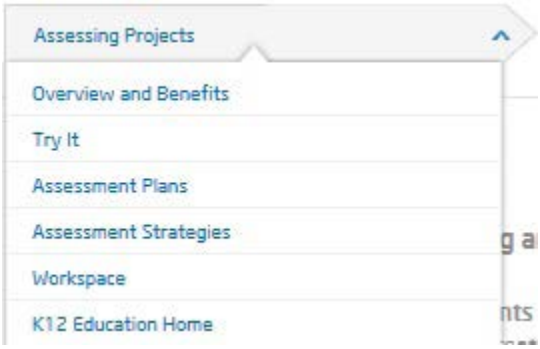
Activity 1
Assessing Projects Scavenger Hunt

Intel® Education Assessing Projects is an online resource that helps teachers and students assess learning with a variety of rubrics and checklists that focus on Common Core standards and 21st Century skills. Teachers use an online workspace to create and customize assessments. Then, the companion Let's Assess app can be used to assess student learning and distribute assessments for students to complete self- and peer assessments.

Step 1: Explore Assessing Projects Online Resource

This step will lead you to the Assessing Projects web site and give you time to explore the many resources available to you.

1. Visit the Assessing Projects web site
2. Use the class's note-taking tool, an online document, or paper to take notes about your discoveries.
3. Complete the Assessing Projects Scavenger Hunt to explore the resource.



4. Find the Overview and Benefits link.

a. Choose at least two of the links in the page to read.

b. Find the Try It link and explore.

c. Find the Demo link and explore.

d. Find the Assessment Library.

e. Find three assessments in the library and view.

5. Find the Tutorial Link.

a. Read through the Tutorial text and tap on the links in the page.

b. Make sure to tap the Managing Personal Library link.

c. Find the view the animation link and tap to view the video.

6. Find the Assessment Plans link.

a. Browse at least three of the assessment plans that are of interest to you.

b. Find the Sample Assessment Plan link. Read about the different assessment plans. Make sure to find the assessment timeline.

7. Find the Assessment Strategies link.

a. Browse at least two of the assessment strategy pages.

b. Find the Assessment Resources link.

c. Browse the resources available.

Step 2: Register for the Assessing Projects Teacher Workspace

Now, you will set up your own Assessing Projects workspace. By creating your own workspace, you will have the ability to browse the Assessing Projects Library, identify relevant assessment instruments, and modify assessments to meet your specific instructional needs, such as giving students feedback on products, performances, and skills. In Assessing Projects, you can modify, save, and organize your assessments. You can also assign students self- and peer assessments for building self-evaluation skills and promoting independent learning.

Follow these steps to create your workspace.

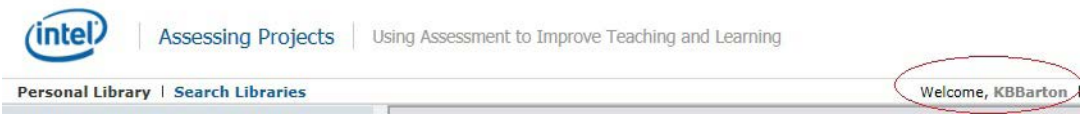
1. From the Assessing Projects home page explored in Step 1, tap the **Workspace** link under **Sign In**.

2. Locate the **Are you a new user?** text at the top of the page.

3. Select the language you are registering in.

4. Complete the registration page.

5. To make sure you are logged in as a user, view the Welcome at the top of the page. Your username should be displayed.



6. View the workspace. The Personal Library and Assessment Library appear in the left navigation pane.

If time allows:

1. Explore the Assessment Library by clicking the folders to expand each assessment section. View assessments of interest.
2. Once an assessment is opened, you can copy assessments to your Personal Library by using the **Copy Assessment** button in the right-hand corner of the screen. Once clicked, the assessment will be added to your Personal Library.

