

The Chromebook Classroom



TEC 994
Steve Young
Fresno Pacific University



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Course Syllabus

Course Description

A Chromebook is a laptop computer utilizing web-based apps and cloud storage. Affordable and powerful, these devices provide students and teachers access to a wide range of productivity and curricular applications. The course will cover the nuts-and-bolts of the Chromebook, as well as the use of productivity apps, online surveys, and learning groups. Hands-on assignments promote a practical, broad understanding of this new teaching and learning tool.

The course can be taken using a Chromebook, Windows, or Macintosh computer; it is not necessary to have access to a Chromebook to complete the course. Instructor support is readily available by email and phone.

The supplemental text: Michael Miller's *My Google Chromebook* (4th Ed.) ISBN-10: 0135911826 is suggested to achieve maximum benefit from the course if you are unfamiliar with Chromebooks. It is not included with the course materials and must be obtained independently; physical and online copies are available via vendors such as Amazon.com.

Course Dates:

Enrollment is open and ongoing so students may enroll at any time and have no less than three weeks and up to one year from the official date of registration to complete the course.

Primary Learning Outcomes

Upon completion of the course participants shall:

- Understand the teacher's role in successfully utilizing Chromebooks in the classroom.
- Model teaching strategies to peers when instructing with technology.
- Be better prepared to manage a Chromebook classroom.
- Identify uses of technology for peer-to-peer and student communication.
- Gain hands-on experience creating curriculum-specific projects.
- Access and navigate the Chrome OS.
- Create and access documents.
- Access and use web based apps.
- Work collaboratively with peers.



Standards - Based Instruction

... To ensure that students are prepared for their future we should: include technology and information literacy in state and local standards for what students should know and be able to do; ensure students use technology appropriately and responsibly; develop new student assessment tools; and strengthen partnerships with industry to help meet the work force needs of the future.

Taken from the Executive Summary of the U.S. Department of Education National Education Technology Plan
(<http://www.ed.gov/Technology/elearning/>)

Assignments contained within this course meet several important proficiency guidelines as defined by **ISTE** (International Society for Technology in Education).

The ISTE Standards provide a framework for learning, teaching and leading that is amplified by technology. They provide a roadmap for educators worldwide as they navigate decisions about curriculum, instruction, professional learning and the transformation of pedagogy with technology.

For more about ISTE and the ISTE standards go to: **www.iste.org/standards**

The seven Educator Standards are:

1. **Learner** - Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning.
2. **Leader** - Educators seek out opportunities for leadership to support student empowerment and success and improve teaching and learning.
3. **Citizen** - Educators inspire students to positively contribute to and responsibly participate in the digital world.
4. **Collaborator** - Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems.
5. **Designer** - Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability.
6. **Facilitator** - Educators facilitate learning with technology to support student achievement of the 2016 ISTE Standards for Students.
7. **Analyst** - Educators understand and use data to drive their instruction and support students in achieving their learning goals.

Each standard is broken down into several subsections (a, b, c, etc.). The relevancy of these standards to this course is one of awareness and familiarity. Later in the course you will be asked to select a number of assignments and assign an ISTE standard and subsection to them.



Course Materials

Workbook: TEC 994: The Chromebook Classroom, by Steve Young.

Course Companion Website: With resources, links, videos, coursework modules, social media links.

Course Requirements

Hardware/Peripherals:

Computer - Chromebook, Windows or Macintosh computer (**only ONE required to complete course**).

Access to the Internet, high-speed preferred.

A Google account (see page 33).

Policies and Procedures

For information on the Fresno Pacific University Academic Policies and Procedures for Independent Study Courses, go online to <https://ce.fresno.edu> and click the 'CE Policies and Procedures' link at the bottom of the page.

Grading Scale

Letter grades, should one be requested, will be on the following scale:

90% -100% = 'A'

80% - 89% = 'B'

79% or below = 'No Credit'

Participants striving for an 'A' should demonstrate the ability to follow directions, show neatness and pride in their work, and thoughtfulness in their responses to written assignments. Students taking the course for 'Credit' are expected to adequately complete all assignments.

Grading

FPU requires all instructors to submit student grades electronically. For me to do this you will need to request online grading. Please refer to the instructions at the end of this workbook detailing the process.



Schedule of Topics

Pre Course Survey

Introduction to Chromebooks

Reading Reflection

TEC 994 Community Blog Submission 1

Hardware Tips and Tricks

Filing and (Cloud) Storage

WiFi Survey of School

Apps for the Chromebook

Using a Mac or Windows with Chromebook Apps

App Review and Reflection - Student App or Site

App Review and Reflection - Teacher App or Site

Adding Apps from the Chrome Store

Using Productivity Apps

Creating a Word Processing Document

Creating a Presentation Document

Creating a Spreadsheet Document

Creating a Survey / Test Document

Lesson Plan 1 - Using a Website

Lesson Plan 2 - Using an App

Lesson Plan 3 - Using Productivity App

Classroom Rules and Safeguards

TEC 994 Community Blog Submission 2

Standards Correlation Chart

Post Course Survey

Course Evaluation



Assignments (18 total for a maximum of 100 points):

- Pre Course Survey 5 points
- Reading Reflection 10 points
- TEC 994 Community Blog Submission 1 5 points
- WiFi Survey of School 5 points
- App Review and Reflection - Student App or Site 5 points
- App Review and Reflection - Teacher App or Site 5 points
- Creating a Word Processing Document 6 points
- Creating a Presentation Document 6 points
- Creating a Spreadsheet Document 6 points
- Creating a Survey / Test Document 6 points
- Lesson Plan 1 - Using a Website 7 points
- Lesson Plan 2 - Using an App 7 points
- Lesson Plan 3 - Using Productivity App 7 points
- Classroom Rules and Safeguards 10 points
- TEC 994 Community Blog Submission 2 5 points
- Standards Correlation Chart 5 points
- Post Course Survey 5 points

Evidence of Learning

Participants in the course will be evaluated on their ability to follow the directions presented in this workbook to successfully complete all the assigned course projects. All written assignments should contain thoughtful, reflective responses applicable to their personal and/or professional experiences, indicating they have put consideration and effort in to their replies.

Instructor/Student Contact

I will email you to verify receipt of your registration and again once I have submitted your grade to FPU. If questions or concerns arise as you work through the course, please *never* hesitate to contact me - that's why I'm here! When contacting me e-mail is preferred, but if you need to phone please do so after 10:00 AM Pacific Time, being mindful of time zone differences, as early morning calls wake the family. Thanks for your cooperation and understanding.



General Information

For information on the Fresno Pacific University Academic Policies and Procedures for Independent Study Courses, go online to <https://ce.fresno.edu> and click the 'CE Policies and Procedures' link at the bottom of the page.

Please scan the materials to familiarize yourself with the sequencing and flow of the course before beginning the assignments. Knowing what lies ahead will help you achieve maximum benefit from each individual assignment and the course, as a whole.

Per FPU policy a minimum of one week per unit of study (three weeks, in this case) must transpire from your date of enrollment to the date your completed coursework is returned to me for evaluation and grading.

All grades must be submitted online to the university. When you have completed the course (shared all completed assignments and sent the links to the instructor) you will need to request online grading. To do so, please follow the directions found at the end of this workbook describing the process. Remember to request online grading when you submit your final assignments but no sooner, please.

Kindly allot sufficient time for me to review your work and submit your grade to the university. Per FPU policy I am allowed up to 10 business days to accomplish this, though it rarely ever takes me that long unless I am out of town. Once I have reviewed your work and submitted your grade to FPU I will email you notification that your grade is in FPU's hands awaiting posting.

References & Resources

Miller, Michael. *My Google Chromebook* (4th Edition). Indianapolis, IN: Que, 2019

www.iste.org/standards

www.cde.state.co.us/cdesped/accommodationsmanual_ccss_k12_techscope

<https://sites.google.com/site/chromebookclassroominthecloud/home> *

www.thejournal.com/articles/2015/04/14/3-reasons-chromebooks-are-shining-in-education.aspx

www.g4w.co/chrome-device-deployment-guide-google-docs

<http://www.classthink.com/managing-chromebooks-in-schools/>

<http://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-146.pdf>

<https://www.us-cert.gov/sites/default/files/publications/CloudComputingHuthCebula.pdf>



Grading Rubric	Exemplary (A)	Passing (B)	No Credit
Effort and Perseverance	Project continued until complete; effort set forth beyond that required; took pride, going beyond the basic requirements set forth. Experimented freely and frequently.	With a bit more effort & dedication projects could have improved; lacks finished quality; met just the minimum objectives of projects.	Project not seen to completion; work inadequate. Seems hurried to "just get it done" and move to the next project.
Craftsmanship and Consistency	Project completely and patiently done with great attention to detail; it was as good as hard work could make it. Tools & techniques consistently and properly demonstrated throughout the project.	Average craftsmanship but not as good as possible with more care, time, effort and attention to detail. Quality varied from project to project.	Below average effort. Lack of pride in work. Inconsistent use of tools/ techniques from project to project.
Written Assignments	Depth of thought with thorough, candid and reflective replies. Relates personal/ professional experiences. Few, if any, errors in spelling, punctuation, grammar. Neatness and pride evident throughout. Thought provoking at times.	Replies vague, generic, superficial, abrupt. Strays away from topic. Grammar, spelling, punctuation errors distracting. Word processed replies is in order due to poor penmanship. Seems rushed. Not engaged.	Assignments missing and/or incomplete. Failed to follow directions as set forth in materials. "Yes"- "No" replies without further discussion to justify response provided.
App Reviews	Forms complete with thorough responses relating directly to curricular use of the app.	Forms completed but additional comments missing or incomplete.	Forms incomplete with no additional comments.
Community Submissions	Engages community with relevant information and commentary. Expresses interest and willingness to share ideas and opinions.	Submissions not engaging. Does not interact with fellow community members.	Submissions incomplete with no additional comments.
Lesson Plans	Enthusiastically developed creative and engaging lesson plans which thoroughly incorporated the topic. Grade and skill level appropriate.	Lesson plans incorporated the topic selected, but not as detailed or engaging as possible. Not grade or skill level appropriate.	Lesson plans incomplete or did not demonstrate incorporation of topic chosen.
Standards Correlation Chart	Correctly aligned course assignments to ISTE NETS-T standards and performance indicator.	Completed but did not chose applicable standard or performance indicator.	Failed to complete the assignment or align all chosen assignments.



Plagiarism and Academic Honesty

All people participating in the educational process at Fresno Pacific University are expected to pursue honesty and integrity in all aspects of their academic work. Academic dishonesty, including plagiarism, will be handled according to the procedures set forth in the Fresno Pacific University Catalog found at: <http://www.fresno.edu>.

Continuing Education Student Learning Outcomes

CE 1. Demonstrate proficient written communication by articulating a clear focus, synthesizing arguments, and utilizing standard formats in order to inform and persuade others, and present information applicable to targeted use.
CE 2. Demonstrate comprehension of content-specific knowledge and the ability to apply it in theoretical, personal, professional, or societal contexts.
CE 3. Reflect on their personal and professional growth and provide evidence of how such reflection is utilized to manage personal and professional improvement.
CE 4. Apply critical thinking competencies by generating probing questions, recognizing underlying assumptions, interpreting and evaluating relevant information, and applying their understandings to the professional setting.
CE 5. Reflect on values that inspire high standards of professional and ethical behavior as they pursue excellence in applying new learning to their chosen field.
CE 6. Identify information needed in order to fully understand a topic or task, organize that information, identify the best sources of information for a given enquiry, locate and critically evaluate sources, and accurately and effectively share that information.

Fresno Pacific University Student Learning Outcomes

Oral Communication: Students will <i>exhibit</i> clear, engaging, and confident oral communication in both individual and group settings – and will critically <i>evaluate</i> content and delivery components.
Written Communication: Students will <i>demonstrate</i> proficient written communication by <i>articulating</i> a clear focus, <i>synthesizing</i> arguments, and utilizing standard formats in order to <i>inform</i> and <i>persuade</i> others.
Content Knowledge: Students will <i>demonstrate</i> comprehension of content-specific knowledge and the ability to apply it in theoretical, personal, professional, or societal contexts.
Reflection: Students will <i>reflect</i> on their personal and professional growth and <i>provide evidence</i> of how such reflection is utilized to manage personal and vocational improvement.
Critical Thinking: Students will <i>apply</i> critical thinking competencies by <i>generating</i> probing questions, <i>recognizing</i> underlying assumptions, <i>interpreting</i> and <i>evaluating</i> relevant information, and <i>applying</i> their understandings to new situations.
Moral Reasoning: Students will <i>identify</i> and <i>apply</i> moral reasoning and ethical decision-making skills, and <i>articulate</i> the norms and principles underlying a Christian world-view.
Service: Students will <i>demonstrate</i> service and reconciliation as a way of leadership.



Course Completion Checklist

- Assignment 1: Pre Course Survey
- Assignment 2: Reading Reflection
- Assignment 3: TEC 994 Community Submission 1
- Assignment 4: WiFi Survey of School
- Assignment 5: App Review and Reflection - student app or site
- Assignment 6: App Review and Reflection - teacher app or site
- Assignment 7: Create a Word Processing Document
- Assignment 8: Create a Presentation Document
- Assignment 9: Create a Spreadsheet Document
- Assignment 10: Create a Survey / Test Document
- Assignment 11: Lesson Plan 1 - Using a Website
- Assignment 12: Lesson Plan 2 - Using an App
- Assignment 13: Lesson Plan 3 - Using Productivity App
- Assignment 14: Classroom Rules and Safeguards
- Assignment 15: TEC 994 Community Submission 2
- Assignment 16: Standards Correlation Chart
- Assignment 17: Post Course Survey
- Submit Online Grade Request



TEC 994 Companion Website

An essential and integral part of this course is the companion website (the URL appears below). Within the site are links to the course syllabus, readings, learning resources, videos, and course assignments. Please take time to click on each link in the 'Resources', 'Links', and 'Videos' columns to familiarize yourself with their contents; you may find some hidden gems of knowledge for you and your students. I would suggest you begin with the first four videos as they provide a good introduction to Chromebooks for teachers and students. In the Coursework column at the bottom of the page are, in order, your assignments for the course.

Before jumping in please take the time to review both this workbook and the links on the website. Doing so will give you an understanding of the focus and flow of the course and how each assignment fits in with the greater whole.

www.chromebook.steveyoungfpu.net

The Chromebook Classroom

[About this Course](#) [Course Syllabus](#) [Enroll](#) [Other Courses \(Main Website\)](#)

TEC 994: The Chromebook Classroom

As schools search for low a cost gateway the digital age, a new star has emerged: the Chromebook. Affordable and powerful, the Chromebook gives students and teachers access to a wide range of connectivity and productivity applications.

This 3 unit professional development course will cover the nuts-and-bolts of the Chromebook, as well as the use of productivity apps, online surveys, and learning groups. Hands-on assignments promote a practical, broad understanding of this new teaching and learning tool.

The course can be taken using a Chromebook, Windows, or Macintosh computer; it is not necessary to have access to a Chromebook to complete the course.

FRESNO PACIFIC UNIVERSITY
Click / tap here to view the Fresno Pacific University website.

This is the bottom of a scrolling frame within the webpage.
Scroll down to view the directory

This is the edge of a scrolling frame within the webpage.
To scroll to the bottom of the page, you may need to move your cursor to the right of the arrow.

RESOURCES	LINKS	VIDEOS	COURSEWORK	SOCIALIZE	CONTACT
Course Workbook [PDF] Order Textbook [Amazon]	Chromebook Help Google App Learning Center Educational App Store	What is a Chromebook Chromebooks In Education How Cloud Apps Work	Welcome Video Course Assignments Precourse Survey	TEC 994 Community	Contact Instructor Fresno Pacific University
Learning with Technology Teaching with Technology Technology in the Classroom 3 Reasons Chromebooks. . .	Extensions and Themes App Reviews (3rd Party) App Top Picks (3rd Party) Tips and Tricks (3rd Party)	Google Chrome OS Introduction for Students Chromebook Management 30 Ways . . . (Slide Show) How-to Videos	Reading Reflection Community Submission WIFI Survey App Reviews Chromebook EDU Community		
Common Core Standards ISTE Standards	IT Resources School WIFI Guide WIFI Speed Test Cloud Prining Setup Deployment Guide (PDF)	Installing Apps Installing Extensions Working with Files Using Google Docs Using iCloud Apps Sharing an Assignment	Using Productivity Apps Lesson Plan Form Classroom Rules Community Submission Standards Correlation Postcourse Survey Course Evaluation		



TEC 994 Companion Website Directory

I have included many online resources (in various formats including video, pdf and websites) to enhance and expand your understanding of the Chromebook classroom. Some links relate directly to course projects (i.e. the reading reflection assignment) while others provide background knowledge and expanded explanations of various topics. Below are the links which appear at the bottom of the course companion webpage. Some links will open on the main web page while others will open a new browser tab.

RESOURCES

Course Workbook [PDF]
Order Textbook [Amazon]

Learning with Technology
Teaching with Technology
Technology in the Classroom
3 Reasons Chromebooks. . .

