# Digital Tools to Empower 21st Century Learners

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@torreytrust

"The conversation has shifted from *whether* technology should be used in learning to how it can improve learning to ensure that **all students** have access to high-quality educational experiences."

-U.S. Department of Education



#### Universal Design for Learning Guidelines

#### AFFECTIVE NETWORKS: THE WHY OF LEARNING



#### Engagement

For purposeful, motivated learners, stimulate interest and motivation for learning.

#### RECOGNITION NETWORKS: THE WHAT OF LEARNING



#### Representation

For resourceful, knowledgeable learners, present information and content in different ways.

#### STRATEGIC NETWORKS: THE HOW OF LEARNING



#### **Action & Expression**

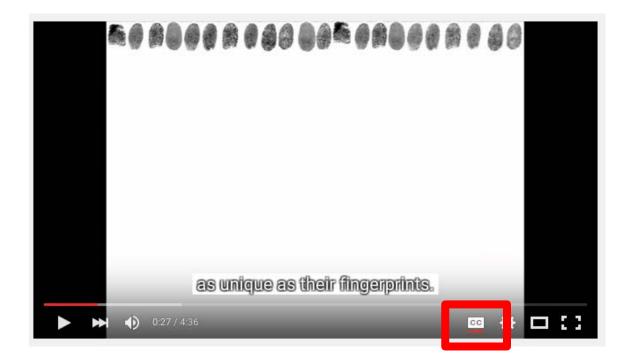
For strategic, goal-directed learners, differentiate the ways that students can express what they know.

Image credit: CAST: About Universal Design for Learning: http://www.cast.org/our-work/about-udl.html#.Xk\_0vmhKiiM



## Multiple Means of Representation

"Learning is impossible if information is imperceptible to the learner, and difficult when information is presented in formats that require extraordinary effort or assistance." (CAST, 2011)



Mitochondria Video:

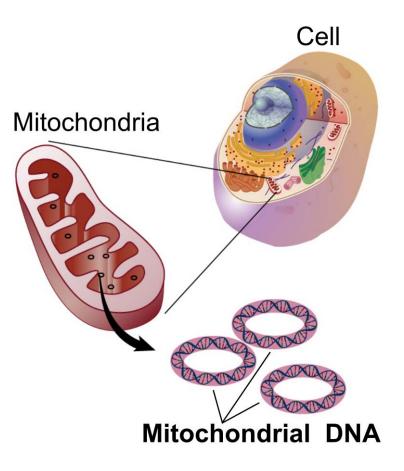


Mitochondria Text:



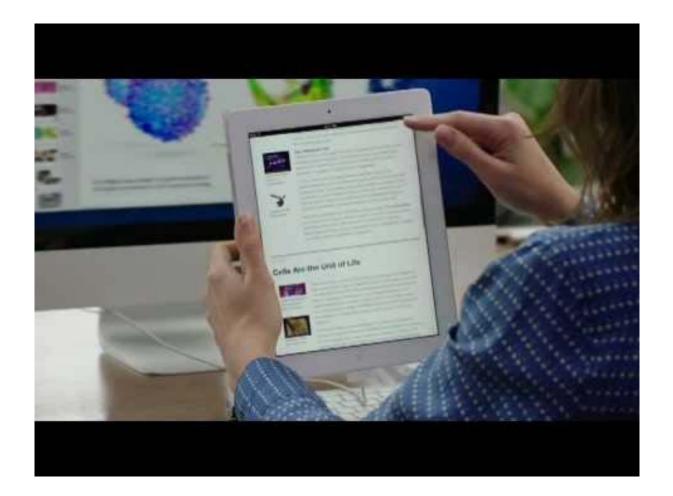
Mitochondria Audio:











#### 15 Science Projects for Book Creator Classrooms by Dr. Monica Burns

#### 0 <

1

#### 9 Animal Habitats

#### Students can create an ebook showcasing where an animal lives.

Your students can probably tell you a lot about where they live. As they learn about different animals and what makes each one special, students can design one page for a collaborative ebook that showcases the habitat of the animal they are studying. Each student page can be used for a multipage class ebook that describes the habitats of animals from around the world!

