

The Practical Ed Tech Handbook

Richard Byrne - FreeTech4Teachers.com



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- Email management tips.
- Blogging tools.

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Introduction

My view on using technology in the classroom is that it should in some way help teachers create memorable learning experiences for their students. That help can come in the form of streamlining a workflow so that I have more time to focus on the fun aspects of teaching, working with kids. That help can also come in the form of technology that enables students to do things that generations before them could not have done, like producing a video that is seen by thousands of people around the world.

This guide is designed to provide you with an overview of a selection of free web tools, websites, and mobile apps that have utility in nearly every K-12 classroom. In each section you will find more than one tool that can be used to reach the same ends. I like to present more than one option in each category because we all have different levels of access to computers and tablets, different school web filtering policies, and different needs for our students.

Why didn't you include X? I think you should include X? The danger of putting together a guide like this is that for every three tools I include there are probably three or ten others that are like it. The tools that I have included in this guide are ones that I have personally used with students and or in the many professional development workshops that I facilitate every year. I tend to gravitate to the tools that have the simplest user interfaces and those that I think a teacher can feel comfortable using with his or her students in a relatively short amount of time. To that end, throughout this guide you will find links to video tutorials on many of the tools that I've chosen to feature.

Where's all the Google Apps stuff? I have published guides about Google Drive, Maps, Earth, Sites, and Blogger in the past. Those guides alone total more than 200 pages. You can find those guides on FreeTech4Teachers.com under the heading of Google Tutorials. I also have a YouTube channel in which I've published more sixty Google Apps tutorials. You can see that playlist at <http://bitly.com/gafeplaylist>.

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I offer in-person and virtual professional development workshops. If you would like to have me come to your school or host virtual trainings, please send me an email at [**richardbyrne@freetech4teachers.com**](mailto:richardbyrne@freetech4teachers.com)

About the author:

Richard Byrne best known for developing the award-winning blog [Free Technology for Teachers](#). He has been invited to speak at events all over North America, Europe, Australia, Southeast Asia, and the Middle East. Richard's work is focused on sharing free resources that educators can use to enhance their students' learning experiences. Richard has taught high school social studies and language arts, worked with preservice teachers, and teaches continuing education courses for the Midwest Teachers Institute.

Richard is a five time winner of the Edublogs Award for Best Resource Sharing Blog. Richard became a Google Certified Teacher in 2009. 2012 saw Richard receive a Merlot Classics award from chancellor's office of California State University. In 2010 he was a finalist for ACTEM's (Association of Computer Teachers and Educators in Maine) educator of the year award. Tech & Learning Magazine named Richard one of their "people to watch" in their 30th Anniversary celebration (<http://techlearning.com/article/26660>).

On a daily basis Richard's blog [Free Technology for Teachers](#) reaches more than 100,000 educators. In addition to writing [Free Technology for Teachers](#), Richard also maintains [iPadApps4School.com](#) and [PracticalEdTech.com](#). Richard's print work includes a monthly column for *School Library Journal*, contributing author to *What School Leaders Need to Know About Digital Technologies and Social Media*, and contributions to *Teacher Librarian*. Richard lives in Woodstock, Maine with his loyal dogs Max and Morrison.

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Communicating with students and parents.

When it comes to communicating with parents nothing can replace a good face-to-face meeting. Face-to-face meetings are not easy to schedule. Not every communication requires the intimacy of a face-to-face meeting. A phone call, a text message, an email, a blog post, or a social media post might be all that you need in order to convey your message. In this section we'll take a look at the best tools for digitally communicating with parents and students. As you read through this section bear in mind that using a combination of the following tools and strategies is going to provide you with the best opportunity to reach all of your students and their parents.

Text Messaging/ SMS/ Push notifications:

People have a difficult time ignoring text messages and other push notifications that pop-up on their mobile phones. For that reason services that allow you to distribute messages in that manner are great for urgent news and reminders. It is also worth remembering that there are more homes with mobile phone subscriptions than homes with broadband subscriptions in the United States.¹ Therefore, you're statistically more likely to have a parent receive your text message than you are to have them receive an email.

Remind

Remind (<http://remind.com>), formerly known as Remind 101, is a great tool for sending important reminders to students and their parents. Through Remind students and their parents can sign-up to receive text messages on their mobile devices. You send the messages from your computer or mobile device without students or parents seeing your personal cell phone number. Like regular text messages that you might send to friends, you can attach files to messages that you send through Remind. Messages can be sent to individuals or to groups that you create in your Remind account.

In addition to text messages Remind offers the option to send audio messages up to fifteen seconds in length. Just like text messages, voice messages can be sent to individuals or to groups.

Stamps is one of the two options that Remind offers for students and parents to use to interact with the messages that you send to them. Students and parents can reply to your Remind messages by selecting one of four stamps to indicate that they have received your message and indicate if they need further clarification about your message.

Chat is the other option that Remind offers to students and parents to communicate with you. Remind Chat allows students and parents to reply with text to a teacher's messages. When I first heard about Remind Chat I was leery of it because I was concerned that students and parents would be messaging teachers at all hours of the day and expecting rapid responses. Remind alleviated that concern when I saw the "office hours" setting in the Remind chat service.

¹ <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>

"Office hours" allows teachers to specify when they will allow chat messages to be sent and received. Teachers can also pause or stop chat exchanges at any time.

ClassDojo Messenger

ClassDojo (<http://classdojo.com>) is a popular tool for creating records of students' behaviors like staying on task, being prepared for class, and general attendance in class. You can also add custom behavior categories to track in your ClassDojo account. Students can sign into their own accounts to see the points they have earned in class. Parents can sign into ClassDojo to see how their children are doing.

ClassDojo also provides a free messenger service (<https://classdojo.com/messenger/>). ClassDojo Messenger can be used to send messages to parents on an individual basis and on a whole group basis. ClassDojo uses the term "Direct Messaging" to refer to sending messages to individuals and the term "Broadcast Messaging" to refer to sending messages to all parents in a group. ClassDojo Messenger hides the personal contact information of the teacher and the of the parents. Parents have to opt-in to receive messages from the teacher.

WhatsDue

WhatsDue (<http://whatsdueapp.com>) is a free service (available for Android and iOS) that enables teachers to create and send due date reminders to their students. Students receive the reminders as push notifications on their iOS and or Android devices.