Common Core Standards
ISTE Standards

Chromebook in Education
Google Docs User Guide
iCloud Apps User Guide

VIDEOS

What is a Chromebook
Chromebooks in Education
How Cloud Apps Work
Google Chrome OS
Introduction for Students
Chromebook Management
30 Ways . . (Slide Show)
How-to Videos

Installing Apps
Installing Extensions
Working with Files
Using Google Docs
Using iCloud Apps
Sharing an Assignment

COURSEWORK

Welcome Video
Course Assignments
Precourse Survey
Reading Reflection
Community Submission
WiFi Survey
App Reviews
App Community
Productivity Apps
Lesson Plan Form
Classroom Rules
Community Submission
Standards Correlation
Postcourse Survey
Course Evaluation

LINKS

Chromebook Help
Google App Learning Center
Educational App Store
App Reviews (3rd Party)
App Top Picks (3rd Party)
Tips and Tricks (3rd Party)

IT Resources
School WiFi Guide
WiFi Speed Test
Cloud Printing Setup
Deployment Guide (PDF)

SOCIALIZE

TEC 994 Community

CONTACT

Instructor
Fresno Pacific

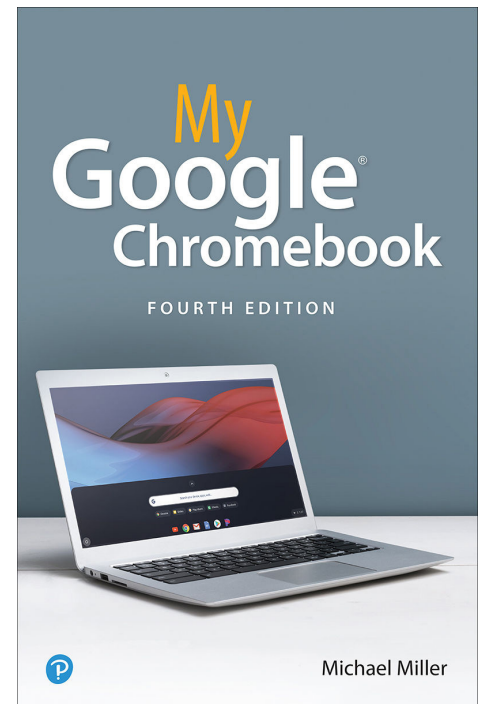


About the Supplementary Text

The focus of this course is on using the Chromebook platform in an educational setting. To supplement the material covered in this workbook I have chosen the text, *My Google Chromebook (4th Ed)*.

The book does an excellent job covering the 'nuts-and-bolts' of operation and use. I think you will find it a comprehensive resource in answering your Chromebook 'how to' questions.

The text is available from many sources, including Amazon.com, for around \$25. It is also available as a Kindle download. There is a link to the order page on the companion course website (look under Resources: Order Textbook [Amazon]).



Here is a listing of some the topics covered in the text:

- Illustrated step-by-step instructions to Google Chromebook
- Help when you run into Chromebook problems or limitations
- Tips and Notes to help you get the most from your Chromebook
- Full-color, step-by-step tasks walk you through doing what you want with Google Apps
- Browse and search the Web with Google Chrome
- Manage content wherever it's stored: Chromebook, an external drive, or The Cloud
- Find great new apps and extensions for education
- Strengthen privacy with Incognito Mode and Google's privacy settings
- Watch TV, movies, and other video with Netflix, Hulu, or YouTube
- Listen to music you've downloaded or streamed from Spotify or Pandora
- Print with Google Cloud Print, even if your printer wasn't designed for it
- Fix photos in the cloud with Adobe Photoshop Express
- Send, receive, read, and manage email through Google Gmail
- Create, import, edit, and format documents with Google Docs
- Build and share spreadsheets with Google Sheets
- Prepare and deliver live presentations with Google Slides
- Optimize Chromebook performance and battery life
- Troubleshoot and correct problems

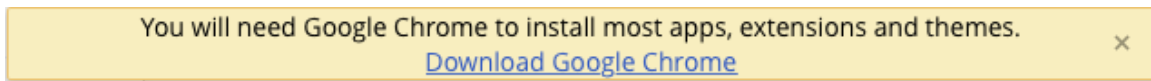


Chrome Apps for Macintosh and Windows

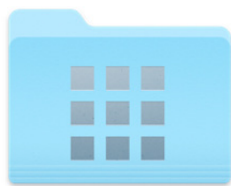
If you are taking this course using a Macintosh or Windows computer you can still download, run, and evaluate Chrome apps. Because apps for Chromebooks are based on Chrome browser technology, you need to download and install the Google Chrome browser on your Mac or PC first. The Chrome browser acts as a 'virtual Chromebook' for apps.

To install the Chrome browser on either a Mac or PC go to: www.google.com/chrome

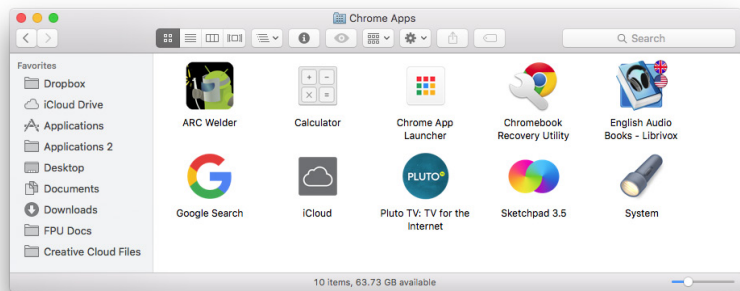
Once the Chrome browser is installed open Chrome and go to the Chrome app store at: <https://chrome.google.com/webstore>



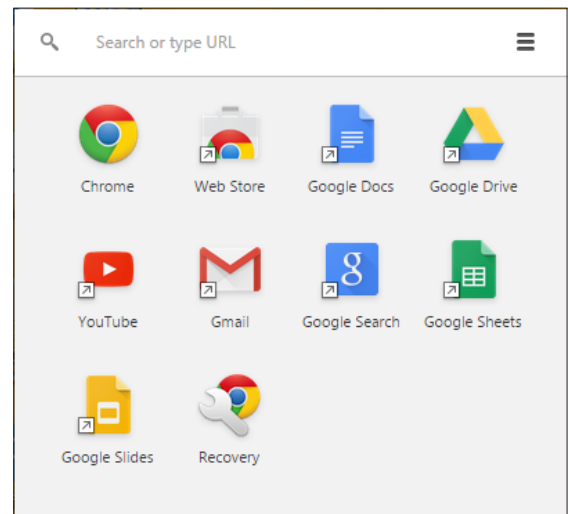
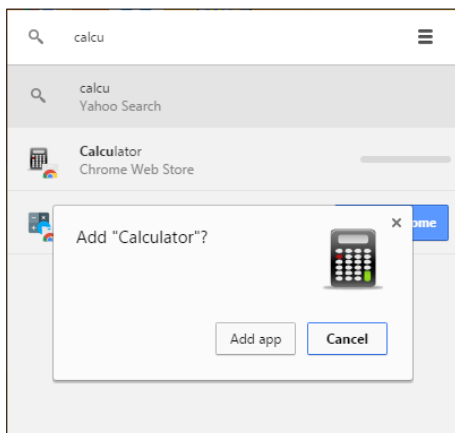
On a Mac, Chrome apps automatically organize themselves into a folder and create an icon on the Mac's dock.



Chrome Apps



On a Windows computer you can run apps through the Chrome browser, just like a Chromebook.





Introduction

Welcome! After taking this course I would like for you to think of the Chromebook as a gateway; through this device you and your students will create, analyze, store and retrieve information. The Chromebook is a tool which allows you to organize learning and facilitate access to meaningful online resources and learning tools.

The course should heighten your awareness of how using technology will effect students. Through the course, I would like you to become proficient at using the Chromebook to solve problems, to infuse technology into your curriculum, and to integrate it into the academic lives of your students.

Many teachers resist using computers in their classrooms because they either don't understand or are intimidated by the technology, or both. For this reason a major objective of this course is to take away the mystery that often surrounds these machines by emphasizing their use as educational tools.

Technology in education is not new. Growing up in the 60s my teachers used 16mm projectors to show educational films. When I began teaching several years later I ran a computer lab using 1st generation computers from Radio Shack. Jump forward 30+ years, and most students carry in their pockets more computing power than an entire university had in the 80s. I recently read that an iPhone has something on the order of 20,000 times more computing power than the first Macintosh computer.

With the introduction of the Chromebook, the dynamic has shifted to low cost (often less than \$150) personal computing. iPads began the thrust to 1:1 computing (where every student has a device at their desk) a few years ago, but are more expensive than Chromebooks and use a touch interface as opposed to the more traditional keyboard / mouse interaction. The rise in popularity of Chromebooks offers the opportunity of 1:1 classrooms to more schools than ever before.

My hope is that through this course your comfort level using technology in general, and the Chromebook in particular, increases - to use it as a familiar, reliable tool to help you and your students reach curricular goals. In my view, the focus of every lesson in which a student engages should be the outcome. What knowledge or wisdom has the student gained? What social skills has the student reinforced? What personal goals has the student achieved? I am hoping that this course will give you a higher comfort level in using Chromebooks and their associated apps to deliver that instruction.

NOTE: Please take the time to review this workbook and the course companion website before beginning any work on the course. In doing so you may discover answers to questions which may arise when jumping right into the course projects. Hopefully your review will give you an insight in to the structure and flow of the course. Thanks!



What is a Chromebook?

A Chromebook is a laptop computer running the Chrome OS as its operating system. The device is designed to be used primarily while connected to the Internet, with most applications (apps) and data residing in "the cloud".

If you are unfamiliar with Chromebooks, I would suggest you view the first four videos in the 'Videos' column on the companion website, as they provide a good introduction for both teachers and students.

Chromebooks were first introduced in 2011 as a platform to showcase the Google Chrome web browser and (albeit somewhat confusing) the Chrome Operating System.

There are several features that separate Chromebooks from other computers. Chromebooks:

- Run the Chrome Operating System and are designed around the Chrome web browser
- Must have an active wireless internet connection to be fully functional
- Have limited storage capability (no Hard Drive)
- Only run apps written for Chrome
- Are typically much less expensive than Windows or Macintosh laptops.



In late 2015 NBC news reported that a survey, conducted by Futuresource Consulting, demonstrated that Chromebooks now encompass over half the devices that are deployed in classrooms across the U.S.



Chromebook Glossary

802.11 AC - a wireless networking standard; indicates the potential speed of a connection.

Aura - the name of the desktop interface of the Chrome operating system.

Bluetooth - wireless technology standard for exchanging data over short distances.

Chromebook - category of notebook computer and mobile device that runs Google's cloud-based Chrome OS (operating system). Chromebooks are built primarily for Web browsing and are optimized for this purpose with the Google Chrome Web browser, as well as near instant-on and instant-resume capabilities.

Chrome Instant - enabled in settings, speeds up browsing so the user can view search results while typing them into the search bar, even before pressing enter.

Chrome OS - the operating system used with the Chromebook; unlike other systems (Windows or Macintosh), it is built around a web browser.

Extensions - small software programs that can modify and enhance the functionality of the Chrome browser.

Google Apps and Extensions - the suite of applications from Google including mail, calendar, word processing, spreadsheet, and presentations, and come pre-installed on a Chromebook.

Google Cloud Print - a technology that connects printers to the web, making available home and school printers from a Chromebook and any other web-connected devices one wishes to print from.

Google Docs - a Google productivity app that allows one to create documents, spreadsheets and presentations. One can also upload existing work to view, share and edit online. Documents created in Google Docs are accessible via Google Drive.

Google Drive - Google's Cloud service where the user can store, edit and share their files online and access them from anywhere.



Google ID - essentially a Google mail / Gmail e-mail address. One must be created prior to using the Chromebook and all its features.

Google Web store - where all the tools, apps and extensions are obtained to make the most of the Chromebook.

Guest User - any person can log into another Chromebook as a Guest user but with limited use of the Chromebook; he or she can browse the Web, but not save or access files as a guest.

HDMI - (High-Definition Multimedia Interface) an audio/video interface for transferring video and audio data from a device to a compatible computer monitor, video projector, digital television, or digital audio device.

Kensington Lock or Kensington Slot - an anti-theft system whereby a locking cable is attached to a reinforced hole in a computer or other device.

LCD - (Liquid Crystal Display) the technology used for displays in notebooks and other small computers.

LED - (Light Emitting Diode) a solid state chip designed to emit light. They are used to illuminate laptop displays.

Octane Score - a browser-based benchmark test created by Google; tests the overall speed of a Chromebook, not just a specific device such as the processor.

Omnibox - Chrome's address bar, unique in that it also doubles as a search box.

Pin - the process of adding an icon from the palette of apps to the Shelf.

Right-Click - clicking the right hand button on a mouse (or two-finger double tapping the touchpad) to invoke a contextual menu, listing a series of actions. **Alt-Click** also invokes the right-click functions.

Sandboxing - the security features of Chrome and Chrome OS to help protect users from malware and viruses; stops infected web pages from spreading to other tabs or the computer.



SD Card - (Secure Digital) a reusable memory card used in portable devices; on a Chromebook, it is used as a medium for extra memory storage, similar to a USB drive..

Shelf - area of the screen (lower left) that looks like a row of application icons.

Solid State Drive - (SSD), also known as a solid-state disk (though it contains no actual disk nor any moving parts); it uses integrated circuits as memory to store data.

Spanner Icon - situated to the right of the address bar; where one goes to customize and control the settings in Google Chrome.

Status Area - located on the far right hand bottom of the Chromebook screen, a group of icons (profile picture, battery life, WiFi signal, and time) depicting system information. Clicking on an icon opens the relevant menu.

Touchpad - pointing device consisting of a soft pad sensitized to finger movement or pressure; used especially on laptop computers as an alternative to a mouse.

Unpin - removing app icons from the shelf (this does not remove the actual apps from the Chromebook).

USB - (Universal Serial Bus) offers users simple connectivity. It eliminates the mix of different connectors for different devices like printers, keyboards, mice, and other peripherals. The USB connector allows many peripherals to be connected using a single standardized interface socket.

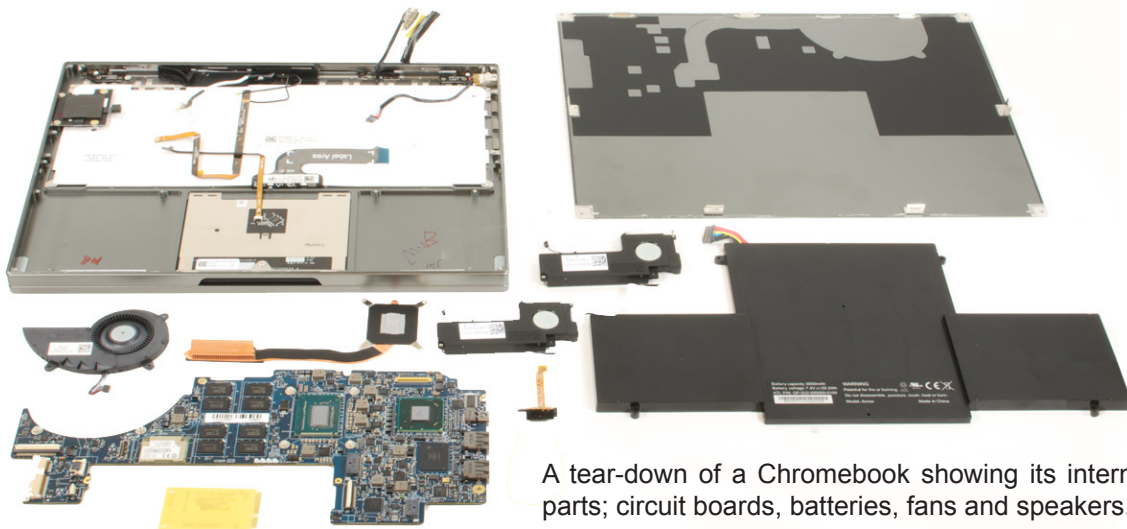
USB Drive - On a Chromebook, a USB drive (also called a thumb drive) can be used for extra memory storage or moving files from one device to another (without the internet).

WiFi - popular wireless networking technology which uses radio waves to provide wireless high-speed Internet and network connections.



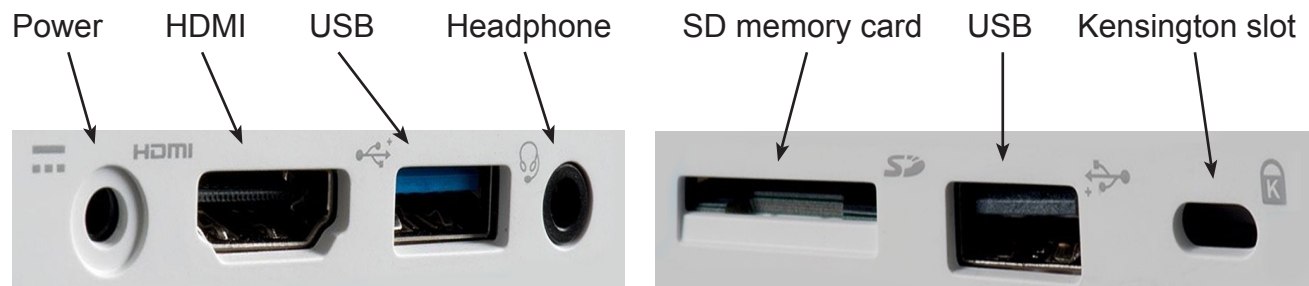
Inside the Chromebook

As with the practical study of any computer, the Chromebook can be broken down into two basic elements: the hardware and the software. The physical Chromebook is very similar to a Windows or Macintosh laptop. To keep the cost down Chromebooks have no hard drive and generally use inexpensive components. While there is data storage in a Chromebook, it is very limited. A typical Windows or Mac laptop has 256GB of storage whereas a Chromebook may have as little as 2GB. In addition to the 'missing' hard drive, Chromebooks do not have a wired network connection - they rely solely on a WiFi connection to access the internet. Since virtually all data and documents require an internet connection, **school infrastructure is a critical component to successful Chromebook deployment.**



A tear-down of a Chromebook showing its internal parts; circuit boards, batteries, fans and speakers.

