

Educational **Technology** for Teachers

Sample Book



The First Ever Multiplatform Interactive
Digital Textbook on Educational Technology


DR. GREGORY M. FRANCOM

Educational Technology for Teachers


USING THIS BOOK

Sample Book

On iPad or iPhone

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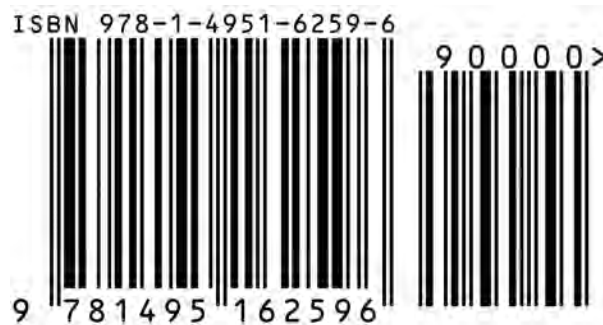
Sample Book

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Citing and referencing this publication (American Psychological Association format):

Francom, G. M. (2022) *Educational technology for teachers*. San Francisco, CA: Inkling Systems, Inc.



Educational Technology for Teachers

DR. GREGORY M. FRANCOM

Sample Book

About the Author

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Dr. Francom completed his doctorate in learning, design, and technology at the University of Georgia. He also holds a bachelor's degree in media arts studies from Brigham Young University and a master's degree in instructional technology from Utah State University. He can be contacted by email at greg.francom@gmail.com.



CHAPTER ONE

Methods and Concepts for the Use of Technology in Education

Sample Book



“New technology is common, new thinking is rare.”

-Sir Peter Blake

CHAPTER OBJECTIVES

AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Define and discuss the importance of educational technology in the Information Age
- Discuss the future of teaching and learning as it relates to Information Age characteristics
- Explain the major aspects of Information Age learning methods including constructivism and student-centered learning, constructionism, and project-based learning
- Explain the concepts of higher-order learning, affordances, digital natives, web 2.0 and learning 2.0
- Choose to develop and implement an Information Age approach to educational technology in the classroom

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

1. LEARNER

- a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.
- c. Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.

2. LEADER

- b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.

4. COLLABORATOR

- a. Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.

5. DESIGNER

- a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
- b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.
- c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

6. FACILITATOR

- a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
- b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.
- c. Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.

7. ANALYST

- a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.

Education in the Information Age

One of the most important lessons that teachers can learn about educational technology is that in order to help students learn, technology must be used in appropriate ways. Simply using technology in the classroom does not guarantee student learning. Teachers must also take advantage of new learning methods and techniques that have become possible and necessary because of advances in technology and in our society.



From the Socratic method of teaching in ancient times to the apprenticeship model during the middle ages, many different learning methods have been developed and used through the years to support student learning. Education has also been organized and structured in many different ways. Each of these learning methods and educational

structures has emerged from the needs and constraints of the time and society in which the method was used.

The American one-room schoolhouse is one example of an educational structure that matched the needs and constraints of its time in rural America (Reese, 2011; Zimmerman, 2009). During the first centuries of the European settlement of America, the majority of Americans lived in rural areas and had limited transportation options. The one-room schoolhouse provided a way for education to reach people in many different locations (Reese, 2011; Zimmerman, 2009). One-room schoolhouses were built and placed strategically so that students from a rural and geographically dispersed area could attend and learn. Students from the same geographical area often

attended the same one-room schoolhouse even though they were in different grades and at different levels of learning (Reese, 2011). Each schoolhouse had a single teacher that would attempt to support the learning needs of a diverse group of students. To learn more about the one-room schoolhouse, click on the slideshow. The one-room schoolhouse eventually declined during the 20th century as a result of changes in



[Learn More](#)



The American One-Room Schoolhouse

INFORMATION AGE EDUCATION

Educational practices and structures must adapt to the needs of society in the Information Age.

American society such as industrialization and urbanization (Zimmerman, 2009). These changes led to an Industrial Age education system that values conformity and centralized control.

Changes continue to occur in our society and we have shifted from an Industrial Age that valued centralized control and conformity, to an Information Age that

values personal initiative and diversity. The one-room schoolhouse and even the industrial educational system in which we currently operate remain behind with regard to learning methods and educational structures (Aslan & Reigeluth, 2013; Reigeluth & Garfinkle, 1994; Stoll & Giddings, 2012).

Just as the one-room schoolhouse was an adaptation to the needs of the society of its time, learning models and educational structures must now adapt to the needs of society in the Information Age (Aslan & Reigeluth, 2013). In the Information Age, the abundance of technological tools and learning resources should shift our teaching and learning activities to be generally more student centered (Aslan & Reigeluth, 2013; Duffy, 2009). Some student-centered learning methods are presented later in this chapter. Each method reflects the current needs and realities of the Information Age, so be sure to consider each as a possible way for you to improve teaching and learning in your classroom. Before we discuss the learning methods, let's talk about what changes will need to happen in the future of teaching and learning so that education will reflect the needs of our society in the Information Age.

Constructivism and Student-Centered Learning



Constructivism is a theory about how people learn that can help provide a framework for Information-Age learning. Constructivist theory asserts that as students try to make sense of their experiences, they build their own knowledge in a structured format (Jonassen et al., 2003; Mayer, 1999). The knowledge structures that students build can be individually constructed by the student or co-constructed as part of a social experience (Piaget, 1997; Vygotsky, 1980).

As mentioned previously, the abundance of technological tools and resources should shift our teaching and learning activities in schools to be generally more student-centered. So what is student-centered learning? Student-centered learning places the student at the center of the learning experience. The student plays an active role and may set his or her own learning goals and determine activities and resources that will help meet these goals (Stoll & Giddings, 2012). This type of learning is in contrast to a teacher-centered learning environment in which the teacher sets the goals, and has primary responsibility for determining the types of learning activities and resources that will help meet these goals. Student-centered learning approaches are compatible with constructivist theory, because learning in constructivism means building one's own knowledge. Click on the link below to find out more about how learning may happen according to constructivist theory.



We often think of the whole-class lecture, in which the teacher shares verbal and visual information, as the prototypical teacher-centered learning environment. In student-centered learning, a variety of approaches are possible, including student investigation, information seeking, project development, experimentation and independent study. There is increasing evidence that student-centered approaches to learning promote the development of critical problem solving and critical thinking skills more than teacher-centered approaches to learning (American Psychological Association, 1997).

Technological tools provide many key ways to support student-centered learning approaches because they allow students to create, experiment, seek information and do other student-centered activities more efficiently.

