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Storing and Sharing in the Cloud

- Learn useful Google Drive techniques for the classroom
- Learn how to enhance and refine Google Drive documents
- Learn how to use Google Drive to improve the way you teach

The work you and your students create in the classroom can be placed online (in the cloud) using Google Drive so you can access it anytime or anywhere. This will allow you to collaborate more easily and get and give feedback in an efficient manner. Ultimately, it will also be a very useful tool for allowing students to be self-paced in your classroom.

One of the most used cloud-based software programs now in classrooms is Google Drive (formerly Google Docs). If your school purchased it, the suite is also known as Google Apps for Education. Google Drive is essentially a slightly simpler version of Microsoft's Office program. Since it is in the cloud, it is updated all the time and does not require any new purchases (i.e., you will continually have access to the latest updates for free).

Using the vernacular of Project RED as discussed in Chapter 1, Google Drive's use in the classroom can be either a first-order change or a second-order change. Since it has the full suite of documents, Presentations (similar

to PowerPoints), spreadsheets, and so on, it can be a very convenient platform for students to turn in work. As with Microsoft, you and your students can also organize your work into folders. All of these are first-order changes that you can easily implement in your classroom.

But Google Drive also allows for second-order changes. You can have students working together from different classes or, for that matter, schools or even countries. You can use Google Drive to create formative assessment tests and quickly ascertain if a student should do some refreshment work on assignments. The list of potential second-order changes is limited only to you and your PLC's imagination. You can even use Google Drive to collaborate with other educators far from the doors of your school.

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So let's go! The Google Drive suite allows you to create and store word documents, called Google Docs; Presentations (which is Google's word for PowerPoints); spreadsheets; questionnaires, called Forms; and drawings (which Microsoft calls Paint). You can also

add a host of other items such as WeVideo, which allows you to virtually collaborate with others on what Microsoft would call Movie Maker.

Please note that Google Drive recently updated its look, and this book reflects that change. If you are looking at the older version, go to the round gear in the upper right hand side, hit "Settings," and then "Experience the New Drive."

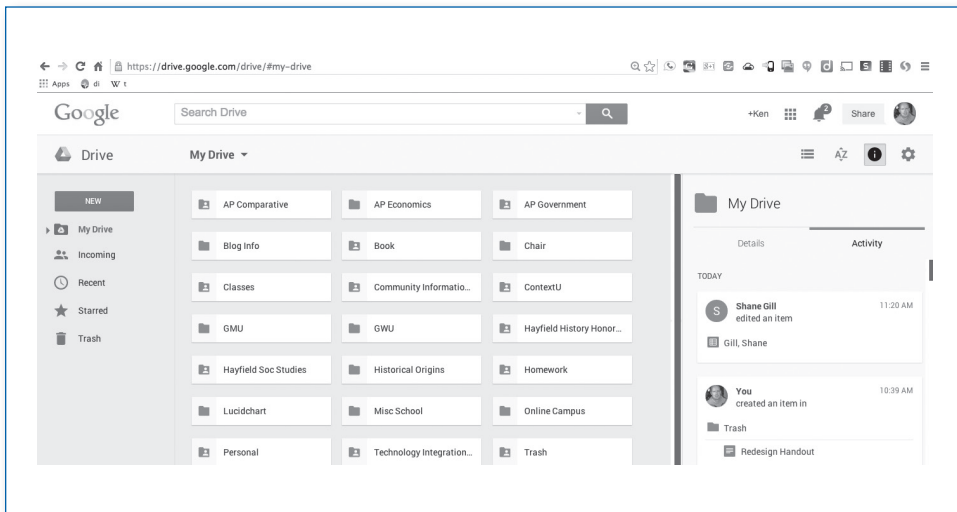
GOOGLE DRIVE TECHNIQUES FOR THE CLASSROOM

Uploading

Google Drive allows users to upload files from other applications such as Microsoft (Word docs, Excel Spreadsheets, PowerPoints). If you use the free Google Drive associated with your Gmail, you will be given 15 gigabytes of space. How big is this? I have all my files for ten classes, all of my personal data, and even the manuscript of this book and have used only 12 percent of my total allotted space. This is because anything started from scratch in Google Drive does not count against your total space allotment. Since you can upload an entire course folder in just a few minutes, it will not take much time to put everything you need in the cloud. Then you will be able to access all of your work from your

smartphone, tablet, or any computer in the world. No longer will you need to drag your computer home with you, keep track of several flash drives, or worry about something important being left behind on your desktop.

- To upload a file or folder, go to the down arrow on the upper left side of Google Drive and look for the “New” button. Once you tap on it, you will see “File upload” and “Folder upload.” Then you will need to find the item on your laptop that you want to upload.
- Once you have found it, click on it and push upload. You may want to convert your Microsoft documents to Google ones, in which case you have to go to the gear symbol at the top right.
- A new screen will appear, and you can click on the option you want, such as one that allows you to convert.