To interact with the user, Chromebooks have standard hardware: a screen, a keyboard, and several ports or access points. These ports include power (Chromebooks run on internal batteries which must be recharged via external adaptor), headphones, and USB port(s). Headphones are recommend for student use in the classroom as they may be listening to varied content. A USB port allows for the use of an external mouse or plugging in a thumb drive (for extra storage and system recovery). Additionally, there may be an HDMI port for connecting the Chromebook to an external monitor or video projector.















Chromebook Keyboard Tips and Tricks

In looking at a Chromebook keyboard, you will see both the familiar and the unfamiliar. There are no caps-lock, function, page-up, or page-down keys. Since most teachers are familiar with computers, these tips and tricks highlight features unique to the Chromebook experience.

The next few pages list some helpful keyboard tricks and shortcuts.

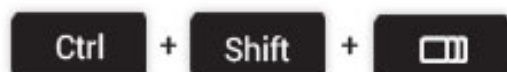


- | | |
|--|---|
|  Go to the previous page in your browser history (F1) |  Decrease screen brightness (F6) |
|  Go to the next page in your browser history (F2) |  Increase screen brightness (F7) |
|  Reload your current page (F3) |  Mute (F8) |
|  Maximize your window (F4) |  Decrease the volume (F9) |
|  Switch to your next window (F5) |  Increase the volume (F10) |

How To Take A Screen Shot (Capture) On A Chromebook

To take a screen capture of your entire screen press the ‘Ctrl’ and ‘Window Switcher’ (usually the 6th key from the left) keys at the same time.

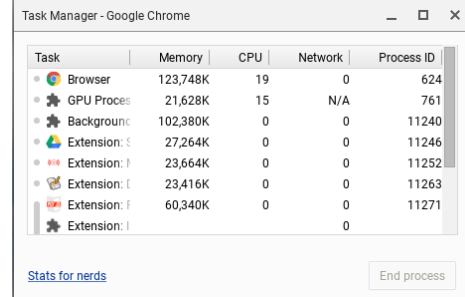
To capture an area of the screen, add shift to the key combination. A cross hair cursor will appear; drag to define the rectangular portion of the screen you wish to capture.





Open Task Manager

Is Chrome suddenly running slow? It could be a misbehaving extension or webpage sucking up resources. View all running apps by using the task manager, then close all unneeded tasks.



Lock the Screen

If you're going to leave your computer unattended, you may wish to lock your screen to prevent anyone else using your Chromebook. Press 'Search' and 'L'.

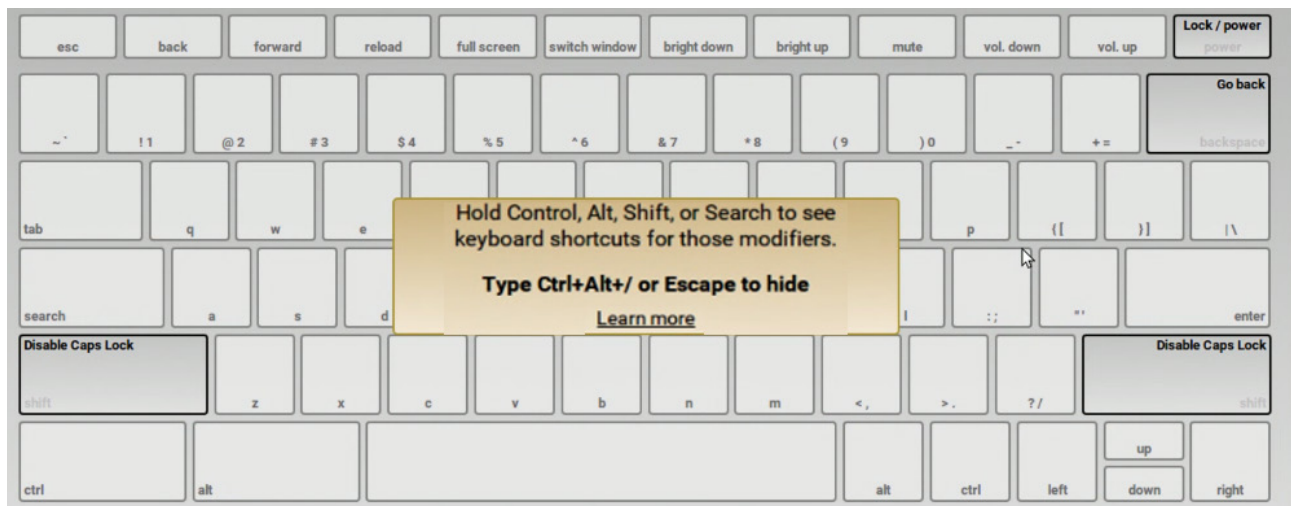


Toggle Caps Lock On/Off

Chromebooks don't come with a dedicated Caps Lock key. To evoke caps lock, use the 'Alt' and 'Search' keys. A caps lock indicator will appear in the lower right corner of the screen. Repeat the key combination to turn caps lock off.



To view all the keyboard shortcuts, use 'Ctrl' with 'Alt' and '?'. Press 'esc' to hide.







Commonly Used Keyboard Shortcuts

Ctrl+N	Open a new window
Ctrl+Shift+N	Open a new window in incognito mode
Ctrl+T	Open a new tab
Ctrl+O	Open a file in the browser
Ctrl+Shift+Q	Sign out of your Google Account on Chrome OS
Ctrl+W	Close the current tab
Ctrl+Shift+W	Close the current window
Ctrl+Shift+T	Reopen the last tab you've closed. Google Chrome remembers the last 10 tabs you've closed.
Ctrl+1 through Ctrl+8	Go to the tab at the specified position in the window
Ctrl+9	Go to the last tab in the window
Alt+1 through Alt+8	Go to the window at the specified position
Alt+9	Go to the last window open
Ctrl+Tab	Go to the next tab in the window
Ctrl+Shift+Tab	Go to the previous tab in the window
Alt+Tab	Go to the next window you have open
Alt+Shift+Tab	Go to the previous window you have open
Click and hold the Back or Forward arrow in the browser toolbar	See your browsing history for the tab
Backspace, or press Alt and the left arrow	Go to previous page in your browsing history.
Shift+Backspace, or press Alt and the right arrow	Go to the next page in your browsing history.
Press Ctrl and click a link	Open the link in a new tab in the background
Press Ctrl+Shift and click a link	Open the link in a new tab and switch to the newly opened tab
Press Shift and click a link	Open the link in a new window
Drag a link to a tab	Open the link in the tab
Drag a link to a blank area on the tab strip	Open the link in a new tab
Type a URL in the address bar, then press Alt+Enter	Open the URL in a new tab
Press Esc while dragging a tab	Return the tab to its original position
Ctrl+Shift+L	Locks your screen







Page Shortcuts

Press Alt and up arrow	Page up
Press Alt and down arrow	Page down
Space bar	Scroll down the web page
Press Ctrl+Alt and up arrow	Home
Press Ctrl+Alt and down arrow	End
Ctrl+P	Print your current page
Ctrl+S	Save your current page
Ctrl+R	Reload your current page
Ctrl+Shift+R	Reload your current page without using cached content
Ctrl and +	Zoom in on the page
Ctrl and -	Zoom out on the page
Ctrl+0	Reset zoom level
Esc	Stop the loading of your current page
Press Alt and click a link	Open the link in a new tab in the background
Ctrl+D	Save your current webpage as a bookmark
Ctrl+Shift+D	Save all open pages in your current window as bookmarks in a new folder
Drag a link to bookmarks bar	Save the link as a bookmark
Ctrl+F	Open the find bar to search your current page
Ctrl+G or Enter	Go to the next match for your input in the find bar
Ctrl+Shift+G or Shift+Enter	Go to the previous match for your input in the find bar
Ctrl+K or Ctrl+E	Perform a search. Type a search term after the question mark in the address bar and press Enter.
Ctrl+Enter	Add www. and .com to your input in the address bar and open the resulting URL
Ctrl+ 	Take a screenshot of your current page
Ctrl+ Shift+ 	Take a partial screenshot
Ctrl+U	View page source
Ctrl+Shift+I	Toggle the display of the Developer Tools panel
Ctrl+Shift+J	Toggle the display of the DOM Inspector



Browser Settings

Ctrl+Shift+B	Toggle the display of the bookmarks bar. Bookmarks appear on the New Tab page if the bar is hidden.
Ctrl+M	Open the Files app
Ctrl+.	Display hidden files in the Files app
Ctrl+H	Open the History page
Ctrl+J	Open the Downloads page
Shift+Esc	Open the Task Manager
Ctrl+Alt+/ or Ctrl+?	Open the list of available keyboard shortcuts
Ctrl+ 	Configure monitor display
Shift+Alt+S	Place focus on the status area in the top-right corner of the screen. Use the actions listed for Shift+Alt+T to move the focus.
Shift+Alt+T	Place focus on the browser toolbar <ul style="list-style-type: none"> • Press Tab or the right arrow to focus on the next item in the toolbar • Press Shift+Tab or the left arrow to focus on the previous item in the toolbar • Press Ctrl+Alt and the up arrow to focus on the first item in the toolbar • Press Ctrl+Alt and the down arrow to focus on the last item in the toolbar • Press Space or Enter to activate buttons, including page actions and browser actions • Press Shift +  to open the context menu for the button (if available). • Press ESC to return focus to the page
Ctrl +  or Ctrl + 	Switches focus to the next keyboard-accessible pane. Panes include: <ul style="list-style-type: none"> • Status bar containing the time, network icon, and battery icon in the upper-right corner of the screen • Address bar • Bookmarks bar (if visible) • The main web content (including any infobars) • Downloads bar (if visible)
Alt+Shift+B	Place focus on the bookmarks bar. Use the actions listed for Shift+Alt+T to move the focus.
Alt+E or Alt+F	Open the wrench menu on the browser toolbar
Ctrl+Alt+Z	Enable or disable accessibility features if you're not signed in with a Google Account. If you're signed in, you can configure the accessibility feature on the Settings page.



Text Editing

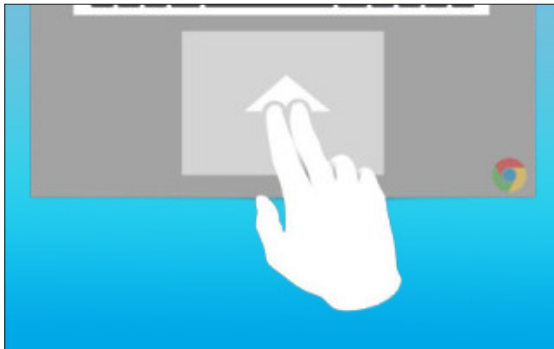
Ctrl+A	Select everything on the page
Ctrl+L or Alt+D	Select the content in the address bar
Press Ctrl+Shift and right arrow	Select next word or letter
Press Ctrl+Shift and left arrow	Select previous word or letter
Press Ctrl and right arrow	Move to the end of the next word
Press Ctrl and left arrow	Move to the start of the previous word
Press Alt and up arrow	Page up
Press Alt and down arrow	Page down
Press Ctrl+Alt and up arrow	Home
Press Ctrl+Alt and down arrow	End
Ctrl+C	Copy selected content to the clipboard
Ctrl+V	<ul style="list-style-type: none">• Paste content from the clipboard
Ctrl+Shift+V	<ul style="list-style-type: none">• Paste content from the clipboard as plain text
Ctrl+X	Cut
Ctrl+Backspace	Delete the previous word
Alt+Backspace	Delete the next letter (forward delete)
Ctrl+Z	Undo your last action



The Chromebook Trackpad

To Scroll on a Chromebook Trackpad / Touchpad

To scroll a webpage on a Chromebook place two fingers on the trackpad then move them up or down (depending on your desired scroll direction) to make the page travel.



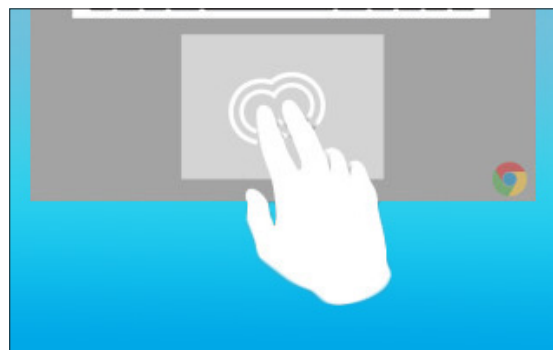
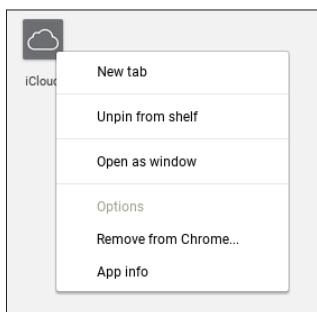
To Right Click on a Chromebook Trackpad

To click (the same as clicking the left button on a mouse), briefly push down with one finger. Most trackpads will give an audible clicking sound.

To Right Click on a Chromebook Trackpad

To right-click on a Chromebook using the trackpad does not require you to plug in a USB mouse. To right-click, tap once on the trackpad using two fingers.

This will open the right-click options.



NOTE: Since all Chromebooks have a USB port, it is possible to plug in a standard mouse, bypassing the trackpad.



The Chromebook Screen - Graphical User Interface



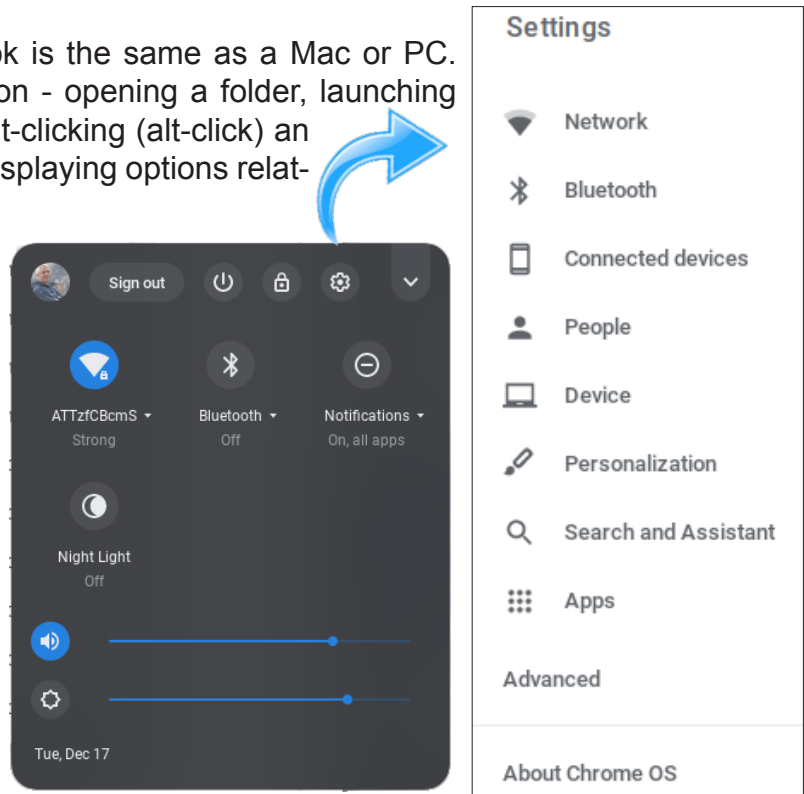
The graphical user interface (GUI) is the visual experience a computer presents to its user. Every type of computer has a GUI - a way of visually presenting information, guiding the computer user on how to access information, control functions, and manipulate settings. In the photo above you see the GUI of a Chromebook, a Macintosh and a Windows computer; they have much in common. There is a visual backdrop (or 'theme'), a series of icons (small images of folders, apps and controls) and text-based menus which can be called upon as needed.

Chromebooks, lacking the vast storage capabilities available to other types of computers, do not have a sophisticated mechanism for filing, organizing, and retrieving files and programs. Since most of the apps and documents are saved in the Cloud, Chromebooks have a simplified GUI. Most major functions are handled through a web interface; using a Chromebook is similar to using a web browser on a Mac or Windows computer. The main engine driving the operation of a Chromebook is the Google Chrome browser.

Operationally, using a Chromebook is the same as a Mac or PC. Clicking an icon invokes its function - opening a folder, launching an app, displaying a website. Right-clicking (alt-click) an icon will open a contextual menu displaying options relating to that item.

The 'less is more' philosophy is evident in the design of the Chromebook interface; there is nothing that is not needed by the average user. There are no 'power user' options to substantially alter the look and feel of a Chromebook.

Apart from simplicity, the main goal of the Chromebook is familiarity. For casual users, the process of working on a Chromebook will be very routine.






Cloud Computing

Cloud computing is a subscription based service where you can obtain networked storage space and computer resources. One way to think of Cloud computing is to consider your experience with email. Your email service provider takes care of housing all the hardware and software necessary to support your personal e-mail account. When you want to access your e-mail you open your web browser, go to the e-mail client, and log in. The most important part of the equation is having internet access. Your email is not housed on your physical computer; you access it through an internet connection, and you can access it anywhere, as long as you have access to the internet. Your email is different than software installed on your [non-Chromebook] computer, such as a word processing program.