Here's how WhatsDue works. First, the teacher registers for a free account on the WhatsDue website and creates a class or classes. Each class is assigned its own unique join code. Teachers then invite students and parents to join the class through the join code. Once students have joined the class they will begin receiving due date reminders on their mobile devices.

Teachers can create multiple classes and schedule multiple reminders for each class from one dashboard on the WhatsDue website. Students opening WhatsDue on their iPhones or Android phones will see reminders of approaching due dates and past due dates.

If you have been leery of using other reminder systems because of privacy concerns with phone numbers or two-way communication, WhatsDue might be for you. It doesn't require phone numbers and it doesn't have two-way communication. It also allows students to be reminded of assignments on a schedule that works for them. For example, they can set the app to remind them of assignments a day before or a couple of hours before an assignment is due.

Class Messenger

Class Messenger (<https://my.classmessenger.com/signup>) is a Scholastic service that offers free iPhone and Android apps that teachers can use to send messages to parents and students on a group or individual basis. Class Messenger allows you to send text and picture messages. Students and their parents can reply to your messages without seeing your personal phone number. Likewise, you don't see personal phone numbers of your students.

Class Messenger categorizes messages within the app. There are categories for homework assignments, general reminders, surveys, and volunteer requests.

One of the aspects of Class Messenger that I appreciate is that when you register for an account on Class Messenger there are demo classes already made for you to use to explore the app. The demo classes eliminate the worry of accidentally sending messages before you completely understand how the app works.

Class Messenger doesn't have to be used on an iOS or Android device. It is possible to use the service through the Class Messenger website.

Google Voice

If you live in an area in which Google Voice (<http://voice.google.com>) is available, it can be a good tool for sending text messages from your laptop to parents' and students' mobile devices. Google Voice will assign a number to you. That number is the one that will appear when you send messages. The downside to using Google Voice is that you will have to have a list of parents' and students' phone numbers in order to send them messages. I used Google Voice for a couple of years but now I prefer Remind as it doesn't require me to manually enter phone numbers and all phone numbers are shielded from the view of teachers and students.

Pros & Cons of Using Text Messages to Communicate With Students & Parents

Pros of using text messages for announcements:

1. Immediate broadcast of messages to large groups of students and parents. Some of these services will let to schedule broadcasting of messages too.
2. People have a very hard time resisting opening text messages immediately whereas email is easy to ignore for hours or days. Don't believe me, the next time you receive a text message try to ignore it for one hour.
3. Even households that don't have laptops, desktops, or home wireless are likely to at least one person that has a mobile phone to receive text message alerts. The Cellular Telephone Industries Association claims wireless penetration in the U.S. is 104% (<http://bitly.com/1frOfha>).
4. You can attach files to your messages to enhance and or explain the larger context of your message.

Cons of using text messages for announcements:

1. You have to get parents and students to opt-in to receive messages.
2. While great for short announcements like, "school is cancelled due to snow" or "remember your field trip permission slip" text messages are not great for announcements that require explanations.
3. Depending upon the service you choose, you may find yourself receiving a lot of replies that should be handled by phone call or in-person conversation.
4. Despite the CTIA statistic above, some students and parents won't have reliable access to a mobile device that receives text messages. This is particularly true in communities in which pay-as-you go mobile plans are prevalent.

Email Management Tips

Like most people, I have a love-hate relationship with my email inbox. As soon as it gets close to empty, it fills up again. I'm sure you can relate.

While I'm still not the best at handling my email efficiently, I do have a few tools that have helped me become a little more efficient.

Auto Text Expander for Google Chrome (<http://bitly.com/1fsd3Wk>) is a convenient Chrome extension that I've recently started using. The extension enables me to create keyboard shortcuts for words and phrases that I frequently use in emails. The video available here (<http://bitly.com/1J3SR85>) provides a demonstration of how to use this handy extension.

Add Reminders is a Google Sheets add-on that enables you to send emails from a spreadsheet. The add-on will format your spreadsheet so that you simply enter reminder messages and email addresses then specify a date on which you want your reminders sent. The Add Reminders Add-on allows you to send the same reminder to everyone in your email list or you can send individualized reminders to everyone in your email list. Watch this video (<http://bitly.com/1Jic6Ys>) to learn how this helpful tool functions.

Creating classroom blogs.

A classroom blog can serve as the online hub for all information about your classroom. You can use a blog to publish updates about your class, to distribute assignments, to post handouts, and share study guides and other reference materials. Of course, a blog is the ideal place to have students write reflections on things they've learned and for you to do the same. More than forty examples of classroom blogs can be found at <http://bitly.com/ftblogs15>.

Blogger is my preferred platform for building classroom blogs. It's free to use all of its features, it integrates into Google Apps for Education accounts, and it takes less than five minutes to create a blog through Blogger. A 90 page guide to using Blogger in school can be downloaded at <http://bitly.com/ftblogger15>. Within that guide you will find a glossary of blogging terminology, step-by-step directions for creating a blog, directions on adding third party content to your blog, and directions for using Blogger's mobile apps.

Edublogs (<http://edublogs.org>) and KidBlog (<http://kidblog.org>) are popular alternatives to Blogger. Both of those services require that you purchase a subscription in order to do things like include videos and manage students' accounts. A chart comparing educational blogging services can be found at <http://bitly.com/ftblogcomparison>.

Pros & Cons of Using Blogs for Classroom/ School Announcements

Pros of using blog posts as school announcements:

1. It is easy to have multiple people maintain the blog. The burden of keeping parents informed about school news doesn't rest with just one person.
2. An archive of announcements is automatically created and easy to find.
3. You can include as much media as you like (or your hosting allows) in a blog post. It is easy to include video of a great school event. Or include an audio announcement that is accessible to struggling readers.
4. You can write announcements in advance and schedule them for distribution at later times.
5. You can easily call attention to and direct people to previous announcement and or to reference pages containing things like school calendars and handouts.

Cons of using blog posts as school announcements:

1. Parents must remember to check your blog or you convince them to subscribe to it.
2. If you have commenting enabled you will need to moderate comments.
3. If you don't have comments enabled parents will have to open a separate email client or call to ask questions about information in the blog post.
4. If your blog's URL is complicated, people will have a hard time remembering it correctly. For example, parents in my district often complained about remembering the structure of sad17.k12.me.us when looking for some of my colleague's blogs. My blog was simply mrbyrneteaches.com (I spent \$10 per year for hosting that domain through Blogger and wrote off the cost on my taxes).