Google Drive Folders

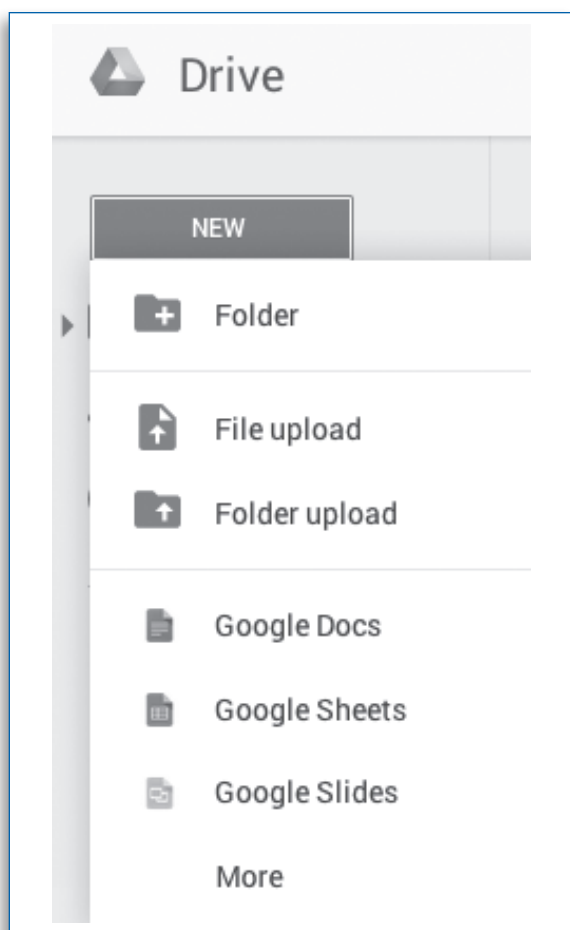
You can use Google Drive Folders to have students submit completed assignments online as soon as they are done rather than have students wait to hand them to you in class. As with any new endeavor, there will be some adjustment phobia. But very quickly your students will prefer the online method for turning in work. There are several time-saving benefits to submitting work online for both you and your students. You and their parents will appreciate students' newfound organization. Using the search bar in their Google Drive accounts, students can find anything instantaneously. Students can easily share work with their peers without having to

make copies. You will no longer have to waste time handing back work and instead can concentrate on grading in real time. If an assignment is due Tuesday at 10:00 a.m., I try to start grading early Tuesday morning or on Monday night so that most of the students have their graded work returned to them before it is officially due. If I add comments to a student's file in Google Drive, the program will let the student know by showing the title of the file in bold font. This is how my students know that their work has been graded. Since my students have come to expect my quick grading turnarounds, when they enter class at 10:00 a.m., some will ask why their work has not yet been graded. You may not want to put yourself under that kind of pressure, but you will come to appreciate your students' seeking out quick feedback, facilitating their ability to improve their work almost in real time.

The first thing you will want your students to do is to create a folder for your class on their devices. Folders are no different from the ones your students have in their backpacks, except these are digital. Just as your students

have folders or interactive notebooks, you are going to help them do the same in Google Drive. Have your students go to Google Drive and create an account. If they already have Gmail, then they just need to log in with their Gmail password.

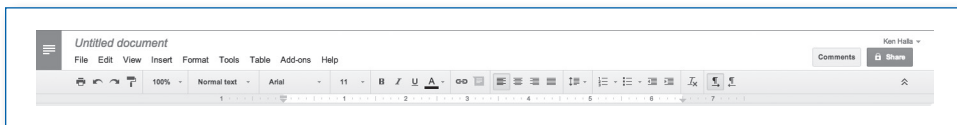
- Go to the upper left side and to the red "New" symbol and then to "folder." If you are using the older version, you will see "Create" instead.
- A box will appear where you can give the folder a title. I would suggest having the students label the folder with the name of your course so that everyone has, for example, "Biology 101" in their Google Drive.
- Then have the students click on the folder so it turns red. Then go to the "New" button and to "folder" and create a subfolder that is named for the first unit you are covering in your course.




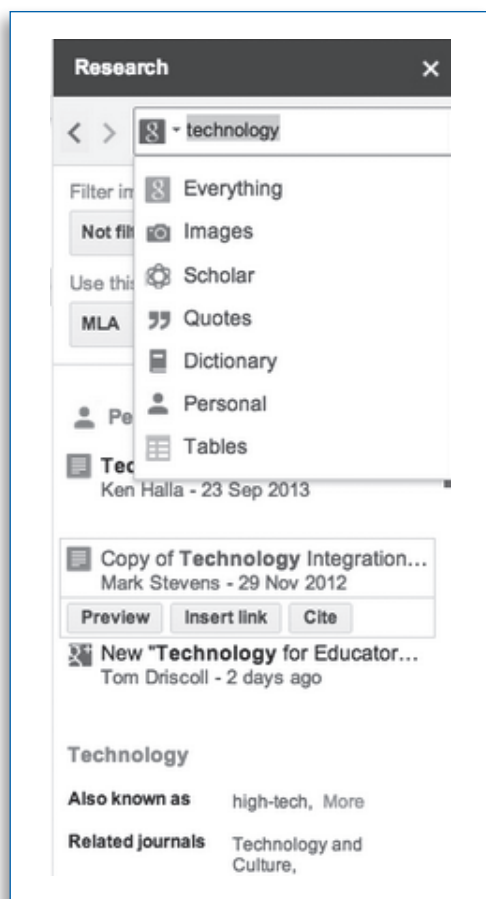
Google Drive Documents

Now let's go to a simple document. You are going to create your first document or instruct your students in doing the same.

