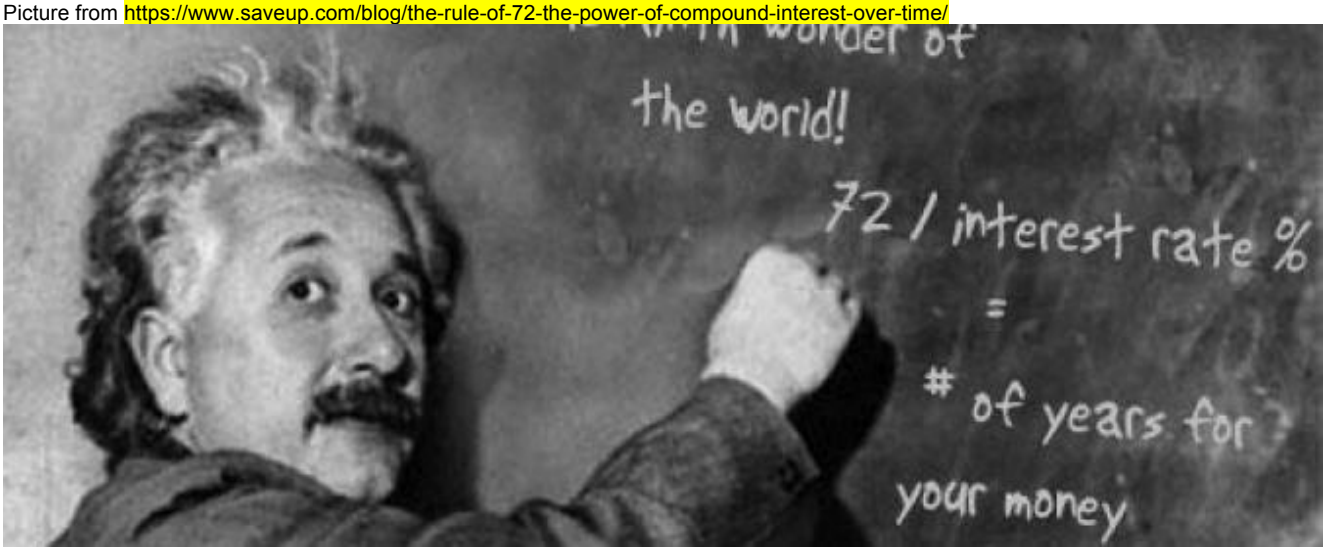
Monday 4/14/14

Hi everyone,

The answer to my puzzle challenge with the spreadsheet last week is called the Rule of 72. It says that money doubles when the interest rate times the numbers of years is approximately 72. So at 9%, it would be 8 years and at 12% it would be approximately 6 years. If you look back at your work from Lesson 2, you will see that your spreadsheet columns fit this pattern. I love the rule of 72!

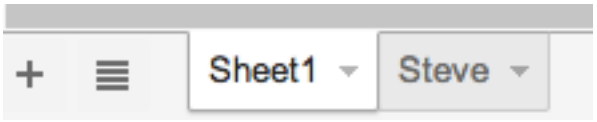
Picture from https://www.saveup.com/blog/the-rule-of-72-the-power-of-compound-interest-over-time/



The first part of this week's lesson involves one more spreadsheet skill -- taking a rectangle of numbers and generating a graph.

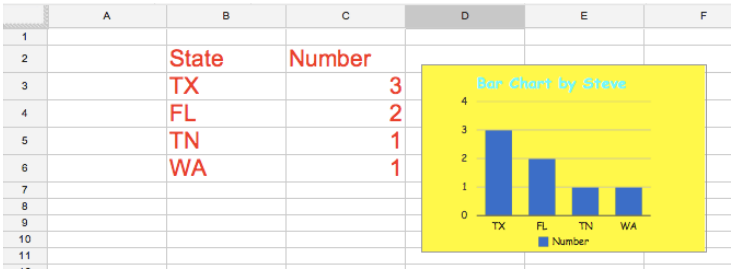
I have shared a document with you called Online GD Course April 2014 and also given it a TINYURL. You got a notification of this document last week but you can also go to it at the URL of http://tinyurl.com/lesson3april and access it.

If you have trouble because you have two email accounts and cannot get in, let me know! It is best to sign in with your Google Drive account and then go to the http://tinyurl.com/lesson3april webpage.
HW 3.1 The required video at http://youtu.be/2KztYAXVEV8 will show the steps of what to do.