5. If you choose to self-host your blog you will have to spend time maintaining the back-end for software updates and security.

A couple of considerations that are neither pros nor cons.

1. Blog posts can easily be converted into and sent as email messages through services like FeedBlitz, FeedBurner, and Aweber to name a few. Parents who prefer email can receive the posts through those services. Parents who prefer to subscribe to a blog via RSS can use services like Feedly and Flipboard to follow the blog.
2. Nearly every blogging platform will let you create static pages for content like calendars, policies, and handouts.

Google Search Strategies

I'm often asked for recommendations on how to help students use Google more effectively in their research efforts. Whether you teach elementary school, middle school, high school, or college students these tips can be used by your students.

1. Not every question needs to be Googled.

- One of the bad habits that I see many students fall into when it comes to research is simply entering into Google the first thing that comes to mind. While this strategy can work, it often leads to a lot of time wasted on searches for information that students already have. Before embarking on a research project ask students to make a list of the things they already know about the topic they plan to research. Have them look in their notes to see if they already have information on the topic.

2. Search within a search result.

- One of the worst offenses students commit while conducting web searches is only glancing at the webpages they open from the search results page. Or worse yet, only reading the brief snippet that appears below the links in a search results page. The reason for this behavior that students often give is “it takes too long to read the whole page.” To remedy this teach your students to use “Control F” (Windows) or “Command F” (Mac) when they open a webpage from the search results page. Control F or Command F allows you to search within any webpage for any letter, word, or phrase. This also works for searching within PDFs and other documents that students may download during a web search.

3. Think like someone else.

- When formulating search phrases it can be helpful to think about the words that someone else might use to describe your topic, question, or problem. Try using those terms instead of your own. Learn more about this strategy in the short video available here <https://www.youtube.com/watch?v=F9dBn3aK4rw&feature=youtu.be>

4. Open the advanced search menu.

- The advanced search menu is often overlooked by students. It is found by opening the gear/ sprocket icon that appears in the upper, right corner of the search results page. In that menu you will find tools for refining search results by file type, domain, language, and more.

5. Search by domain.

- Limit search results to specific top-level domain or to a specific website. For example, if I wanted my search results to be limited to links from [.edu](#) sites, I would enter “.edu” in the domain limitation box.

6. Search by file type.

- Search by file type allows you to find results according to file format. Combine searching by file type **.ppt** or **.pdf** with searching by domain **.edu** or **.k12.me.us** to find PowerPoints or PDFs produced by students and teachers. (replace the **.me** in **.k12.me.us** with your state's two letter abbreviation to find slides and PDFs produced in your state).

7. Try Google Scholar.

- Google Scholar to find academic, peer-reviewed articles on your topic. Often these are articles that you would not find in typical Google search. Google Scholar is also useful for finding court rulings and patent filings.

8. Set Google alerts and Google Scholar alerts.

- Go to <https://www.google.com/alerts> to create alerts for specific search terms. When new information related to your topic is available, it will be emailed to you. Google Scholar also has an alerts function.

9. Search Google Books & Newspapers

- Google Books (<https://books.google.com/>) indexes millions of books and periodicals that you can search within. Many books and periodicals are available to read online for free. The Google News Newspaper Archive (<https://news.google.com/newspapers>) has digitized hundreds of old newspapers that you can search through.

10. Remember that Google isn't the only search engine.

- Most schools and local libraries has access to databases that are not indexed by Google and or are not accessible without the subscription fee that your school or library pays. Ask the librarian for assistance in accessing those databases.

Digital Citizenship

Whether our students are in Kindergarten or high school before we send them out on the web we should be teaching them digital citizenship.

Elementary School Resources

PBS Kids offers the Webonauts Academy (<http://pbskids.org/webonauts/>) in which elementary school students can learn about safe online behaviors. When students have completed all of the Webonauts missions they will graduate from the Webonauts Academy. The educators tips page offers some practical suggestions for using Webonauts in the classroom or in a school library.

In an effort to teach children about potential dangers online and how to avoid them, the Council of Europe has offers a game called Through the Wild Web Woods (<http://www.wildwebwoods.org>). Through the Wild Web Woods is designed for students ages seven through ten to learn how to spot danger on the Internet and what to do when they do spot danger on the Internet. The game is available in twenty-four languages.

Professor Garfield is a free resource developed in part by the Virginia Department of Education. Professor Garfield teaches students how to be safe online, how to recognize and respond to cyberbullying, and how to decide if something is a fact or an opinion. These educational activities can be found in the free Professor Garfield apps; Online Safety (<http://bit.ly/ftgarfield>), Fact or Opinion (<http://bit.ly/ftgarfield1>), Cyberbullying (<http://bit.ly/ftgarfield2>). All of the free Professor Garfield iPad apps use the same format. The format is a set of comic strips that students read to learn about the issues the app is focused on. At the end of the comic strips students play some simple games to practice recognizing good online behaviors.

AT&T's Safety Land (<http://bit.ly/ftatt>) is a nice game through which kids learn and practice recognizing danger on the Internet. The game is set in the city of "Safety Land." As students navigate from building to building in Safety Land they are confronted with a series of scenarios and questions to respond to. If they respond correctly to each scenario they will capture the cyber criminal and send him to the Safety Land jail. Students who send the cyber criminal to Safety Land jail receive a certificate that they can print out.

Digital Passport (<http://bitly.com/ftdpp>) is an online program from Common Sense Media. The purpose of the Digital Passport program is to provide students in grades three through five with lessons and games for learning responsible digital behavior. Digital Passport uses videos and games to teach students about cyberbullying, privacy, safety and security, responsible cell phone use, and copyright. Students earn badges for successfully completing each phase of the Digital Passport program.

Middle School / High School Resources

A Thin Line (<http://www.athinline.org/>) is a digital safety education resource produced by MTV in collaboration with other media partners. The purpose of the site is to educate teenagers and young adults about the possible repercussions of their digital activities. A Thin Line offers a series of fact sheets about topics like sexting, digital spying, and excessive text messaging and instant messaging. A Thin Line gives students advice on how to recognize those behaviors, the dangers of those behaviors, and how to protect your digital identity. Students can also take a short quiz to practice identifying risky digital behaviors.

