

Geometry ABC's
Not your average alphabet book!
created by Rebecca Jackson

Subject Area: Geometry

Suggested Grade Level: Secondary (6-12)

Technology Used:

- Computer
- Google Docs (Presentation) <http://docs.google.com/>
- Web Browser (Firefox, Internet Explorer, Safari, etc.)
- Animoto (Video Slideshow Maker) <http://animoto.com/>

Time Length:

- Creation of Presentation: 2-4 class periods (Allow for a weekend between introduction and due date, so that students have time to finish at home if necessary)
- Conversion to Animoto Video: 1 class period (Allow for 2-3 additional days before due date if students want to make changes, etc.)

Abstract:

The following lesson allows students to collaborate with their peers using the Google App – Google Presentation to create a Digital “A to Z” Geometry Vocabulary Book. They will be required to create a slide for each letter of the alphabet containing a geometry term, its definition, and a picture or graphic that demonstrates an application of the term. Then students will save each slide their presentation as a jpeg picture and upload to the Video Slideshow Program Animoto. Students will upload their favorite music, select a theme, and edit transitions before producing their final digital “book”.

Lesson Objectives:

- Students will be able to demonstrate geometric vocabulary knowledge acquired throughout year-long course.
- Students will be able to identify real-world applications of geometric vocabulary
- Students will be able to collaborate with peers through a digital environment.

Student NETS Standard(s) Alignment:

- 1. Creativity and Innovation.** Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology
 - a. Apply existing knowledge to generate new ideas, products, and processes
 - b. Create original works as a means of personal or group expression

- 2. Communication and Collaboration.** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
 - a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats
- d. contribute to project teams to produce original works or solve problems

5. Digital Citizenship. Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- a. Advocate and practice safe, legal, and responsible use of information and technology
- b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- c. Demonstrate personal responsibility for lifelong learning
- d. Exhibit leadership for digital citizenship

6. Technology Operations and Concepts. Students demonstrate a sound understanding of technology concepts, systems, and operations

- a. Understand and use technology systems
- b. Select and use applications effectively and productively
- c. Troubleshoot systems and applications
- d. Transfer current knowledge to learning of new technologies

Materials Needed:

- Computer
- Internet Access
- Teacher Gmail Email Account
- Student Email Accounts
- Animoto Educator Account
- Geometry Textbook Book (helpful, but NOT required)

Lesson Procedure:

This lesson is intended for an end-of-course assessment. While I will present a lesson for a Geometry course, it could be easily adapted for any subject area.

In preparation for the students to begin this assignment, they need to be divided into groups of 2 or 3. Then, before entering a computer lab, the teacher needs create Google Presentations for each group. This way the teacher will have access to ALL student work.

To Create a New Google Presentation

- Visit <https://docs.google.com>
- Login with Gmail id
- This will take you to your workspace with any documents you may have created earlier. Next, from the upper left corner, you will want to click on **CREATE** and select **PRESENTATION** from the pull-down menu
- Then you will see a list of themes. Select one (I would suggest the “blank” allowing for students to decide)

- Now the presentation will be visible. Click on the upper left where it shows the title of your presentation “Untitled presentation” and change it to identify the group
- Finally, select the **SHARE** button in the upper right corner. You will be listed as the owner, but in the **Add People** field enter the email addresses of the students in this group.

Now you are ready to delve into the project. Students will use Google Presentation to collaborate with peers creating a Digital “A to Z” Geometry Vocabulary Book. They will create a slide for each letter of the alphabet in which they incorporate a geometry term, its definition, and a picture or graphic that demonstrates an application of the term. (See Appendix A for student handout). Google Presentation allows for multiple students to modify this presentation from anywhere with Internet access.

While students are working on their presentations, the teacher needs to create an Animoto Education account.

To Create an Animoto Educator Account

- Visit <http://animoto.com/education>
- On the right side of the screen you will see a button **Apply Now** which will start your registration process.
- A new screen appears, and on the right side you will see a prompt to **Sign up today!**
- Enter your information
- Once your account is approved you will receive a promo code that allows you to create 50 six-month free Animoto accounts (it appears that after six-months you can reapply for another free trial)

Next you will need to set-up Animoto accounts for your students. Animoto’s help desk recommends the following (<http://help.animoto.com/entries/104077-how-do-i-set-up-accounts-for-my-students>)

To Create and Animoto Educator Account

- Create a class email account using Gmail. (I used msjacksonsmathclass@gmail.com). You can make up your own. This will serve as a “dummy” account for students to create logins.
- Next we will use the free subscription code to register groups using the registration form (https://animoto.com/sign_up). When you are entering the email on the registration form you would enter the class email with plus signs depending on the group. See example below

Group 1: msjacksonsmathclass+1@gmail.com

Group 2: msjacksonsmathclass+2@gmail.com

Group 3: msjacksonsmathclass+3@gmail.com

- All activity under these accounts will be sent to the original, derivative e-mail (msjacksonsmathclass@gmail.com), allowing for students to have unique accounts that you, as the teacher, are able to monitor

Once students have finished their Google Presentations they will be required to create an Animoto Digital Slideshow of their Presentation. They will need to save each Google Presentation slide as a .jpg file (file -> download as -> JPEG image) and upload it to their Animoto Presentation by selecting the **Add Pics and Vids** button. Students can select their own music, design, transitions, length, etc. The following link is a good introduction to the program that should be shown before students are put on computers to create their own videos:

<http://help.animoto.com/entries/20461613-the-new-animoto-video-creation-process-a-video-tutorial-guide>

Once presentations are finished students will press **PRODUCE VIDEO**. Once created they will have the ability to share or download their videos! (see examples in APPENDIX B)

APPENDIX A

Geometry

Name: _____

Digital "ABC" Vocab Book

Date: _____ **Hr:** _____

In a small group you will be creating a Digital Geometry "ABC" Vocabulary Book. You will use Google Presentation to create your book. Each page or slide will contain a letter of the alphabet in which you incorporate a geometry term, its definition, and a picture or graphic that demonstrates an application of the term.

Upon completion you will save each of your slides as a .jpeg file. Then you will upload these photos into a Video Slideshow Program called Animoto. This will allow you to select a template and create a short video set to your choice of music that displays your "ABC" Book.

You will be graded on the following:

<u>GOOGLE PRESENTATION</u>		<u>PTS</u>	
1. COVER PAGE		3	_____
2. PAGE CONTENT (2 points per page)		52	_____
DEDUCTIONS:			
3. CREATIVITY		15	_____
4. GRAMMAR, SPELLING, ETC.		10	_____
	TOTAL	80	_____
<u>ANIMOTO PRESENTATION</u>		<u>PTS</u>	
1. CREATION (transitions, logical order)		15	_____
2. MUSIC (length, appropriate)		5	_____
	TOTAL	20	_____

APPENDIX B

CREDITS

Some of the ideas for this project were modified from the following blog:

<http://danpooleriii.edublogs.org/2011/11/30/google-docs-and-math-class/>

You can find examples of Mr. Pooler's students' videos here:

<http://mrpoolersgeometryclass.weebly.com/geometry-a-to-z-class-projects.html>