- To begin, click on the folder where you want it to go to so it turns red. Then go to “Create,” and then go to “Document” and click on it. In the middle of your screen, a document will appear looking every bit the same as what you are used to in Microsoft's Word program, but now you are in the cloud.
- If you forget to click on the appropriate folder, then just right click on the assignment, go to “Move,” and then navigate to the correct folder.
- Next, when you open up a document, it will ask for a title. I always tell my students to name it first with the number for the period of the class they are taking with me, then a space, their name, a space, and finally the name of the assignment we are working on in class. For example, “2 Halla Questions on Homer.” If you are an elementary teacher, you might have the date go before your name. When files are labeled in this manner, a teacher is able to see the documents students have shared in an organized fashion, making it much easier to enter into a grade book.



- Now run your cursor over the icons starting on the left at the top of the page (see image above). The first symbol will say “Print” and the second, “Undo,” and so on.
- An icon with which you may be unfamiliar is the hyperlink symbol, which looks like a link from a chain. Click on the hyperlink icon when you want to insert a hyperlink (URL) from a web page onto an image or word. To do this, go to the web page, drag your cursor over the URL, and then hit the “Control” and “C” buttons (that is the copy command). Then go back to the hyperlink symbol on your document page and press “Control” and “V” (that is the paste command) on your keyboard, and it will be pasted into the space.
- You can also instantly undo something by clicking forward or backwards on the arrows .



Everything else on that line will be familiar to you from the type of text you want, to whether you want to bold letters, or underline them, center them, and so on. One change from a Word document is that if you want to have a font size that is not normal, such as 9.5, just click on the font number, delete what is there, and type it in.

Another great feature of Google Drive documents can be found under “Tools” > “Research.” You will see a pop-up window on the right side of the page where you can then input your topic into the research window. If you hover your mouse over the topic, you can choose to preview, insert a link in your document, or even add a citation at the foot of the page. Underneath your research window, you can choose the style of citation you need (MLA, APA, or Chicago). When you click on the research window, you can choose to search specifically for images, dictionary, scholar, and more.

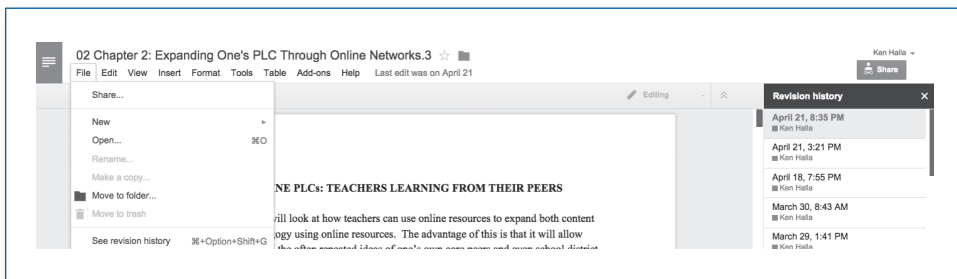
Using the Cloud to Stem Plagiarism

Unfortunately some students will not be able to resist the temptation to plagiarize from Internet sources and copy from peers since it is so easy. Therefore, you need to be proactive and thwart plagiarism and copying early on. The best way to do this is to educate students about proper digital citizenship by showing them how to cite sources correctly. It is also important to let students know that you will be investigating suspicious passages from their work. They should quickly get the message that they won’t be able to get away with not citing their sources.

Unfortunately some students will not be able to resist the temptation to plagiarize from Internet sources and copy from peers since it is so easy. Therefore, you need to be proactive and thwart plagiarism and copying early on.

- If you see a series of words that are too good to be true, copy and paste them into a search engine. If the student copied the passage, the source will appear in your search.

- Once your students have all turned in their work, you can put a questionable (as in possibly copied) stem in the Google Drive search engine at the top of the page. If any other student's work includes the same line, that file will appear.
- If you are working on the assignment with other teachers, send them the same string of words and have them also use their class folder's Google Drive search engine where it says "Search Drive." Usually if you catch students doing this early, they will be freaked out and be less like to plagiarize later.
- You can also go to "File" and then "Revision History" and click on earlier versions of the document. The earlier versions will list the time that it was created and if there is only one, you can assume it was either uploaded (something I discourage in my class) or copied and pasted. Usually the students make some mistake such as pasting in one version with the other student's name. Since you can see all the changes, all you need to say is "I see you deleted 'Joey's name at 1:13 a.m.'" Of course, administering assessments on a regular basis will tell you who is doing the work. You can also use "Revision History" to look at your own earlier versions of a document in case you would like to return to a previous version or see the changes your colleague made on a document you are collaborating on.

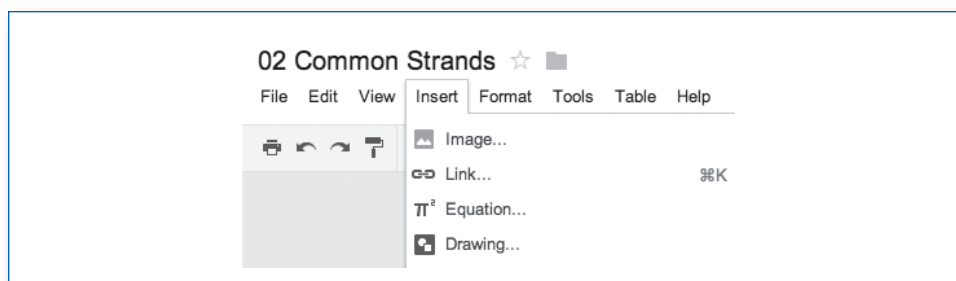


REFINING GOOGLE DRIVE DOCUMENTS

Inserting Images

Inserting images into documents adds a nice touch. It is my belief that having an image at the top of an assignment adds another important dimension to it. Since many of us think in images, seeing one at the top of an assignment will better connect the information for students in their memories.


