Guidelines for Using Digital Tools in the Classroom

Successfully navigating and implementing the myriad of available digital resources designed for classroom teachers is a bit daunting, but well worth the effort. It requires not only a willingness to change, as it is always evolving, but also a shift in how we support strong instructional methodology with digital opportunities. Whether we have an electronic whiteboard and one computer in a classroom or every student is armed with an electronic device, we can incorporate technology in meaningful ways.

Effective Practices for Using Digital Tools in the Classroom	Additional Guidelines, Resources, & Strategies	Internet Resources & Digital Tools
Incorporating technology in the classroom requires a shift in thinking but never minimizes significant role of the teacher.	• Although teachers may be using more digital technology to teach, the **instructor is still at the helm** activating and inspiring learning, assessing progress, and providing a safe instructional environment. • Using more technology in the classroom moves the **focus to student-centered work**. This shift may require that teachers adjust how they instruct their students and conduct their classrooms. It is important to make this change comfortable for the teacher and the students. • Students need specific instruction for how to use appropriately whatever technology teachers choose to implement. Many students are surrounded by digital technology at home, but using it for educational purposes requires **teacher modeling and direction**. • If you only have **one computer and projector** or one interactive. Smartboard in your classroom, consider the following suggestions: ○ Start a collaborative class blog where every student takes turns regularly contributing.	Implementing Technology in the Classroom from Edutopia Seven Brilliant Things Teachers Do With Technology Seven Stupid Mistakes Teachers Make With Technology

	○ Use the interactive whiteboard or computer and projector to pull up interactive learning websites and let students take turns or collaborate with each other to solve the problems or complete the activities. ● If you have regular access to **a few laptops or tablets** or a classroom pod of computers, consider doing the same sorts of activities as listed above or modify them for smaller collaborative groups. ○ Students can create and publish all sorts of projects (small group or individual blogs, video projects, slide presentations, etc.) ● If you have **regular access to a class set of laptops** and tablets then your options increase significantly. Individual work and collaborative possibilities abound.	Technology Integration Matrix by Florida Center for Instructional Technology
Safe Internet Practices are essential for effective incorporation of online tools for classroom use.	● There is much on the Internet that is inappropriate for students. Teachers are charged with maintaining a **safe and productive learning environment** for their students, so taking extra precautions to protect your students from encountering unsuitable material is important. ● Discuss the potential issues and problems with your students and establish a pattern of self-reporting any encounter with inappropriate content. ● Establish an acceptable use policy and have students and parents sign a contract.	Integrating the Internet: Risks and Solutions Safety Land- a fun game that teaches basic Internet safety MTV's A Thin Line- Internet Safety and Cyberbullying Internet Safety for Teens
SAMR Learning (or The **S**ubstitution **A**ugmentation	● At the **substitution** level, the teacher incorporates a computer, but the computer's function is to simply do something that was already done in the classroom prior to the computer's arrival, i.e. create a typed response to a	SAMR Model- Technology is Learning

Modification **R**edefinition) Model was developed by Dr. Ruben Puentedura and is essentially a hierarchy of implementing technology effectively.	question, print it out, and turn it in. ● At the **augmentation** level, computer technology serves as a tool to perform common classroom tasks, i.e. students take a quiz on the computer and receive immediate feedback . ● At the **modification** level, common classroom tasks are being accomplished through the use of technology, i.e. students make a podcast of their debate on school uniforms. The podcast is played for their peers in other classes and serves to inform the discussion on the topic. ● At the **redefinition** level, computer technology serves to allow for completely new tasks to occur in the classroom that prior to the computer were impossible, i.e. students create short video parodies depicting historical characters in contemporary settings.	

Blended Learning is an approach to the classroom where part of the traditional face-to-face instruction is replaced by an online experience.	● Students will typically spend 30-70% of their time "in-class" online in a blended scenario. The focus of the class moves from being teacher-centered to more student-centered where the students are expected to take an active part in their learning by solving problems and collaborating. Well-orchestrated blended-learning classes have proved to be much more engaging for students.
	   ○ They contribute more in discussions
	   ○ They come to class better prepared
	   ○ They produce more thoughtful written responses
	   ○ They interact with each other and the teacher more
	   ○ They learn the material more thoroughly than their non-blended peers.
		Blended Learning Toolkit
		