Students can create an animal habitat ebook to show their reader where an animal lives. **You might ask students to include:** 

- Name of an animal
- Description of where the animal lives
- Photo or illustration of a map
- A student video describing the habitat
- . A list of other animals that share the same habitat
- Key features that make the habitat unique

Providing students with choices for which animal they will study can help maintain engagement in the task. If you are studying a particular region with your students, you might provide a list of animals for them to choose from that relates to your learning goals. For example, if your students are studying the tundra, you might ask them to choose from a set list of animals like; an arctic fox, caribou, or ermine.

Giving students an audience for their work can take many forms. Your students can share their work with classmates, schoolmates or families. Alternatively, you might reach out to an organization that supports conservation of animals and share your creations with their team.



You might ask students to profile animal habitats in your community. Zebras of the Savanna

by Alyssa

A classroom scenario

#### https://bookcreator.com/2018/07/15-science-projects-for-book-creator-classrooms/

Yelp was right to fire entitled millennial who whined about... My Notebook > Quick Notes

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An open letter may not be the best way to air your grievances, as ex-Yelp employee Talia Jane demonstrated,

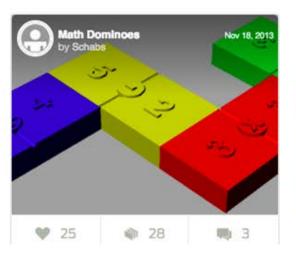




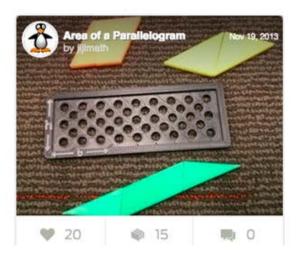












#### https://www.thingiverse.com/education

## Multiple Means of Engagement

"Even though we have one of the most diverse countries in the history of the world, and even though it's the 21st century, we still design our learning environments like textbooks for the average student." ~Todd Rose ("The Myth of the Average" TED Talk)



# Design open-ended activities that encourage student choice based on interest (in the topic and/or technology)

Activity Objective: Your task this week is to design a digital media product that enhances student learning. Your design should draw from what you learned in Week 2 about how digital media can enhance student learning and you should use one of the tools you explored and evaluated from Week 1.

Activity Instructions: Choose a topic that your students have struggled with (e.g., why do leaves change color?) or that helps you achieve a learning goal (e.g., my students are not engaged in writing arguments to support claims). Make sure the topic is simple and easy to demonstrate through digital media. For example,

# Hello!

#### I am Torrey Trust

I am here because....I am excited to learn from everyone in EDUC 593A

#### Superpower

My superpower is:

Writing







Q C Torrey Trust Log out

#### 10 Responses 0 Replies 0.8h Engagement

#### Random Slideshow



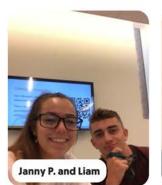










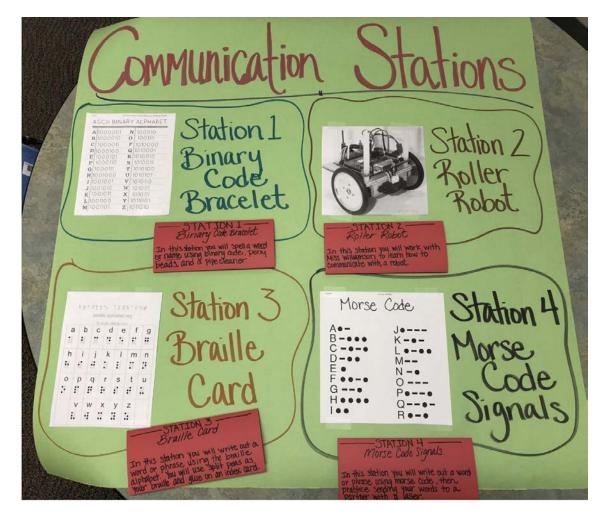












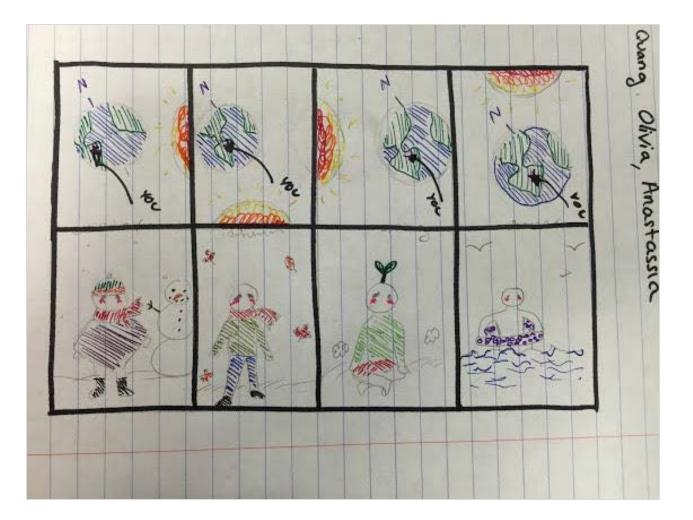
https://fictionalstoriesinscience.com/

#### Using Tech to Engage Learners



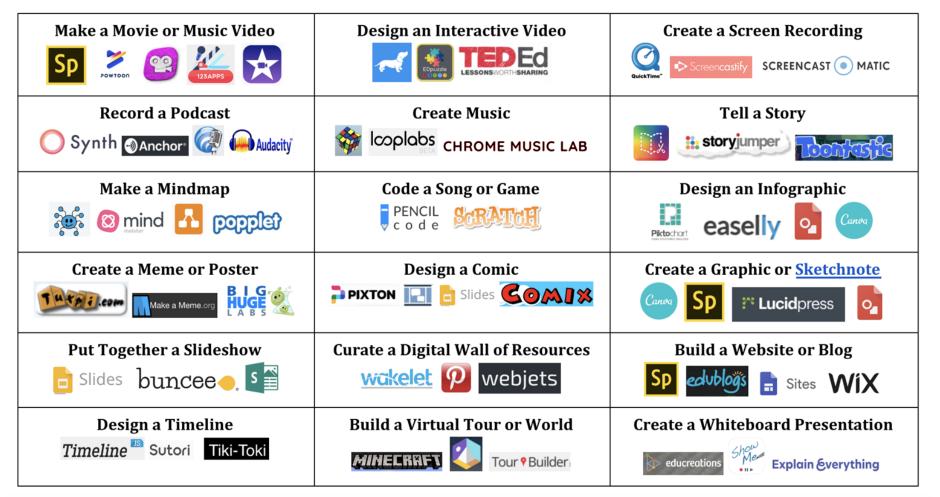
# Multiple Means of Action & Expression

"In reality, there is not one means of action and expression that will be optimal for all learners; providing options for action and expression is essential." (CAST, 2011)









bit.ly/DMchoiceboard

#### October Reading Response Activities

Read for 15 minutes each night. You need to complete at least 3 activities by Oct. 31, 2019. Color in the box when you have finished the activity. Directions