Visit <http://bit.ly/digitalclassroomteacherguide> to access live links.




- To insert an image, go to the page and hit “Insert” and then “Image.”
- If you click on the first symbol for adding an image, it will bring up a new window where you can search for a saved image. Additionally, any time you run your cursor over an item, a description of it will pop up.
- But since you are in the cloud, you could also click on “By URL” and add in a URL from a web image. This will save you the time of downloading and uploading the image. To get the image URL, just right click on the picture and it will say “save image address” or “save image URL.”
- You can use EasyBib (see Chapter 1) to create citations for images. There are also sites such as [Creative Commons](#) (Google it!) that allow you to use their images without having to receive permission for items that might be made public, provided you follow the guidelines of the site (such as not using the image for commercial gain).

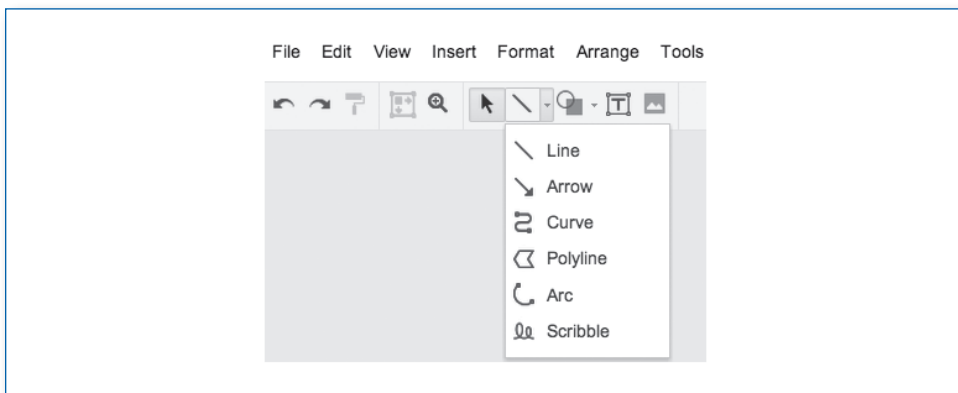
Drawing

In addition to documents, you can also create drawings. To do this go to the “Create” tab at the top of the Google Drive suite, making sure you are in the correct folder by clicking on it so it changes colors. Then go to the drop down called “Drawing.” Essentially this program is the same as Microsoft’s Paint. There are any number of reasons you might want to use this. You or your students could diagram a sentence. You could upload a map (“Insert” > “image”) into a document and then label the map or label parts of a flower for biology.

- As with most of the other applications in this chapter, go to the “Insert” button, then “Line” and you will see the “Scribble” button, which is the one you will want to use most often. Click on it and start dragging your cursor about your image.
- Once you are done scribbling, click on the pencil image  , which won’t appear until you draw your first line. Clicking on the

pencil image will allow you to change the color of the line. To alter the width of the line, click on the icon with three lines as seen above. By going to “Insert” and “Line,” you can get a line that you can draw from one item to another. Whatever key you want to use, just hover your mouse over it, and a word will pop up telling what it is used for. The best way to learn at this point is just to try and to make mistakes.

- You can write on your image by clicking on the text box  , dragging out a corner, and writing inside the box.



- From inside a document, you can create a drawing by going to “Insert” and then “Drawing.” When you are done, press “Save and Close” and the drawing will be inserted into the document.

Sharing Google Drive Files With Students and Colleagues

There are many great advantages to using Google Drive. Perhaps the greatest one is that all changes are saved instantly. Secondly, you can share your files, collectively or on a case-by-case basis, with up to ninety-nine others who can collaborate instantly. The first time your students collaborate they will find it odd to see other students’ cursors (their names will appear beside them) inside their document, but they will soon learn to maneuver around these. If you have worked collaboratively via e-mail in the past, consider how many times you or your students have e-mailed a document back and forth to each other until it is complete. With Google Drive, you need never do this again. Now you can insert comments (“Insert” > “Comment”) or even just make corrections that collaborators can view through Revision History without ever having to e-mail anything.

Visit <http://bit.ly/digitalclassroomteacherguide> to access live links.