		Four Models of Blended Learning

The Flipped Classroom is a structure for a class where the teacher becomes the mentor rather than the sole	● In this sort of classroom structure, there might be a video lecture at home and homework done in class. Students are meant to be the questioners and the thinkers just as much as the teacher. ● It is important that in a flipped classroom where much of the work is student-driven, that students understand why they need to know what teachers are asking them to learn. "It's on the test" doesn't suffice. What	Best Practices for the Flipped Classroom Flipasaurus- tool for creating a flipped classroom

deliverer of knowledge.	value is there in the topic of study? ● Technology is an important part of the flipped classroom and reflection is likewise important. Visual learning requires some discussion and reflection, some time and space to articulate what was gleaned from watching a video, or time to practice what was taught.	Blendspace – flip your class by organizing online resources, embedding assessments and monitoring progress
Research and writing in the classroom today is part of every subject area, not just language arts, and it is enhanced by digital technology. Teach students to use various tools to conduct research, evaluate a website's credibility, create citations, write, and publish their work.	● There are abundant online sources for students to use in **research**. In fact, the increase in primary source texts online, for example, is likely indicative of the fact that online sources are becoming as valuable as print resources for information. ● Just as with any tool, students need **modeling to understand how these sources work.** Teachers save themselves and their students a great deal of work by not only demonstrating the use of these tools, but having the students engage in meaningful practice using them before they do their own individual research projects. 　○ Consider assigning the class the task of researching a broad topic you are studying, for example, the American Revolution. Assign groups the task of answering the following questions (or questions you write yourself): 　　1. How did a group of colonies successfully unify themselves in a revolution against the British Empire without modern communication (radio, television, internet, telephones)? 　　2. What impact did the American Revolution have outside of England on other European Countries? 　○ Ask students to use the school's online research tools (Noodle, Refseek, Sweetsearch, etc.) to find sources that answer these questions. 　○ After the students complete the assignment, ask them how the tools worked. 　　1. What steps did you take to find the articles?	Research and Writing with Technology Tools to Organize Research Tools to Publish Student Writing Tools to Generate Citations Tools to Search and Evaluate Websites Read, Write, Think – a comprehensive site for lesson plans, interactive tools and classroom resource in English/ language Arts

	2. What was confusing about the tool? 3. What was easy? ● The bottom line with research, citation, organization, and publishing tools is that teachers need to know how they work, model for students, allow students to practice using the tools, and provide opportunities for students to discuss their experiences.	
Presentations are not limited to PowerPoint in the classroom. While this is an effective tool, there are several other options that provide different visual and auditory experiences for students and teachers alike.	● **Prezi** is one example of an excellent alternative to PowerPoint. It is easy for teachers and students to use, has an assortment of interesting formats and images to choose from and allows for animation, embedded links, pictures and music as part of the presentation. ○ Prezi works for any traditional presentation topic and, rather than several slides with a lot of text, it is much more visually engaging for viewers because of the animated templates and graphics options. ● **Animoto** is another tool for creating short videos using a template format. It is also easy for students and teachers to use. There is a professional use upgrade that requires a subscription fee, but the free options are still useful in creating short, powerful video clips to share. ● **Slideful** is a very simple option for younger students with less experience with technology. It allows users to upload 10 pictures to make a digital slide show including simple text and animation and basic picture editing. ● **Glogster** allows students to make stimulating, interactive multimedia posters to engage one another in learning. They can use this tool to create factual presentations, state and support opinions, make effective arguments, or build fanciful narrations. ● **Isuu and Joomag-** magazine creating platforms that allow students to lay out and create professional looking magazines	The 5 Best Free Slideshow Presentation and Creation Tools for Teachers Prezi for Education Animoto.com Slideful.com Glogster.com Isuu Joomag
Assessment with technology can reduce the use of paper and	● There exist several excellent **tools for creating quizzes and assessments** to utilize in the classroom if teachers have access to tablets or laptops, or even a classroom pod of computers.	Tools for Writing Quizzes

make writing, delivering and grading assessments much easier. Several useful tools exist to assist teachers in creating quizzes and other assessments or even polling students to check for understanding or prior knowledge.	○ For assessing prior knowledge, students can rotate the use of a pod of computers to complete the task if a one to one ratio of devices doesn't exist. ○ If there are enough laptops or tablets to go around, quizzes or other assessments can easily be administered and even graded using no paper. ● **Student response systems** are a powerful tool that let teachers know what students know immediately. There are clickers to purchase, but cell phones and other digital devices work as well. Keep in mind that when students use immediate response devices, they cannot sit back passively in the class but rather engage frequently when teachers ask questions to check for understanding. Instead of one or two students answering a question aloud, everyone in the class submits an answer providing immediate feedback to the teacher. ● There are many ways to **use immediate response devices or Apps** effectively in the classroom including, but not limited to, the following ideas: 　○ Use devices to ask questions to see what students really know. 　○ Use devices for Think-Pair-Share activities where students share their final answers via the clicker. 　○ Use devices with an online quiz or poll. ● Spot-check homework by asking students to use and App such as **Poll Everywhere** or **Lino** to answer a few of the questions using their devices.	33 Digital Tools for Formative Assessment Clicker Activities Poll Everywhere Lino Class Pager
Social Networking in the classroom can be an excellent means to not only engage students, but to have a meaningful exchange of ideas and information.	● Using **Facebook** for your class can be an effective means for communication and for sharing information amongst the students. Make certain that you have parents' consent before you ask students to join Facebook, and that you discuss online safety with students. Establish a plan for reporting if students encounter inappropriate content online or feel uncomfortable about something happening in their online exchanges. Students need to know they can come to you safely and privately in these cases.	Social Networking Tips for Teachers Twitter4Teachers Wiki Page