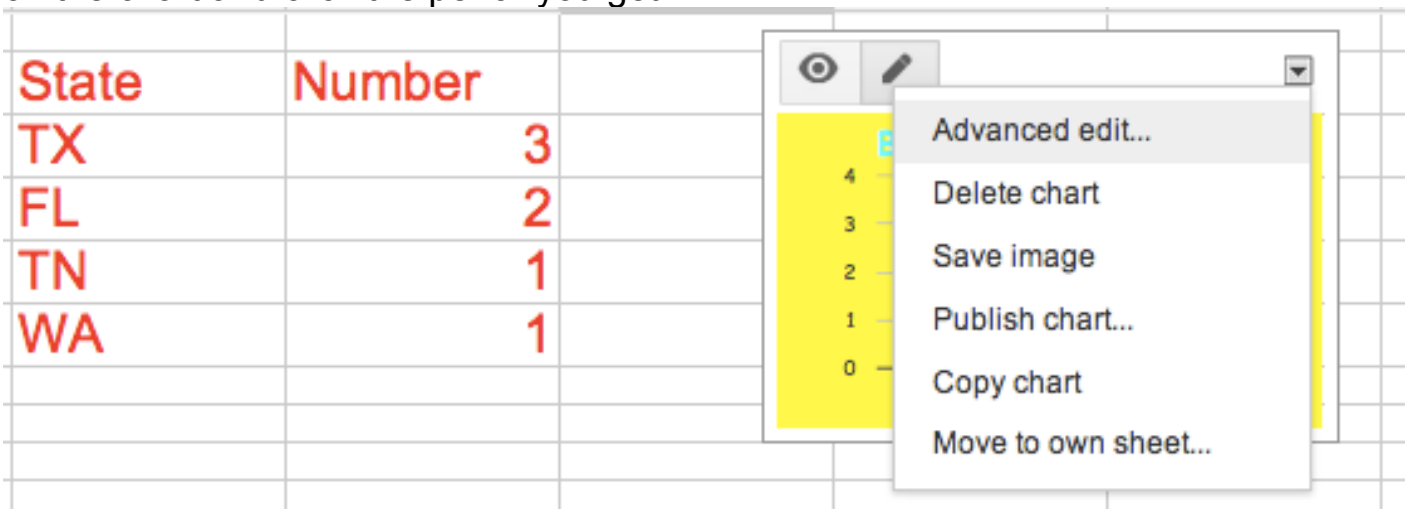


The + symbol lets you make a new TAB or new WORKSHEET and then the RENAME feature lets you give it your first name. Please create a new worksheet and then use the baby triangle next to "Sheet" to rename it with your name.

The data to graph is located on SHEET1 and so you will copy and paste the red section from sheet 1 to YOUR worksheet page. I have a column marked "beware" that contains a complicated formula that some of you may optionally want to ask me about. Once you highlight the data and choose INSERT CHART under the INSERT MENU, you will get something like this

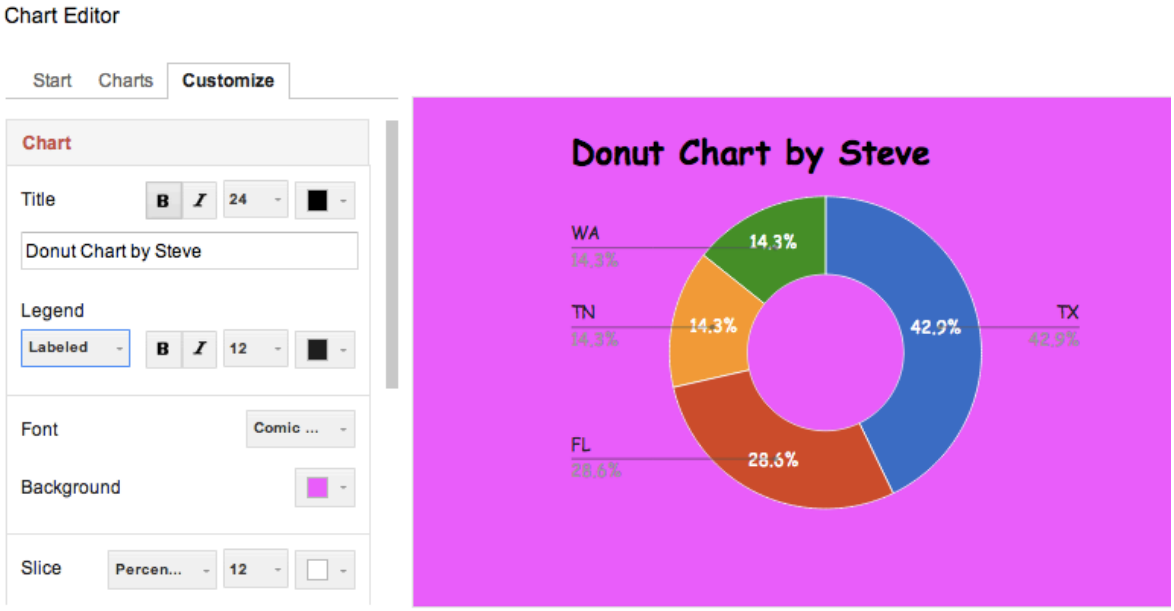


You can move the chart around by moving the mouse onto the top of the chart and getting the hand icon. You can resize by one of the bottom corners. When you click on the chart and click the pencil you get



and go into ADVANCED EDIT mode. This lets you change the type of chart or the legend or font type or colors.