According to constructivist theory, knowledge cannot be easily transmitted from teacher to student, and the prototypical model of teacher-centered learning – the lecture – won't be very effective. Instead, students must build their own knowledge structures through experience. The key to constructivism and student-centered learning is that students are involved in meaningful experiences, and they try to make sense of these experiences by reflecting upon and explaining them. Meaningful experiences can range from class projects, to field trips, to scientific experiments, to problem investigations. In constructivist theory, students can also build knowledge as part of a social experience as they interact with fellow students, the teacher, or others who are more knowledgeable during a meaningful learning experience (Vygotsky, 1980).

Active Learning

One type of learning that fits well within constructivism and student-centered learning is active learning. Active learning means that students are mentally and/or physically active while learning. Mentally active learning means that students are meaningfully engaged with learning materials, and physically active learning means that students are physically moving during learning activities (McGowan et al., 2021; Nguyen et al., 2020). Active learning can be used to involve students in the kind of meaningful learning experiences that are recommended according to constructivist theory. When students are engaged in meaningful experiences, they are mentally active as they try to make sense of and reflect upon them. We'll share more about active learning in Chapter six, along with a variety of technologies teachers can use to support active learning.

CHAPTER TWO

21st Century Skills and ISTE NETS Standards

Sample Book



“Teaching in the Internet age means we must teach tomorrow’s skills today.”

-Jennifer Fleming

CHAPTER OBJECTIVES

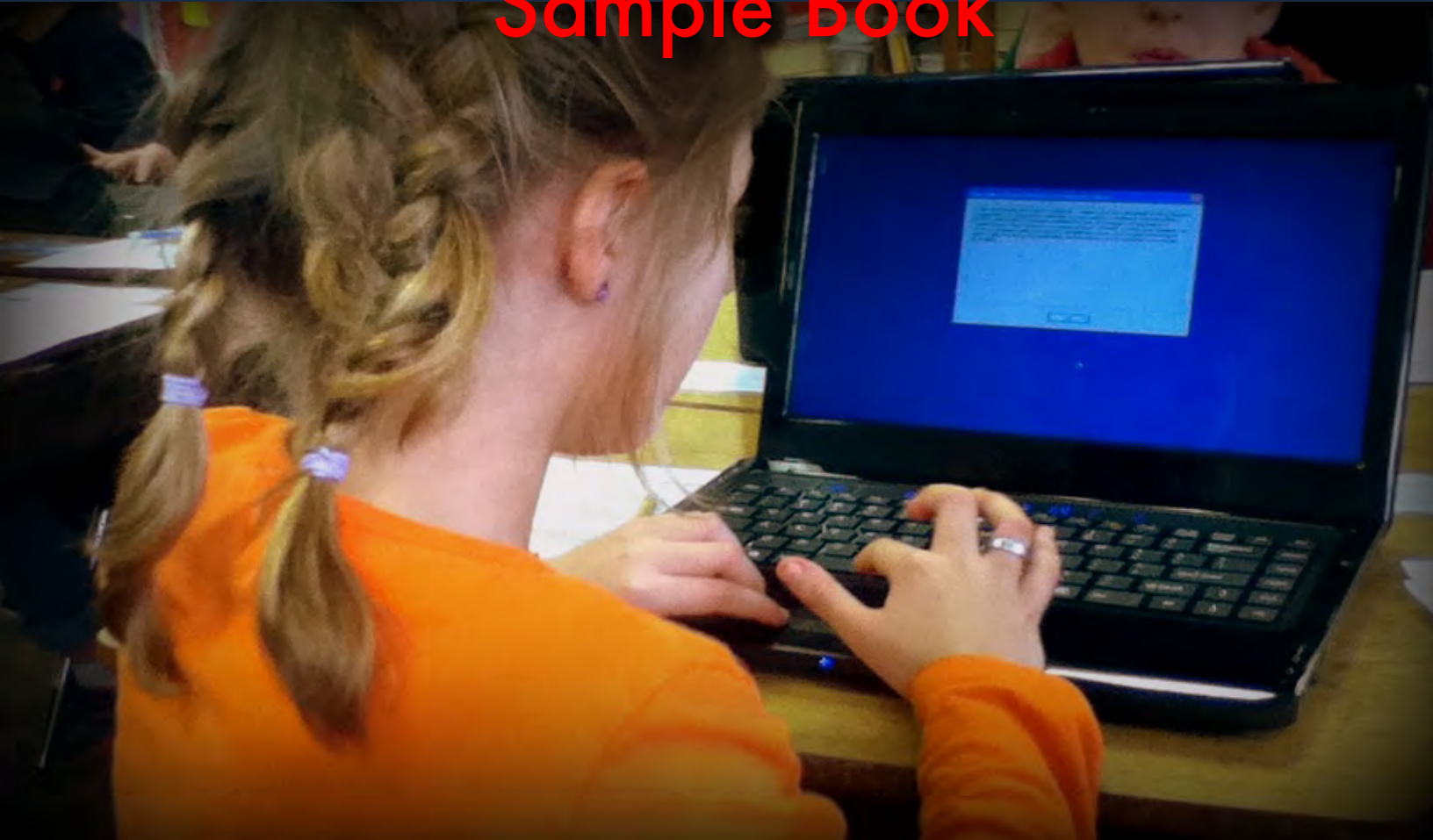
AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Describe the 21st century learning framework and ISTE standards
- Identify the core subjects and themes covered as part of the 21st century learning framework
- Explain the main types of skills within the learning and innovation area of the 21st century learning framework and the related ISTE standards
- Explain the main types of skills within the information, media and technology area of the 21st century learning framework and the related ISTE standards
- Explain the main types of skills within the life and career skills area of the 21st century learning framework and the related ISTE standards
- Choose learning methods that match ISTE standards

CHAPTER THREE

Student-Centered Learning Technologies

Sample Book



“We need technology in every classroom and in every student and teacher’s hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world.”

-David Warlick

CHAPTER OBJECTIVES

AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Setup and use a wiki for student-centered learning
- Create and configure a class blog
- Use Google Drive applications to support student-centered learning
- Explain how different technologies can support location-based learning, including global positioning systems, augmented reality and mapping tools
- Create a quick response code to link to learning materials
- Create a personal or class website

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

1. LEARNER

a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.

2. LEADER

b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.

c. Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.

3. CITIZEN

b. Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.

4. COLLABORATOR

a. Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.

b. Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.

c. Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.

5. DESIGNER

b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.

c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

6. FACILITATOR

a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.

b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.

d. Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.

7. ANALYST

a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.