Own Your Space (<http://bitly.com/ftmsft>) is a free ebook designed to educate tweens and teens about protecting themselves and their stuff online. This ebook isn't a fluffy, general overview book. Each chapter goes into great detail explaining the technical threats that students' computers face online as well as the personal threats to data that students can face online. For example, in the first chapter students learn about different types of malware and the importance of installing security patches to prevent malware infections. The fourteenth chapter explains the differences between secured and unsecured wireless networks, the potential dangers of an unsecured network, and how to lock-down a network.

Google has a good set of lesson plans on digital citizenship and digital literacy (<http://bitly.com/ftggtk>) that middle school teachers should take a look at. The lesson plans are divided into three sections; becoming a digital sleuth, managing digital footprints, and identifying online tricks and scams. These digital citizenship lessons are part of Google's Good to Know site. Good to Know is an excellent site on which you can find good and clear explanations of web basics. The detailed lesson plans can be saved in your Google Drive account. Even if you don't use the entire lessons as they were written, they're still worth saving in Google Drive to refer to as you build your own digital citizenship lesson plans.

ThinkB4U (<http://www.thinkb4u.com/>) is a series of web safety videos and tutorials from Google and its partners. Using the "choose your own adventure" aspect of YouTube video editing, ThinkB4U offers interactive videos to educate viewers about things like protecting online reputations, avoiding scams, research and critical thinking, and responsible text messaging. ThinkB4U is divided into three basic sections; students, parents, and educators. Each section addresses nine different topics related to safe and responsible use of the Internet and cell phones. The sections include short videos about the topics, a short written lesson, and some interactive games on the topics of responsible use of the Internet and of cell phones. The Educators' section of ThinkB4U offers lesson plans from Common Sense Media and the National Consumer League. There are lesson plans designed for elementary school, middle school, and high school use.

Seven Digital Deadly Sins (<http://sins.nfb.ca/#/Grid>) is an interactive story produced by the National Film Board of Canada. The story contains seven chapters each containing short

videos, essays, and polls. The videos and essays tell the stories of people suffering from digital sins like greed (illegally downloading media) and wrath (cyberbullying). After reading or watching the stories viewers can vote on questions about what they would do in similar situations. Seven Digital Deadly Sins does deal with some content, mostly in the section on lust, that you will want to screen before deciding if it is appropriate for the students in your classroom.

Creating and Protecting Strong Passwords

One of the best ways to protect your online identity is to create strong passwords containing unique characters. Sometimes it's difficult to think of new strong passwords. When you're having a mental block thinking up a new password try PassCreator (<http://passcreator.com>). PassCreator is a free service that helps you create a strong password. To use PassCreator just select the attributes you want your password to have (number of characters, character type, etc.) then press "create." If you don't like the password created for you, just press "create" again to generate another password.

Whenever it is offered as an option, it is a good idea to use two-step or two-factor authentication on the online services you use. Google, Dropbox, Box, and many other cloud services offer this option. Two-step authentication means that just entering one password isn't enough to log into a service. Learn about Google's two-step authentication in this video <https://youtu.be/zMabEyrPRg> and read about it in detail at <http://bitly.com/ftgtwostep>

Six styles of classroom video projects

The process of creating and publishing videos can be a great way to get students excited about researching, storytelling, and sharing their work with an audience. For teachers who have never facilitated video creation projects in their classrooms, choosing the right style of video and the right tools can be a bit confusing at first. To help bring clarity to the styles and tools, I have a rather simple outline that I use in my video creation workshops (<http://bitly.com/ftworkshops>).

Project style #1 - One-take videos:

These are videos that are shot using the camera built into a mobile phone or tablet. You might also use the camera in a laptop for these types of videos. The purpose of a one-take video is to quickly record a short observation, to record a short message, or to capture an important moment like students making observations during a science lab. Generally, these videos should be less than sixty seconds.

One-take videos can be uploaded just as they are to YouTube, Vimeo, Instagram (depending on the length of the video), your classroom blog, Google Drive, Dropbox, or any number of online hosting services. If you use the YouTube or Instagram mobile app (available for Android and iOS) you might trim the beginning or end of the video to remove dead space in it or apply a color filter to it, but that will be the extent of the editing that is done before the video is shared.

Project Style #2 - Audio slideshows

These are videos that are built upon a series of still images combined with a soundtrack of either music or spoken words. Summarizing the highlights of an event, summarizing the key points in a story, and summarizing the results of research project are all common purposes for creating audio slideshows. You will also find this style of video used to give step-by-step directions for a process. This style of video is typically less than three minutes long.

Animoto (<http://animoto.com>) was the first tool to popularize creating this style of video. Animoto can be used in a web browser on your laptop or Chromebook. Android and iOS apps are also available from Animoto. To create an audio slideshow through Animoto you simply need to upload ten to fifteen pictures then choose the soundtrack that you want to hear as the images are displayed. Within Animoto there is an extensive gallery of free music that you can use if you don't have music of your own to upload. Animoto does allow you to add some limited text to your slideshow video. A variety of frame and transition themes are offered by Animoto. Some of those themes are free and others are only available to subscribers to Animoto's premium service.

YouTube offers an audio slideshow creation tool. The process of creating a video with YouTube's audio slideshow creation tool is very similar to the process of using Animoto to make a video. You supply the images and YouTube supplies the audio track. You can pick from thousands of audio tracks to match to your slides. After adding your slides and selecting an audio track you can add speech bubbles to your images by using YouTube's annotations tools. A video demonstration of the process of using YouTube's audio slideshow tool can be found here <http://bitly.com/yftfslide>

The shortcoming of both Animoto and YouTube's audio slideshow creator is that you have very limited control over the timing of transitions in your video. So if you want to narrate the slideshow rather than just play music you will have to try another tool. On an iPad Shadow Puppet Edu and 30 Hands are good apps to use to create audio slideshows. WeVideo is a good browser-based as well as Android option. (Explain Everything is also a good Android and iPad option, but it is not free). For desktop creation of audio slideshows iMovie and Windows Movie Maker good choices.

Shadow Puppet Edu (<http://bit.ly/shdwft>) is a free iPad app that you can use to create audio slideshow videos. The app offers an integrated search tool for finding pictures from the Library of Congress, to search for images from NASA, and to find Creative Commons licensed images from Flickr. You can also import pictures and videos from the camera roll on your iPad. After selecting a set of images students you can arrange them into any sequence by simply dragging and dropping them into order. Then to create a story press the record button and talk while flipping through your images.