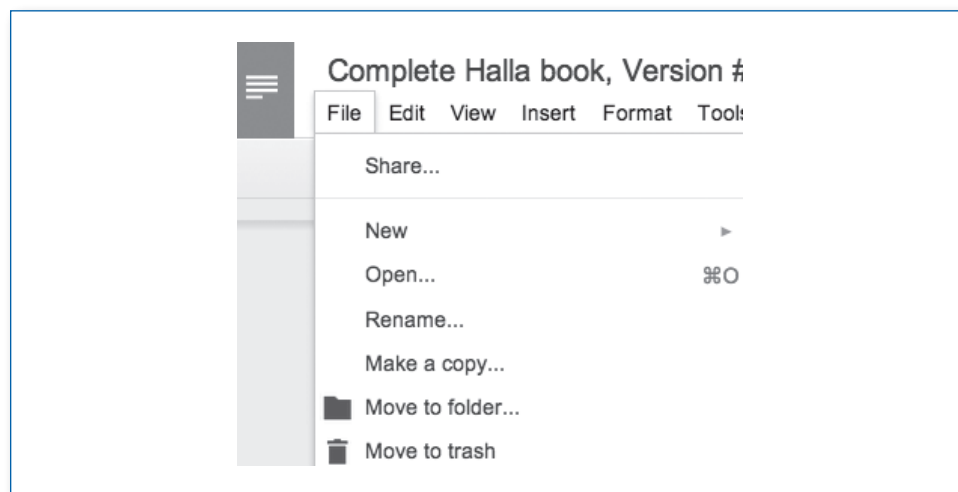
Perhaps the greatest advantage of working in the cloud is that all changes are saved instantly. Secondly, you can share your files, collectively or on a case-by-case basis, with up to ninety-nine others who can collaborate instantly.

There are two primary ways you can share documents with colleagues and students. For example, you might want to share with your students a document that contains instructions for an assignment. You can give students the URL for the

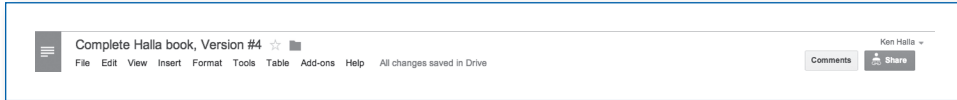
Google Drive document by pasting the URL into a platform such as Blackboard or Moodle.

Then instruct students to take the following steps.

- Click on the link to open the Google Drive document.
- Go to “File” and “Make a copy.”
- Rename the document with their last name and the name of the assignment.
- Close out of the document.
- Go to their Google Drive home page and find the “Recent” link at the bottom left of their list of documents.
- From the list of recent documents, drag the new assignment document into one of the folders on the left.
- Go into the folder and open the assignment.
- Now students can edit the document with their own work.
- To share the work with you (or their fellow students), go to the upper right side to the blue “Share” button. Click on the share button and type in the teacher’s or the student’s Google e-mail address.
- There are levels of sharing (Can Edit, Can Comment, and Can View). Have the students select the appropriate level of sharing for each given situation. Generally the teacher wants to have the student set it for “Can Edit.”



- On the lower left side of your Google Drive home page, you will see a folder called “Incoming.” Those of you using the older Google Drive version will see “Shared.” Click on this, and you will see all the documents that people have shared with you.
- If you use my naming format, the files will be organized by class and ready for you to grade.

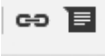


This is a suggested procedure for grading student assignments.

- In the older version of Google Drive, you will see a blank check box. Once you have clicked on each corrected assignment, right click on one of them and all will be removed. In the newer version of Google Drive, you will just have to right click on each item and press “remove” as you finish each item.
- The files are no longer in your Google Drive account, but your students will still see that they have shared the item with you. They can go to their “Share” button and look at who has access to the item. So if you want to have your students re-submit something after you have taken it out of your “Incoming” folder, have them go to the “Share” button and click on the “X” beside your name, which will delete it. After that they can resubmit your name to be shared and it will reappear in your “Incoming” folder.
- If you would rather keep the assignments after you have commented on them, I suggest that you create a folder for each assignment.
- Go to “Create” > “Folder” > (name the folder) > “Create.”
- The same principle then applies. If you check the box after commenting on each file, you can then move the checked files all at once into another folder, in this case the folder specified for that particular assignment. Right click on one of the checked files, select “Move to” > select the correct folder > “Move.”
- If a student has made corrections on his or her assignment based on your feedback, the name of the file will be bolded, letting you know that it is time for you to look at the work again.
- Once you have made corrections on a student’s work, right click on the line in your incoming list and then hit the “Remove” button.

Another use for a Google Drive document is to have your students share their first draft of a paper with you or with fellow students for

feedback. Once the draft has been shared, those individuals may comment on the document

- The comment icon looks like a speech bubble . When you click on the comment button, a side screen will appear on the right side of the page that will allow you to insert comments.
- Alternatively you can go to the “Insert” tab and then to “comment.” Now your students can see your comments on each section that needs work. If you are teaching a writing class, you can live edit student papers with having to walk around the room. This might be a difficult concept to grasp at first, but remember that any file in Google Drive is simply a web page. So when you and your student share a file, you are both in the same document. Students can rework the draft, click on your comment, press “resolve” and the comment will then be deleted. Since it is a web page, you also will never need to carry a flash drive around as all you need is an Internet connection and a browser.

BEYOND DOCUMENTS

Splitting Your Screen

If you want to grade assignments and immediately put them in your gradebook, then you will want to split your screen. On many computers all you need to do is to open up two Internet windows (or one browser window and one Google Drive document).

- Go to the bottom of the screen, right click and press on the line that says “vertically split your screen.”
- Now go to the bottom of your screen and right click on your mouse pad and hit the part of the screen that says split vertically or horizontally.
- If you want to change the size of each half so that one has one-third and the other has two-thirds, then put your cursor on the edge of one side until an arrow appears and then draw the side to make it larger or smaller. On an Apple laptop, this is the only way to split a screen short of purchasing an online app to do so.