When you create a document using word processing software, that document stays on the device you used to make it unless you physically move it. An email client is similar to how Cloud computing works except instead of accessing just your email, you can choose what information you have access to within the cloud. The cloud makes it possible for you to access your information from anywhere at any time. While a traditional computer setup requires you to be in the same location as your data storage device (typically the computer hard drive), the cloud takes away that step. The cloud removes the need for you to be in the same physical location as the hardware that stores your data. Your cloud provider can both own and house the hardware and software necessary to run your home or classroom applications.

You need an internet connection in order to access the cloud. This means that if you want to look at a specific document you have housed in the cloud you must first establish an internet connection, either through a wireless or wired internet or a mobile broadband connection. The



Unable to connect to the Internet

Google Chrome can't display the webpage because your computer isn't connected to the Internet.

ERR_INTERNET_DISCONNECTED

benefit is that you can access that same document from wherever you are with any device that can access the internet. These devices could be a desktop, laptop, tablet, or phone. This can also help you to function more smoothly because anyone who can connect to the internet and your cloud can work on documents, access software, and store data.



WiFi Networks

Going hand-in-hand with Cloud Computing are networks. This is the technology which connects a device (such as a Chromebook) to other devices - a printer, a server, the internet. Like more traditional connections, computer networks have certain specifications relating to speed and capacity. A good network is fast, reliable and can handle multiple devices simultaneously. While it is certainly not your job as a teacher to understand (let alone troubleshoot) networking issues, it is important to know a bit more than 'I turn it on and magic happens'.

It is easiest to look at a network from two perspectives: your local device on one end, and the internet at large on the other. We can assume that the internet 'works' - web pages and cloud services are active and available, waiting for you and your students to access them. It is the several pieces of technology between the internet and your Chromebook that comprise a network.

In most school districts the internet signal goes to the district office, where it is subject to a firewall and other safeguarding software before being sent to school sites. At each site the signal is distributed around campus via fiber optic or ethernet wiring. In your classroom, both wired and wireless (WiFi) networking should be available. At some point a device, called a router, turns the wired signal into a wireless WiFi signal and broadcasts it over a short range. These access points should be plentiful - one per classroom is ideal.

The speed to the WiFi network is very important - the FCC considers 10Mbps to 25Mbps reasonable for households that stream video, but classrooms that may have 30 students watching an instructional video on their Chromebooks will need a much faster connection (each connection lowers the overall speed of the network). In assignment 4 you will be asked to test the speed of a wireless network.

A School network should be:

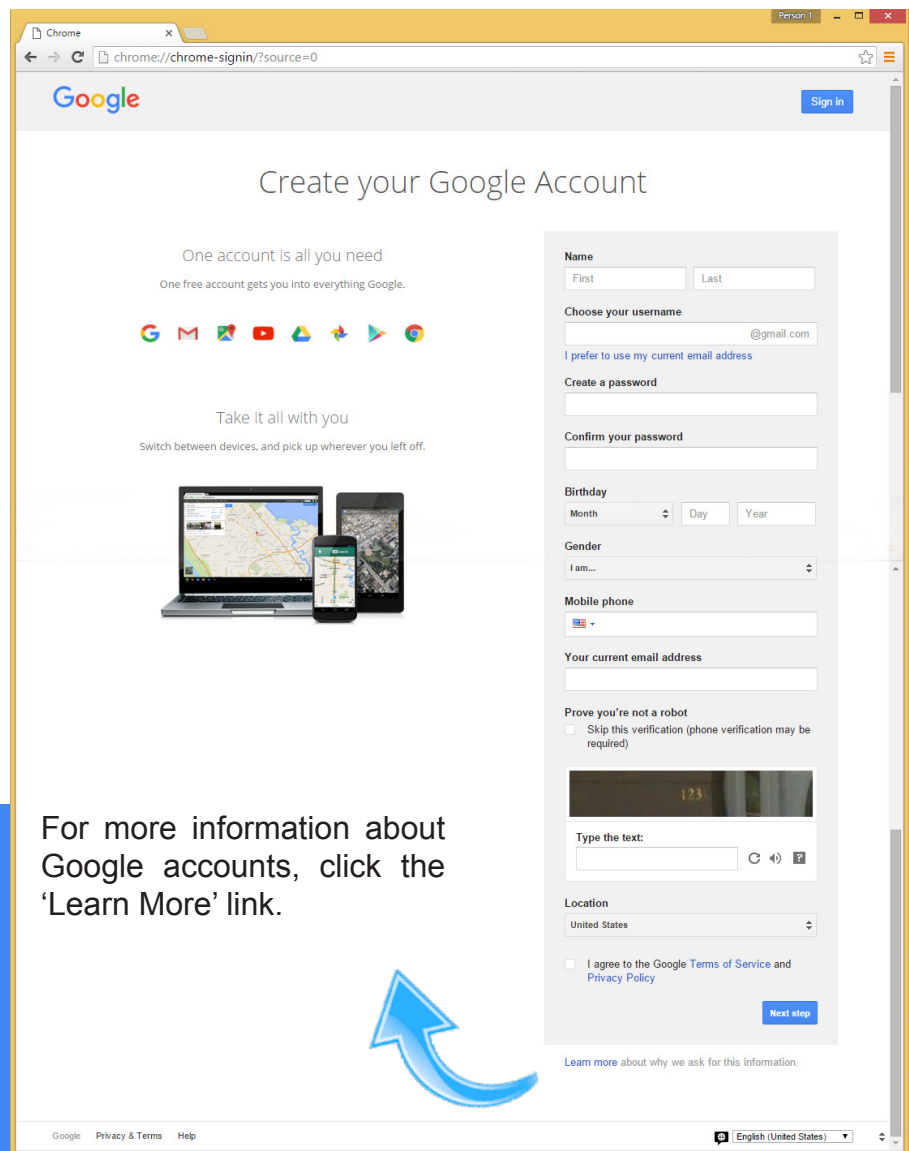
- Fast** - enough to ensure unhindered access to learning resources
- Reliable** - so learning is not interrupted by technical glitches
- Safe** - providing access to only to resources which are appropriate for each individual and protecting everyone from unwanted external connections
- Secure** - so we can be sure we are being safe from hackers
- Scalable** - adding 100 new devices to the network will not cause problems



Setting up a Google Account

If you do not already have a Google account, you will need to create one to complete the course. Go to: <https://accounts.google.com/signup>

A Google Account gives you access to Google products like Gmail, Google+, and YouTube with a single username and password. A Google Account comes with a Gmail address and a Google+ Profile. Once you create a Google Account you can use that same username and password to sign in to any Google product. **You can not access the full functionality of a Chromebook without signing in with a Google account.**



Help

- Create a Google Account**
- Creating a strong password
- Verify your Google Account
- Verify your account via SMS or Voice Call
- Checking if you have an account
- Browser requirements
- Control what others see about you across Google services
- About Google Accounts

For more information about Google accounts, click the 'Learn More' link.



Google Account Settings

Once your account is established, a visit to the 'My Account' page is in order. To access the account settings, go to the *Google.com* web page on a browser and click on the circular icon in the upper right corner of the window. If you are not signed in, click the **Sign in** button.

'My Account' gives you access to settings for privacy and data security. There are options for changing your ID photo, email address(es), password, and name.

It is possible to have a Google username independent of other information - the username assigned to my Google account is 'Steve Young' but it could easily be reset to 'Number1StarTrekFan'. This Google name is used as the identifier when using Google Communities or sharing files.

Welcome

Sign-in & security

- Signing in to Google
- Device activity & notifications
- Connected apps & sites

Personal info & privacy

- Your personal info
- Activity controls
- Ads settings
- Account overview
- Control your content


Account preferences

- Language & Input Tools
- Accessibility
- Your Google Drive storage
- Delete your account or services

About Google

- Privacy Policy
- Help and Feedback

Steve [Grid Icon] [Notification Icon] [Profile Icon]



Steve Young
steveyoungfpuniv@gmail.com
[Google+ Profile](#) – [Privacy](#)

My Account

Change

Add account Sign out

Sign-in & security >	Personal info & privacy >	Account preferences >
Control your password and account-access settings. Signing in to Google	Manage your visibility settings and the data we use to personalize your experience. Your personal info	Set language, accessibility, and other settings that help you use Google. Language & Input Tools

Name Steve Young >

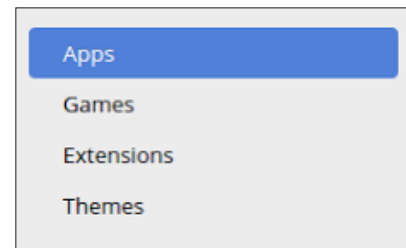


About Chromebook Apps

A computer without apps (also called programs or applications) is nothing more than a digital picture frame. Apart from the operating system, which works on a purely functional level, a computer can not 'do' anything. It is the apps which instruct the computer how to display websites, perform music, teach spelling, send emails, and all the other things we expect computers to do. Chromebooks can process three kinds of apps: **hosted, packaged and extensions**. The differences may be subtle to a non-techie, but the distinctions are important.

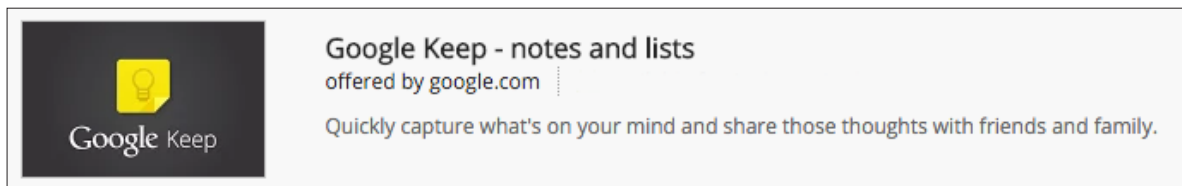
Hosted Apps

A hosted app is a Chrome application which depends on an internet connection to work. The app is not stored on the Chromebook; it is temporarily accessed from the cloud. When the app is closed, the app itself is not saved; it must be reloaded from the Cloud again. Google Docs is an example of a hosted app.



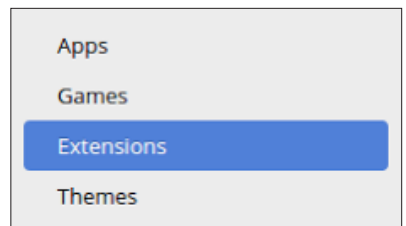
Packaged Apps

A packaged app runs straight from your computer and does not necessarily need an internet connection to operate. An example is Google Keep, which allows you to write notes even when offline. The limiting factor of how many packaged apps you can have installed is the size of the Chromebook's memory.



Chrome Extensions

Extensions add functionality to existing Chromebook apps.



For example, the Google Dictionary extension provides a pop-up definition when a word on a web page is clicked.

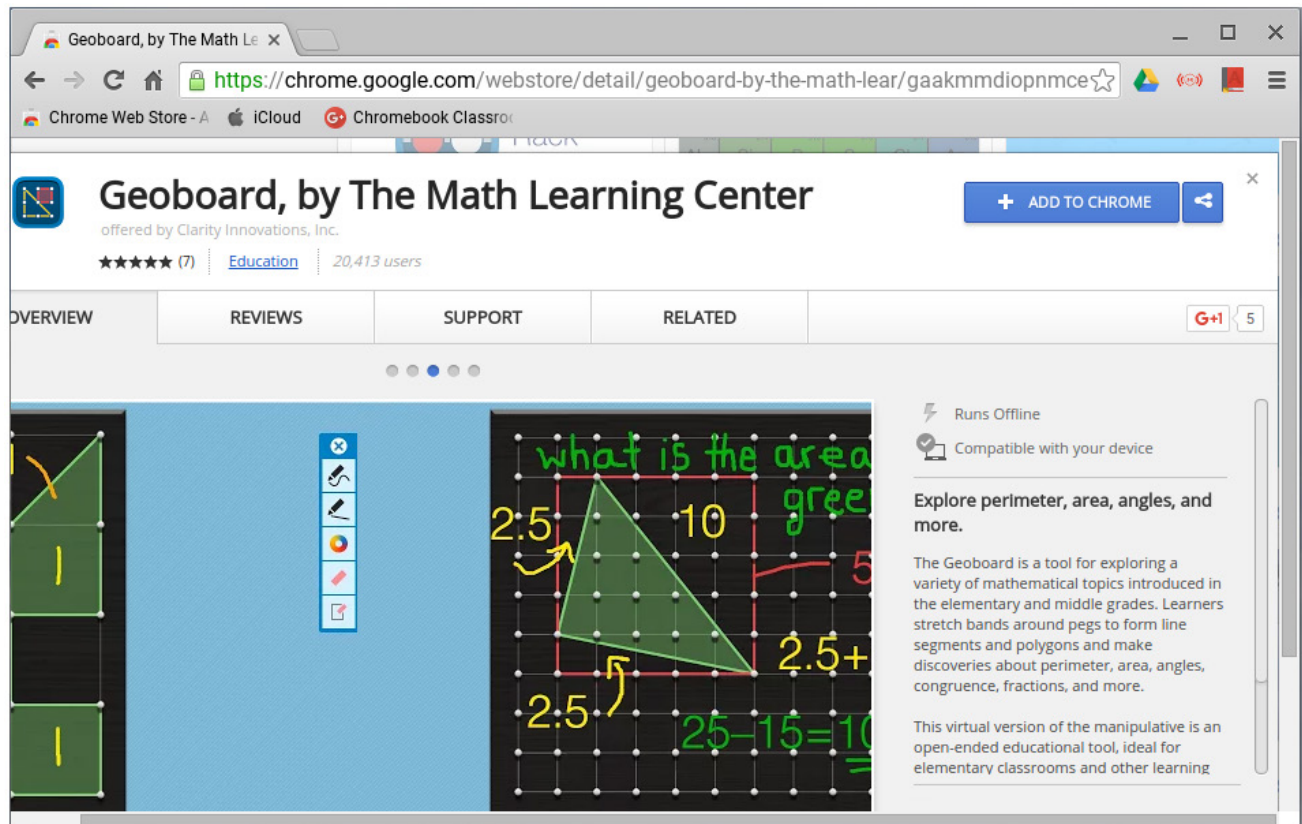
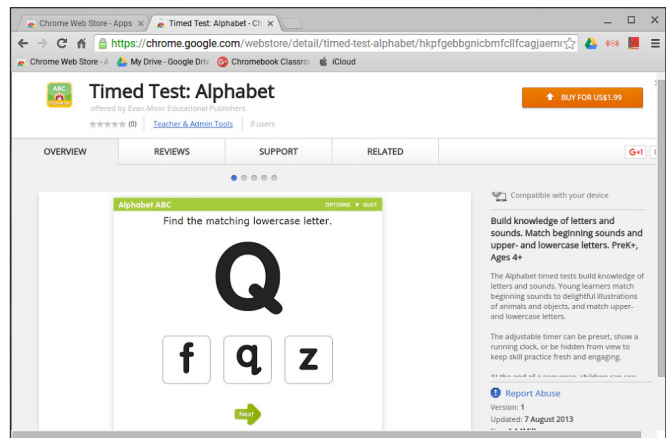


Chromebook Apps

You may already have a collection of favorite, 'must have' apps you use with your students on non-Chromebook devices - these may or may not be available for the Chromebook. A large percentage of educational software use the Windows or Macintosh operating system. If an entire curriculum is dependent on a particular piece of software, some thought should be put into the ramifications of using a different computing platform.

If the bulk of your and your students' computer use is online, then using a Chromebook should present no compromise in the resources available to you. One of the purposes of this course is to familiarize you with the range and quality of Chromebook apps.



If you are taking this course and do not have access to a Chromebook, rest assured most apps run on Macintosh and Windows computers as well.