3. You will see the assessment in your Personal Library folder in the left navigation pane.
4. Copy an assessment into your Personal Library and use the **Edit Assessment** button to edit an assessment to meet your needs.

Step 3: Debrief

Use the following guiding questions to participate in a class discussion around the Assessing Projects resource.

- What features of the online resource seemed most usable?
- What features were challenging to use?
- How can you use this resource in your own classroom?

Take notes during the class discussion, using the class's note-taking tool, an online document, or a piece of paper.

Activity 2
Reflection

You have explored and investigated two important assessment resources. Participate in a class debrief as much as time permits. Your facilitator will lead a group discussion to review the resources explored, and then you will be asked to complete a self-assessment using the Let's Assess App to reflect on your experience with the assessment tools.

Extension Module 4

STEM/Data Collection

Overview

We want our students to succeed in science, technology, engineering, and mathematics topics (STEM). Using tablets as a resource for teaching these STEM subjects is a great way to spark excitement and capture interest. Intel Education has developed tools that make collecting and analyzing data fun, engaging, and dynamic.

Learning Objectives

Participants will:

- Participate in group discussions
- Complete an activity using the microscope tool and Lab Camera tool
- Complete an activity using the thermometer tool and SPARKvue tool
- Understand the benefits of using the Intel® Education Solutions Data Gathering Tools
- Relate teaching STEM topics to mobile learning

Activity 1
Microscope and Lab Camera

Step 1: Take Pictures

Lab Camera is an Intel Education Solutions tool that allows students to gather scientific data through the use of a camera. To access the camera, select it from the tools available on your tablet.

A screen will open showing a variety of lab camera choices:

- **Time Lapse:** Observe and record actions that take place slowly over time.
- **Kinematics:** Track horizontal and vertical movement of objects.
- **Motion Cam:** Record videos triggered by movement.
- **Microscope:** Capture magnified images.
- **Universal Logger:** Log data from instruments that cannot be connected to a computer, including those with digital, radial dial, or liquid-in-glass display.
- **Pathfinder:** Track movement trails and paths.

For this activity, you will select the Microscope tool. Snap the microscope lens over the camera on the back of your tablet. Tap the Microscope icon to open it.

When you open the Microscope, help labels display to assist you. This is the Quick Guide. You can return to this help view by tapping the icon in the top left corner. Tap anywhere on the screen to exit the Quick Guide.

Experiment with the camera. To take a picture, tap the Take a Picture button near the bottom of the screen. Find three different subjects to photograph. Be creative and use what is around you, such as:

- Fingerprint
- Fabric
- Printed text on paper
- Leaf
- Hair

Make sure to save each picture.

TIP

Some helpful tips while you are using the Microscope: Work with a partner. Have one person hold the tablet, and the other person tap the Take a Picture button; Find good light. The better the light, the clearer the image; Use slides. Prepared slides produce sharp magnified images; Hold the tablet at the right distance. Try moving the tablet closer and farther away to find the clearest image.; and Be sure to save three photos. If you are unsure which button is Save, use the Quick Guide to help you.

Step 2: Enhancing a lab report with images

In a lab report images are often labeled to document findings. There are a variety of different ways to label these images. Take some time to explore different ways you can add labels to your images using Media Camera or Pixler on your tablet. When you have found one you like, label one of your images.

Step 3: Share and Reflect

Share your images with a small group. As you present your picture, discuss what you discovered about the Microscope Lab Camera, including any helpful tips. Think about and share ideas on how you might use Lab Camera in the classroom.

Step 4: Further exploration

The microscope feature is one of a number of different functions in LabCam. Explore the other features to see which ones you may be able to use in your classroom. Share with a partner.

Activity 2
Thermal Probe and SPARKvue

SPARKvue is another Intel Education Solutions tool that allows students to collect and analyze data using sensors and tools. To access SPARKvue, tap the app's icon on your tablet.

