

Digital Integration Strategies for Blended Learning

Mathematics

| Strategy | Explanation/Integration | Resources |
|-------------------------------|---|--|
| Virtual Manipulatives | Supports hands-on activities for learning mathematics foundations. Offers a flexible environment for exploring complex concepts. Provides a concrete representation of abstract concepts. | http://www.shodor.org/interactivate/ http://nlvm.usu.edu/en/nav/vlibrary.html http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html https://www.mathplayground.com/math_manipulatives.html |
| Inquiry | Inquiry Maths is a model of teaching that encourages students to regulate their own activity while exploring a mathematical statement called a prompt. Inquiries can involve a class on diverse paths of exploration for understanding. Students take responsibility for directing the lesson with the teacher acting as the arbiter. Students can present their prompts and responses in digital form such as PowerPoint, Sway, Excel, or Video. | http://www.inquirymaths.com/ |
| Digital Graphing and Plotting | Ideal for Algebra investigations allowing students to transform functions and create graphs. | https://www.desmos.com/ |
| Microsoft Excel | Allow students to create Excel worksheets to solve problems with repeated change. | Apply Percentages to forecast change Create a Balance and Spending Spreadsheet Make and Input/Output Chart Use for survey, data, and trend graphing Track and graph real-world statistics |
| Video Tutorials | Show a video to introduce or reinforce a topic or skill. Lead a classroom discussion on the topic and allow students to practice the skill while providing academic feedback. Assign practices exercises and projects to strengthen understanding. | https://www.khanacademy.org/ Have students recreate their own tutorial videos using various media such as cartoon or anime, music or theater, etc. |

Digital Integration Strategies for Blended Learning

Reading/Language Arts

| Strategy | Explanation/Integration | Resources |
|--------------------------|--|---|
| Presentation | Create presentations to share information in a new and exciting way using digital media. *Assign each student a topic, vocabulary word, question to answer and add one slide to a class presentation. | http://www.pixiclip.com/beta/ https://prezi.com/ http://www.voki.com/ PowerPoint |
| Vocabulary or Word Study | Create a vocabulary glossary using Sway, PowerPoint or Word. Students should include the definition, synonyms and/or antonyms, images, and examples. Make a T-chart or Cornell Notes Chart to add important ideas and notes from class. | PowerPoint Sway Word |
| Test Review | Create a quiz to review concepts from a lesson or unit study. Create Study Guide using presentation media Make a game like Jeopardy or Who Wants to be a Millionaire with questions/answers set | Forms Sway or PowerPoint PowerPoint |
| Research | Teach students how to successfully research on the internet using scan and skim techniques, learn how to search and use appropriate resources, and summarize ideas without plagiarism. *Create online notecards instead of paper index cards to organize resources and information. | http://www.madlylearning.com/studentresearch/ * https://www.supernotecard.com/ *Sway, PowerPoint, Word |
| Journaling | Use Word, Sway, PowerPoint or online journaling tools to create a digital journal. Ideas for journaling: http://www.lifehack.org/articles/technology/5-online-journaling-tools.html | https://penzu.com/ https://evernote.com/ |
| Writing | *Create a digital Writing Handbook with grammar rules, tips, creative helpers, examples of excellent writing, a Wonder List for topics of writing both fiction and nonfiction, and unique words for spicing up text. **Write Outlines, Essays, Themes, and Research papers using proper research styles such as APA and other citation processes. | *Sway, PowerPoint, Word ** https://www.diigo.com/index https://owl.english.purdue.edu/owl/resource/560/01/ http://www.crlsresearchguide.org/NewOutlineMaker/NewOutlineMakerInput.aspx |

Digital Integration Strategies for Blended Learning

| Social Studies | | |
|--------------------------|--|---|
| Strategy | Explanation/Integration | Resources |
| Movement | Present a current or historical problem facing society and have a round-table discussion to share opinions. Divide into groups to research solutions. Students will complete activities to create a presentation or model of their solution. | Video Sources (YouTube, TeacherTube, History Channel, National Geographic, etc.) Sway or PowerPoint |
| Brochure | Create a brochure to highlight geography, historical events and/or people | PowerPoint Word |
| TimeLine | Use tools to create a timeline of chronological events in an era or time-period, to outline important battles in wars, to clarify change over time, etc. | Excel PowerPoint or Sway Word |
| Virtual Debate | Students can become an online expert on a topic to research and provide personal views and alternative viewpoints. Students can debate their topics using a blog post, video, podcast or mock debate with a classmate(s). | PowerPoint or Sway Word Video Presentation Tools |
| Shadow Box Presentations | This site provides the tools for you to build up an argument or description of an event, person or historical period by placing items in a virtual shadow box. | http://museumbox.e2bn.org/ |
| Presentation | Assign students a vocabulary word, event, battle or war, treaties, Presidents, important historical figures, etc. Each student will create a slide to present their information as part of a class presentation file. | http://www.pixiclip.com/beta/ https://prezi.com/ http://www.voki.com/ PowerPoint, Sway |
| Current Events | For current events and news, use sites like CNN Student News that cover a current issue or topic in depth. Have students write a response and keep a journal of current events. | http://www.cnn.com/studentnews/ https://www.dogonews.com/ https://www.washingtonpost.com/lifestyle/ki/dspost/?utm_term=.c67b5a45f936 |