30hands (<http://bit.ly/30handsft>) is a free iPad app that makes it very easy to create a narrated slideshow and or whiteboard video. To create a basic narrated slideshow on 30hands all you need to do is import images from your iPad's camera roll then press the record button below each image to record your narration. If you don't have any pictures on your iPad you can take pictures using the 30hands app. 30hands also allows you to draw images instead of importing pictures. You can combine imported pictures with drawn images in your presentations. And you can draw on top of imported images. When your project is complete you can save it on your iPad or share it with the 30hands community.

Project Style #3 - Whiteboard/ Screencast Instructional Video

This style of video is what you will find on places like Khan Academy. This style is used for explaining and demonstrating how to solve problems, how to use a piece of software, providing a walk-through of a timeline or flowchart, or to simply narrate a set of slides. This style of video is often made by teachers for the purpose of instruction to students. There is value in flipping

that model to have students create instructional videos through which they model their knowledge of a process or topic.

Clarisketch (<http://clarisketch.com>) is a free Android app that has great potential for classroom use. The app allows you to take a picture or pull one from your device's camera roll and then add your voice to it. While you are talking about your picture you can draw on it to highlight sections of it. Completed projects are shared as links to the video file hosted on Clarisketch. You can share the link to your Clarisketch video and have it play on nearly any device that has a web browser. Clarisketch is also available as Chrome app (<http://bitly.com/clarisketch>).

PixiClip (<http://pixiclip.com>) is a good option for creating simple instructional videos in your computer's web browser. PixiClip provides a whiteboard space on which you can draw, upload images to mark-up, and type. While adding elements to your PixiClip whiteboard you can talk and or record a video of yourself talking. In fact, you can't use the whiteboard without at least recording your voice at the same time. Recordings can be shared via social media, embedded into blog posts, or you could grab the link and include it on webpage.

ScreenChomp (<http://bit.ly/ftchomp>) was one of the first whiteboard iPad apps. Other apps have surpassed it in terms of optional features, but ScreenChomp still shines when it comes to ease of use. ScreenChomp provides a whiteboard on which you can demonstrate things by drawing and talking people through your instructions. You can draw and talk over a blank whiteboard or you can upload an image and draw on it while you're talking. Either way, ScreenChomp records your voice as you go. When you're done recording ScreenChomp provides you with a unique URL for your recording. Share that URL through email, social media, or post it on your blog for students to watch.

Knowmia Teach (<http://apple.co/1RQGG37>) is an iPad app for creating instructional whiteboard videos. The app allows you to create your video on a slide-by-slide basis. You can draw and talk on slides in the app. You can pause the app between slides. Images can be inserted into the backdrop of each slide which is great when you want to explain a diagram to students. An option for recording your face on each slide is also including in Knowmia Teach.

To record your screen on a MacBook you can simply open QuickTime Player then choose "New Screen Recording" from the File drop-down menu.

There are lots of tools for creating screencast videos on a Windows computer.

Screencast-O-Matic (<http://screencast-o-matic.com>) is the tool that I use on a regular basis for creating screencasts on both my Windows 7 laptop and on my MacBook. You can launch it from your web browser and use it for free. Screencast-O-Matic also offers a desktop installation option for \$15/year. Jing (<https://www.techsmith.com/jing.html>) from TechSmith is another screencasting tool that I've used on both Windows and Mac over the years. The drawback to Jing is that the video saves as a .swf file which isn't terribly easy to use in other services or

upload to YouTube. You can learn more about SWF files on the TechSmith website (<http://bitly.com/1KbfUQF>).

Project Style #4 - Animated Videos

Creating animated videos is a great way for students to bring a story to life. They can create animations for stories they've created or for stories they've read.

Tellagami (<http://tellagami.com>) is an app for iPad and Android that is a lot of fun to use to create narrated animations. Tellagami allows you to create customized animated scenes in a matter of minutes. To create a narrated, animated scene simply open Tellagami and tap "create." After opening the create menu you will see a default character and background scene. The characters can be altered by selecting from a big menu of customization options. The background scenes can be changed by selecting from a menu or by inserting a picture from your iPad or Android tablet's camera roll. To add your voice to your animations simply tap "record" and start talking. Completed animations are stored on the camera roll of your iPad or tablet. Tellagami does not require students to create accounts or have an email address.

Wideo (<http://wideo.co>) is a neat video creation service that allows anyone to create animated videos and Common Craft-style videos (<http://commoncraft.com>) online through a simple drag-and-drop process. Wideo templates provide a basic framework for a video's theme. A couple of the templates that might be of interest to teachers are the slideshow template and the curriculum template.

Scratch (<http://scratch.mit.edu>) allows students to program animations, games, and videos through a visual interface. Students create their programs by dragging together blocks that represent movements and functions on their screens. The blocks snap together to help students see how the "if, then" logic of programming works.

Project Style #5 - Stopmotion & Timelapse Videos

Creating stopmotion videos is a good way for students to see how a story develops frame-by-frame. Think about the process of making a claymation film. That process requires students to plan each part of a story by positioning the clay figures for each scene. I have had students use this process with paper cutouts instead of clay. The videos on CommonCraft.com provided my inspiration for having students create stopmotion videos featuring paper cutouts in place of clay.

Timelapse videos offer a fantastic way for students to record and then see how a lengthy process occurs. Capturing the process of osmosis provides a good opportunity to use timelapse videography. Take that standard osmosis demonstration of placing a raisin in a beaker of water and capture it with a timelapse video tool. When you're finished capturing the process you will have a short video that will show students the stages of the raisin swelling.

JellyCam (<http://bitly.com/ftjellycam>) is a free program for creating stopmotion movies. Using JellyCam you can create stop motion movies using images from your computer or images that you capture via your webcam. Once you've selected images you can quickly arrange them into a sequence. After the sequence is set you can specify how many images you want per frame. A soundtrack can be uploaded to your video. JellyCam uses the Adobe Air platform. If you don't have Adobe Air it takes just a couple of minutes to install it.

OSnap (<http://bit.ly/ftosnap>) is an iPad app (available in a free version and in a paid version) that you can use to create stop motion and time lapse videos. The app is quite easy to use. To create a video with the OSnap app you simply need to start a project and take a series of still pictures using your iPad's camera. Then adjust the number of frame per second to edit your video. If you want to, you can add a soundtrack to your video by selecting audio files that are stored on your iPad. You can go back and edit your videos by removing images and from the project at any time. Completed projects can be stored on your iPad, uploaded to YouTube, or shared via email.