HW 3.2 -- after watching the video previously referenced, create a new worksheet in our group GD file and copy/paste from the main sheet to yours. Change the name of this new worksheet and create a chart of your choice on this sheet.



LESSON 3 Next Topic

This week, we are going to start a series of assignment tasks that involve online teams. After much research, I have matched you up with the nicest two people in our group! The team and colors are below. Note: I will update this once more surveys come in. I apologize to any of you if I made a mistake in column two. Mon 4/21 Update

NAMES	URLs for the SURVEY	SCHOOL and JOB	TEAM
Brenda	http://tinyurl.com/pncritique	Pacific Northern Academy, Anchorage, AK • Art	4-- AK+ME+MI
Carla	http://tinyurl.com/research33	Detroit Country Day School • MS Eng	1 -- MI + VT + GA
Cathy-Jo	http://tinyurl.com/region33	Washington Academy ME • High Sch Spanish	4-- AK+ME+MI
Doug	http://tinyurl.com/Quadratics-Check-In	Woodlawn School NC • High Sch Math	3-- NC+MI + AK
Gauri	http://tinyurl.com/Gauri4MMSurvey	Detroit Country Day School • Tech	2-- MI+FL+MA
James	** Please send or resend when time allows (sorry if I made a mistake keeping track) **	Alexander Montessori Sch • Miami FL • co-head	2-- MI+FL+MA
Jean	http://tinyurl.com/MrPipQuiz	Detroit Country Day School • HS Eng	3-- NC+MI + AK
Karen	http://tinyurl.com/springreflection	Thetford Academy VT • Spec Ed 7-12s	1 -- MI + VT + GA
Laurie	http://tinyurl.com/laurieh34	Pacific Northern Academy, Anchorage, AK • G4	3-- NC+MI + AK
Linda	http://tinyurl.com/surveylg	Pacific Northern Acad, Anchorage, AK • *Off Admin*	5--AK+NC+MI
Megan	http://tinyurl.com/megan33	Detroit Country Day School • Kindergarten	4-- AK+ME+MI
Molly	http://tinyurl.com/SurveyMolly02	Trinity School of Durham and Chapel Hill • Exec Asst	5--AK+NC+MI
Stephanie	http://tinyurl.com/trautman34	Detroit Country Day School • MS Eng	5--AK+NC+MI
Susan	http://tinyurl.com/susan34	Northfield Mount Hermon School • Religious Studies	2-- MI+FL+MA

HW 3.3 We begin with the first assignment that you complete the SURVEY of your 2 team partners and send an email note to each partner saying what you liked or found intriguing about her/his survey. No need to cc me. This will allow your partners to get some data into the SS and will allow you to see the work of your partners in this course and begin a relationship that will continue for the rest of the course. I will send emails in a separate note to each group of three.

HW 6.1 Please start ***contemplating*** a new GD Presentation or Google Site on "A Tale of Three Schools" in which you and partner(s) compare and contrast the way your three schools are working through the stages of GD and what some of the hassles and issues are. This will involve email exchange and/or a GD shared file. This assignment is not due until week 6 on 5/5 which is why I am calling it HW 6.1. There will be more on the specs for this each week.

Just in case any of you still need help on how to make a TINYURL, here again is the 11 minute optional video -- http://youtu.be/jY1ef22RaOA

Next, I share with you a GD list reviewing dozens of specific things you have learned in this course, each one with an ID number. The spreadsheet is called GD Review SS and you and you can find it at the http://TINYURL.COM/GDREVIEW33 -- your name is in a column in the right that allows you to say you "got it" or "need help."

Here are the questions from 1 to 20 and a 22 minute optional video at http://youtu.be/WJ_NcWNFOa0 that goes through these 20 questions in order giving you answers with examples and visuals. You can fast forward or go back to any question since they are in order! This is NOT a required video but simply a resource to get help on any of these 20 questions.