Digital Integration Strategies for Blended Learning

Science

| Strategy | Explanation/Integration | Resources |
|---------------------------------|---|--|
| Movement | Present a scientific issue or problem facing society and have a round-table discussion to share opinions. Divide into groups to research solutions. Students will complete activities to create a presentation or model of their solution. | Video Sources (YouTube, TeacherTube, etc.) Sway or PowerPoint https://www.khanacademy.org/#/science |
| Presentation | Assign students a vocabulary word, concept, invention or element from the Periodic Table. Each student will create a slide to present their information as part of a class presentation file. | http://www.pixiclip.com/beta/ https://prezi.com/ http://www.voki.com/ PowerPoint, Sway |
| Vocabulary or Word Study | Create a vocabulary glossary using Sway, PowerPoint or Word. Students should include the definition, synonyms and/or antonyms, images, and examples. Make a T-chart or Cornell Notes Chart to add important ideas and notes from class. | PowerPoint Sway Word |
| TED Talks | Have students watch a TED expert explain a concept. Have students research a concept or topic from a current classroom study and create their own TED Talk. | https://TED.com |
| Research | Teach students how to successfully research on the internet using scan and skim techniques, learn how to search and use appropriate resources, and summarize ideas without plagiarism. *Create online notecards instead of paper index cards to organize resources and information. | http://www.madlylearning.com/studentresearch/ * https://www.supernotecard.com/ *Sway, PowerPoint, Word |
| Online Science Fair Experiments | Use sites to create experimental simulations, experiments and STEAM activities. | https://phet.colorado.edu/ http://mw.concord.org/modeler/ http://www.design-simulation.com/ip/index.php http://www.exploratorium.edu/exhibits/nf_exhibits.html |

Digital Integration Strategies for Blended Learning

Foreign Language

| Strategy | Explanation/Integration | Resources |
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| Translation | Group students and have them find an appropriate video online. Students can watch the video with or without sound/subtitles. Students will write a dialogue or script for the video and translate into the language of study. Students will practice and record/dub sound over the video or create a new video. | http://www.pixiclip.com/beta/ https://prezi.com/ http://www.voki.com/ |
| Vocabulary or Word Study | Create a vocabulary glossary using Sway, PowerPoint or Word. Students should include the definition, synonyms and/or antonyms, images, and examples. Students can add pronunciation with audio, video, and/or text. Make a T-chart or Cornell Notes Chart to add important ideas and notes from class. | PowerPoint Sway Word |
| Conjugation | *Create a digital Conjugation Handbook with grammar rules, tips, creative helpers for learning conjunctions and other language idiosyncrasies. In Excel, have students create If, Then formulas to create conjugation tables and helpful lists. | Sway, PowerPoint, Word, Excel https://www.diigo.com/index |
| Foreign Language News Sources | Provide an authentic and relevant language and culture learning environment with current events. News in the target language affords the student a fascinating glimpse into the everyday life and attitudes of people who speak it. | http://www.fluentu.com/blog/french/learn-french-news/ http://www.countryreports.org/country/Spain/news.htm http://www.cnn.com/americas |
| Authentic Materials | Teach language and culture using authentic materials such as news, music videos, movies, TV, etc. This ensures that materials are up-to-date and relevant which makes learning more meaningful to students. | http://www.fluentu.com |
| Writing | Have students keep a journal, create a newsletter, brochure or pamphlet of culture such as holidays, foods, biographies, travel, etc. in the language they are learning. | PowerPoint or Sway Word |

Digital Integration Strategies for Blended Learning

Exploratory/Specialty

| Strategy | Explanation/Integration | Resources |
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| Art or Product Gallery | Use Instagram to take pictures to show how students are meeting learning goals in your classroom. Students can take pictures and tag a caption or description | http://www.madlylearning.com/instagram-in-classroom/ |
| Flip Your Classroom | Give students access to course concepts through online modules. Students can prepare for class by watching a short video of course content then come to class to work on projects or products. | http://goanimate.com/ http://www.voki.com/ |
| Playlist | Have students find music, dance, theater, etc. examples and create a playlist to show how contemporary, modern, and past musical styles can be compared. Use playlists to show how past composers, compositions, theater, dance, etc. has influenced modern art, music, and/or performing arts. | http://hypster.com/create http://youtubelister.com/ https://www.diigo.com/index |
| Video Tutorials | Show a video to introduce or reinforce a topic or skill. Lead a classroom discussion on the topic and allow students to practice the skill while providing academic feedback. Assign practices exercises and projects to strengthen understanding. | Have students recreate their own tutorial videos using various media such as cartoon or anime, music or theater, exercise or sports drills and activities, etc. Use https://www.craftsy.com as an model. |
| Charting Data | Have students create a chart with formulas to track health such as heart rate, exercise, pedometer, or food diaries. Students with coding experience can create a program for the class. | Excel Word Coding Tools: https://github.com/ or https://codepen.io/ |