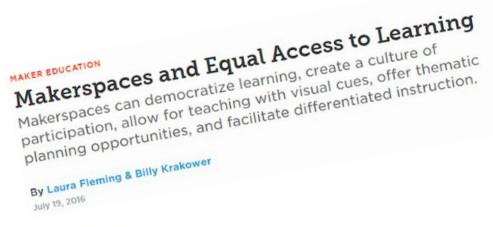


Add All Your Links HERE

AUDIO	SUMMARY	CHARACTER MAP
Record one of your favorite passages from the book using FlipGrid. In the recording, explai why you chose the passage.	Enter the title of the book and the author, with a different states of the book. Ad your (first name and teacher's name. The a brief summary of your reading on this Board. Be sure t include your name, the title and author of the book, and your teacher's name Lino Board	Use this <u>Goode Draw Template</u> a complete the Character Map on c of the main characters in the sto
VENN DIAGRAM Use this <u>Venn Diagram Template</u> compare YOU and a character in your reading.	STUDENT CHOICE You can choose to do any activi you wish - Just check with your teacher first!	ABOUT THE AUTHOR Create a Google Slide presentativ about the author of the book you reading Include other books by this autho your presentation. Sample Background Slide
BEST QUOTE Use paper or Use Google Draw of Google Slides to write and illustry one of your favorite quotes from book Be sure to include the boo title and why you chose this quot	WORD STUDY	CHARACTER TRAITS Create your own character trait g Use this Template. Character Traits List of Character Traits

4 C's Digital Learning Menu					
Communication	Collaboration	Critical Thinking	Creativity		
1. Summarize <b>your learning</b> using the digital tool of your hoice. Feel free to use multiple types of media. (ex: video, presentation, drawing, Twitter, mindmap)	3. With a partner, discuss the <u>topic/question</u> , then together create a digital representation of your thoughts, ideas, questions and reflections. (ex: Slides, Padlet, drawing, video)	5. Using the <b>image</b> provided by your teacher, infer what happened in the picture. Retell what you think happened in your own words and expressed with the digital tool of your choice. (ex: timeline, diagram, digital story)	7. List as many uses for a <u>paperclip</u> that you can think of in ten minutes. Share with a partner and push your team to think of 20 more!		
2. Teach a concept from <u>this</u> <u>week's learning</u> to another student using the digital tool of your choice. Feel free to use multiple types of media. (ex: screencast tutorial, YouTube video, diagram, podcast)	4. With your team, discuss possible solutions to the <b>problem</b> and develop a solution. Together, create a digital representation of your solution using the tool of your choice. (ex: sketch, diagram, Docs, Slides, Sites)	6. Research a current issue that you are passionate about. Using your research as evidence, craft an argument using the digital tool of your choice to assert your opinion with ideas to solve. (ex: writing, video, podcast)	8. Reinvent <b>school</b> ! If <b>school</b> could be anything you wanted it to, what would it look like? What would you learn? How would you learn it? Create a model of your new school using the digital tool of your choice.		

ShakeupLearning.com





## 'Makerspaces' for science instruction also proving helpful for English learners





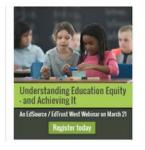




2 COMMENTS







### Maker Spaces: What Can They Do for ELL Students?

By Peter DeWitt on June 28, 2015 6:45 AM

#### Tweet Share 41

Today's guest blogger is John Spencer, an author and speaker who recently left the classroom after eleven years as a middle school teacher to become a full-time assistant professor at George Fox University.

Makerspaces: Hands-on Learning for Students of All Abilities

#### Library Resources | August 30, 2017



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-U.S. Department of Education

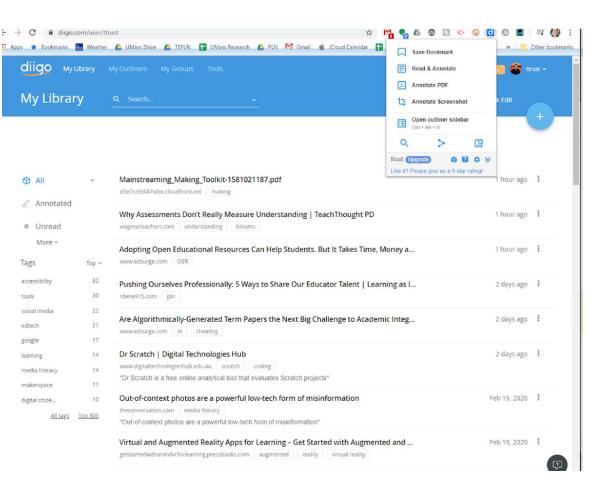


20 Digital Tools & Apps for Your Classroom

#### EXPLORE THE STUDENT STANDARDS

0	Empowered Learner	Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.	+
0	Digital Citizen	Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.	+
8	Knowledge Constructor	Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.	+
4	Innovative Designer	Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.	+
6	Computational Thinker	Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.	+
6	Creative Communicator	Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.	+
0	Global Collaborator	Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.	+