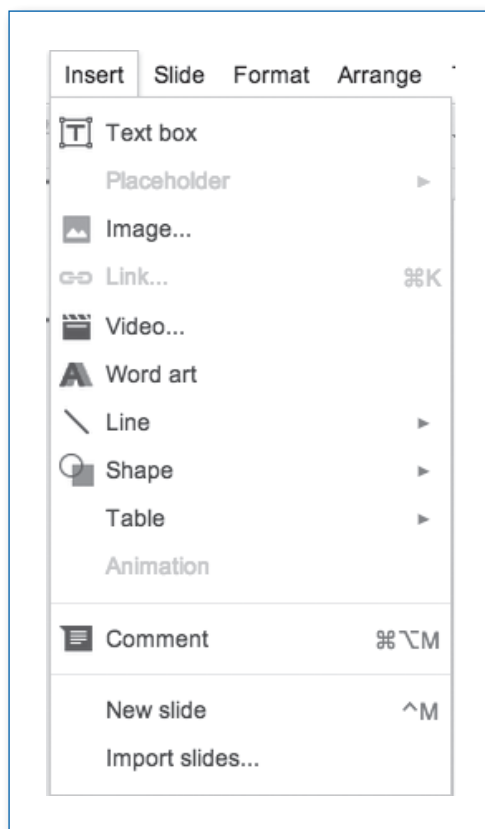
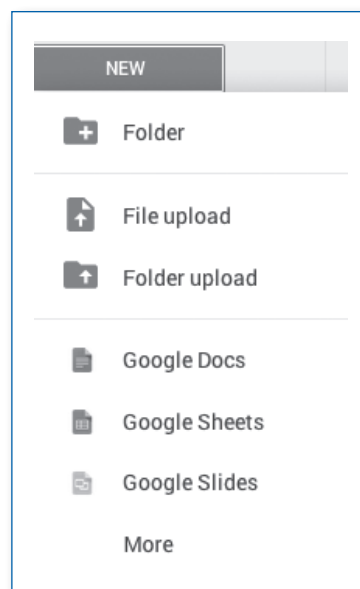
Presentations

The next item under documents is “Presentation.” I sometimes use several slides at a time for when I flip my classes (see Chapter 5). What I love about these presentation slides is that I can give my students the URL for each presentation and, if I later edit the slides, I do not have to give them an

updated version or a different URL since the original URL will lead to the updated version. Best of all, one can include video from YouTube very easily within the presentation slides. If you do share YouTube videos with your students, make sure you include proper citations and get permission if you are making the Presentation public.

When I started using Google Drive, I first uploaded all of my PowerPoints. Working on the PowerPoints within Google Drive is incredibly easy.

- To upload a Microsoft PowerPoint (or any other item), go to the upper left and tap on the word “New” and then “File upload” or “Folder upload.”
- If you are starting from scratch, when you first open the Presentation file, you will be prompted to select a background.
- Go to the “Insert” tab on the upper left side. You will see a text box for inserting lettering.
- You can also insert word art, a table, an image, lines, shapes, animations, and more. You will want to remind your students to properly cite whatever they use and to get appropriate permissions for anything they make public.
- If you want to insert a video, click on “Video” and you will be taken to a YouTube search engine. Write the title in the box, press “Enter,” and your video will appear. Double click on it, and it will be added to your Presentation. If you put your cursor on the end, you can stretch or shrink the image.
- To insert new slides in a Presentation, click on the “Slide” menu option next to “Insert.” You will be able to choose which type of slide you would like to insert.



The suggestions offered in this chapter are a good way to start implementing second-order change in your classroom. Once you become familiar with the basics, you will find that there is a lot more you can do that extends beyond the tools listed in this book.

As you can probably tell, my style of teaching is hands on rather than straight lecture, as I believe that students learn more by muddying their hands than by passively listening. The best way to create and view Google Drive Presentations is on a laptop or desktop computer. Although you can see most of the applications on a smartphone or tablet, you cannot manipulate everything as you can on the laptop. But, in a year or so, Google Drive will likely be upgraded so that use on tablets will be easier.

How to Use Google Forms

Every year I have to collect student and parent e-mail addresses for our gradebooks. I used to pass around a sheet of paper and then struggle trying to decipher everyone's handwriting. Other times, we want to collect answers from students after they have watched a video. Now, I accomplish these tasks easily and painlessly by using Google Forms.

- Go to New > More > Google Forms.
- You will be prompted to enter a file title and to select a background.
- You will then be prompted to enter your first question. I always start with the LAST name (which I emphasize with capitals to catch my students' attention).
- Beside "Question Type," you would click on "Text" in this case—although there are many other options. Depending on the type of question you choose, your screen will change.
- Then decide if you want to make it a required response by checking the box beside "Required" or "Optional."
- Continue to add questions until you are done.
- At the top of the page look for the words "View Live Form." Click on that link, and then copy the URL and send it to your students.

The screenshot shows the Google Forms editor interface. On the left, there are labels for 'Question Title', 'Help Text', and 'Question Type'. The 'Question Title' field contains 'Untitled Question'. The 'Question Type' dropdown is set to 'Multiple choice'. Below this, there is a checkbox for 'Go to page based on answer'. The main area shows a single choice option: 'Option 1'. Below this is a text input field with the placeholder 'Click to add option' and a link 'or Add "Other"'. At the bottom left is a 'Done' button, and at the bottom right is a checkbox for 'Required question'.