Wikis

The first student-centered learning technology we will introduce is the wiki. Wikis have been around for a number of years, the first wiki was “WikiWikiWeb,” which was developed and implemented by Ward Cunningham in 1995 (Leuf & Cunningham, 2001). Wikis are technologies that allow the editing of a single website, or group of pages, by multiple people (Ebersbach et al., 2008; Leuf & Cunningham, 2001). They allow quick and easy page editing by a variety of people on a website that is publicly viewable. The word “wiki” is a Hawaiian word, which means “quick.” Take a look at some examples of wikis that have been setup and used for learning activities by clicking on the following web links.

Web Link



"What Else" Class Wiki

Web Link



Señora Gruettner's Spanish Wiki

Most wikis can be configured to only allow certain users to edit pages in the wiki, but some wikis can also be configured to allow unregistered guests to edit pages. If you create a wiki, be sure to be careful with these settings as you don't want to have someone delete your content or fill your wiki with spam and advertisements. However, wikis do include features that allow you to easily revert to a previous version of the content and eliminate more recent changes if unauthorized changes to the wiki were to occur.

Although wikis have been around for a while, they are still popular as an educational tool. There are many different wiki programs that can be downloaded and installed on a web server for free. Some of these include mediawiki, dokuwiki and pmwiki.

However, installing, properly configuring and maintaining one of these wiki applications on a web server requires a high level of technology skills and expertise.

Most teachers choose to use a wiki service on a website where creating a wiki is as easy as signing up on the site. Probably the most popular website that offers wiki services for educators was Wikispaces, which shut down in 2018. An alternative to Wikispaces for setting up traditional educational wikis is [pbworks](#) which offers educational pricing and a limited free wiki service. Also, Google Docs is a free tool that allows for easy collaboration between students. We'll discuss Google Docs later in this chapter.

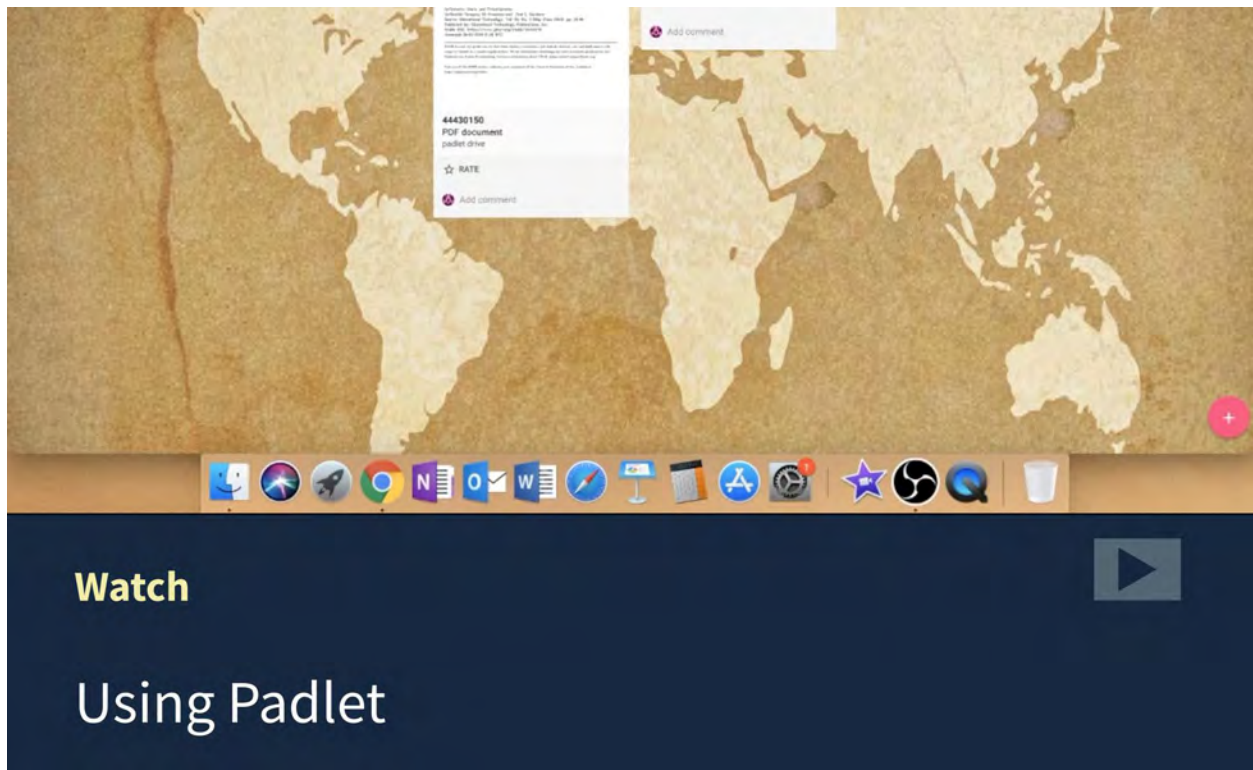
New wiki tools

Because opportunities for online collaboration are changing to become more media rich, many teachers are embracing wiki-like tools that allow students to post media responses and presentations in a single location. Padlet and Flipgrid are two such tools that make it easy for multiple students to post media to one place. With Padlet, a teacher can easily create a space to which students can post text, files, pictures, videos and more. Using Flipgrid, a teacher can create a single place to which students can post multiple video responses. Click on the following links and view the lessons to learn more about Padlet and Flipgrid.

Web Link



[Padlet Website](#)



Spanish 1

Active | Share Grid | Grid Actions

2 Topics + New Topic

0 videos 0 views 0 engagement

Export Data | Search in Grid

Pin	Topic Name	Flip Code	Display Date	Engagement	Activity
	Ideas				Hidden Actions
	Let's Connect!	b9beac95	Mar 27, 2019		Hidden Share Actions

Add a New Topic, or visit the Topic Discovery Library to explore Topics from educators around the world.

Watch

Setting up Flipgrid

Greg Francom
Display Name: Greg F.
Mar 27, 2019 2:33pm 7 views

Flipgrid.com/96926438

Grading Rubric:
Select grading for your student based on this rubric for the Topic.

4	Ideas	5	Performance

Comments
Leave a feedback comment to further describe your assessment of Greg's response to the Topic.

Very nice use of verbs.

Copy Feedback Link | Email Feedback to Student

Watch

Student Responses on Flipgrid

Using a wiki for student-centered learning

Wikis are powerful tools for learning because they can be configured to allow students to collaboratively post content. Teachers can design projects and activities in which students post text, pictures and even videos on a designated subject to a single location. A particularly powerful form of learning using wikis is “jigsaw learning,” in which each group of students in a classroom may learn about a different aspect of the same subject. The groups of students can post what they have learned online and when each group is done, the result is a central online location covering all of the different aspects of the subject.