HW 3.4 required. Go to the SS at http://TINYURL.COM/GDREVIEW33 and pull down the triangle for each of the 20 questions that constitute a "self-check" on do you know that skill. You can watch the optional video at http://youtu.be/WJ_NcWNFOa0 if you need help. You can also ponder how I did the pull down triangles in this spreadsheet which you will formally learn later in the course. And if the vertical text intrigues you where you see your names, I would love to show you that trick when we have our next conversation.

1 Name each of the modules of GD and state one interesting unique feature about each one?
2 What are the steps for sharing a file in GD? What are 3 different privilege levels

you can give each user?
3 How can you share a GD file with a large number of users using a GROUP of EMAILS?
4 What are the steps to making a GD file to be public to anyone with the link and how does TINYURL.COM work to help us with this? What is the disadvantage of using this approach?
5 What does it mean to "object oriented" vs "bit-mapped" in terms of drawing? Which one is GD Drawing?
6 What is the formula in a GD spreadsheet to add up the cells in a range such as D2 to D9?
7 What is the rationale for requiring all your students in a class to use a standard file saving name?
8 What is the feature called under the TOOLS menu that lets you instantly look up information or pictures on the web to pull into a GD file?
9 How do you change the citation style in GD from MLA to APA to Chicago?
10 How do you convert a Microsoft Word file into a GD file?
11 How do you convert a GD file into a Microsoft file?
12 Demonstrate how to insert 1 picture and 1 quote into a GD using the RESEARCH TOOL creating 2 footnotes and using a certain citation style (MLA, APA, Chicago).
13 Explain how to use GD to find pictures that are copyright free.
14 What is the preferred technique of sharing a large group of files with several contacts?
15 How many owners can a document have? Is it possible to make someone else the owner?
16 Demonstrate how to use the "magic spot fill down technique" and explain why some times we highlight one cell and other times we highlight two cells?
17 How do you make numbers look like currency?
18 What formula do we use to calculate percent increase? For example if you have a number in cell E3 and you want to type into E4 a formula to calculate 9% increase, what exactly would you type?
19 What are the names for the two ways text in a WP document can interact with a graphic, e.g. the graphic is called _____ or _____ . Demonstrate an example of each in a GD WP document.
20 How do we create separate worksheets in one GD spreadsheet? How do you name or rename each one?

And now for our next topic:

The $ Symbol

Let us go back to Google Docs spreadsheet and learn about **the $ symbol** in the context of the bank interest program. Let us say that my boss wants to contemplate ANY percentage and we don't want all of those columns that you made last week. Can we have just one column and change the percentage in one cell from 1.04 to 1.05 to 1.12 and so on?

Yes, we can and I will teach you how to do so in this required 8 minute video called Lesson 4 Dollar Symbol GD course -- http://youtu.be/nuGMrX0yddM

To reinforce the video lesson, please look at this formula that contains the mysterious $ symbol known and understood by a small percentage of people!

	A	B	C
1		Percent Increase	1.08
2			
3	2000	$100.00	
4	2001	=B3*C1	
5	2002	$116.64	
6	2003	$125.97	
7	2004	$136.05	
8	2005	$146.93	
9	2006	$158.69	

The formula in B4 looks like =B3*C1 but instead it is =B3*C1 and as you will hear in the video, the $ symbols wrapped around the letter C are declaring that the cell C1 is a CONSTANT not to be changed when you fill down with the magic spot. For over 20 years, I have used the bad joke that "Bill Gates declared nothing to be more sacred than money and that is why he chose the $ symbol."

Here is what most people would do in setting up this problem

	A	B	C
1		Percent Increase	1.08
2			
3	2000	$100.00	
4	2001	=B3*C1	
5	2002	$0.00	
6	2003	$0.00	
7	2004	$0.00	
8	2005	$0.00	

and even though you get the right answer for B4, you mess up everything below when you fill down.

Finally, I want to point out that you can get away with

	A	B	C
1		Percent Increase	1.08
2			
3	2000	$100.00	
4	2001	=B3*C$1	
5	2002	$116.64	
6	2003	$125.97	
7	2004	$136.05	
8	2005	$146.93	

since the $ symbol affects what it is in front of (in this case the "1"). However, until you have done 10 or 20 examples, you are better off using the $ symbol before and after the letter. The formula =B3*C$1 technically means that column "C" can be altered when you fill right but that row "1" is to be considered sacred when you fill down. Since in this example, we just fill down, this formula works with just one dollar symbol.

By the way, when you use a command such as =B3*C3 that is called "relative reference" since when you fill down or fill right, the variables are changed relative to where you started. In contract, in using =B3*C3, we would call C3 and absolute reference since all formulas based on this one would remain referencing C3.