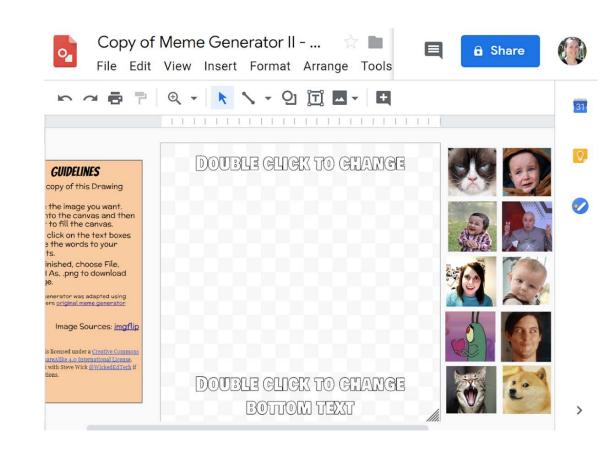
## Empowered Learner Tool: <u>Diigo</u>



## **Empowered Learner** Tool: <u>Twitter</u>

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	my	Week or lawed days 1 toke are under den an in order and alter in our day take 1 minutes tokes and a state of a take 1 minutes to assess the law and tokes take 1 minutes tokes and tokes and take 1 minutes tokes and	t do you think about tudent-Centered Lea tudent-Centered Lea	rning Plan in the El		Trending in United Sta <b>#FlashbackFriday</b> 9,501 Tweets

Empowered Learner Tool: Meme Generators (Google Drawing Template)



**Empowered** Learner Tool: Meme Generators (Google Drawing Template)



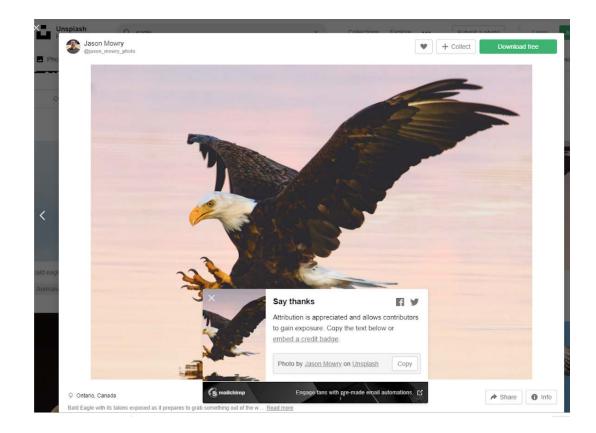
teaching alone in your classroom

sharing ideas and thoughts you learned from F2F and digitally from your PLNs with your students

Empowered Learner Tool: Meme Generators (Google Drawing Template)



## **Digital Citizen** Tool: <u>Unsplash</u>



## Digital Citizen Tool: YouTube Audio Library

#### Audio Library

Free music

Browse and download free music for your project.

Sound effects

ks		Genre 👻 Mood 👻 Instrument 👻 Duratio	Attribution * Search music	
Collapsing All Around	NEW	2:57 Amulets	Attribution not required amatic Attribution required	4
Resolver	NEW	3:22 Amulets	All licenses ark	4
This is Not a Dolphin	NEW	3:47 True Cuckoo	Ambient   Inspirational	4
Invisible Beauty	NEW	3:08 Aakash Gandhi	Ambient   Romantic	4
This is Not Effortless	NEW	4:10 True Cuckoo	Classical   Sad	4
Lucid Haze	NEW	3:05 Amulets	Cinematic   Dramatic	4
Tundras	NEW	2:56 Amulets	Cinematic   Dramatic	ł
Chords of Harmony	NEW	3:09 Aakash Gandhi	Ambient   Bright	4
Nocturnally	NEW	3:03 Amulets	Cinematic   Dark	4
This is Not Jazz	NEW	3:32 True Cuckoo	Dance & Electronic   Bright	1
Til Death Parts Us	NEW	2:13 Aakash Gandhi	Ambient   Calm	ł