USING A WIKI IN EDUCATION – SOCIAL STUDIES

In a social studies unit on pioneers, a teacher could assign groups of students to learn about aspects of pioneer life including transportation, shelter, food, traditions, the Homestead Act, and more. The teacher could have an online location setup with pages for each of these aspects of pioneer life. Then each group of students could post what they learned. When each group has posted their information, the result would be a full site featuring pages on the aspects of pioneer life. Each student can then learn from what other students posted.

Other Wiki Tools

Here are a few other useful wiki-like websites and apps that allow various users to add and edit words and pictures in a collaborative space. [Pinterest](#) allows users to “pin” a picture with a link to the website where the picture came from to a collaborative board. This social media site has allowed users to easily share quality ideas and links with each other. [Seesaw](#) is an iPad app that allows students to easily create text, graphics and other media and submit to the teacher or post to a class journal. This app makes it easy to organize and share student work.

Mapping Tools

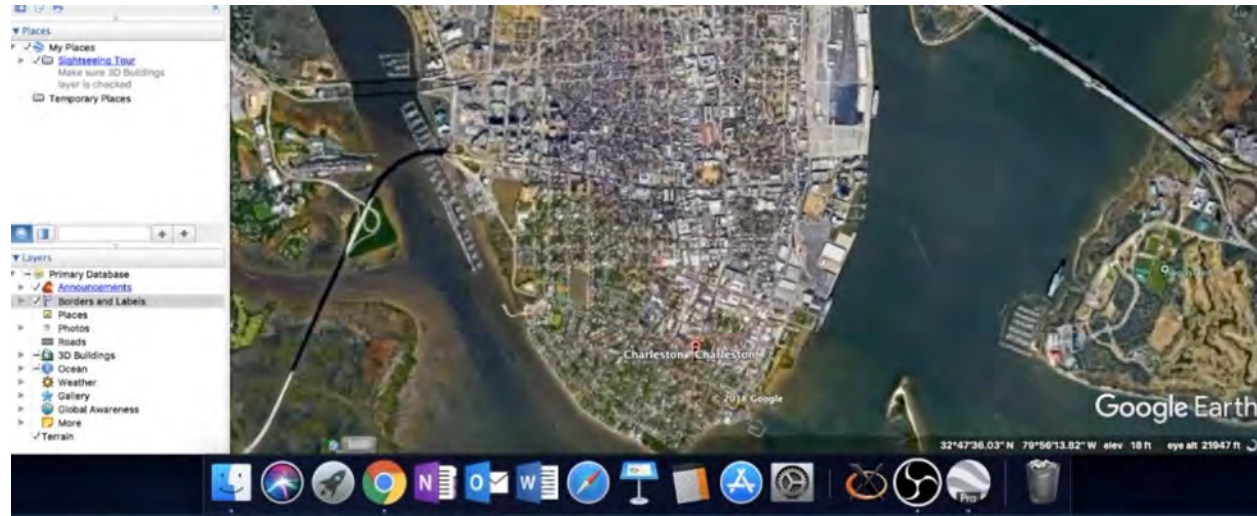


Perhaps the most common Information Age location-based learning experiences use one of a set of available online maps. From Google Maps to Bing Maps to Apple Maps, a variety of sites are available to use to navigate around the world and find more information about locations. These online maps can be used in education to provide students with enhanced visuals of locations for learning purposes. Google Earth is an excellent free mapping tool that can be used for location-based learning experiences.

Google Earth uses the same technology as Google Maps, but adds many features to what is available on Google Maps for free. Follow the web link below to access the Google Earth website and watch the lesson which shows you how to use Google Earth.

Web Link

Google Earth Website



Watch

Using Google Earth

Teachers have taken advantage of the affordances of Google Earth to support learning in many different ways. Perhaps the simplest use of Google Earth in the classroom involves showing key locations featured in subject matter content to students on an interactive whiteboard. However, here are some more sophisticated ideas for using Google Earth in education.

IDEAS FOR USING GOOGLE EARTH IN EDUCATION

- Have students follow the locations of an historical event using Google Earth and make note of the geography, terrain and other features from each location.
- Explore the main location of a literary work by viewing the location and making note of the setting, culture and geography for the work.
- Follow the journey of the characters in a literary work with students by showing journey locations, noting distances and making other observations that relate to the story.
- Learn more about the culture and language in a foreign country by zooming in on a part of that country and also going to street view to see pictures of people, buildings and signs.

An additional student-centered idea for teaching mathematics is to have students measure objects and distances using the Google Earth ruler and then calculate volume, circumference or use other mathematical formulas. Several interesting objects in Google Earth can be used including:

- A cylindrical building in Singapore (circumference, diameter, radius)
- The triangular Flatiron building in New York (angles, lengths and hypotenuse)
- The pyramids at Giza (volume, length and width)

Using the link below, take a look at the Google Earth Education website to get more ideas for using Google Earth for learning.

Web Link



Google Earth Education Website

CHAPTER FOUR

Project-Based Learning with Technology

Sample Book



“Teachers need to stop saying, ‘hand it in,’ and start saying, ‘publish it,’ instead.”

-Alan November

CHAPTER OBJECTIVES

AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Discuss the essential elements of project-based learning
- Select appropriate technological tools and applications for a project
- Create a plan for project-based learning in your classroom
- Teach and model quality presentation skills, including planning, presence, visual design and voice
- Create a recorded online presentation for students to watch
- Teach and model quality video production and editing techniques
- Explain copyright and fair use as they relate to project-based learning and classroom activities
- Describe the role that open digital media resources and open-source software can play in project-based learning

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

1. LEARNER

a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.

3. CITIZEN

b. Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.

c. Mentor students in the safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.

d. Model and promote management of personal data and digital identity and protect student data privacy.

4. COLLABORATOR

a. Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.

c. Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.