Here is the finished product as you will see on the video

	A	B	C	D	E	F	G
1		Percent Increase	1.08			The formula in B4 looks like =B3*C1	
2							
3	2000	$100.00		2021	$503.38		
4	2001	$108.00		2022	$543.65		The rule of 72 says that to double money in the bank, you multiply the # years times the percentage and that equals 72 (approximately).
5	2002	$116.64		2023	$587.15		
6	2003	$125.97		2024	$634.12		
7	2004	$136.05		2025	$684.85		
8	2005	$146.93		2026	$739.64		
9	2006	$158.69		2027	$798.81		
10	2007	$171.38		2028	$862.71		
11	2008	$185.09		2029	$931.73		
12	2009	$199.90		2030	$1,006.27		
13	2010	$215.89		2031	$1,086.77		
14	2011	$233.16		2032	$1,173.71		
15	2012	$251.82		2033	$1,267.60		
16	2013	$271.96		2034	$1,369.01		
17	2014	$293.72		2035	$1,478.53		Hope you understand that this example is a complicated one.
18	2015	$317.22		2036	$1,596.82		
19	2016	$342.59		2037	$1,724.56		
20	2017	$370.00		2038	$1,862.53		
21	2018	$399.60		2039	$2,011.53		
22	2019	$431.57		2040	$2,172.45		
23	2020	$466.10		2041	$2,346.25		

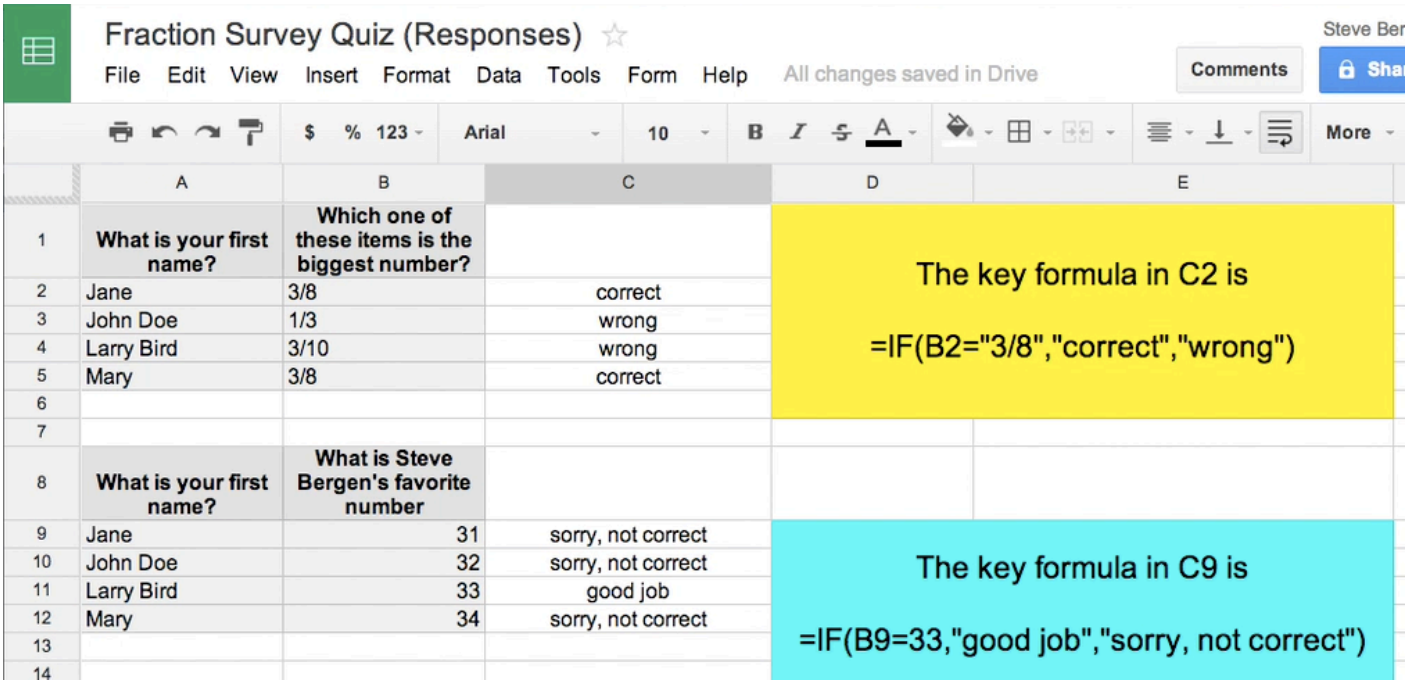
Next command: The IF command
This lets you decide if something is true, whether numbers or words.