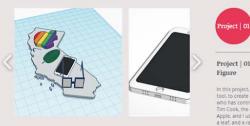
## **Digital Citizen** Tool: <u>Wix</u>

Evan Greenwald

HOME LEARNING + TEACHING PHILOSOPHY RESUME ED TECH PROJECTS CONTACT

Educator

#### ED TECH PROJECTS



#### Project | 01 Tinkercad 3D Printing Figure

In this project, I used Tinkercad, an online 3D printing tool, to create a representation of a queer person who has contributed to the technology field. I chose Apple, and I used symbols such as an iPhone, glasses, a leaf, and a rainbow Apple logo to represent him.

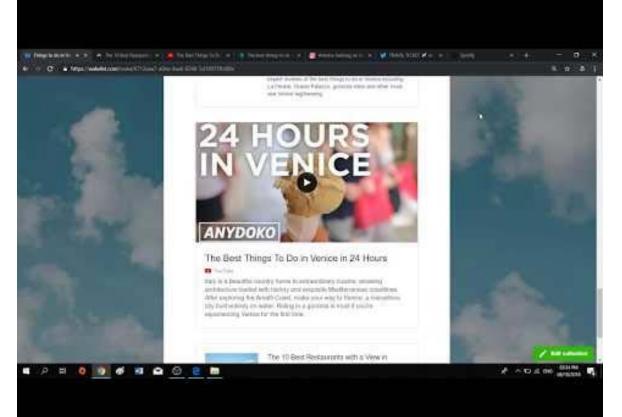




Project | 02 PowToon Video--Media Literacy and Professional Development

For this project, I used PowToon, a popular platform for making professional animated videos, to create a video about media literacy and professional

# Knowledge Constructor Tool: <u>Wakelet</u>



#### Knowledge Constructor Tool: <u>Webjets</u>

#### webjets

The creative desktop for all things that matter



# Knowledge Constructor Tool: Hypothes.is (free) or **Perusall**



#### Welcome to the SCORAI Sustainable Consumption (SC) Teaching project.

These pages provide an increase of openary around the world that include a "lightestable convergillos" diversion. Please and me conversity by providing information on your course, sharlog with on your nuterials and weinerfire leaching agamaches, or struck exchanging with as through your introducements.

#### SCOAU Russing others the following:

- · Charge-descriptions providing a detailed overview of each course -Including angley Brokherumbring promodate
- · Triaching materials & Jeannaiters on the topic of SC providen and unarrel The ReadParts of resided live operates.
- · The Soularsaide Comparently's Talencey some area, where instituting goests provide a shart introduction in a these of interest to blackeds.

Wat a further sizemary, general also see the related Witchedle article



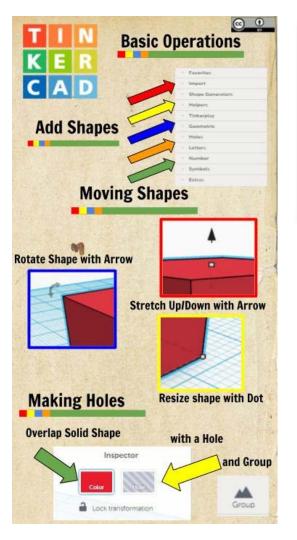
#### YOUR COURSE?

Please contact Markete Salumian towhit your course to the list by committing a short torre-

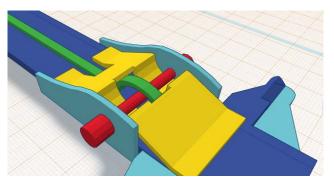
#### **NEWS SC TEACHING AT 2017** SCORAL CONFERENCE IN BRICHTON

A spectal tradem (Imitiative to SC) Teaching was a great topontal same all reprovably in an providers for teaching wave presented, with participants sharing klein and invights kids how they touch, what interiore there, and what a 50