Parapara Animation (<http://bitly.com/ftpara>) is a free animation creation tool developed and hosted by Mozilla. The tool is easy to use and it does not require registration in order to use it. To get started simply visit the Parapara Animation website, select a digital crayon, then start drawing. Click the large "+" icon in the top of the screen to add a new frame to your animation. You can playback your frames at any time in the creation process. When you're done making your animation it will be assigned a unique URL that can be shared via email. A QR code for your animation will also be generated for you.

Project Style #6 - The Documentary/ Feature Film

These are the longest video projects in a classroom. Students will create videos of five minutes or more to tell a fiction or nonfiction story. While any of the previously mentioned project styles could be stretched to five minutes, generally they're better kept to shorter lengths. The typical project over five minutes is going to be a documentary style, news report, or telling of a long fiction story with live action. For Mac users, iMovie is the go-to tool for these projects. Windows users will lean toward Windows Movie Maker. On a Chromebook, WeVideo is your best option for editing documentary/ feature film projects.

Creating & Distributing Flipped Video Lessons

VideoNotes (<http://videonot.es>) is a neat tool for taking notes while watching videos. VideoNotes allows you to load any YouTube video on the left side of your screen and on the right side of the screen VideoNotes gives you a notepad to type on. VideoNotes integrates with your Google Drive account. By integrating with Google Drive VideoNotes allows you to share your notes and collaborate on your notes just as you can do with a Google Document. You can use VideoNotes to have students submit questions to you and each other while watching videos. Of course, you can insert questions into the conversation for your students to answer too. The video available at <http://bitly.com/1E6NR3V> will show you VideoNotes in action.

Vialogues (<http://vialogues.com>) is a free service that allows you to build online discussions around videos hosted online and videos that you have saved on your computer. Registered users can upload videos to Vialogues or use YouTube videos as the centerpieces of their conversations. After you have selected a video from YouTube or uploaded a video of your own, you can post poll questions and add comments that are tied to points in the video. Your Vialogue can be made public or private. Public Vialogues can be embedded into your blog or website. Learn how to use Vialogues in the video available at <http://bitly.com/1EER4Cj>

EDpuzzle (<http://edpuzzle.com>) is a neat tool that allows you to add your voice and text questions to educational videos. On EDpuzzle you can search for educational videos and or upload your own videos to use as the basis of your lesson. In your EDpuzzle lessons you can make it a requirement for students to answer a question before moving forward in the video. EDpuzzle has an online classroom component that you can use to assign videos to students and track their progress through your video lessons. EDpuzzle's Chrome extension (<http://bitly.com/edpzext>) enables you to save YouTube videos directly to your EDpuzzle account. This means that instead of having to search within EDpuzzle for videos you can simply browse YouTube like you normally do then just click the EDpuzzle extension to save the video. Once a video is saved you build your questions around it. Learn how to use EDpuzzle by watching the video at <http://bitly.com/edpzle>

eduCanon (<http://educanon.com>) is a good service for creating, assigning, and tracking your students' progress on flipped lessons. eduCanon allows teachers to build flipped lessons using YouTube and Vimeo videos, create questions about the videos, then assign lessons to their students. Teachers can track the progress of their students within eduCanon. To create lessons start by identifying a topic and objective then searching YouTube and Vimeo from within the eduCanon site. Once you've found a suitable video you can build multiple choice questions throughout the timeline of your chosen video. You can create as many lessons as you like and assign them to your students at any time. See eduCanon in action in the video available at <http://bitly.com/edcannon>

Teachem (<http://teachem.com>) is a service that uses the TED Ed model of creating lessons based on video. On Teachem teachers can build courses that are composed of a series of videos hosted on YouTube. Teachers can write questions and comments in "flashcards" that are tied to specific parts of each video and display next to each video. Students can take notes while watching the videos using the Teachem SmartNote system. Creating a Teachem course a straight-forward process of choosing a video URL then writing corresponding questions. When you create a Teachem course you can make it public or private. Public courses can be accessed by anyone that has address for your course. Teachem contains an option to collaborate with colleagues on the creation of courses. A series of Teachem tutorial videos can be found at <http://teachem.com/faq>

Blendspace (<http://blendspace.com>) makes it easy for teachers to organize and share educational materials in a visually pleasing format. On Blendspace you arrange videos, links, images, and files around any topic of your choosing. Blendspace has built-in search tools so that you do not have to leave your Blendspace account in order to locate resources. When you share a set of Blendspace materials with your students they can give you feedback to show that they understand the materials or they can ask questions about the materials. You can also see if your students actually looked at all of the materials that you have shared with them. Using Blendspace can be a good way to create and deliver flipped lessons.

Audio Recording & Publishing

AudioBoom (<http://audioboom.com>) offers an easy way for teachers and students to create short audio recordings that are matched to images. In the video below I demonstrate how to use the web version of AudioBoom to create a short audio recording. AudioBoom also offers free iPad, iPhone, and Android apps. AudioBoom's education section (<https://audioboom.com/about/education>) is full of great examples of using the service in classrooms. The video available at <http://bitly.com/audboom> demonstrates how to use the browser-based version of AudioBoom.

TwistedWave (<https://twistedwave.com/online/>) is an audio recording tool through which you can create and edit spoken audio recordings from scratch. Your completed tracks can be exported to Google Drive and SoundCloud. If you have existing audio tracks in your SoundCloud or Google Drive account you can also import it into TwistedWave to edit those audio tracks. TwistedWave's audio editing tools include options for fade-in, fade-out, looping, sound normalization, and pitch adjustments. The editor also includes the typical track clipping tools that you would expect to see in an audio editing tool. Watch a demonstration of TwistedWave at <http://bitly.com/twistedwave>

Clyp.it (<http://clyp.it>) is an easy-to-use audio recording tool available to use in your web browser. To record on Clyp.it you simply go to the website and click the big record button (you may have to allow pop-ups in your browser in order for Clyp.it to access your microphone). When you're done recording click the share button and you'll be taken to a page on which you can download your recording or grab an embed code to post the recording on a blog. In the video embedded below I provide a demonstration of how to use Clyp.it in your web browser. Clyp.it is also available to use as a [free iOS app \(http://apple.co/1D2y19j\)](http://apple.co/1D2y19j) or as a [free Android app \(http://bitly.com/1CRZybU\)](http://bitly.com/1CRZybU). A video demonstration of Clyp.it is available at <http://bitly.com/1NxxajZ>

Vocaroo (<http://vocaroo.com>) is a free service that you can use to create short audio recordings. Creating a recording on Vocaroo is a simple process that does not require you to create an account or have any special browser plugins. Just go to the site and click record to get started. Watch the video at <http://bitly.com/vocaroo15> to see how easy it is to use Vocaroo.