In the homework, you will see two required spreadsheet problems that require the use of the $ symbol to solve and several optional challenges

HW 3.5 Required
Larry, Kevin, and Robert are 3 basketball players who make $33,000, $44,000 and $32,000 respectively. The owner of the Boston Celtics wants to give them a percentage increase (the same for all 3) but has not decided what percent yet. So you need to create a GD spreadsheet that lets the owner type in 1.03 or 1.04 or 1.05 into one special cell and the computer then shows their salaries. Please do this as a new GD spreadsheet and put it into your folder called HW to Steve from ??? once done. This same GD spreadsheet will have one TAB for HW 3.5 and one TAB for HW 3.6.

Next, let us learn to use the IF statement in this 3 minute video titled Lesson 4 IF Command GD course -- http://youtu.be/9IUxNCJ4VxM

Note that the IF formula has 3 things inside the parentheses separated by two commas. These 3 things are called "parameters." The first parameter is something that is either true or false. If the first parameter is true, then the second parameter is inserted into the cell. Otherwise the third parameter is inserted. That is why you see "correct" or "wrong" in the cells below in column C for the first example.



	A	B	C
1	What is your first name?	Which one of these items is the biggest number?	
2	Jane	3/8	correct
3	John Doe	1/3	wrong
4	Larry Bird	3/10	wrong
5	Mary	3/8	correct
6			
7			
8	What is your first name?	What is Steve Bergen's favorite number	
9	Jane	31	sorry, not correct
10	John Doe	32	sorry, not correct
11	Larry Bird	33	good job
12	Mary	34	sorry, not correct
13			
14			

Whenever you have numbers (called "numeric data") you do not need quotes.

=IF(B9=33,

However, when you deal with words and even 3/8 is called a word since there is no equals in front of it, then you need quotes. We call these "alphanumeric data."

,"sorry, not correct" or =IF(B2="3/8",

Here is a HW assignment problem with the IF statement that requires you to use both the IF formula and the $ symbol.

HW 3.6 Required

Alice, Barbara and Carol earned scores of 58,78 and 88, respectively on a test. Use an IF statement in a column next to their score to indicate who passed or not by having the word "PASS" or "FAIL" appear automatically. Let us call 65% passing.

Then add a column for curving their score using the $ symbol to reference a number which will increase the grade equally for all 3 of them by whatever percentage is specified in a certain designated cell.

Please do all these homework assignments on 1 spreadsheet called
Lesson 3 Spreadsheet Problems Jane Doe
Each problem you do should be on a different worksheet TAB on the bottom. You can put this file into the folder previously called HW TO STEVE FROM ??? but you should send me an email so I can check your work and give you some feedback.

HW 3.7 Optional Challenge (if you do this, put it into a new TAB on the same SS)
Create a 2 column spreadsheet with the odd numbers from 1 to 21 in the first column. In the second column show the partial sums so next to 3 will be 1+3 and next 9 will be 1+3+5+7. You should do this by using a formula in the cell next to 3 that contains a $ symbol usage and then fill down with the magic trick.

HW 3.8 Optional Challenge (if you do this, put it into a new TAB on the same SS)
Create a three column spreadsheet with the temperatures for 20 consecutive possible Celsius temperatures, e.g. 1 to 20 degrees or 41 to 60 degrees or -31 to -10 degrees in column one. The user should be allowed to choose the low number and your 20 temperatures should be based on that one via formula with the $ symbol. Then in column two, use a formula that changes Celsius to Fahrenheit such as F=(9/5)*C+32 or F=1.8*C+32 to compute all the equivalent temperatures. Then in column three, use an IF formula to see if the Celsius and Fahrenheit are the same, saying "same" or "different" in each cell.

And now for our final topic:

Finally, our lesson will involve getting started (first base before second base) with Google Sites. The video below gives you all the details and instructions. Please note that you are being to simply create a SITE with a specified name and type. Once you do so, you send me the URL and I will test it. In the second half of our course, I will be encouraging you to implement something from this course involving students and one or two of you may choose to have a classroom website with each student owning a page as your teacher activity of choice.

Here are some key things to complement the video and to reinforce certain points. Each item marked SPEC is an important specification for you to make sure you do right! In my first few years of being a computer teacher in the 1980s, I had a hard time grading and evaluating computer projects. Then an Art teacher colleague told me about putting SPECS into projects and alerting the students loud and clear that these were some of the items by which they would be evaluated. This was before grading rubrics became popular. Once I started doing that, it was much easier to give students feedback, evaluation and grades on their projects since I had my checklist of SPECS and they would know which ones they did well and which ones they did not complete properly.