Innovative Designer Tool: TinkerCad







# Innovative Designer Tool: <u>Mindmup</u> (or Google Drawings)

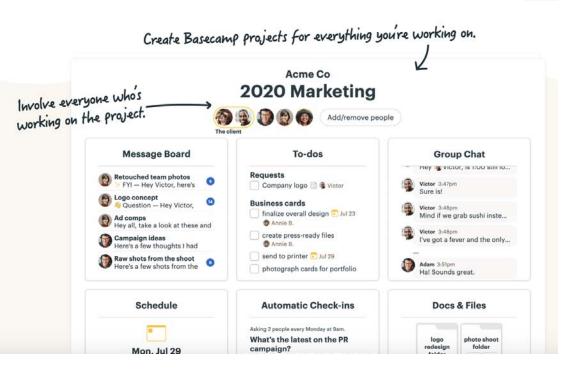


# Innovative Designer Tool: Basecamp

Basecamp

How it works Before & after Got clients? Pricing Support

Sign



# Computational Thinker Tool: <u>Data</u> Basic.io

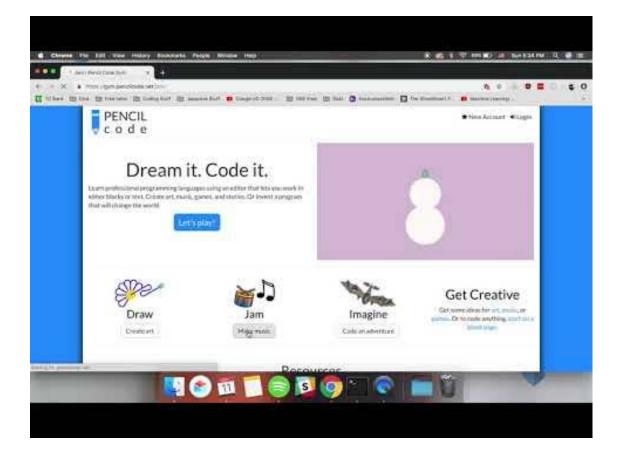


DataBasic is a suite of easy-to-use web tools for beginners that introduce concepts of working with data.

These simple tools make it easy to work with data in fun ways, so you can learn how to find great stories to tell.

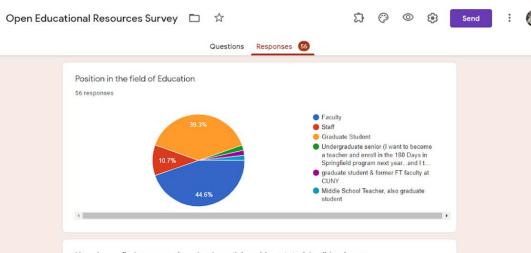


# Computational Thinker Tool: <u>Pencil</u> Code (or Scratch)

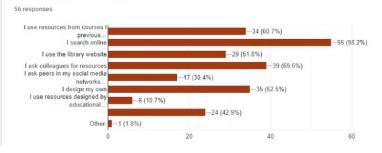


#### Computational Thinker Tool: <u>Google</u> Forms

.....



How do you find resources (e.g., books, articles, videos, tutorials, slides, images, assignments) for your courses?



#### Creative Communicator Tool: KnightLab Storytelling Projects

# **Timeline JS Intro Tutorial**

A quick tutorial on creating a media rich timeline using Timeline JS by Knight Lab.