Look at the image below, which illustrates a completed quiz. Very quickly you can eyeball it to see if your pupils put down all of the correct answers. This is a very useful form to create when you want to collect information from students at the beginning of the year. I use it as a quick way to get parent e-mails, phone numbers, and so forth.

Chapter 19 & 20 Quiz (Responses) ☆

File Edit View Insert Format Data Tools Form Help Flubaroo All changes saved in Drive

Timestamp	A	D	E	F	G	H	I	J	K	L	M

Templates

Instead of creating your own Google Forms from scratch, as a beginner, you might want to search for forms that have been created by others. There

Google Docs > Template Gallery

Public Templates | **Templates I've used** | My Templates

Sort by

- Hottest
- Most users
- Highest rating

Narrow by type

- All types
- Documents
- Spreadsheets
- Presentations
- Forms
- Drawings

Narrow by category

- All categories

Presentation - Professional (Cool) By Google Docs
★★★★☆ 43 ratings [Rate it](#) [Embed](#) [Report abuse](#)
Presentation - Professional (Cool)
[Use this template](#) [Preview](#)

Recipe - Striped By Google Docs
★★★★☆ 32 ratings [Rate it](#) [Embed](#) [Report abuse](#)
Recipe - Striped
[Use this template](#) [Preview](#)

Visit <http://bit.ly/digitalclassroomteacherguide> to access live links.

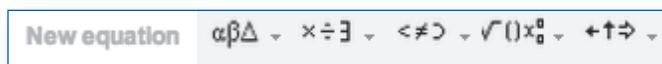
are many, many templates for documents, Presentations, forms, drawings, and spreadsheets. To find them, go to a search engine and type “[Google docs templates](#)” (see image above). When you find a template you want to use, simply hit the “Use this template” button and it will open that particular Google Drive application. You will then be able to start editing the template to fit your particular needs. Once you have finished editing, go into your Google Drive account and click on “Recent” on the lower left, and you will see the new template saved.

Google Translate

One of the classes I teach is a mainstreamed World History class that has been combined with English Speakers of Other Languages. Almost half of the students have been in the United States for two or fewer years. For those students, it sometimes helps to translate documents. Think about when you are trying to help a student to learn how to write. The key is writing, not knowing the language. Likewise, students who have just come to the United States might want to see a full translation of your entire project. To translate a document, simply go to “Tools” and “Translate document.” It will not be perfect, but it will help your students immeasurably. You can find even more languages by going to [Google Translate](#).

Math Symbols

If you look closely at the symbols at the top of a Google Drive document, you will notice no math symbols. But you can pop them in very quickly by going to “Insert” and then to “Equation.” Now you can add equations very easily.

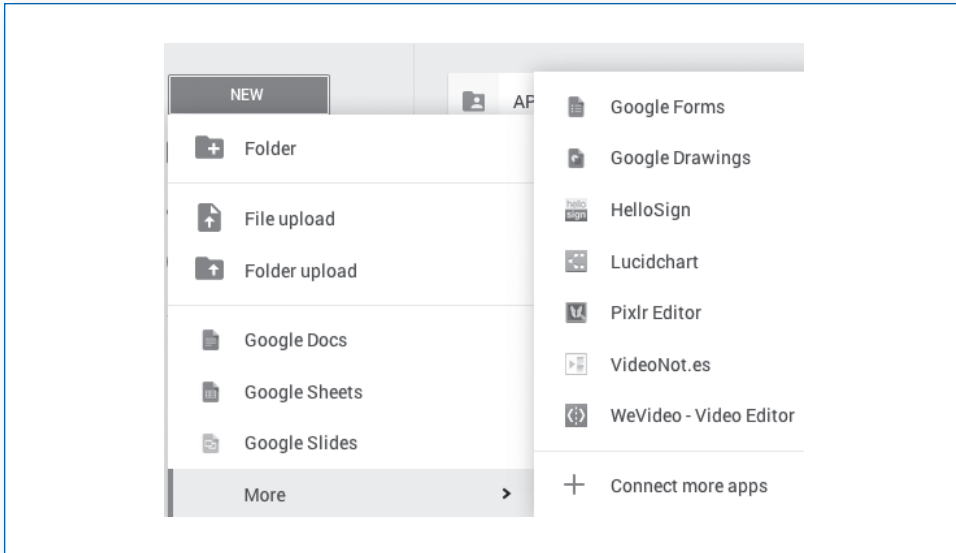


Adding Applications to Your Google Drive Account

Another wonderful advantage of Google Drive is that you can add apps to it. For example, [WeVideo](#) is a cloud-based app that several people can work on simultaneously to create a video. WeVideo allows you to mix video with pictures, sounds, graphics, and words. The great thing about WeVideo is that it is compatible with both Microsoft-based computers as well as Apple devices.

There are plenty of other apps that you can add to your Google Drive by clicking on “New” > “More” and then looking for apps that you think might be helpful to you in your classroom. For most apps, you

should be able to find tutorials on YouTube that will help you get started with the basics.