5. DESIGNER

a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.

b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.

c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

6. FACILITATOR

a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.

b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.

c. Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.

d. Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

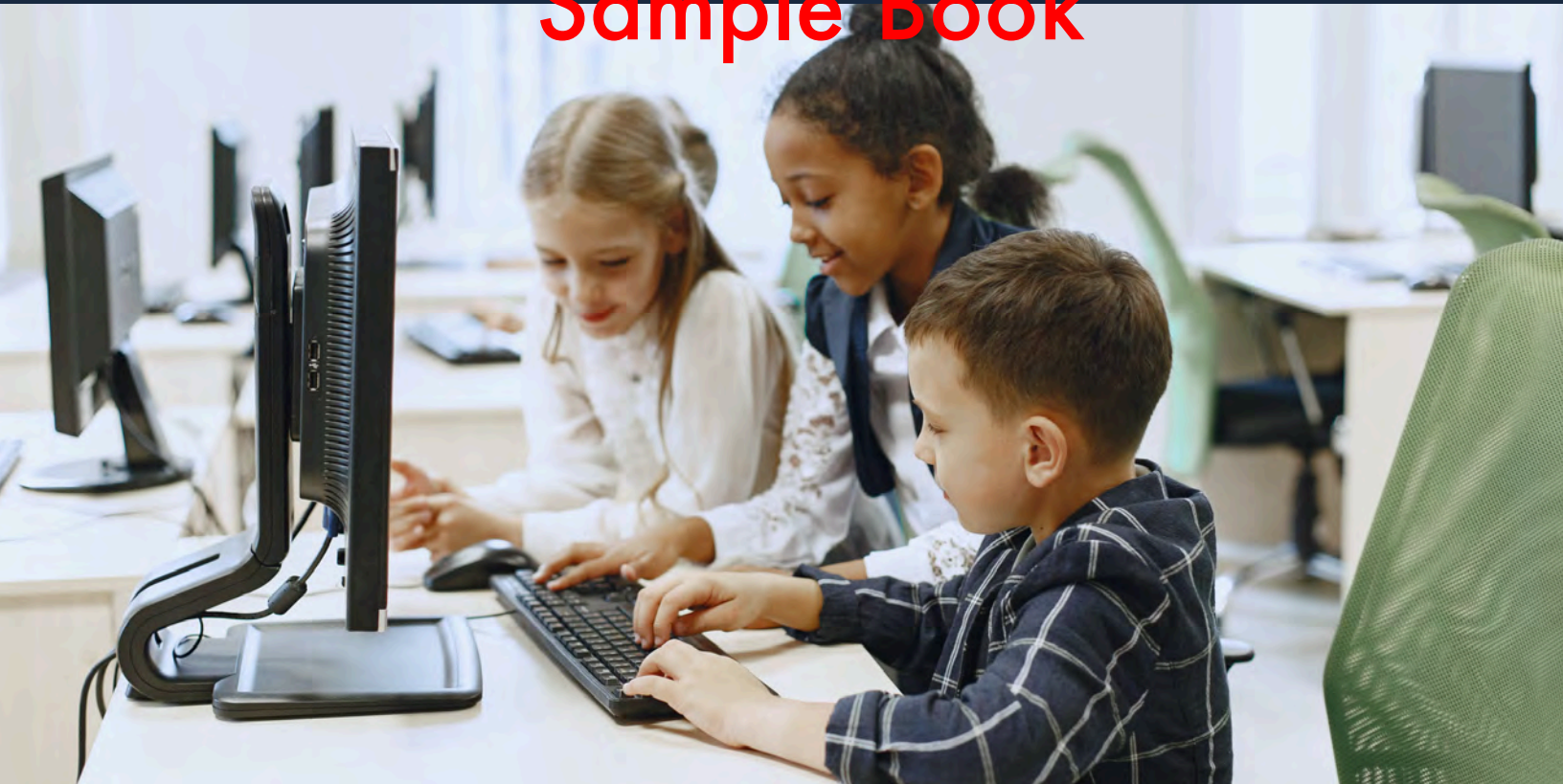
7. ANALYST

- a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.
- b. Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.
- c. Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.

CHAPTER FIVE

Resource-Based Learning with Technology

Sample Book



“Teachers need to integrate technology seamlessly into the curriculum instead of viewing it as an add-on, an afterthought, or an event.”

-Heidi Hayes Jacobs

CHAPTER OBJECTIVES

AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Describe the importance of resource-based learning in the Information Age
- Find, evaluate and select appropriate learning resources for student learning
- Create quality resource-based learning activities for students
- Model and teach key practices for determining the accuracy of an information source
- State the steps students follow as they complete an information seeking activity
- Explain the children's internet protection act and its effect on schools
- Develop and implement quality student information seeking activities

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

1. LEARNER

b. Pursue professional interests by creating and actively participating in local and global learning networks.

2. LEADER

b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.

c. Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.

3. CITIZEN

b. Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.

4. COLLABORATOR

b. Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.

d. Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.

5. DESIGNER

a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.

b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.

c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

6. FACILITATOR

- a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
- b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.

CHAPTER SIX

Active Learning with Technology

Sample Book



“Technology will not replace great teachers, but technology in the hands of great teachers can be transformational.”

-George Couros

CHAPTER OBJECTIVES

AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Define active learning
- Use a classroom response system for active learning
- Describe components of interactive whiteboard systems
- Use and troubleshoot an interactive whiteboard
- Select and use an interactive whiteboard software application to create an engaging presentation
- Support active learning with an interactive whiteboard
- Create interactive whiteboard presentations and classroom response system activities that support higher-order learning

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

2. LEADER

- b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.
- c. Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.

4. COLLABORATOR

- b. Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.

5. DESIGNER

- a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
- b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.
- c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