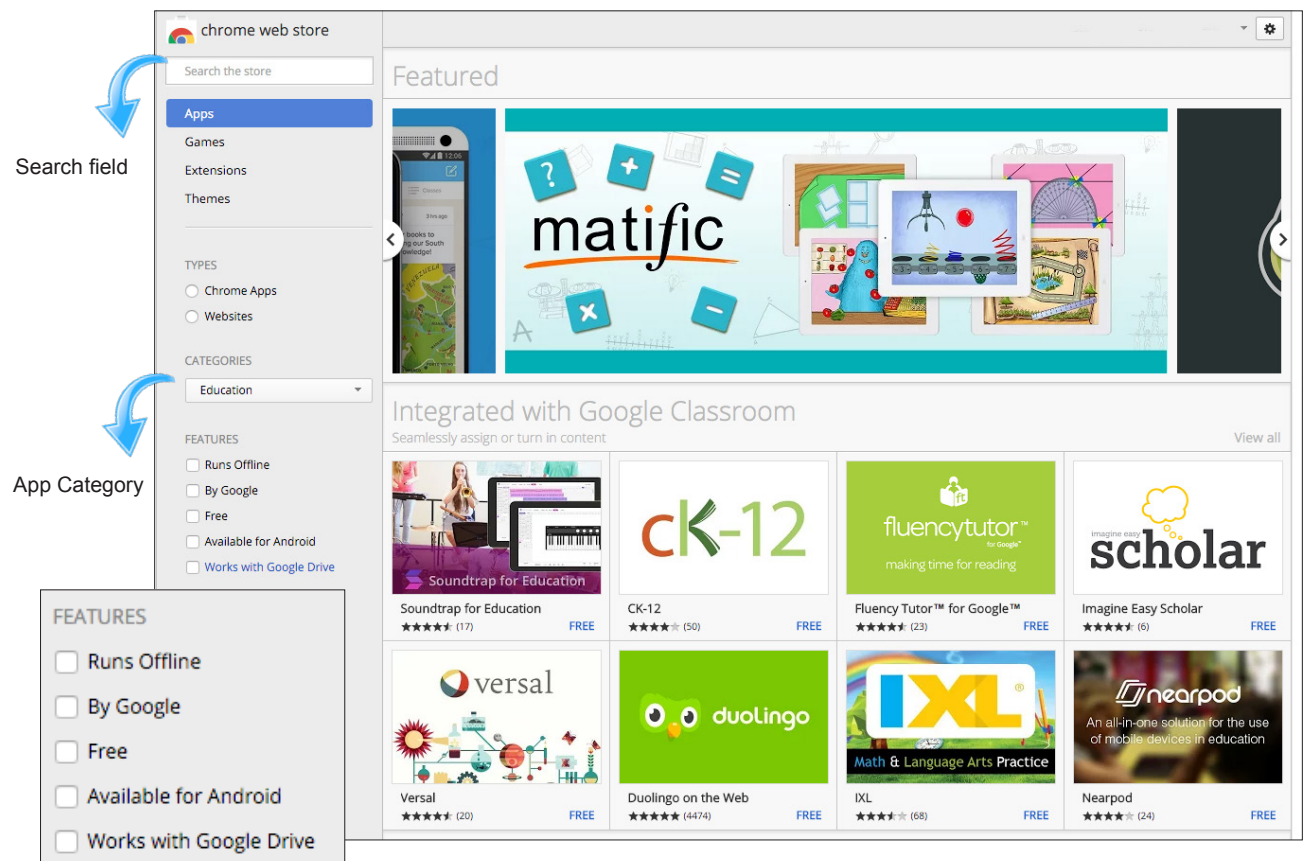
Installing Apps

Depending on the make, model and manufacturer of the Chromebook, some apps may already be installed. Installing apps (or in some cases, bookmarking the app on the Chromebook with an easy to find icon) is a simple process. Accessing the Google Web Store (go to: www.chrome.google.com/webstore) opens a web page with options for viewing apps by category, type, or searching by keyword; to see a demonstration, watch the 'Installing Apps' video on the TEC 994 course companion website.

Once an app has sparked your interest, clicking on its graphic will display a detail page. Included in the information is a 'Compatible with your device' notice, indicating whether your Chromebook can run the app. Clicking the 'ADD TO CHROME' link will install the app onto your Chromebook and create an icon in the Launcher. The Launcher icon on the Chromebook's desktop looks like this  or this. 



With a commercial app, you may have the option to download a demonstration copy. These are usually fully functional, but with a limited lifespan.

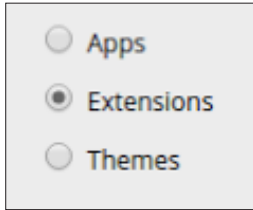



The screenshot shows the Chrome Web Store interface. On the left, there is a sidebar with a search field and a list of app categories (Apps, Games, Extensions, Themes). Below this, there are filters for 'TYPES' (Chrome Apps, Websites) and 'CATEGORIES' (Education). A 'FEATURES' section includes checkboxes for 'Runs Offline', 'By Google', 'Free', 'Available for Android', and 'Works with Google Drive'. A callout box on the left points to the search field and the 'App Category' filter. The main content area shows a 'Featured' banner for 'matic' and a grid of 'Integrated with Google Classroom' apps, including Soundtrap for Education, CK-12, Fluency Tutor for Google, Imagine Easy Scholar, Versal, Duolingo on the Web, IXL, and Nearpod.

NOTE: For a visual explanation, see the 'Installing Apps' video on the companion website.



Installing Extensions

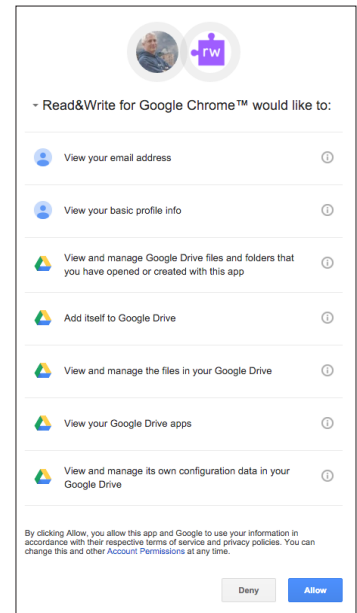


The process of installing extensions is essentially the same as installing apps.

Make sure to check the 'Extensions' option in the left hand pane of the Chrome Web Store.

Some extensions, like Read & Write (illustrated below) require you to give it access to some aspects of your Google account to function, as seen in the illustration (right).

To see a demonstration, watch the 'Installing Extensions' video on the companion website.



Read&Write for Google Chrome™
 offered by texthelp.com
 ★★★★★ (566) | Accessibility | 2,675,031 users

COMPATIBLE WITH YOUR DEVICE

Boost reading and writing confidence. Offer support for Google Docs/web to students with learning difficulties, dyslexia or ELL/ESL.

Read&Write for Google Chrome™ offers a range of powerful support tools to help students gain confidence with reading, writing, studying and research, including:

- Hear words, passages, or whole documents read aloud with easy-to-follow dual color highlighting
- See the meaning of words explained with

[Website](#)
 Report Abuse

Version: 1.7.2.5
 Updated: December 10, 2015
 Size: 454KiB
 Languages: See all 8



NOTE: For a visual explanation, see 'Installing Extensions' video on the companion website.



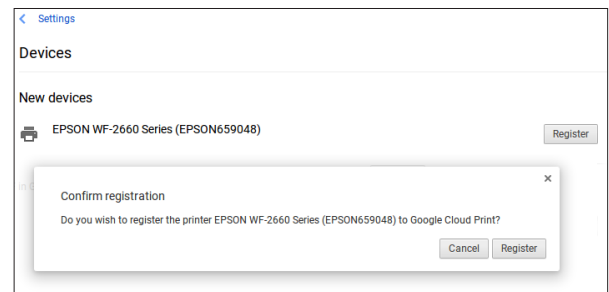
Printing

In the old days you would connect a printer to a computer by plugging in a cable from the computer to the printer. With the advent of networking, a computer is able to print to any printer on the same network, even if the printer is down the hall or in the library.

Chromebooks, lacking the ability to connect directly to a printer, must rely on a wireless network. There are two options: using a Cloud-ready printer, or configuring a printer to use with the Chromebook through the use of the Chrome web browser on a Windows or Macintosh computer.


In the illustration the Chromebook can 'see' a cloud-ready printer and, after registering the device, print to it.

Click on the 'Cloud Printing Setup' link on the course website for more info.




www.google.com/cloudprint/learn/

Getting Started with Google Cloud Print



Classic printers
Classic Printers connect to a laptop or PC, and register with Google Cloud Print using a feature of Google Chrome.
[Learn more.](#)

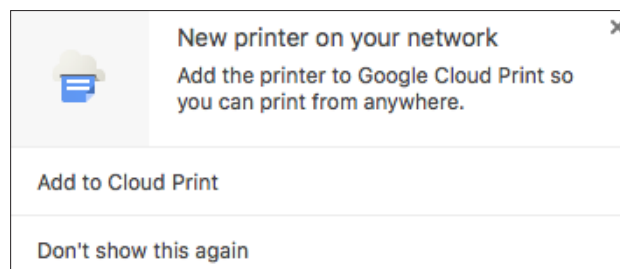
[Add Classic printer >](#)



Cloud Ready printers
Cloud Ready Printers connect directly to the internet and can register themselves with Google Cloud Print without a laptop or PC.
[Learn more.](#)

[Add Cloud Ready printer >](#)

For non-cloud ready printers, the configuration / registration must be done on either a Windows or Macintosh computer. Log onto your Google account in the Chrome web browser, and follow the directions.





Managing Files and Storage

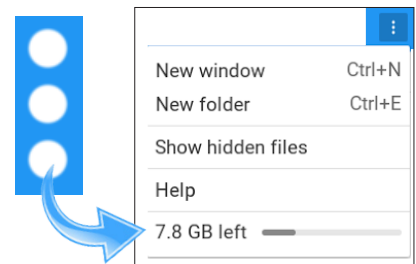
There are two types of information stored on a Chromebook: Apps and Documents.

The first type, Apps, are visible in the Launcher. There can be multiple ‘pages’ of apps, and swiping left and right will move from page to page.

The second type of information that can be stored on your Chromebook are Documents. These may be screen captures, files download from the internet, email attachments, or documents generated from an app (such as Google Keep). All these files and documents are accessed by clicking the ‘Files’ icon on the desktop or in the Launcher.



To view the Chromebook’s available memory, click the ‘Settings’ icon. As a rule, you can not add internal memory to a Chromebook. If your device came with 8GB of memory (to be shared between apps and documents), you cannot upgrade to 32GB.



The workaround to free-up local (non-Cloud based) storage is to transfer documents to a thumb drive (inserted into the USB port). The device (thumb drive) will appear in the Files window as a USB icon, and include information on the size of the thumb drive. Dragging documents from your Google Drive or the Chromebook drive (labeled ‘My Drive’) to the thumb drive will copy the files onto the thumb drive. Those files can then be deleted from the Chromebook, freeing up additional space for future use.

The screenshot shows the 'Recent' view of the Files app. On the left sidebar, a USB drive is listed with '8GB' of space. A blue arrow points from the USB drive icon to the '8GB' entry. The main pane shows a list of files with columns for Name, Size, Type, and Date modified.

Name	Size	Type	Date modified
EBOOK RUBRIC.gdoc	-	Google d...	Dec 17, 2011, ...
US National Archives.gslides	-	Google p...	Mar 18, 2012, ...
771 ch 7 presentation Sjosted...	-	Google p...	Aug 3, 2012, 1...
PencilCase.webloc	262 by...	WEBLOC ...	Mar 27, 2014, ...
googledrive.ibooks	3.9 MB	IBOOKS f...	Aug 17, 2014, ...
Untitled document.gdoc	-	Google d...	Jan 25, 2015, 1...
castle.epub	6.7 MB	EPUB file	Feb 3, 2015, 6:...
Lost & Found Flyer copy.pages	3.2 MB	PAGES file	Feb 19, 2015, ...
pages.html	468 by...	HTML do...	Feb 19, 2015, ...
eBook Library Ford.PNG	902 KB	PNG ima...	Apr 22, 2015, 9...
Post Course Survey Ford.pdf	90 KB	PDF docu...	Apr 22, 2015, 9...
Star Wars Ep IIX Script.pdf	3.9 MB	PDF docu...	Jan 22, 2016, 9...

NOTE: For a visual explanation, see ‘Working with Files’ video on the companion website.

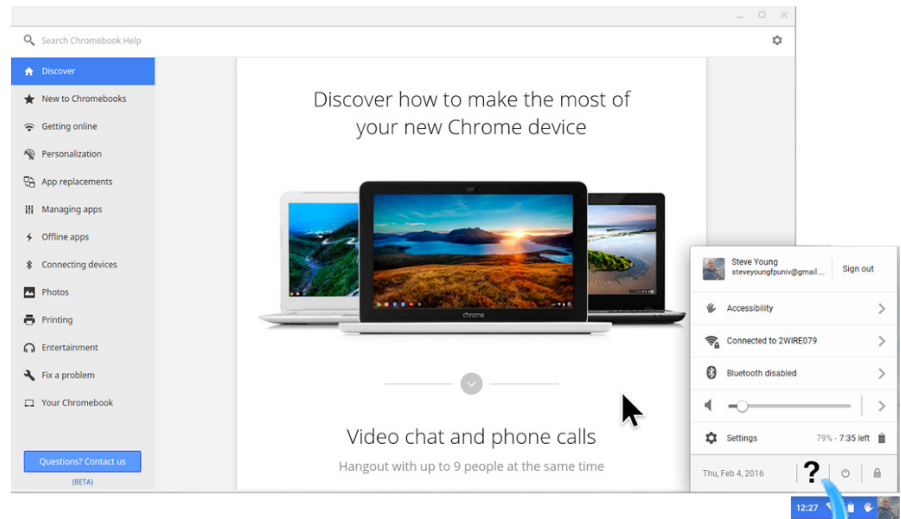


Additional Chromebook Help

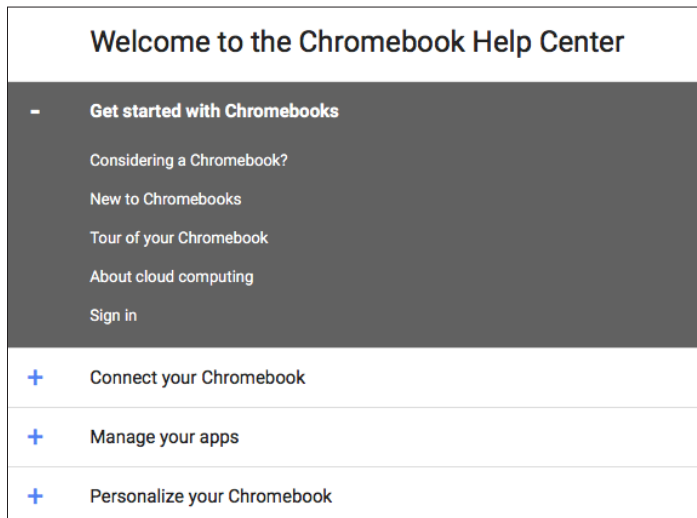
The previous few pages have detailed some of the basic aspects of operating a Chromebook. For more detailed information there are many sources you can draw from. The course's supplemental *My Google Chromebook* text, as well as online help pages, will fill in many gaps that have not been covered in this workbook.

In completing the assignments (beginning on the next page) you will be using many of the features and functions of the Chromebook.

Please take time to explore the resources before completing each assigned task.

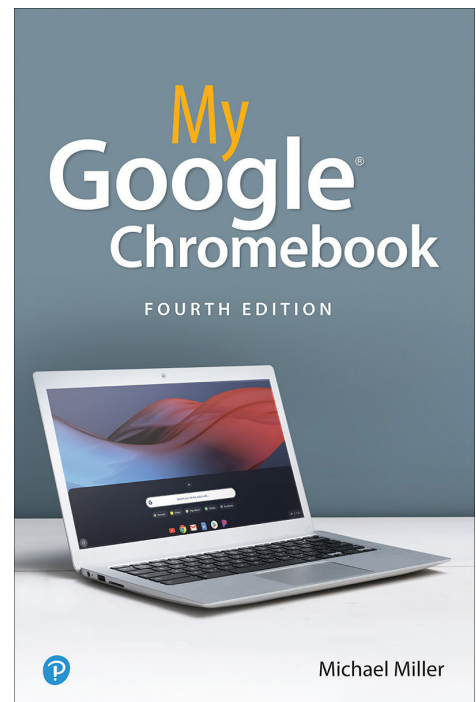


The online help resources on a Chromebook are accessed by clicking on the ? icon after clicking any of the icons in the status area (i.e. Time).



The official Google Help Center can be found at: www.support.google.com/chromebook

There is a link to the help Center on the companion website labeled 'Chromebook Help'.





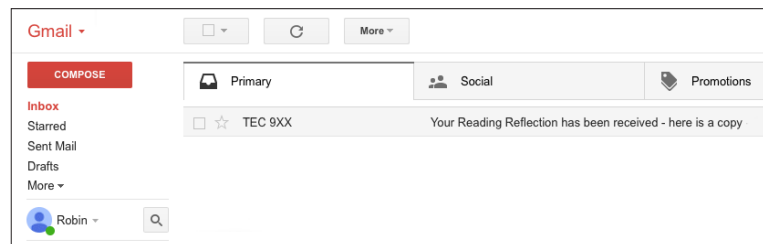
Course Assignments and Submitting Work

By the end of the course you will have completed a total of eighteen (18) assignments, as outlined in the course syllabus. Most of the assignments will be completed using the online forms accessed through the companion website. I am hoping for responsive, relevant replies to the prompts when I have requested a narrative response. The next several pages contain screen captures of the online forms associated with many of the assignments. These forms are located on the TEC 994 course companion website at:

www.chromebook.steveyoungfpu.net

When completing the forms, you may either type directly in to the form, or if you prefer you may word process your responses in a separate word processing program, then copy and paste the text into the corresponding field within the online form. You can also create documents in non-Google programs and send those to the instructor (see next page).

Once you submit these assignments using these online forms, a copy will be emailed to you at the address you provide, originating from *steveyoungfpu@univ@gmail.com* so insure your account will accept emails from my address.