	● Depending on your students' access to Facebook, this may be a good alternative to Google classroom. There are some specific ideas to keep in mind as you use this tool. 　○ First, create a "**Friends**" list with only your students in the class listed. Consider creating a **Facebook Group** for your class that is private so that only the students (and their parents) have access to it. You might also consider using the **Discussion Board** feature on Facebook as well to dialogue with students about content related subjects. 　○ Share "rich content" with your students via Facebook, including links to videos, meaningful articles, interesting websites, etc. Encourage (or even assign) them to do the same so that the group becomes an access point for an excellent collection of resources. 　○ If you have a one to one ratio for laptops or tablets in your classroom, this can be a source for daily agendas, assignment explanations with embedded links, etc. Or it can be a means for students to access homework or projects. ● **Twitter** may also be used as a means to dialogue and exchange and share information in the classroom. 　○ Consider that Twitter's 140-character limit requires Tweeters to be concise, a writing skill that many students need to improve and Twitter can be a means to do so. 　○ Teachers can post a content related question and have students respond and then discuss the responses in the following class, categorize them, etc.	
Using various devices (iPods, iPads, Chromebooks, etc.) and their Apps in the classroom engages students in	● **Remind** is just one example of a free and easy-to-use App for teachers to send out text and/or email reminders to students and parents about homework assignments or other upcoming deadlines and events. 　○ This is useful for older students who have cell phones and email accounts, but can be utilized for blanket communication to parents of younger students as well.	Remind.com Voicethread.com Back to School Prep: What Apps to Download

| new and meaningful ways. | ○ Consider having students and parents sign up on meet the teacher night or curriculum night. Getting students and parents in the habit of using communication tools like this one works best if they start early in the school year.
● **Voicethread** is another example of an excellent App (not a free one, however) for class discussions via a user-friendly discussion board format. It is in the cloud, so no software needs to be downloaded and it is accessible with any device. Voicethread provides the option for teachers to share images, documents, links to websites, etc. and then allows students to comment on those offerings using a "microphone, webcam, text, phone, [or] audio-file upload" (voicethread.com). Using this tool, teachers can post a primary source document with a topic for discussion about it and then students can comment on it using whatever format or device they choose. This allows for more participation options for students who may not be inclined to reply in class. It can be used for meaningful out of class discussions or homework.
● There are endless possibilities for using Apps and devices in meaningful ways. For example,
　○ Consider having students analyze the different characters in a piece of literature by considering what Apps those characters would use.
　○ Using a Smartphone Voting App, check students' prior knowledge about how electricity works to determine what you need to prepare for a lesson.
　○ Have students make a short stop-action film depicting the events that led to an important historical occurrence or illustrating how they solved a math problem.
　○ Ask students to document their work with pictures that they take and send with their phones during a chemistry lab.
　○ Have younger students create and edit podcasts about their favorite book.
　○ Consider recording and editing your own podcast to share with your | Engage Students with Ipods

Mobile Technology Goes to School

Using Podcasts in the Classroom

Podcasts For Free in the Classroom

Smartphone Web Voting

Great iPad Apps for Creating Stop Action Films

Audacity (a free audio editor and recorder)

Movie Maker

Blogtalkradio.com

Socrative.com

5 Lessons for Mobile |

www.kammsolutions.com

	students while you are on a summer trip or an educational tour. Ask your students to do the same.	Device Implementation