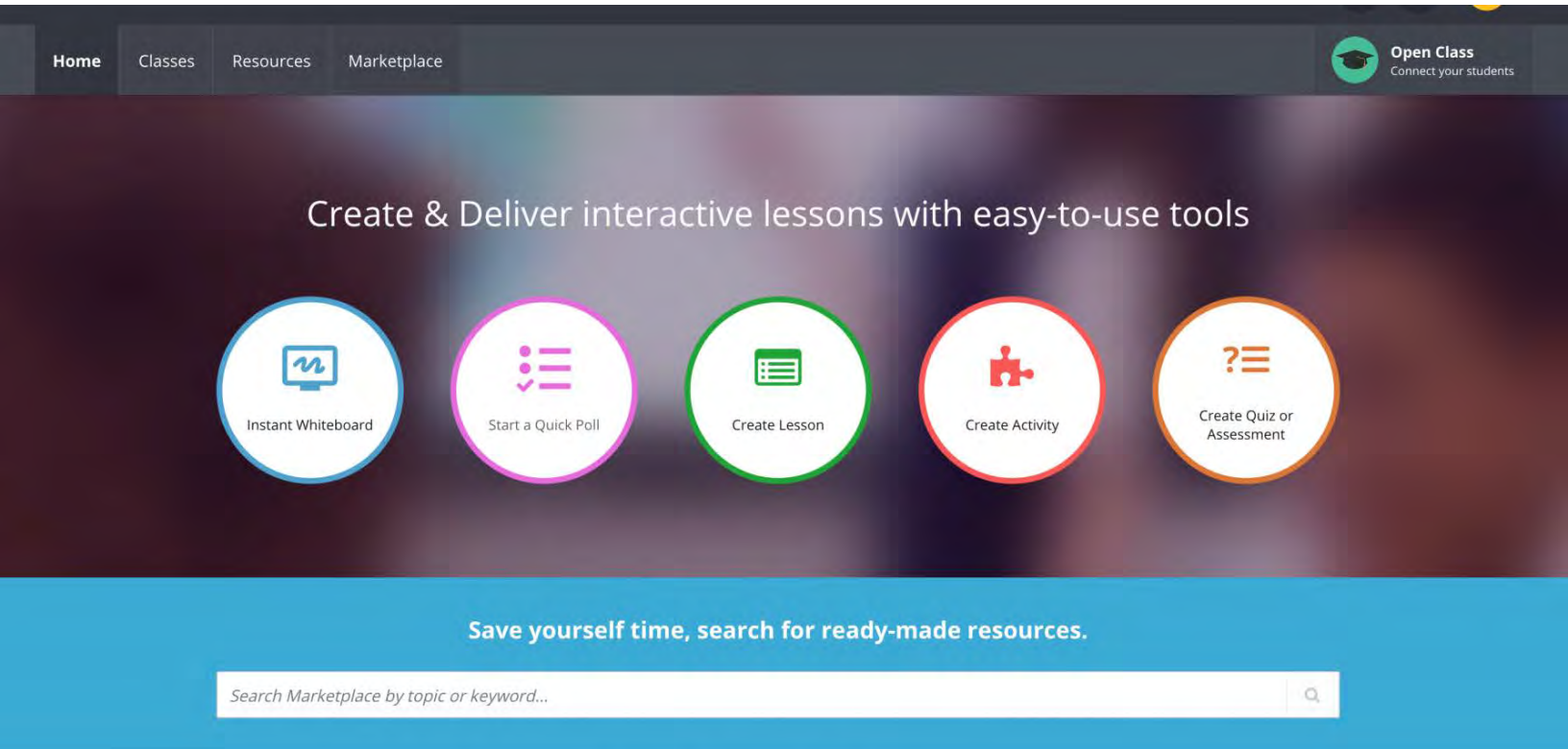
6. FACILITATOR

- a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
- b. Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.

7. ANALYST

- a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.
- b. Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.

ClassFlow



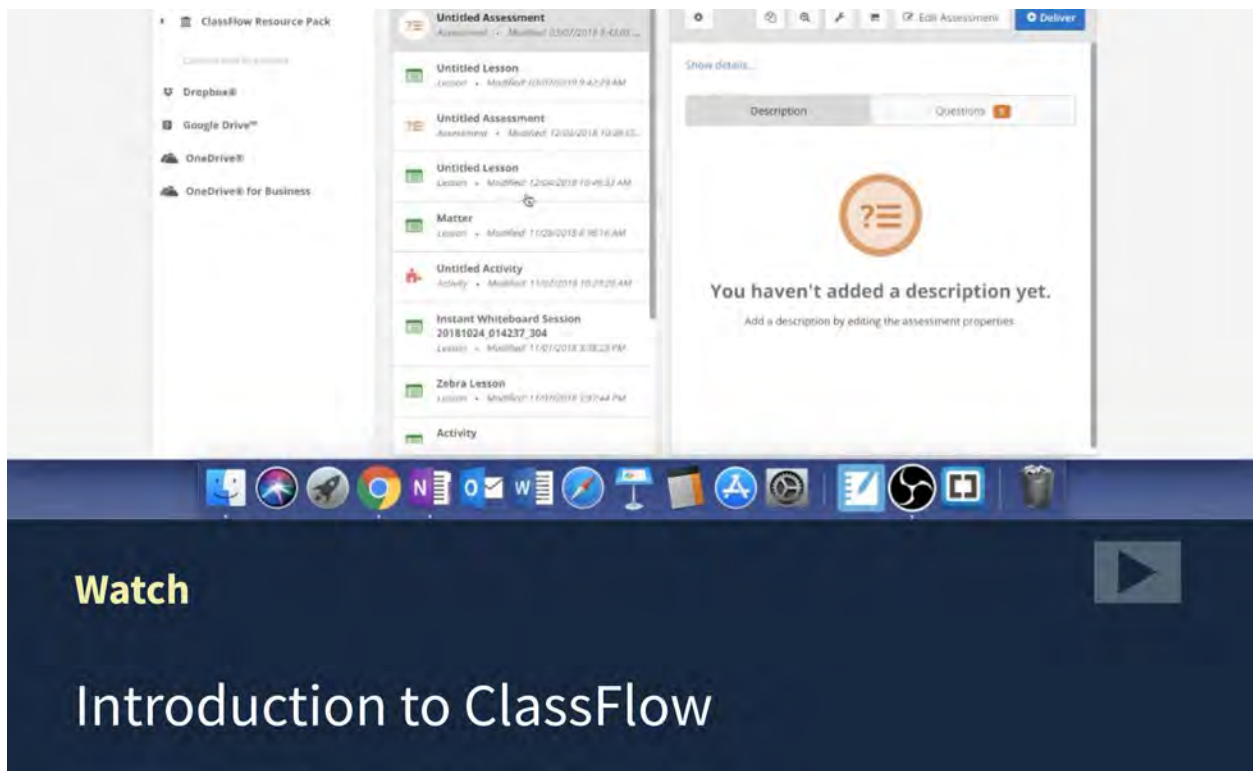
ClassFlow is an online interactive whiteboard software application provided by Promethean. It has largely replaced the ActivInspire interactive whiteboard software application, which used to be provided with Promethean brand interactive whiteboards. It is free to setup an account at classflow.com and use ClassFlow, which works on any interactive whiteboard. As with Smart Notebook, ClassFlow adds interactive elements that are not available in other presentation software applications.