For this activity, you will need the Thermal Probe. Plug it into the headphone jack of your tablet. When you plug in the Thermal Probe, the Temperature Sensor information appears in SPARKvue. It also gives a reading of the current temperature data. You have a choice of 2 labs below. Follow your facilitator's directions.

Lab 1: Body Temperature Exploration

Step 1: Setup

For this lab, you will be collecting temperatures from somewhere on your body and graphing the change. To begin, tap the temperature data, and tap Show.

Decide what temperature you are going to measure. Some ideas are:

- Inside hands
- Breath
- Behind knee or elbow
- Or you decide!

Step 2: Predict

Make a prediction about what you think will happen to the temperature. Tap the graph icon in the bottom left of the screen.

Tap the drawing icon that appears on the screen.

Draw your prediction of what will happen to the temperature onto the graph. Then, tap OK/Done.

Step 3: Collect Data

Start collecting temperature data. Tap the green arrow at the bottom of the screen. When the data levels out, tap the arrow again to stop collecting. Take a second reading.

The graph may need to have a more appropriate scale. Tap and drag the axes to change the scale.

Step 4: Compare Prediction and Actual Data

Compare your prediction with the actual change by reading the graph. What further questions are raised by the data? What is your interpretation of the data?

Lab 2: Microclimate exploration

In this lab, you and a partner will taking part in exploring a micro-climate.

You will select an ecosystem on/near the school grounds for this study.

Step 1: Set Up

Roughly measure an area of 5m x 5m square.

Draw or take photographs about 3 plants and 3 animals that may be living in your microclimate on a notes app on your device. Describe the food, water, amount of sunlight and shelter available as well as the feeding relationships (food web)

Plug the temperature probe into the headphone jack of your tablet.

Decide what temperatures you are going to measure. Some ideas are:

- Directly on the ground
- 2 feet off the ground
- In the shade
- In the sun
- Anywhere else you can think of

Step 2: Predict

Make a prediction about what you think will happen to the temperature. Tap the graph icon in the bottom left of the screen.

Click the drawing icon that appears on the screen.

Draw your prediction of what will happen to the temperature onto the graph. Then, tap OK/Done.

Step 3: Collect Data

Start collecting temperature data. Tap the green arrow at the bottom of the screen. When the data levels out, tap the arrow to stop collecting.

The graph may need to have a more appropriate scale. Tap and drag the axes to change the scale.

Repeat the temperature collection in a different location/number of locations in your microsystem.

Step 4: Compare Prediction and Actual Data

Compare your prediction with the actual change by reading the graph. What further questions are raised by the data? What is your interpretation of the data?

How did the temperatures change in the different locations? Were there any surprises in your data?

Step 5

What effect do you think the temperature has on your microsystem? What other questions do you have that you can investigate about your micro-climate?

Explore the user guide for many other functions and features of Sparkvue.

Activity 3
Explore SPARKlabs

Step 1: Review Activities

SPARKvue offers premade lessons to use with your students called SPARKlabs. They are engaging activities that integrate SPARKvue tools and core curriculum.

Tap Open or Experiments from the SPARKvue home page. A list of lessons will open. Browse the titles, and tap a lesson that is interesting to you. Click through the lesson and follow the directions, if possible. As you explore, think about how you could use this format in your own classroom.

Step 2: Review User Guide

Consider your curriculum and using the question icon explore the SPARKvue User's Guide and note curricular connections.

Step 3: Share

When you finish reviewing the lessons and User's Guide, find a partner and share what you explored.

Discuss with your partner how you might use one of the experiments in your classroom. What modifications would need to be made?

Activity 4
Reflection

You have explored some tools that Intel Education offers to enhance your STEM curriculum. Think of ways the Lab Camera, SPARKvue, and other tools used in this module could be incorporated into and enhance your existing lessons in your classroom. Record your thoughts in the course's note-taking app, in an online document, or on a piece of paper.