Blogging or using online authoring tools provide a variety of ways for students to keep online journals or record their thoughts, pictures, essays, poetry, etc.	● Having a **class blog** is an engaging way to ask students to create and publish their ideas and reflections about what they are learning.
	○ Even if there is only one computer in a classroom, a class blog is feasible. Consider providing time slots for students to work on their blog submissions during class.
	○ Note that student work can always be saved on the blogging site and checked by the teacher before it is published. For most students, having an audience of readers will naturally encourage them to do their best writing.
	○ There are many ways to conduct blogging activities in a class. Consider providing students with a jar of journaling topics to pull from, or a book of journal prompts they can peruse.
	○ Ask students to respond to their individual class experience with questions similar to the following:
	  1. What was the most interesting thing you learned today?
	  2. What was the most important?
	  3. What is still confusing?
	  4. What did you learn about yourself?
	○ Invite parents to read the blog as a way to be more involved in what the students are studying.
	○ Take pictures, or have students take pictures, and then upload them to the blog entries. Students can act as journalists reporting what is happening in the class, school, or community and use the photos as part of their description. Reading and discussing what their peers have written is also an important part of the classroom blogging experience.
	● **Wixie** is an example of **an online authoring tool** that offers a secure space for students and teachers to connect, communicate, and publish their work.
		Kidblog
		
		Fifth Graders Soar in the Blogosphere
		
		Wixie.com
		
		Kidpub.com (publishing site for kids and adults)

	○ Wixie allows students to publish their work in a space shared by their classmates and teacher. The work is stored on the cloud, so there are also features that permit students to share their work with family and friends outside of school. ○ Wixie provides features that allow for students to create drawings and images, record their voices, as well as submit and publish written work. The performance tasks created by students are multi-sensory and contained in one place. ○ Students can write their own stories, record personal histories, conduct and record interviews, write advertisements in a foreign language they are studying, etc.	
Educational Apps and accompanying Classroom Management Systems are available in abundance online. They each offer a variety of tools, but most have at the very least a means to communicate with students collectively or individually, send out homework assignments with links to videos, images, online texts, etc., post questions to a discussion board and much more.	● **Google Apps for Education or GAFE** is a group of widely used and generally familiar "productivity" applications available to schools for free. Teachers, staff and students need to have a registered email address and an account with Google in order to have full access with one login. ○ The applications include an "office suite" of access to Google documents, slides, spreadsheets and much more. All of the work can be saved to an online **Google Drive** accessible via any electronic device with internet access. ○ Using these tools, students and teachers can work collaboratively and see each others' feedback and contributions in real time on the same project. For example, students working on a slide presentation for a science class can produce and save their individual slides in a shared drive file where all the members of the group have access to that file. This avoids work getting lost in the exchange from student to student and allows for the final compilation of work to be safe and secure. ○ Additionally, the teacher has access to students' slideshows for presentations and can see a record of what each student did. ● **Google Classroom** was released in 2014 and works as a classroom management system to keep track of the informational exchange between	Google for Education Article on Google Apps for Education 6 Effective Ways to Use Google Drive in E-Learning Google Classroom Tutorials Google Classroom: A Free Learning Management System Edmodo.com Schoolology

	students and teachers. It makes the use of GAFE even easier and is only accessible to GAFE users. Google Classroom also makes blanketed communication with all students or individual students simple.
	    ○ Teachers can post questions in a discussion board forum, provide assignment descriptions with links and slides and videos, provide feedback on student submissions, send quizzes or test for students to take electronically, provide access to electronic textbooks, articles, books, etc. all in one place.
	    ○
	    ○ Google Classroom interfaces with Google Calendar, so assignment deadlines are tracked and students are notified if they've missed submitting something via Google Classroom.
	    ○ Daily agendas, warm ups for grammar, foreign language vocabulary, math concepts, reading assignments, review questions from the prior day's lesson in science or social studies, Tedtalks, Youtube videos, electronic texts, etc. can be disseminated and submitted through Google Classroom.
	● **Edmodo** is another classroom management system and has unlimited storage and intuitive options for teachers to create groups, communicate with students, post questions and responses to a discussion board, send out assignments with links to online resources, deliver quizzes, assess and record student progress, communicate with parents and more.
	● Similarly, **Schoolology** is another excellent management system compiled of apps, collaboration tools and much more. **Moodle** touts being globally driven with an established and strong community base. It provides varied options for online learning and teaching through an open-source learning platform in a secure and private environment.
	● These tools also provide **teachers with the ability to collaborate** with each other across the globe, access to new resources, and participate in professional development options that can be inter or intra-district depending on the teacher's needs.
		Moodle

Additional Websites for Technology Resources

"How to Integrate Technology." http://www.edutopia.org/technology-integration-guide-implementation

"Tech Tools By Subject and Skills." http://edtechteacher.org/tools/

"Web 2.0: Cool Tools for School." http://cooltoolsforschools.wikispaces.com/Home

"The Technology Integration Matrix." http://fcit.usf.edu/matrix/index.php

"Great Minds: Digital Resources." http://greatminds.net/maps/resources/digital_resources

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