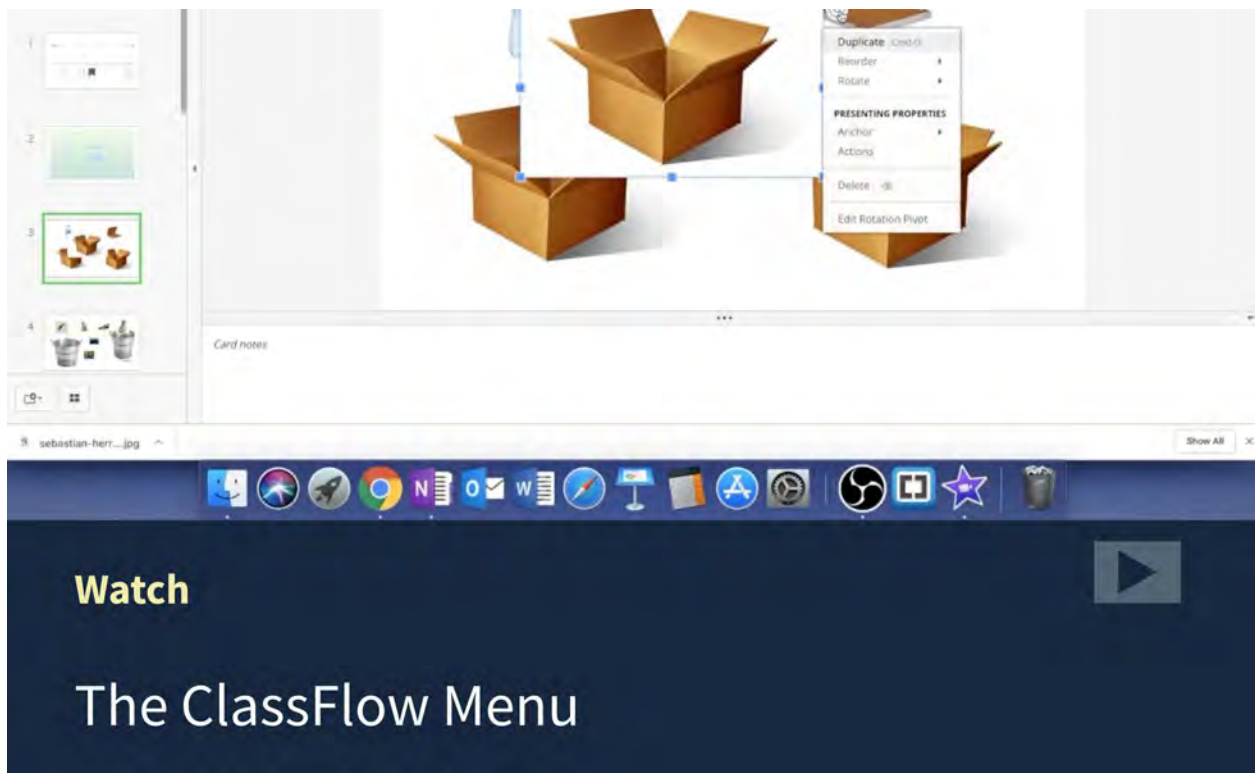
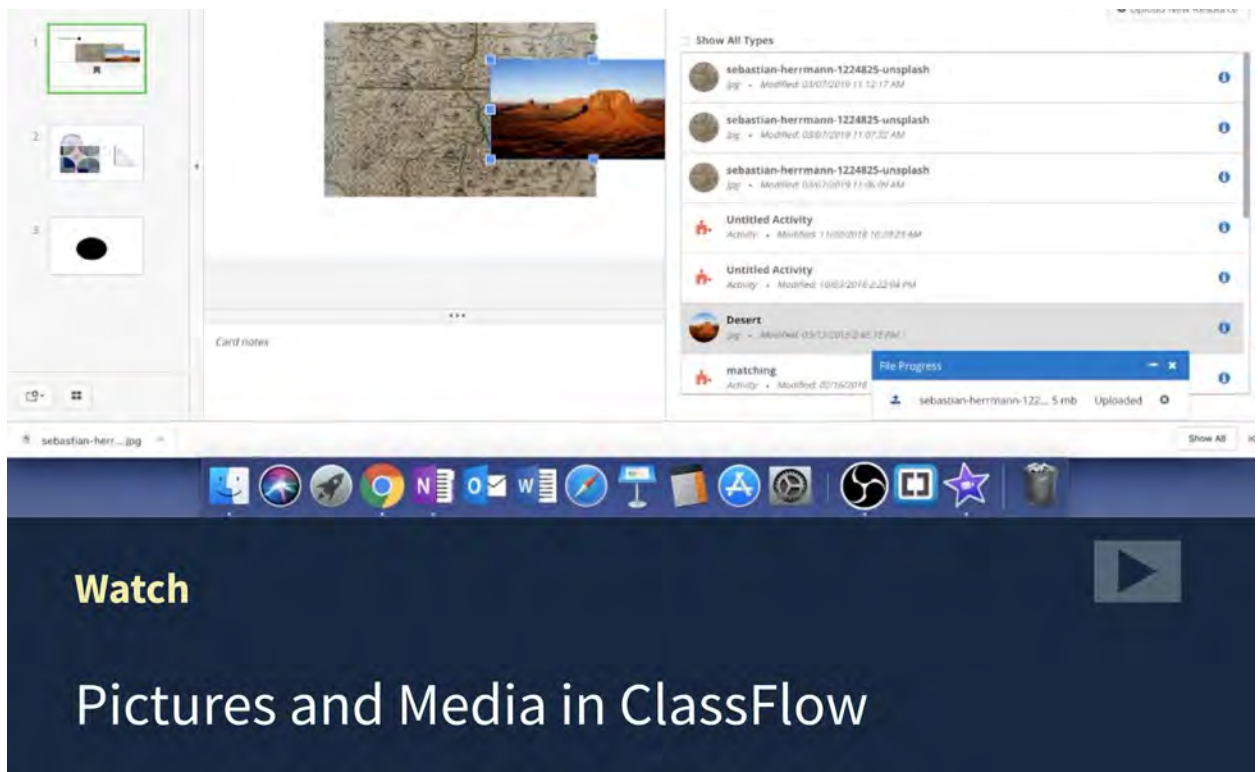
Web Link