SoundCloud's (<http://soundcloud.com>) Android and iOS apps no longer have the recording features that they used to have, but the browser based version still offers a good recording tool. After recording in your SoundCloud account you can grab the embed code for any of your recordings. Learn how to use SoundCloud in the video available at <http://bitly.com/scft2015>

AudioPal (<http://audiopal.com>) is a free service that anyone can use to create short audio messages to embed into blog posts. AudioPal offers three way to create messages. You can record using the microphone connected to your computer. You can record by calling AudioPal's phone system. Or you can create a message by using AudioPal's text-to-speech function. See AudioPal in action at <http://bitly.com/audiopal15>

If you want to create a podcast that is published to global audience then publishing your podcast through iTunes will probably give it the best opportunity to reach a large audience. Most people are familiar with the process of subscribing to podcasts through iTunes. The drawback to using iTunes to publish your podcast is that the set-up process (<http://apple.co/1frNpRN>) is confusing the first time you do it. But if you're only publishing occasionally or only looking to share your audio recordings with a specific audience (let's say students, their parents, and perhaps another classroom or two) then you might be better served by using one of the tools featured above as a simpler method of publishing your audio recordings.

Backchannels & Informal Assessment

Backchannels, polling services, and quiz tools provide good ways to hear from all of the students in a classroom. These kind of tools allow shy students to ask questions and share comments. For your more outspoken students who want to comment on everything, a feedback mechanism provides a good outlet for them too. I've hosted a number of webinars about backchannels and informal assessment tools. The recording of the most recent of those webinars is available at <http://bitly.com/backchannel15>.

Today'sMeet (<http://todaysmeet.com>) is a long-time favorite tool of mine for backchanneling in the classroom. Over the years Today'sMeet has evolved from a very basic chatroom tool to one that I can reliably use in classrooms. Today'sMeet allows you to quickly create a chatroom without registering on the site. However, if you choose to register you can take advantage of some excellent additional features including moderating comments, closing rooms early, keeping an archive of chatrooms, and requiring sign-in in order to participate in the chat. Today'sMeet also now allows you to embed your chatrooms into a blog post. I've used Today'sMeet rooms as a place where my students can ask questions and reply to each other's questions during a classroom activity. See the features of Today'sMeet displayed in the videos available here <http://bitly.com/1hsQxyy>

81 Dash (<http://81dash.com>) is a nice backchannel platform developed with the help of teachers. 81 Dash provides a place for teachers to create chat rooms to use with students to host conversations and share files. Once you are registered you can begin creating rooms. In your chat room you can exchange messages and files. As the owner of a room you can delete messages written by your students. Students join your 81 Dash room by going to the URL that is assigned to your room. When they arrive at your room for the first time they will be asked to register. There are two registration options. Registering as a "guest user" does not require students to enter email addresses. See 81 Dash in action in this video <http://bitly.com/1MGi4cz>

Formative provides you with a place to create online classrooms. Your students join your classroom by entering the assigned class code after registering on the Formative website. Once your classroom is established you can begin distributing assignments to students. Assignments can be as simple as one question exit tickets like "what did you learn today?" to complex quizzes that use a combination of multiple choice, short answer, and true/false questions. You can assign point values to questions or leave them as ungraded questions. You can also enable or disable instant feedback for students. When you give an assignment to students through Formative you can watch their responses in realtime. The best feature of **Formative** is the option to create "show your work" questions. "Show your work" questions enables students to draw responses and or upload pictures as responses to your questions. When you use this question type students will see a blank canvas directly below the question. On that canvas they can draw and or type responses.

Tozzl (<http://tozzl.com>) allows you to quickly create private, password-protected message boards as well as public boards. To get started visit Tozzl and select "create a new Tozzl." Then you can name your message board and set a privacy password (optional). Tozzl assigns a new, unique URL to each message board. On your message board you can add sections for chat, file sharing, to-do lists, and YouTube videos. You can also import the feed of a Twitter hashtag. The many facets of Tozzl open it up to a bunch of possible classroom uses. You could use it simply as a backchannel tool in which students ask questions through the course of a lesson. You could have students use it as a project management tool when they're working in groups. Tozzl message boards also have the potential to be used for simply distributing digital handouts and videos to your students. A video about Tozzl can be seen at <http://bitly.com/1J862CD>

Kahoot (<http://getkahoot.com>) is a service for delivering online quizzes and surveys to your students. The premise of Kahoot is similar to that of Socrative and Infuse Learning. On Kahoot you create a quiz or survey that your students respond to through any device that has a web browser. Your Kahoot questions can include pictures and videos. As the teacher you can control the pace of the Kahoot quiz or survey by imposing a time limit for each question. As students answer questions they are awarded points for correct answers and the timeliness of their answers. A scoreboard is displayed on the teacher's screen. Students do not need to have a Kahoot account in order to participate in your activities. To participate they simply have to visit Kahoot.it then enter the PIN code that you give to them to join the activity.

Socrative is the standard to which I compare all new student response systems. **Socrative** uses cell phones and or laptops (user's choice) for gathering feedback from students. You can post as many questions as you like in a variety of formats. One of the more fun question formats is the "space race" format in which students can work individually or in teams to answer questions as quickly as possible.

Padlet

Padlet (<http://padlet.com>) is a great tool that I frequently use in my workshops for the purposes of gathering feedback from attendees and having attendees share digital creations they made during a workshop. One of the reasons that I like it so much is that it is easy to use. I also like it because it can be used for a bunch of purposes. A playlist of Padlet tutorials can be found at <http://bitly.com/ftpadlet>

Padlet as a simple blogging platform:

Padlet walls can be arranged in free-form, grid, or stream layouts. Creating a Padlet page in the stream format could be a good way to create a simple, collaborative blog for students. You could create the page, select "stream" format, and make the page accessible for students to write short posts on. Their posts could include images and videos. If you want to, you can password protect your Padlet pages and moderate messages before they appear on your Padlet page.