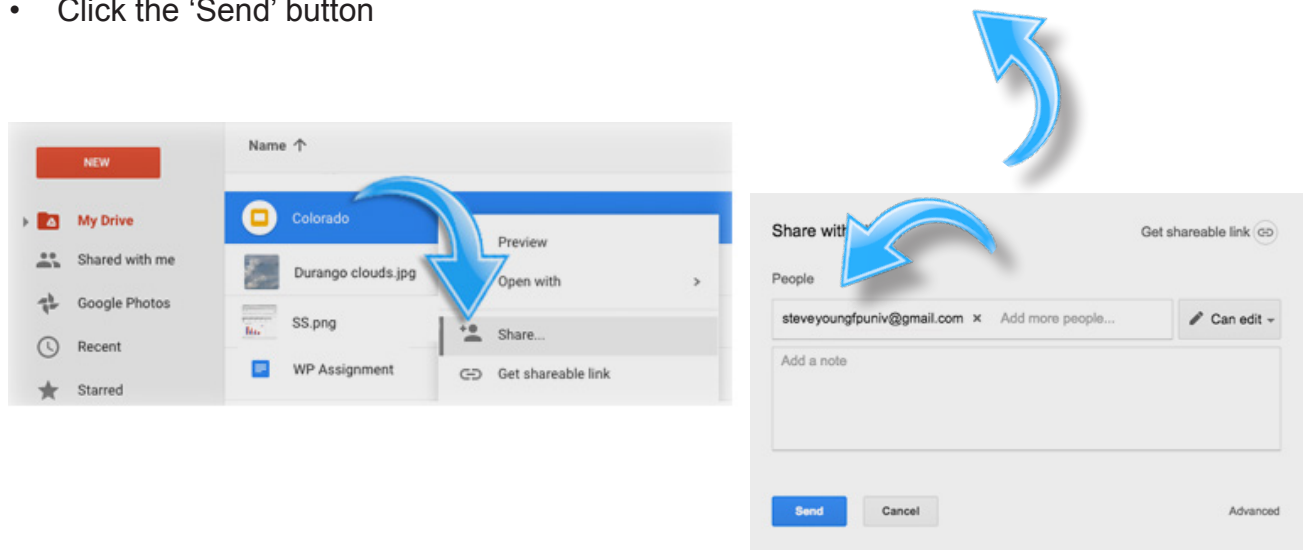
- Assignment 1: Pre-Course Survey
- Assignment 2: Reading Reflection
- Assignment 3: TEC 994 Community Blog Submission 1
- Assignment 4: WiFi Survey of School
- Assignment 5: App Review and Reflection - Student App or Site
- Assignment 6: App Review and Reflection - Teacher App or Site
- Assignment 7: Create a Word Processing Document
- Assignment 8: Create a Presentation Document
- Assignment 9: Create a Spreadsheet Document
- Assignment 10: Create a Survey / Test Document
- Assignment 11: Lesson Plan 1 - Using a Website
- Assignment 12: Lesson Plan 2 - Using an App
- Assignment 13: Lesson Plan 3 - Using Productivity App
- Assignment 14: Classroom Rules and Safeguards
- Assignment 15: TEC 994 Community Blog Submission 2
- Assignment 16: Standards Correlation Chart
- Assignment 17: Post Course Survey
- Course Evaluation



Submitting Work

To submit a Google Docs file to the instructor for assignments 8~11, follow these steps:

- On your Chromebook or computer, open Google Drive in a browser
- Select the relevant file by alt-clicking on a Chromebook (right-click on a Mac or PC)
- Choose the 'Share' option from the menu
- In the resulting dialog box, address the link to **steveyoungfpuniv@gmail.com**
- Click the 'Send' button



If you are working on a Mac or PC and have created and saved a non-Google document (i.e. with Microsoft Word or Acrobat PDF), you can **simply attach the file to an email and send it to me** at **steveyoungfpuniv@gmail.com**

This method works with Chromebooks, Macs and Windows computers.



Assignment 1: Pre-Course Survey

The first assignment you will complete is, appropriately enough, the Pre-Course Survey.

Here you will be asked some general questions concerning your thoughts on technology in the classroom and your personal experiences, if any, using Chromebooks.

The survey asks for your name, your email address, and your Google username.

It is important that I know BOTH your full name and your Google username (which may differ from your actual name) as I will be referencing your Google username for the three Google Community assignments.

A copy of your survey (and all subsequent survey forms) will be e-mailed back to you at the email address you supply within the form (which does not necessarily need to be a gmail address).

These copies back to you will come in the form of an email originating from my email address of: *steveyoungfpuniv@gmail.com* so make sure your email account will accept email from this address if you wish to receive a copy in verification that you completed the assignment(s).

Please remember to fill out the narrative responses with thorough, thoughtful, relevant replies. Thanks!

Pre-Course Survey
* Required

Full Name (First Last) *

I am enrolled in TEC 9XX *
 Yes
 No

Email address *
A copy of your completed form will be emailed to you

Google Name *
This may be different than your actual name, and is the identifier when posting to Google Communities.

What grade level / subject do you teach?

What prior experience do you have using a Chromebook?
If no, explain what motivated you to learn about them.

How are you or your fellow teachers currently using technology in the classroom?

Do you feel that technology is an effective method to deliver instruction? Why or why not?

Does your school / classroom have a WiFi network?
 Yes, it seems to work well.
 Yes, but there are issues with getting connected.
 Some classrooms have it, others do not.
 I am not sure.
 No.

Do you know of a district, school or colleague currently using Chromebooks in the Classroom?

If so, what have you heard about their experiences?

What is the goal for you or your school / district regarding the use of Chromebooks?

What do you hope to get out of this course?

Submit

Never submit passwords through Google Forms. 100% You made it.

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[Report Abuse](#) - [Terms of Service](#) - [Additional Terms](#)



Assignment 2: Reading Reflection

I have selected a group of four articles which I believe are relevant to technology in the classroom.

After scanning over the four articles chose ONE, read it, and respond to the survey prompts.

Please remember to fill out the narrative responses with relevant, thorough, thoughtful replies.

If you prefer, you can word process your answers in a separate word processing program then copy / paste the responses into the corresponding field within the online form.

Reading Reflection

Please note: This task will be weighted the same as other assignments in the course. I am expecting a thorough reply to the narrative prompts. The intent is for you to write a response relating your thoughts and ideas for the use of Chromebooks in the classroom, both generally and as it relates to your specific situation.

If you would like to word process the project using Word, Pages, or word processing another program, you are welcome to do so. To transfer your completed document, click on the link below - a new web page will open where you can select your completed document to upload to the instructor's Google Drive.

chromebook.steveyoungfpu.net/fileupload.html

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TEC 9XX *

Yes

No

Which article did you choose to respond to?

Too Much Learning

Redefining Instruction with Technology

What Does Technology in Education Mean

3 Reasons Chromebooks are Shining in Education

What are your general feeling concerning the article?

Cite a specific example or concept within the article which you found particularly useful? Why did you find it so?



Assignment 3: TEC 994 Community Blog Submission 1

Google closed all Google + Communities in early April, 2019. This was a great site to share ideas and respond to fellow TEC 994 student’s thoughts. In the alternative, I have set up a Google Classroom in which you can express your insights about using Chromebooks, and respond to your fellow student’s comments.

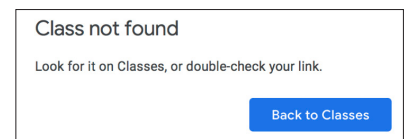
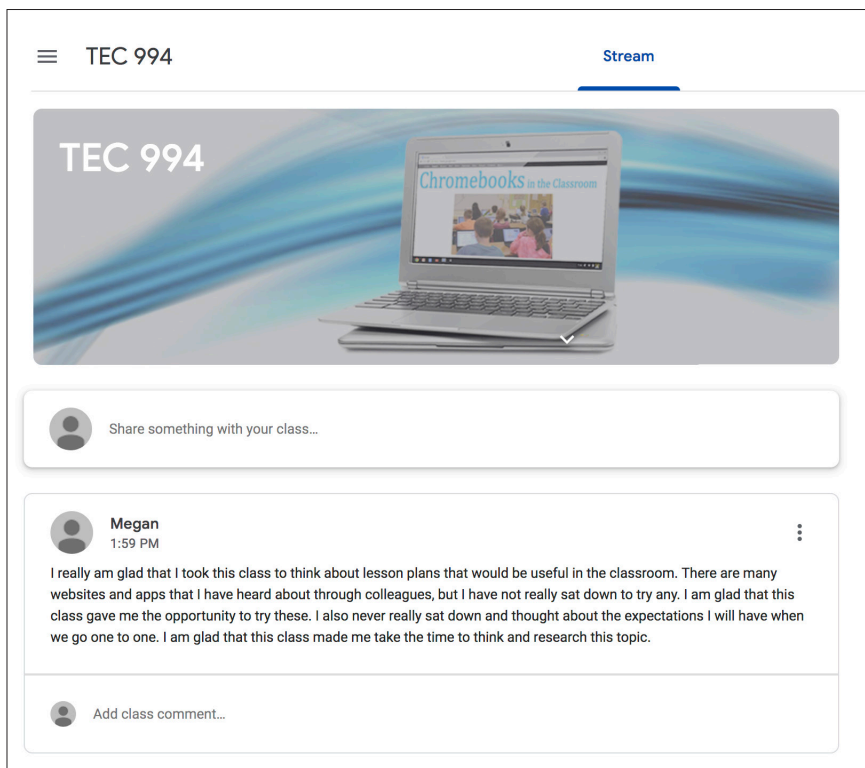
You will need to be logged into a Google account and use the access code **mbzea97** to gain access. The hyperlink to the blog can be found under the ‘Socialize’ column on the TEC 994 course companion website.

Please note that some school districts block their teachers from viewing or joining 3rd party Google classroom pages. If you get a message to that effect, you may need to log in with an alternate (non-school district) Google account. You may see a ‘Class not found’ notice on the Google Classroom page; if that is the case, just follow the instructions below.

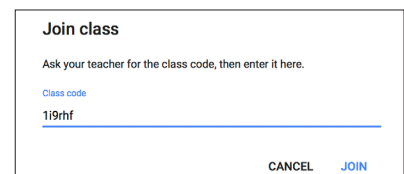
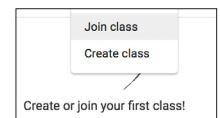
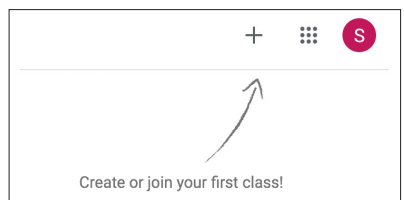
For the purposes of this assignment, after joining the class **please contribute at least one post or responding to an existing post.**

Again, it will be important that I know your Google username (this is crucial, especially if it differs from your given name) so I know who to assign credit to upon completion of this task. There is no need to contact me once you have made your blog entry, as I check regularly.

I encourage you to check back from time to time to see what others have to say, including me!



To join the class, click the ‘Back to Classes’ button, then the ‘+’ in the upper right corner.



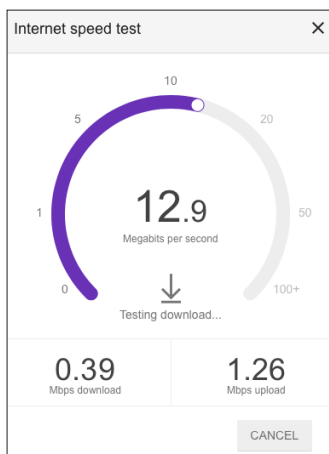
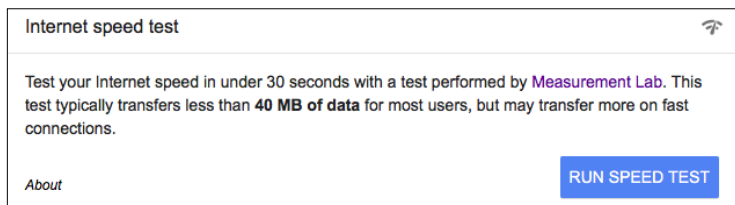


Assignment 4: WiFi Survey of Your School

More than other types of computers, the Chromebook is dependant on your school's technology infrastructure.

In order for to you to better understand that technology, I have posed a series of questions about wireless access in your classroom in particular, and your school in general.

Included on the companion website is a link to an internet speed testing link, which will measure the speed of your network. **Use it and record your findings in the survey form.***



You may need to talk to your school or district IT person to get a better understanding of how the use of Chromebooks will effect the network (see page 34 of this workbook).

After talking with the district or school technology person, **respond to the survey questions.**

If you are unfamiliar with WiFi networks, a brief guide can be found under the 'Links' column on the companion website.

Note: If you do not have access to your school's WiFi network (i.e. you are on summer break) and can not complete all the questions, please answer the alternative essay question at the end of the survey.



WiFi Survey

Since Chromebooks are dependent on wireless internet access, it is important for you to know and understand your school's wifi landscape.

If you have completed the project using a word processor, you can send that document rather than using the form below. Click on the chromebook.steveyoungfu.net/fileupload.html link - a new web page will open were you can choose your completed document to upload to the instructor's Google Drive.

If you do not have direct access to your school (i.e. you are on summer break) and can not complete all the questions, please answer the alternative essay question at the end of this survey.

*** Required**

Full Name (First Last) *

I am enrolled in TEC 994 *

Yes
 No

Email address *
A copy of your completed form will be emailed to you

Does your classroom / school have WIFI?

How would you rate your classroom / school WIFI?

- Works fine all the time
- Usually works
- It works sometimes
- It barely works at all
- Not available

Who is in charge of maintaining the school's WIFI network?

- The district IT department
- The school IT department
- An assigned member of the school staff
- I do not know

If you have a problem with the WIFI network, who do you contact? What is their job title?

Based on your experience or anecdotal evidence from others, do you feel your school's WIFI network needs to be 'beefed up' before you use Chromebooks with your class? Explain.

Use the speedtest.net site to test your classroom / school network. Note the results for (1) Ping, (2) Download Speed and (3) Upload Speed.

If possible, discuss the results of the WIFI speed test with the IT / tech person at your site or district. What are his or her thoughts on the findings?

Alternative Essay

Please respond to the below prompt if you do not have physical access to your school's WIFI network and can NOT complete the speed test component of this survey.

Read the article (Click the URL below for Part 1 - the Part 2 link is embedded in the article) and respond to the prompt.

http://www.educationworld.com/a_tech/setting_up_school_wifi_part_1.shtml

After reading the article, describe the 'who', 'where' and 'how many' mentioned in the article. Relate your narrative to your goals for the Chromebook classroom.

Submit

Never submit passwords through Google Forms. 100%: You made it.






Assignment 5 ~ 6: App Reviews and Reflections

The heart of any computer, and especially true with a Chromebook, is its software - apps that teach and facilitate learning. On the companion website are links to both the Google Chrome app store and two 3rd party app review sites. The links are found in the 'Links' column:

- Educational App Store
- App Reviews (3rd Party)
- App Top Picks (3rd Party)

Assignment 5 asks you to use these resources to research, select and list 10 apps you feel would be useful in your classroom, along with a brief description.

10 Useful Apps	App Evaluation Form 1	App Evaluation Form 2
<p>There are many apps and extensions available for both students and teachers. After browsing the Educational App Store and the 3rd party links (see the course workbook), list ten apps which you feel would be useful in your classroom. These can be teacher-focused apps (i.e. gradebooks), curricular apps (i.e. spelling or math) or specialized apps (i.e. american sign language).</p> <p>Your selection can be focused (just Geometry apps) or generalized (apps at the 3rd grade level).</p> <p>Click the icon below to open the survey form.</p> 	<p>Chose one Chromebook app or extension (not necessarily from the list of 10) and evaluate it using the online form.</p> <p>This should be a app which students would use - either a productivity app (i.e. word processing) or a curricular app dealing with a specific subject area.</p> <p>Click the icon below to open the survey form.</p> 	<p>Chose one Chromebook app or extension (not necessarily from the list of 10) and evaluate it using the online form.</p> <p>This should be a app which teachers would use - either a productivity app (i.e. word processing) or an administrative app (i.e. gradebook or class survey).</p> <p>Click the icon below to open the survey form.</p> 

For Assignment 6, select one student (curricular or productivity) app and one teacher (administrative or productivity) app (not necessarily from your list of 10) and complete an evaluation checklist for each.

For your convenience, the forms are printed at the end of this workbook, should you want to fill them out on paper before using the online form.

App Name 1/10
Include description (its basic function) and relation to curriculum

App Name 2/10
Include description (its basic function) and relation to curriculum

App Name 3/10
Include description (its basic function) and relation to curriculum

Name and Description of App

Evaluation Checklist *
1 is the lowest (least applicable) 4 is the highest (most applicable)

	N / A	1	2	3	4
The app does what it says it does	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of app is relevant to the purpose and student needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Content is appropriate for the student	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help or tutorial is available in the app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information is error-free, factual, and reliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App's settings and/or content can be customized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
History is kept of student use of the app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design of app is functional and visually stimulating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student can exit app at any time without losing progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No in-app purchases are necessary for intended use of app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App contains no advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App promotes creativity and imagination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App provides opportunities to use higher order thinking skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App promotes collaboration and idea sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App provides useful feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes about the app and your intended use for it:



Assignment 7: Word Processing on the Chromebook

Apart from curricular apps such as graphing calculators and language tutorials, the majority of work most students and teachers perform on Chromebooks is with productivity apps. These apps include word processing, presentations, spreadsheets, and survey / test creation. The following four assignments deal with these productivity apps. Tutorials for the relevant programs can be found on the companion website or the supplementary course textbook.

Using a web-based word processor such as Google Docs or Pages for iCloud, produce a one page (minimum 2 paragraph) word processing document. The content is up to you, but try to relate in some way to your curricular area or expertise. Once the document is saved (save as Last Name, Assignment 7, WP) on your device or your Google Drive, share the link with the instructor.

When all four documents (word processing, presentations, spreadsheets, and survey/test creation) are complete and submitted to the instructor (see page 41), please fill out the online ‘Using Productivity Apps’ survey.

Using Productivity Apps

Please note: This task will be weighted the same as other assignments in the course. I am expecting a full formed document of the prescribed type.