You will be dealing with a CAPTCHA that looks like this:

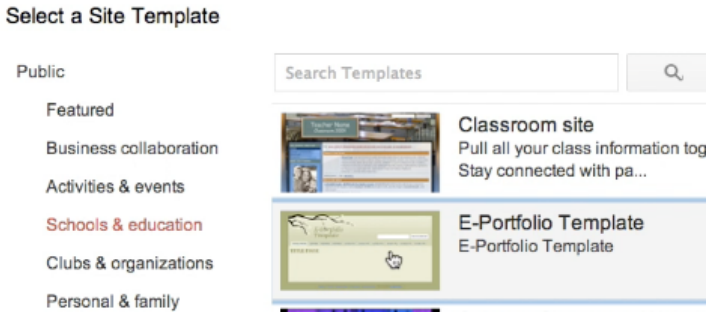
It is fun to learn this word which is an acronym for *Completely Automated Public Turing test to tell Computers and Humans Apart*, a trademark of Carnegie Mellon University. A CAPTCHA is a type of challenge-response test (named after a computer scientist named Alan Turing) used to determine whether or not the user is human. The term was coined in 2000 (info from http://en.wikipedia.org/wiki/Captcha).

Here is the 12 minute video to watch before or after the reading (your choice).
http://youtu.be/62NAtdAr8xw

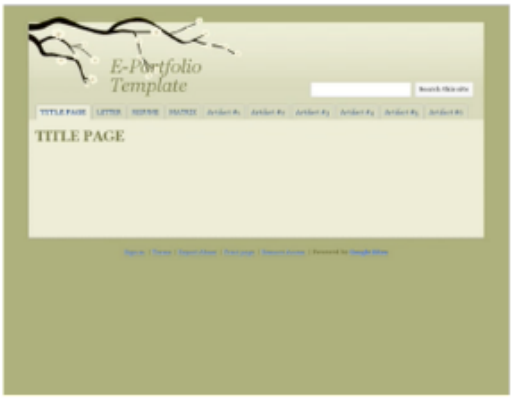
HW 3.9 Required
Create a Google Site according to the specs and details below.

SPEC: You must use a site name such as 33SteveB33 using a number, your first name, the first initial of your last name and then the same number. You do the typing in this top box and the lower box with your URL is filled in by the computer. Take note of the URL however in the lower box because that is how you tell me you have done this homework!

SPEC: You must choose this grouping -- Schools & Education -- for Site Templates and then you must choose the category of E-Portfolio template for this assignment.



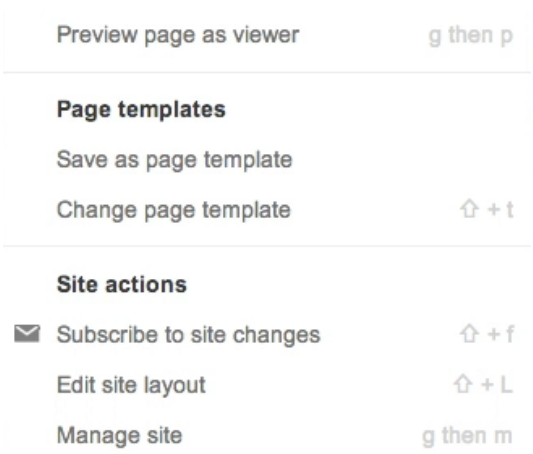
In a subsequent week, we will create a BLANK Google Site and you will see the difference. But for now, you must choose this one.



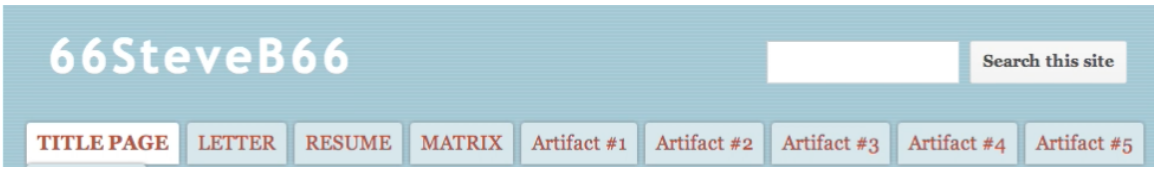
E-Portfolio Template
By nawrojn
E-Portfolio Template

Preview template

Here are several of the most important choices under the MORE menu

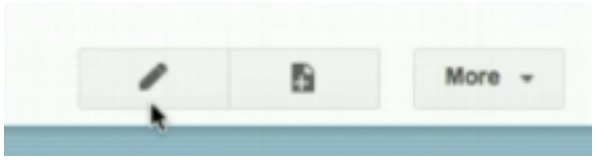


Overview:
Your website will have a URL that looks like https://sites.google.com/site/66steveb66 with a look that looks like this.