Padlet for group research and discussion:

A few years ago I showed my special education students a short (18 minutes) video about cultural changes that took place in the US during the 1920's. After the video we discussed what they saw. Then I had students search online for other examples of cultural change in the 1920's. When they found examples they put them onto a Wallwisher wall that I projected onto a wall in my classroom. The wall started with just text being added to the wall and quickly progressed to YouTube videos being added to the wall. Once every student had added a video to the wall we stopped, watched the videos, and discussed them.

Padlet as a showcase of your students' work:

If your students are creating digital portfolios, creating slideshows, or producing videos you could use Padlet to display all of your students' best work on one page. Create the wall, call it something like "my best work this year," and have your students post links to their works.

Plickers

Plickers (<http://plickers.com>) is the ideal polling/ informal assessment tool for classrooms in which not every student has a computer or tablet to use. Plickers uses your iPad or Android tablet in conjunction with a series of QR codes to create a student response system. Students are given a set of QR codes on large index cards. The codes are assigned to students. Each code card can be turned in four orientations. Each orientation provides a different answer. You can ask questions verbally or project them on a screen for students to see. When you're ready to collect data, use the Plickers mobile app to scan the cards held up by your students. Plickers will show you a bar graph of responses. Responses can also be saved in your online Plickers account.

Three ideas for using Plickers in your classroom:

1. Quickly taking the pulse of the class. Ask your students, "do you get this?" (or a similar question) and have them hold up their cards to indicate yes or no. You can do this with a saved class or a demo class in the app.
2. Hosting a review game. Create a series of questions in your saved Plickers classroom. To conduct the review have students hold up their cards to respond to each question. Every student gets to respond at the same time and you get to see how each student responded. This is an advantage over many review games in which only the first student to respond has his or her voice heard.
3. Take attendance. In a saved Plickers class each student has a card assigned to him or her. At the start of class just have them hold up their cards to check-in.

Creating Digital Portfolios

Over the course of the school year our students create some fantastic digital products. Building a digital portfolio is a great way for students to look back at everything they've done and organize their works into a cohesive package. The following seven tools are good services for creating digital portfolios.

Google Sites (<http://sites.google.com>) is a good platform on which students and teachers that have Google Apps for Education accounts can build digital portfolios. Page-level permissions in Google Sites allows the creator of a site to share and give editing access to specific pages within a site rather than giving access to edit the entire site. To use page-level permissions open your Google Site editor then click "enable page-level permissions." With page-level permissions activated you can share and allow editing for each page individually. A video tutorial on using page-level permissions can be found at <http://bitly.com/FTPLP15> A 47 page guide to Google Sites can be seen here <http://bitly.com/ftgsites>

Weebly (<http://weebly.com>) can be a great digital portfolio platform for your students. Weebly makes it easy to create websites that look great and are easy to navigate. Weebly users can select from a superb collection of site templates and themes. The Weebly mobile apps allow users to edit and add content on the go. Weebly for Education (<http://education.weebly.com/>) includes all of the intuitive website-building and blogging tools found on Weebly plus features built specifically for education. Weebly for Education offers bulk creation of student accounts which teachers can manage and moderate. Students can create their own websites and blogs using the accounts that you create for them.

Seesaw (<http://web.seesaw.me/>) is a free service designed for creating digital portfolios on iPads, Android tablets, and Chromebooks. Students can add artifacts to their portfolios by taking pictures of their work (in the case of a worksheet or other physical item), by writing about what they've learned, or by shooting a short video to record something they have learned. Students can add voice comments to their pictures to clarify what their pictures document. To get started with Seesaw create a free classroom account. Students join the classroom by scanning a QR code (you will have to print it or project it) that grants them access to your Seesaw classroom. As the teacher you can see and sort all of your students' Seesaw submissions. Seesaw allows parents to create accounts through which they can see the work of their children. As a teacher you can send notifications to parents when their children make a new Seesaw submission. Visit <http://bitly.com/ftseesaw> to watch a series of tutorials about Seesaw.

The eduClipper (<http://educlipper.net>) portfolio tool allows students to create portfolios of things they have clipped (AKA bookmarked) online, things they have stored in their Google Drive accounts, content they've created on services like Prezi and Animoto, and files they have stored on their computers. eduClipper portfolios use the same visual interface that students and teachers use when bookmarking things in eduClipper. Students can re-arrange elements in their portfolios by simply dragging and dropping them into position on their portfolio canvasses.

Dropr (<http://dropr.com>) is a free service for creating portfolios of your images, videos, and audio files. Within your Dropr account you can have multiple portfolio pages. If you wanted to have a page for images that you took in the fall and a page for images that you took in the spring, you can do that in Dropr. To create a Dropr portfolio start by signing up with a social media profile or with your email address. Then start your first project by uploading a cover image. Once you have started a project you can drag and drop media from your desktop to the Dropr website. Each project can include text in addition to the media that you upload to it. Each of your projects will have a different URL. You can work on your projects in private until you are ready to share them with the world. Your Dropr projects can be embedded into a blog as a slideshow.

Clipix (<http://clipix.com>) will initially remind you of Pinterest in that you can "clip" images, videos, and links to save on digital clipboards. Clipix also supports uploading files from your computer to your Clipix clipboards. Each of the clipboards that you create in your Clipix account can be kept private or made public. There is also a privately shared option that can be used for collaborating on clipboard creation. Clipix's basic functions are very similar to other services in the same market. The user interface on Clipix feels less cluttered to me than that of some of its competitors. The option to customize your clipboard background is a nice touch too. Clipix offers Android and iOS apps that will synchronize with your online Clipix account.

Tackk (<https://tackk.com/education>) is a free service that was originally designed for creating simple webpages, but has morphed into a good tool creating digital portfolios and assignment portfolios. To create a Tackk page you do not need to register for an account, but unregistered Tackk pages expire after seven days. If you register for the service your Tackk pages stay up indefinitely. I recommend registering for a free Tackk account before creating your first page.

Creating a Tackk page is a simple matter of uploading an image then adding text in the customizable fields above and below your images. Tackk pages can also accommodate videos, audio files, and maps. You can find a video tutorial about Tackk at <http://bitly.com/fttackk>

Disclosures: I am an advisor to eduClipper. Seesaw has advertised on FreeTech4Teachers.com.

The PracticalEdTech.com weekly newsletter comes out on Sunday evening (Eastern Time). It provides a summary of the most popular posts from FreeTech4Teachers.com.

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