Word Processing: 1 page formatted, title, two paragraphs of text
 Presentation: 5 slide presentation with elements of text and graphics / photos on all slides
 Spreadsheet: 2 columns and five rows of numbers, at least one formula
 Survey / Test: 5 questions or prompts

To view / download cheat sheets for the Google productivity apps, click this link: chromebook.steveyoungfpuiv.net/cheatsheet.pdf

To transfer your completed review form, click on the link below - a new web page will open where you can select your completed document (one at a time) to upload to the instructor's Google Drive. chromebook.steveyoungfpuiv.net/fileupload.html

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TEC 99X *

Yes
No

Productivity App 1: Word Processing Document

I created a document using Google Docs
 I created a document using Apple Pages
 I created a document using Word
 I have uploaded the document to the instructor
 Other: _____

Productivity App 2: Presentation Document

I created a document using Google Slides
 I created a document using Apple Keynote
 I created a document using PowerPoint
 I have uploaded the document to the instructor
 Other: _____

Productivity App 3: Spreadsheet Document

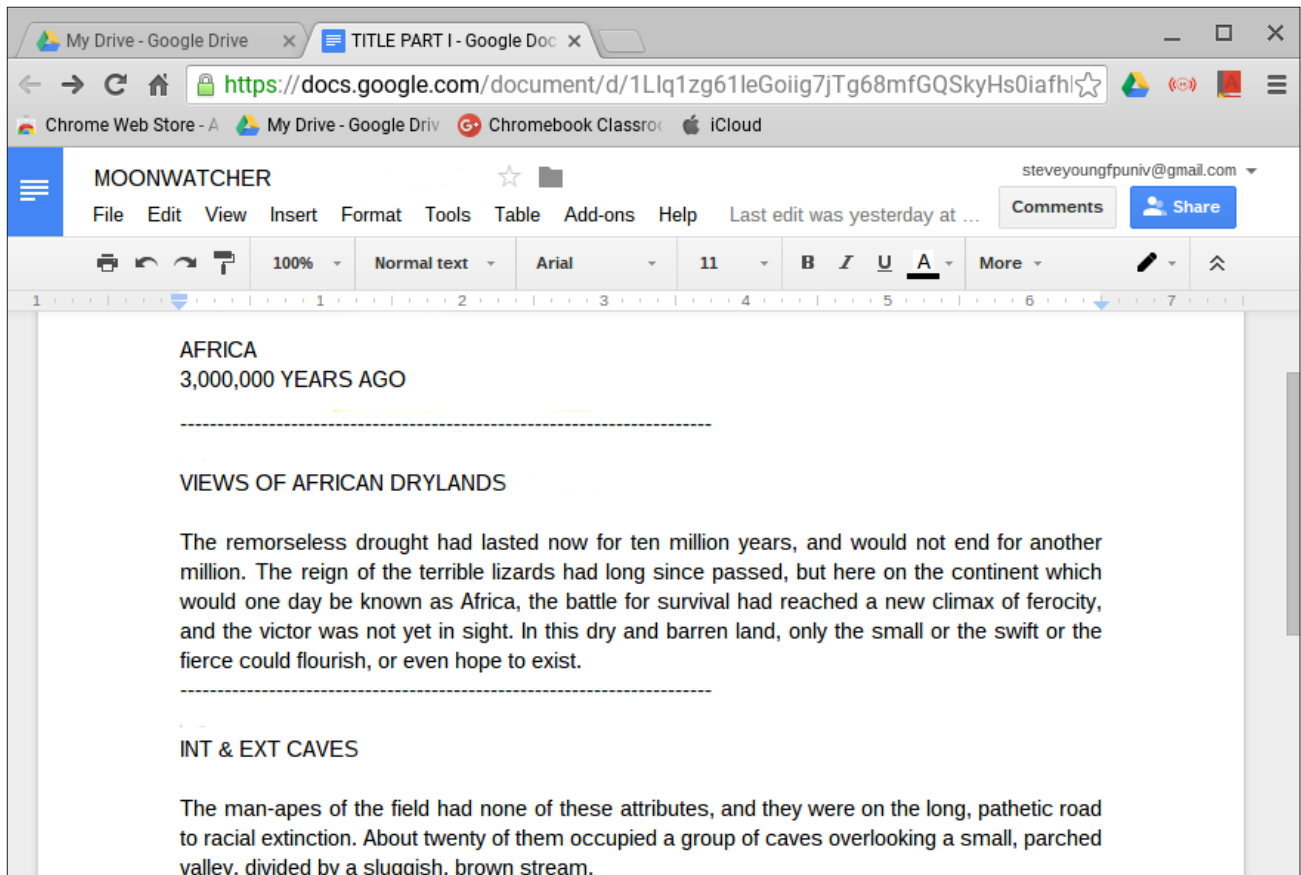
I created a document using Google Sheets
 I created a document using Apple Numbers
 I created a document using Excel
 I have uploaded the document to the instructor
 Other: _____

Productivity App 4: Survey or Test Document

I created a document using Google Forms
 I have uploaded the document to the instructor
 Other: _____

Submit 100% You made it

Never submit passwords through Google Forms.





Assignment 8: Presentations on the Chromebook

Using Google Slides, Keynote for iCloud, or another web-based presentation app produce (at least) a four slide presentation. Tutorials for the relevant programs can be found on the companion website or the supplementary course textbook.

The content is up to you, but try to relate in some way to your curricular area or expertise. Once the document is saved (save as Last Name, Assignment 8, PR) on your device or your Google Drive, share the link with the instructor.

When all four documents (word processing, presentations, spreadsheets, and survey/test creation) are complete and submitted to the instructor (see page 41), please fill out the online 'Using Productivity Apps' survey.

Using Productivity Apps

Please note: This task will be weighted the same as other assignments in the course. I am expecting a fully formed document of the prescribed type.

Word Processing: 1 page formatted, title, two paragraphs of text
 Presentation: 1 slide presentation with elements of text and graphics / photos on all slides
 Spreadsheet: 5 column and five rows of numbers, at least one formula
 Survey: 3-5 questions or prompts

To view / download cheat sheets for the Google productivity apps, click this link: chromebook.steveyoungfpuiv.net/cheatsheet.pdf

To transfer your completed review form, click on the link below - a new web page will open where you can select your completed document (one at a time) to upload to the instructor's Google Drive. chromebook.steveyoungfpuiv.net/fileupload.html

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TIC XXX *

Yes
No

Productivity App 1: Word Processing Document

I created a document using Google Docs
 I created a document using Apple Pages
 I created a document using Word
 I have uploaded the document to the instructor
 Other: _____

Productivity App 2: Presentation Document

I created a document using Google Slides
 I created a document using Apple Keynote
 I created a document using PowerPoint
 I have uploaded the document to the instructor
 Other: _____

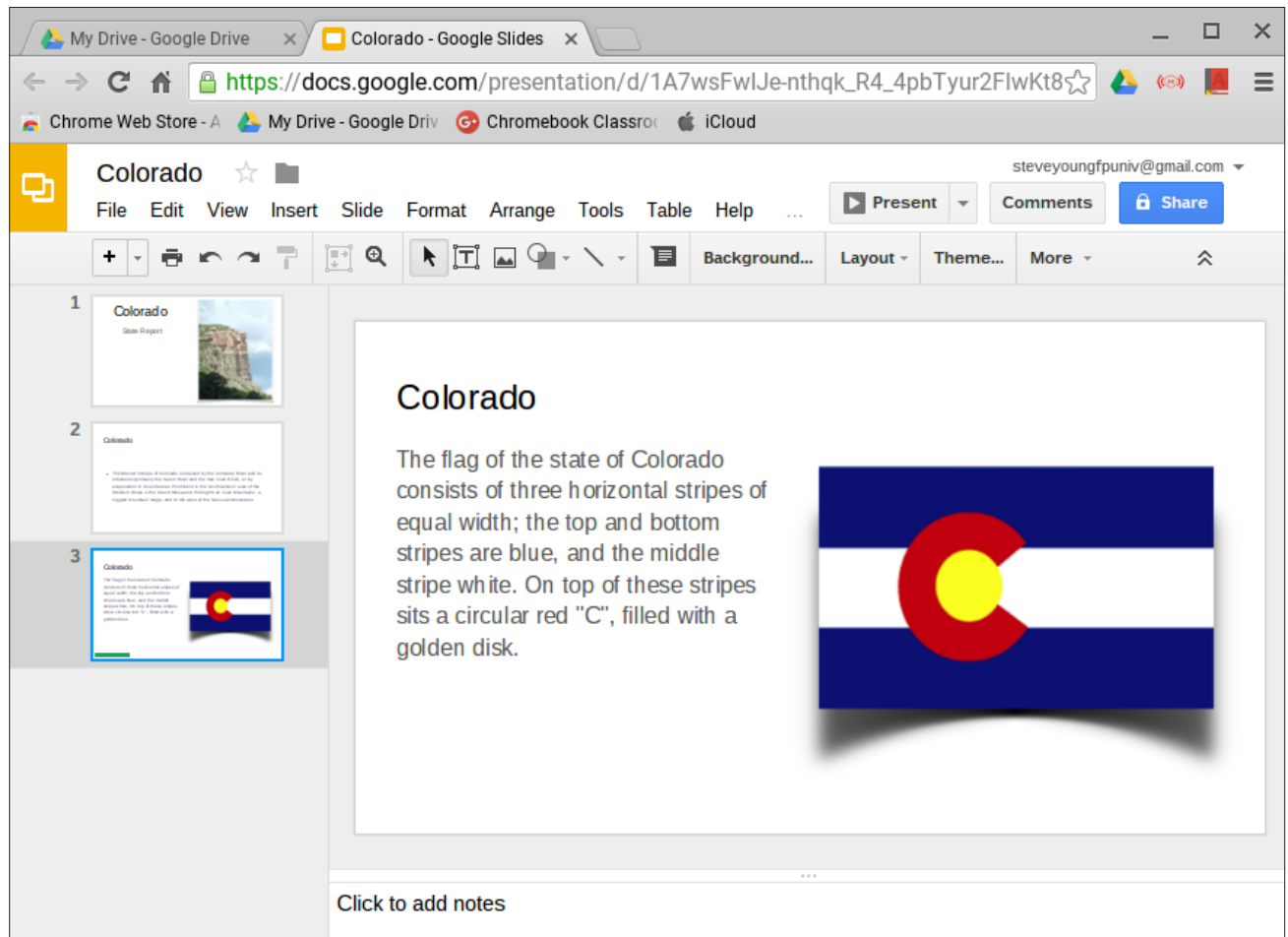
Productivity App 3: Spreadsheet Document

I created a document using Google Sheets
 I created a document using Apple Numbers
 I created a document using Excel
 I have uploaded the document to the instructor
 Other: _____

Productivity App 4: Survey or Test Document

I created a document using Google Forms
 I have uploaded the document to the instructor
 Other: _____

Never submit passwords through Google Forms. 100% You made it.





Assignment 9: Spreadsheets on the Chromebook

Using Google Sheets, Numbers for iCloud, or another web-based spreadsheet app, produce a range of data at least five columns by three rows. Using that data, create a simple chart. Tutorials for the relevant programs can be found on the companion website or the supplementary course textbook.

The content is up to you, but try to relate in some way to your curricular area or expertise. Once the document is saved (save as Last Name, Assignment 9, SS) on your device or your Google Drive, share the link with the instructor.

When all four documents (word processing, presentations, spreadsheets, and survey/test creation) are complete and submitted to the instructor (see page 41), please fill out the online 'Using Productivity Apps' survey.

Using Productivity Apps

Please note: This task will be weighted the same as other assignments in the course. I am expecting a fully formed document of the spreadsheet type.

Word Processing: 1 page formatted, title, two paragraphs of text
 Presentation: 3 slide presentation with elements of text and graphics / photos on all slides
 Spreadsheet: 3 column and five rows of numbers, at least one formula
 Survey / Test: 5 questions or prompts

To view / download cheat sheets for the Google productivity apps, click this link:
chromebook.steveyoungfou.net/cheatsheet.pdf

To transfer your completed review form, click on the link below - a new web page will open where you can select your completed document (one at a time) to upload to the instructor's Google Drive.
chromebook.steveyoungfou.net/fileupload.html

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TIC 99X *

Yes
No

Productivity App 1: Word Processing Document

I created a document using Google Docs
 I created a document using Apple Pages
 I created a document using Word
 I have uploaded the document to the instructor
 Other: _____

Productivity App 2: Presentation Document

I created a document using Google Slides
 I created a document using Apple Keynote
 I created a document using PowerPoint
 I have uploaded the document to the instructor
 Other: _____

Productivity App 3: Spreadsheet Document

I created a document using Google Sheets
 I created a document using Apple Numbers
 I created a document using Excel
 I have uploaded the document to the instructor
 Other: _____

Productivity App 4: Survey or Test Document

I created a document using Google Forms
 I have uploaded the document to the instructor
 Other: _____

100% You made it

Never submit passwords through Google Forms.

The screenshot shows a Google Sheet titled "Hair Color" with the following data table:

	A	B	C	D	E	F	G	H
1	Hair Color	Black	Brown	Blonde	Red			
2	Boys	8	4	3	2			
3	Girls	9	7	5	3			

A bar chart titled "Boys and Girls" is embedded in the sheet, comparing the number of boys and girls for each hair color. The chart shows that for Black hair, there are 8 boys and 9 girls; for Brown, 4 boys and 7 girls; for Blonde, 3 boys and 5 girls; and for Red, 2 boys and 3 girls.



Assignment 10: Surveys and Tests on the Chromebook

Using Google Forms or another web-based survey / test creation app, produce (at least) a five question test or survey. The content is up to you, but try to relate in some way to your curricular area or expertise. Once the document is completed and saved on your device or your Google Drive, share the link with the instructor.

When all four documents (word processing, presentations, spreadsheets, and survey/test creation) are complete and submitted to the instructor (see page 41), please fill out the online 'Using Productivity Apps' survey.

Using Productivity Apps

Please note: This task will be weighted the same as other assignments in the course. I am expecting a full formed document of the prescribed type.

Word Processing: 1 page formatted, title, two paragraphs of text
 Presentation: 5 slide presentation with elements of text and graphics / photos on all slides
 Spreadsheet: 5 column and five rows of numbers, at least one formula
 Survey / Test: 5 questions or prompts

To view / download cheat sheets for the Google productivity apps, click this link:
chromebook.steveyoung.net/cheatsheet.pdf

To transfer your completed review form, click on the link below - a new web page will open where you can select your completed document (one at a time) to upload to the instructor's Google Drive.
chromebook.steveyoung.net/fileupload.html

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TEC XXX *

Yes
 No

Productivity App 1: Word Processing Document

I created a document using Google Docs
 I created a document using Apple Pages
 I created a document using Word
 I have uploaded the document to the instructor
 Other: _____

Productivity App 2: Presentation Document

I created a document using Google Slides
 I created a document using Apple Keynote
 I created a document using PowerPoint
 I have uploaded the document to the instructor
 Other: _____

Productivity App 3: Spreadsheet Document

I created a document using Google Sheets
 I created a document using Apple Numbers
 I created a document using Excel
 I have uploaded the document to the instructor
 Other: _____

Productivity App 4: Survey or Test Document

I created a document using Google Forms
 I have uploaded the document to the instructor
 Other: _____

Submit

Never submit passwords through Google Forms. 100% You made it.

My Drive x Vocabul: x Vocabul: x Vocabul: x Vocabul: x Vocabul: x Vocabul: x

← → ↻ 🏠 <https://docs.google.com/forms/d/1vvti0Y2x5Pv0ufDsr1m4IAWBVKt0rJgae-KnNI> 🌟

Chrome Web Store - A My Drive - Google Driv Chromebook Classro iCloud

Vocabulary Test

Getting ready for the Spring Language Tournament - here are this weeks 10 words!

feckless

- lacking initiative or strength of character
- lacking the ability to feck, or run uphill
- the frontmost part of a sailing ship
- the ability to push against an unseen force

derivative

- based on an existing entity
- to split into two
- to revive
- having the power to draw off

ubiquitous

- having more than one option
- found everywhere
- found only in the past
- to misquote a well known phrase

Submit



Assignment 11 ~ 13: Chromebook - Based Lesson Plans

Now that you have explored Chromebook apps, created documents with productivity apps, researched the use of Chromebooks in the classroom, and interacted with other teachers, it is time to create lessons for your students.

Using a lesson plan form, **develop three lesson plans. The first should involve the use of a website (such as a virtual tour site), the next using an app (such as a calculator) and the final using one of the productivity apps (word processing, presentation, spreadsheet, online form) addressed in the previous four assignments.**

Each plan should include a brief narrative on what the lesson is and how it is to be taught. Please include (at least) the following elements:

- Subject of Lesson
- Lesson Objective
- Lesson Activities
- Teaching Strategy
- Evaluation*

If you would like to use a different lesson plan form (such as district - approved lesson plan form), feel free. If the form appears online, remember to save it to your computer for transfer.

You also have the option to paste your lesson plan (word processed in a separate program) into the online form.

To transfer your completed form, click on the 'File Transfer' link on the Lesson Plan Form page - a new web page will open where you can select your completed pdf or word processing document to upload to the instructor's Google Drive (save as Last Name, Assignment 11~13, LP).

*If you are taking the course when students are not available (i.e. during vacation or over summer break) and can not evaluate the lesson, please so state then leave the evaluation portion blank, but expand the other portions of the narrative.