Syncing Google Drive With Your Laptop

When people start using the cloud, many worry that their files are not safe. Even though everyone who accesses the Internet from a computer is susceptible to viruses that could destroy all of their documents, most people still want their work saved on their laptops. If this is a concern of yours, you can choose to sync your Google Drive files with your computer or computers. If Google Drive is synced, any work edited in the cloud version of Google Drive will also show on your computer and any work done on your computer (on those synced files) will also appear on Google Drive.

- To sync your cloud version of Google Drive to a saved document on your laptop, go to the top right side of your Google Drive main page and tap on the round gear symbol, which is your settings tab.
- You will then see “Download Google Drive.” Go to the downloaded program, click on it, and let it run the program.
- Go to the round gear on the upper right side of your folder page, tap it and “Settings” > “General” > “Offline,” and check the box to start syncing with your laptop.
- It will differ depending on your computer, but somewhere on the desktop you will see the Google Drive icon. Clicking on it will allow you to see your files.

- Now each time you update documents on the cloud, as soon as you open up your “base” laptop, it will sync with what is online.



One of the nicest parts about adding Google Drive to your repertoire is the efficiency you will gain. Grading will never again mean dragging folders home, or losing items. You will save time by adding in grades as you mark the assignments, and you can have more time to work with your students or even to relax!

An important ingredient to having students moving through a course at different paces is grading work almost immediately. This is not as difficult as it may seem. Some correcting can be done during class so students who need help can see teacher feedback right away. Given that correcting work always takes the same amount of time, be it today or next week, why not mark it right away while it is still fresh in the students’ minds?

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In my experience, when students look at a corrected assignment on a paper, they are less likely to look at comments in that medium than on a digital copy such as a Google Drive document. Students, like

most of us, also appreciate timely feedback when the assignment is still uppermost in their minds. Giving comments a few weeks after work has been turned in often means a student will be less inclined to closely study the corrections needed.



Here is the QR code for the links in this chapter. Alternatively, you can go to <http://bit.ly/digitalclassroomteacherguide>

CLASSROOM EXAMPLES

My students have all of their work in files that look like real notebooks, only digitized. This first-order change allows them access to their work at all times. No more worries about forgetting work when they move from friend to friend or even parent to parent. Since work can be instantly shared with me, there is also no forgotten homework. This means that students can also instantaneously see my corrections on their assignments and work with me or peers to improve work.

We also use Google Drive documents to work in small groups; but, unlike traditional classes, we are not limited to just those in the classroom at the

moment. If it is appropriate, we share the folders with students in other classes. For example, one year, after the advanced placement exam, a colleague and I combined our AP US history and AP US government students into a very large classroom and had juniors and seniors collaborating across grade levels and with students not even in their same class schedule. Similarly we have also worked with students from other schools.

What about when your students are writing? Perhaps you know a page that can help them on the Internet to better learn a concept. Simply insert the link in your comments and your students will quickly be able to go to your recommended page. Likewise, if you keep a page with all of your assignments on it and links to them, if a new student comes in midyear, you can make a copy of the document, amend it, and in short order have all of the assignments for the new student easily accessible. The key is thinking that differentiating is okay and that separate pacing may be necessary for the special education, ESOL, or any other students with unusual situations. If you think about it, using cloud-based assignments will allow you to let students work at their own pace and for you to mingle more with each of the students as you explain and re-explain each of the concepts. In my school, we have a built in remediation period every other day. But because of the self-pacing my students are already doing, there is no need for the remediation period since it is being done every class period with the students who need it and there is no need to wait for a designated time.

In my department, members of the PLC share their folders with one another and with the administration. No longer do we need to e-mail our administrator our PLC notes. Instead she just goes in our shared PLC folder and looks at our work. Likewise, we share our entire class assignments instantly with other PLC members or even teachers in other schools. This allows for instant collaboration among teachers. Since Google bolds any document that another person has worked on, when you open your folder, you instantly know if someone else has made a change.

EDUCATOR CHALLENGES

Monday Morning Challenge: Commit to uploading a complete folder of one of your classes into Google Drive. Once you have done this, promise yourself that you will use only Google Drive for the entire year for one class. Understand that it will take time to adjust, but the commitment now will mean you will gain efficiency, and in a year you will gladly be putting all of your work in the cloud.

Tuesday Morning Challenge: Have your students create a folder for your class and put all of their work into it on a daily basis. Realize that

some students will need additional help over a period of weeks, but commit to the challenge and student productivity will greatly improve.

Wednesday Morning Challenge: Give your students a short research assignment and have them use the Google Drive document research tool to find and cite information. Have them turn in the assignment with five or six citations.

Thursday Morning Challenge: Collect student information such as home phone numbers and parent e-mails using a Google Drive form. Now when you need to contact parents, you can access it no matter where you are.

Friday Morning Challenge: Try collaborating with other teachers on creating a common PLC assignment. Think of a project you might want to create, share it with the other members on your team, and have each of you make additions. Remember, you can insert comments in the margin to give one another a heads-up as to what you are thinking. You might even raise the bar and collaborate with members of another school's PLC using a Google Hangout and the document. This would be a second-order change, as you could create an assignment in real time with educators you would be left to e-mail with at best.

Twitter Hashtag Challenge: Use #individualizelearning to Tweet ways you are using Google Drive in your classroom. You could share a lesson plan that you have developed on Google Drive by pasting the link to the file in a Tweet (including the #pacingdigitallearner hashtag) to ask others for ideas on how you might improve the lesson.