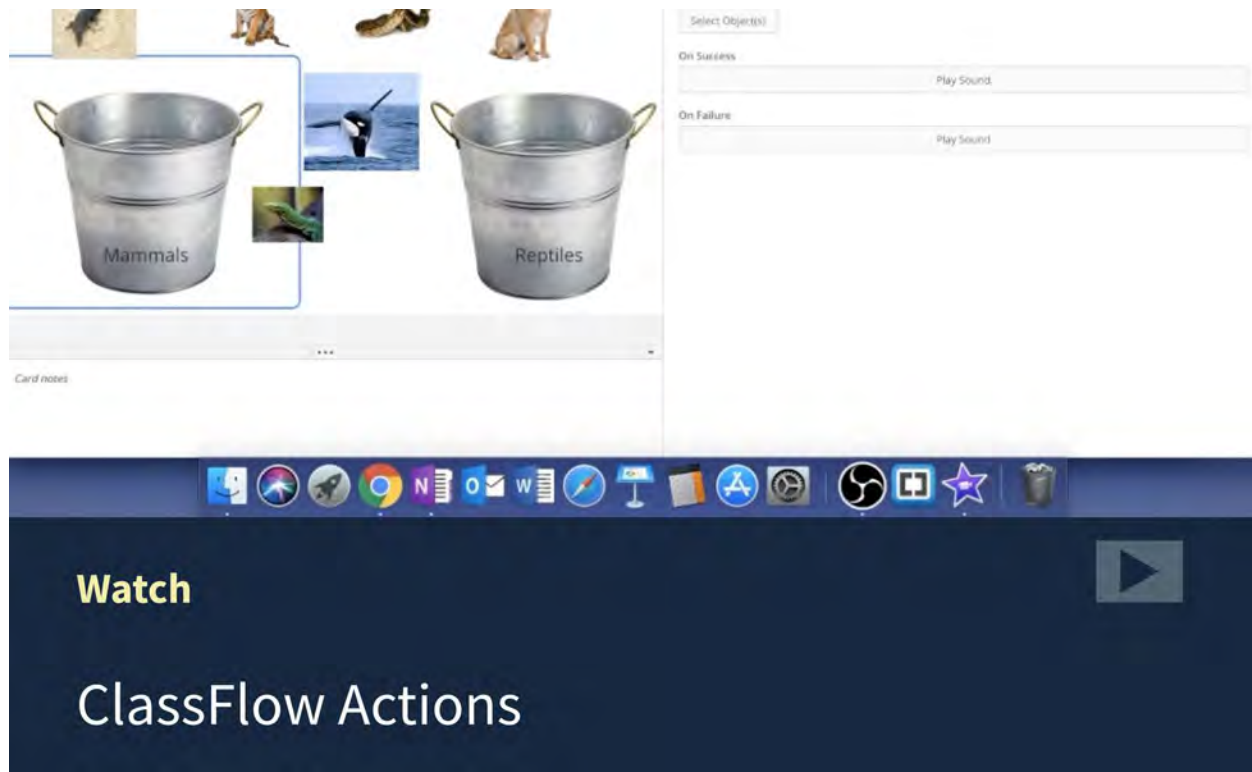
Classflow Website



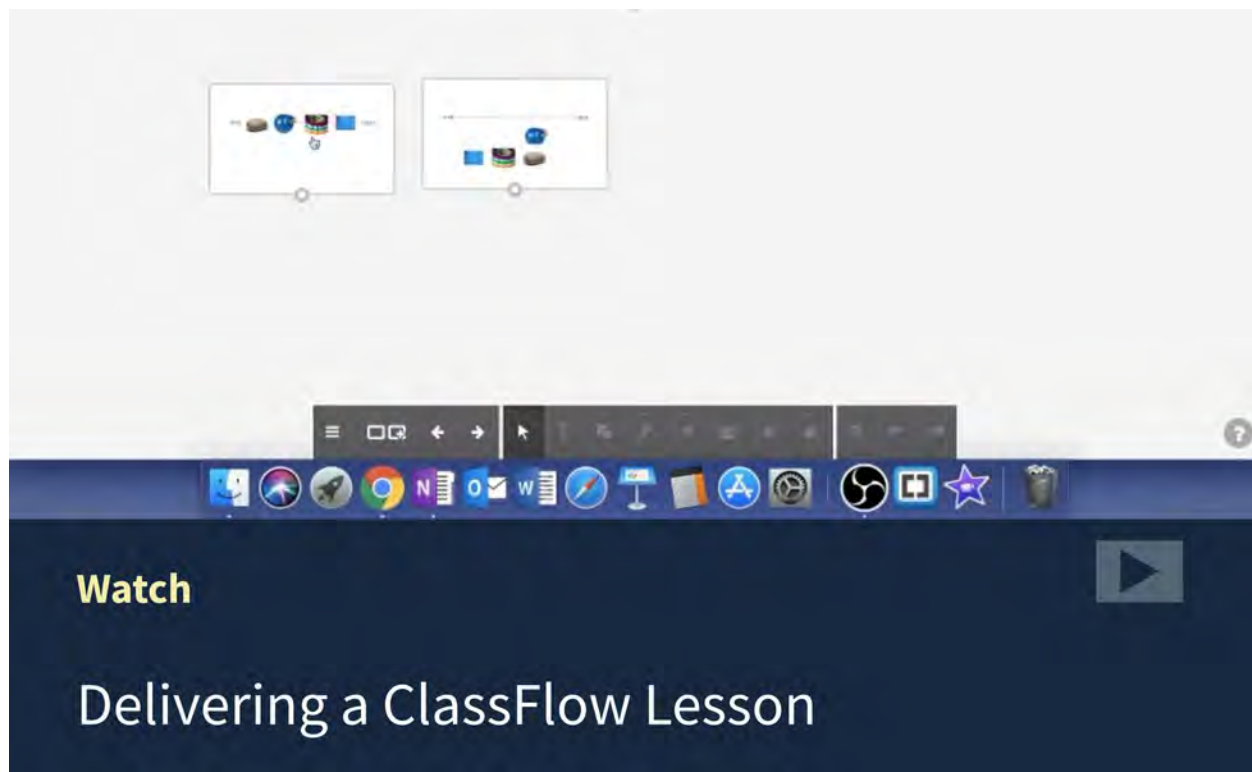
ClassFlow allows the user to create files with pages that can be shown in sequence as part of a lesson. Activities that support student engagement and learning can be developed and implemented with ClassFlow. Watch the following lessons to learn more about how to work with ClassFlow.







One of the greatest features of classflow is that you can deliver activities directly to student devices. In this way, you can have one student come up to the interactive whiteboard and complete an activity, while the other students in the class follow along and complete the same activity on their own devices. Watch the following lesson that shows how to deliver a ClassFlow lesson to students.



ClassFlow lessons and activities that were created by other teachers can be found in the “Marketplace” tab at [classflow.com](https://www.classflow.com). You can also share your own ClassFlow lessons and activities to this marketplace.

CHAPTER SEVEN

Distance Learning

Sample Book



“We need to bring learning to people instead of people to learning.”

-Eliot Masie

CHAPTER OBJECTIVES

AFTER READING THIS CHAPTER, YOU WILL BE ABLE TO:

- Explain key concepts related to distance learning
- Discuss the major reasons that educational institutions provide distance learning
- Plan distance learning activities that follow effective practices for student learning
- Identify and learn to use distance learning tools for synchronous distance learning
- Conduct an effective synchronous distance learning session

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

1. LEARNER

- a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.
- c. Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.

2. LEADER

- a. Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders.

3. CITIZEN

- a. Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationships and community.

4. COLLABORATOR

- c. Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.

5. DESIGNER

- a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
- b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.
- c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

6. FACILITATOR

- a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
- b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.

ISTE STANDARDS FOR EDUCATORS IN THIS CHAPTER

7. ANALYST

- a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.
- b. Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.
- c. Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.