Lesson Plan Form

Please note: This task will be weighted the same as other assignments in the course. I am expecting a thorough reply to the lesson plan prompts. The intent is for you to develop three lesson plans to use in your (real or future) Chromebook classroom. A lesson should contain (at least) the following elements:

- Objectives and Goals
- Anticipatory Set
- Direct Instruction
- Guided Practice
- Closure
- Independent Practice
- Required Materials and Equipment
- Assessment and Follow-Up

If you would like to use a form (like a district - approved lesson plan form), you are welcome to do so. If the form appears online (instead of being downloaded), remember to save it to your computer for transfer.

To transfer your completed review form, click on the link below - a new web page will open where you can select your completed pdf or word processing document to upload to the instructor's Google Drive.

<chromebook.steveyoungfpu.net/fileupload.html>

* Required

Full Name (First Last) *

Email Address *

I am enrolled in TEC 9XX *

Yes
 No

Lesson Plan 1 - Using a Website

Lesson Plan 2 - Using Apps

Lesson Plan 3 - Using Productivity Apps

[Submit](#)

Never submit passwords through Google Forms.

100%: You made it.

Footer text or page number



Assignment 14: Classroom Rules and Management

The use of any device in the classroom presents the teacher with challenges, both large and small. Working in a classroom with 30 students and 30 Chromebooks can be daunting. The solutions to the issues of safety, maintenance, efficiency and effectiveness are varied and diverse.

I have provided a link to a simple Google search, 'Classroom Rules for Chromebooks'. Review a few of the links that look promising and relevant to your teaching situation (i.e. primary grades, high school, etc.), or feel free to use your own search criteria - you may wish to include Digital Literacy, Copyright, or Netiquette as part of your set of classroom rules and guidelines.

Through your research, develop a set of guidelines for your students to follow. This could be in the form of a letter home to parents, a slideshow, or perhaps a poster hanging in your classroom. Be creative, and have fun with this assignment!

Type or paste your completed project into the form, or attach your document or presentation and email it to the instructor (see page 41).

There are two spaces for Rules Narrative in the online form, in the event your guidelines include 'Good Thing - Bad Thing' sets of rules, which are better documented separately. You do NOT need to use both, the second field (Rules Narrative 2) is supplied 'just in case'.

Classroom Rules for Chromebooks

Please note: This task will be weighted the same as other assignments in the course. I am expecting a thorough reply to the narrative prompts. The intent is for you to write a response relating your thoughts and ideas for the classroom rules that you would like implemented in a Chromebook classroom.

Take some time researching what others have done to address rules for the care and use of Chromebooks. <https://www.google.com/#newwindow=1&q=classroom+rules+for+chromebooks>
Develop your own set of rules applicable to your specific and unique teacher situation.

If you would like to word process the project using Word, Pages, or word processing another program, you are welcome to do so. To transfer your completed document, click on the link below - a new web page will open where you can select your completed document to upload to the instructor's Google Drive.

<chromebook.steveyoungfpu.net/fileupload.html>

*** Required**

Full Name (First Last) *

Email Address *
I am enrolled in TEC 9XX *

Yes
 No

Rules Narrative 1

Rules Narrative 2

100%: You made it.

Never submit passwords through Google Forms.



Assignment 15: TEC 994 Community Blog Submission 2

You have had several experiences researching, using, and thinking about all aspects of Chromebooks in the classroom since you first communicated with your fellow TEC 994 students via Assignment 3. I am hoping that you have some new idea to say about what they have learned, as well.

Please log back onto the TEC 994 website;

www.chromebook.steveyoungfpu.net

and click on the 'TEC 994 Community' link. Follow the instructions to log onto the Google Classroom page and blog with your fellow students. Add at least one new post (a closing thought or perhaps a suggestion) and respond to at least one existing post.

Access code **mbzea7**

TEC 994

Chromebooks in the Classroom

Upcoming

Woohoo, no work due soon!

View all

Share something with your class...

AJ
May 14

Andrew - Assignment 16

I would just like to say that this course was extremely helpful in providing additional resources to use with my classroom Chromebooks. I liked the section where you can make a set of rules to use in your classroom in regards to Chromebook care. I heard horror stories of some students just being careless and disrespectful while using their Chromebook. I tell my class that this is not their property, it is the school's and they need to treat the Chromebook with care and respect. I have a list of 11 or 12 guidelines that they need to follow, and if they choose not to, then they will lose the privilege of using their Chromebook. It is simple, but it works. After a student or two loses their privilege for a day, then everyone knows you mean business.

Add class comment...



Assignment 16: Standards Correlation Chart

By completing this course you will have fulfilled several ISTE Technology Standards for Teachers; these have been defined as necessary tools for today’s teaching professional. This course does not address any specific state’s technology standards. It does, although, reinforce the national ISTE standards.

To demonstrate your familiarity with these standards and correlate them to your work, **choose any three assignments, research which ISTE Educator standard and performance indicator each assignment addresses then record your findings on the online survey for all three.**

You can find the educator standards and performance indicators at www.iste.org/standards or the link on the survey form.

Standards Correlation Chart

To demonstrate your familiarity with standards and correlate them to your work, choose any three assignments, research which ISTE - T (teacher) standard and performance indicator each assignment addresses (refer to <https://www.iste.org/standards/for-educators>) then record your findings on the following form.

*** Required**

Full Name (First, Last) *

Your answer

I am enrolled int TEC 994 *

Yes

No

Correlation 1

Name of Assignment *

Your answer

Standard:

Learner

Leader

Citizen

Collaborator

Designer

Facilitator

Analyst

Performance Indicator

a

b

c

d

Example:

To correlate Project #8, “Presentations,” to the ISTE teacher standard, choose “Designer”

Next, the letter ‘b’ is the relevant performance Indicator for Standard 5 (Designer): “ Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.”



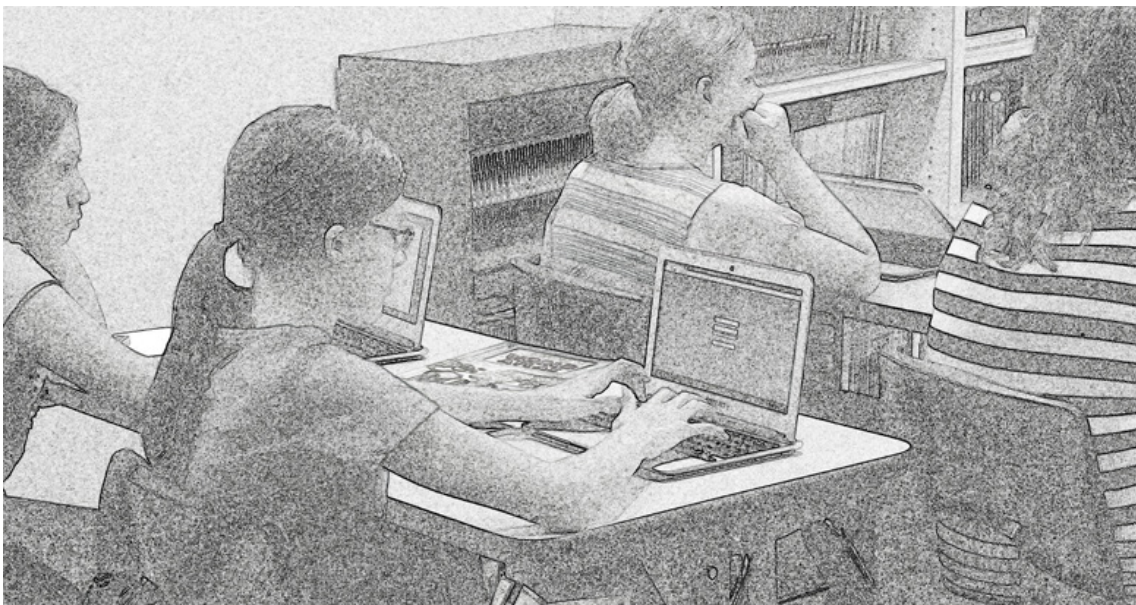
Closing Thoughts

The past few years have been a very exciting time for the use of technology in education. I remember the introduction of desktop computers, laser disks and video projectors; none of these technologies, at least at first, felt 'ready for prime time'. Early adopters were the more experimental, fearless, and tech-savvy teachers who did not mind failing now and again.

The advent of the Chromebook is really a reintroduction of what was once called a 'thin client'. These were terminals (a monitor and a keyboard), but the software was stored remotely on a shared server. Their functionality was limited, but the cost for each was very low. Chromebooks offer the same low cost advantage - I have a \$100 Chromebook on my desk right now and it can run many of the same programs as my \$1400 laptop, \$3000 desktop and \$800 iPad!

In the 90s I would be asked by colleagues what technology I was using. When I responded that I was with a Macintosh school district, the response would sometimes be "why aren't you using *real* computers?" Much has changed in twenty years; Apple is now the world's biggest tech company and there is no such thing as a 'play computer'. Chromebooks are not just 'wannabes' - they are a very legitimate product, filling an important place in education. With more and more of the resources located online, the availability of a low cost and internet capable computer is of great benefit to you as a teacher.

Whether you are already using Chromebooks in your classroom or are planning ahead, it is my hope that this course has added to the potential and benefit Chromebooks have to offer.





Assignment 17: Post - Course Survey

As you complete TEC 994, I would like you to take some time and reflect on the experience.

Ideally, you now have some insight and knowledge which you did not have when you responded to the Pre-Course Survey at the outset of the course.

As always, please provide thoughtful narrative to the prompts.

Post-Course Survey

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TEC 9XX *

Yes

No

About how hours did you spend completing the course?

Having used (or watched modeled use) the Chromebook, which aspects of the technology do you find most beneficial and / or productive, and why?

Do you feel the Chromebook platform would lend itself to your teaching style and curriculum. How?

Do you plan on using student Chromebooks in your classroom? What steps have you taken to make this happen?

Never submit passwords through Google Forms.

100%: You made it.



Course Evaluation

I continually strive to make my courses as meaningful and useful as possible.

I would appreciate you answering a few questions as they pertain to the content, structure and depth of the course.

I base many of the adjustments and rewrites of my courses based on your input and suggestions.

Your honest and candid feedback would never affect your grade in the course, I promise.

Thanks!

Course Evaluation

*** Required**

Full Name (First Last) *

Email Address *

I am enrolled in TEC 9XX *

Yes

No

Did the course meet your expectations?

How do you feel about the structure of the course? Was it organized in an orderly fashion, making it easy to follow? How would you improve the structure?

Do you have any comment on the assignments? Were they worthwhile and meaningful? Do you have any suggestions for additional assignments?

How did the workload of this course compare to that of other courses with equivalent units?

How did you hear about the course?

Would you recommend the course to others?

Never submit passwords through Google Forms. 100%: You made it.



Notes: List of 10 Useful Apps

If you like to jot down notes on paper before using the online survey forms, I have included them here for your convenience.

<p>App Name 1/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 2/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 3/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 4/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 5/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>

<p>App Name 6/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 7/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 8/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 9/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>
<p>App Name 10/10 Include description (its basic function) and relation to curriculum</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>



Notes: Student App Evaluation Checklist

Name and Description of App

Evaluation Checklist *
1 is the lowest (least applicable) 4 is the highest (most applicable)

	N / A	1	2	3	4
The app does what it says it does	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of app is relevant to the purpose and student needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Content is appropriate for the student	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help or tutorial is available in the app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information is error-free, factual, and reliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App's settings and/or content can be customized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
History is kept of student use of the app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design of app is functional and visually stimulating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student can exit app at any time without losing progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No in-app purchases are necessary for intended use of app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App contains no advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App promotes creativity and imagination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App provides opportunities to use higher order thinking skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App promotes collaboration and idea sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App provides useful feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes about the app and your intended use for it:



Notes: Teacher App Evaluation Checklist

Name and Description of App

Evaluation Checklist *
1 is the lowest (least applicable) 4 is the highest (most applicable)

	N / A	1	2	3	4
The app does what it says it does	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of app is relevant to teacher needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App simplifies a routine task (i.e. gradebook)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Help or tutorial is available in the app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information is error-free, factual, and reliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App's settings and/or content can be customized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
History is kept of teacher's use of the app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design of app is functional and visually stimulating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher can exit app at any time without losing progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No in-app purchases are necessary for intended use of app	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App contains no advertising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App simplifies a routine task (i.e. gradebook)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App increases your productivity and use of time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App promotes collaboration and idea sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
App provides useful feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
useful feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes about the app and your intended use for it:



About Your Instructor ...

I was born in 1953 at the Presidio in San Francisco, California. The second child of Maj. John and Bette Jane Young, I was enthusiastically welcomed by my only sibling - a brother, six years my senior. After my dad retired from the Army he still had a touch of the wanderlust so we spent the next few years exploring Wyoming and Colorado. In 1963 we settled in Durango where my brother and I spent our days climbing trees, skipping stones across the Animas River, and exploring the La Plata mountains, which were our backyard.

In the late 1960s my parents moved back to the Bay area of California where I finished high school then went off to college, enrolling at California State University in Fresno. I majored in Mass Communications - a combination of English, Theater Arts and the technical aspects of radio, television and film production. I had those typical, youthful aspirations of becoming a 'rich and famous' script writer and filmmaker. Upon graduation I partnered with a local film production company and spent the next several years writing, producing and filming documentaries and television commercials.

A combination of the reality of parenthood and a souring economy in the early '80's guided my decision to return to school to obtain my teaching credential. The birth of my daughter in 1983 cemented my decision to opt for the stability of teaching over the uncertain world of the arts. I began as a classroom teacher at the same time computers were first being introduced to the public, in general, and schools. I have always had an affinity for machines and gadgets so I soon transitioned from 'traditional' teaching to working with technology in education; the best decision ever!

Within a year I was the Technology Teacher/Coordinator for a small high school; teaching programming in a lab and setting up local area networks. As technology evolved and became more affordable, the District purchased classroom computers and I, seeing the need, began writing record-keeping and database programs for teachers.

By the early '90's I was assisting with technology District-wide and speaking at regional and state conferences. It was at this time I began teaching summer and weekend seminars at Fresno Pacific University (then Fresno Pacific College) on integrating technology in to the classroom. Through membership in CTAP (California Technology Assistance Project) I also provided professional development, planning, and implementation assistance to help schools utilize technology to support teaching and learning.

I recently retired after more than 30 years of service to Madera Unified School District. With my 'extra' time, I will be developing new courses for Fresno Pacific. My wife, Becky, and I enjoy interacting with teachers from all over the country - we recently began traveling across the US on Amtrak and have already logged over 10,000 miles riding the rails, making whistle stops at many of your hometowns!



Using a Steadicam during the filming of a commercial for a regional TV station in the days before gray hair!



My beautiful bride Becky, on our wedding day! After all these years she's still the love of my life (and the world's greatest cook!).



Taking a break at my desk at Madera Unified, while administering an early (circa 1990) school-wide network.



Scuba diving (a passion of mine) with my daughter off the coast of Maui, in the beautiful state of Hawai'i.



Fishing the Animas River in Durango, CO, where my brother and I used to roam. Pretty nice catch! We only keep what we eat, and this one was delicious!



In San Francisco receiving California's prestigious Golden Bell Award for an exemplary program in technology, with Madera Unified school board trustees.



Visiting the St. Louis Arch with my wife - a day trip from Indianapolis after our annual trip to the Indy 500.



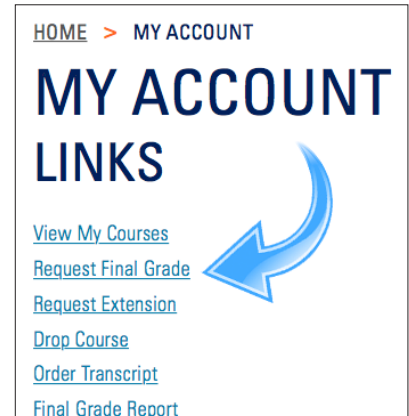
Becky's family and I, including her three children and all eight (so far!) of our grandkids, at Becky's parents' 60th wedding anniversary celebration.



DIRECTIONS FOR SUBMITTING A REQUEST FOR ONLINE GRADING

FPU requires I submit your grade online. For me to do that you must request online grading via your FPU account. When you've submitted your completed coursework (no sooner):

- Login to your account on the CPD website at <https://ce.fresno.edu/my-account>
- Click on 'Request Final Grade' **SIGN IN**
- Select this course from the list of ungraded courses in which you are currently enrolled
- Click the box confirming accuracy of the information
- Click Submit
- FPU will email me that you have completed the course and are ready to be graded



Please submit your request for online grading the same day you submit your completed coursework (no sooner). I cannot submit your grade until online grading has been requested.

If I receive your final coursework but you've yet to request online grading, expect a delay while I attempt to contact you in reminder. If you encounter technical difficulties with the on-line grading system please contact FPU directly; I am unable to troubleshoot their system.

Once I have submitted your grade to FPU I will notify you via email that this has been accomplished. Processing grades submitted electronically is not automatic; FPU strives to post grades the same day, but it may take up to 2 business days to certify and post your grade (FPU will email you once your grade has been posted).

Prior to ordering a transcript, particularly a 'RUSH' transcript, verify your grade has *officially* been posted. Login to your FPU account and click Final Grade Report. If your grade in this course appears, print off your Final Grade Report (FPU no longer mails Grade Reports - you must print them out yourself) and proceed with ordering transcripts.

If this course does not appear, although I notified you I submitted your grade, please contact FPU (1-800-372-5505) directly with your inquiry. It may be they are 'holding' your grade for whatever reason, typically if you are overenrolled.

I hope you found the course beneficial. I'll keep an eye out for your packet, and look forward to reviewing your work! Again and as always, thanks!