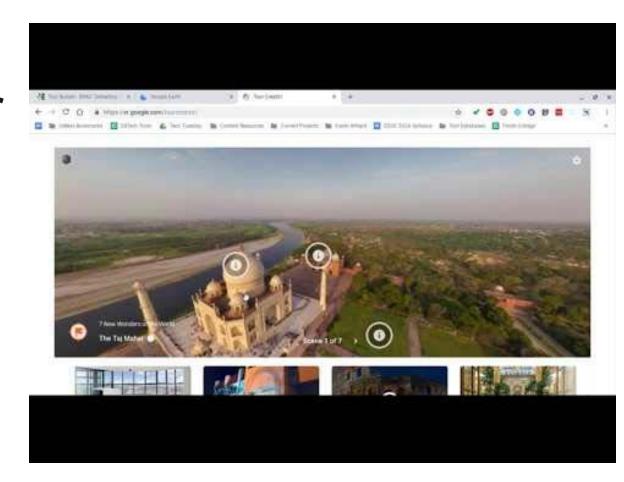
Digital Communication Consulting

#### Creative Communicator Tool: <u>Adobe</u> Spark

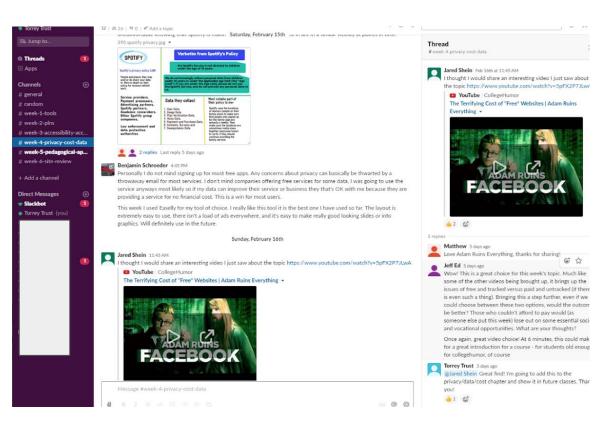
#### **REBUILDING NEW YORK**

HOW THE U.S. REBUILT NYC AFTER THE ATTACKS

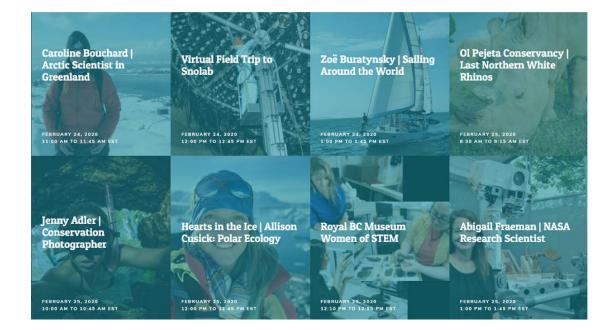
# Creative Communicator Tool: <u>Google</u> Tour Creator



#### **Global Collaborator** Tool: <u>Slack</u>



# Global Collaborator Tool: Exploring By the Seat of **Your Pants** (Google Hangouts)



# **Global Collaborator** Tool: <u>Flipgrid</u>

#### **9 NEW WAYS TO USE FLIPGRID**

1. Sharing book reviews: With Flipgrid's new augmented reality (AR) feature, classrooms and classroom libraries can use the video QR code to create an engaging way for students to share book reviews. After a student records their review, the teacher can print the QR code and tape it on the book, and the student's classmates can use their devices to scan the code and watch the review as a way to help them decide if they'd like to read the book.

2. Practicing world language skills: Flipgrid makes it possible for teachers in different districts and different countries to collaborate. For world language teachers, this creates opportunities for students to practice their speaking skills with a larger group than just their class. Students can post videos to get practice with the vocabulary they're learning, and instead of being limited to practicing with the people in their physical classroom, they can engage and build their skills with other students around the world studying the same language or have conversations with native speakers of the language.

3. Increasing accessibility for all students: Flipgrid has expanded many of its accessibility features to ensure that all students can participate. Students can use closed captioning when viewing videos, which also generates a full transcript for each video. Microsoft's Immersive Reader can be used within both the closed captioning and any text within a topic to read the texts aloud and break up words into syllables for easier decoding.



4. Inviting outside speakers: Using Guest Mode, teachers can invite guest speakers to participate in classroom discussions. Guests can watch student videos and post their own videos. This option provides a way for experts in a field to share their knowledge asynchronously, with students posting videos of their questions for the expert to answer at a convenient time in a video response. STEM teachers, for example, could invite engineers or scientists to discuss their careers and research and to answer student questions.

# More tools!

- Online Tools for Teaching & Learning Database
- Digital Tools for Reading & Writing



#### **Questions?**