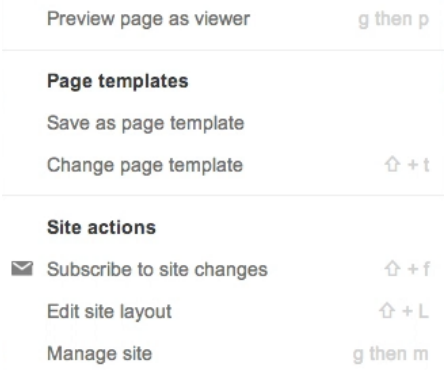


Give your website a title and one sentence with a link to summercore.com/videos

In order to EDIT your website, you need to click the PENCIL



Here are the two most important parts of the MORE button: EDIT SITE LAYOUT and MANAGE SITE.
The EDIT SITE LAYOUT option lets you get a SIDEBAR for your website.
The MANAGE SITE option lets you permanently delete items.
Also under MORE you will find DELETE page.



Good luck! I look forward to seeing a website from each of you that has one link to summercore.com/videos. Don't forget to give me access by choosing SHARING and changing the sharing specs to

phone = 781-953-9699
skype name = stevebergen (no spaces)
Email = sbergen33@gmail.com

Optional Topics for our 30 Minute Conversation on Next Pages (if interested)

Optional 3.10 for more advanced users only:
Using the SPLIT formula in GD: 2 min video at http://youtu.be/hCnu0aETC-I
Using the COUNTIF formula in GD: 3 min video at http://youtu.be/OnLs3JLjCvQ
Fancier features with GD Forms: 5 min video at http://youtu.be/qXMHxxuOn1Y

Optional 3.11 Challenge -- using the GD at http://tinyurl.com/presidents33, copy and paste the data into a new TAB WORKSHEET and put your name on it
I would like to see you in your individual worksheet
a) freeze the first column and the top two rows (use FREEZE under VIEW)
a) insert columns between A and B and put the names into 2/3 columns using the SPLIT command
b) demonstrate in the YELLOW the use of the =COUNTIF command to tally the number of Presidents inaugurated at under age 60 as well as the number of Presidents from one state of your choosing

Optional 3.12 for our 30 minute conversation -- I will get you started with the Flubaroo or Doctapus journey if it seems that it is something you can use.

This innovative "add-on" to GD was created in the summer of 2012 and is called **Doctopus**. It allows you to take a Google Doc and distribute it to all your students creating an organization within a spreadsheet with several unique features:
* you can set a deadline for your students and then automatically "lock" the document at a certain time so that no more entries can be made
* you can create several levels of the same document (for examples Level A for more capable students and Level B for weaker students) and easily stay organized on a spreadsheet

I have created a 16 minute optional video which takes you through this very neat Doctopus add-on and have "done a simulation" with all of you for this week: http://youtu.be/brTFRdGj83c

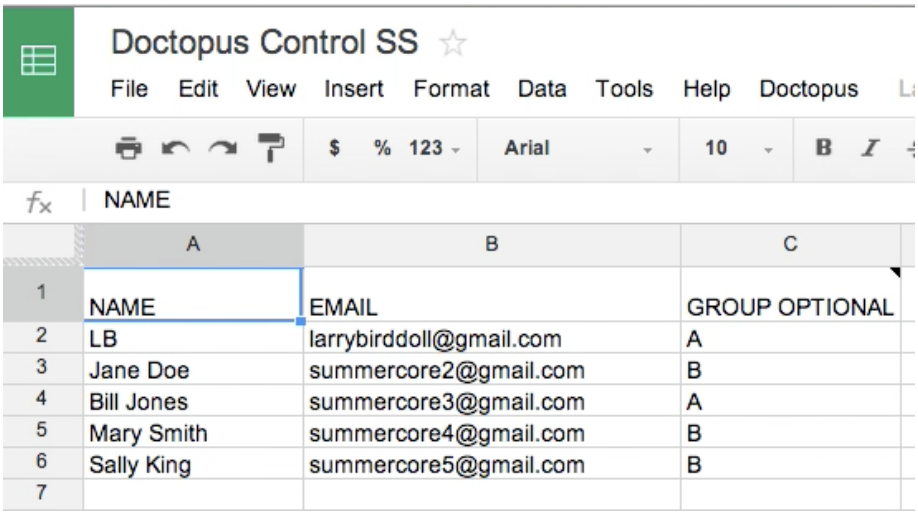
I believe several of you will use it and love it and say it is one of the most valuable things you learned in the course!

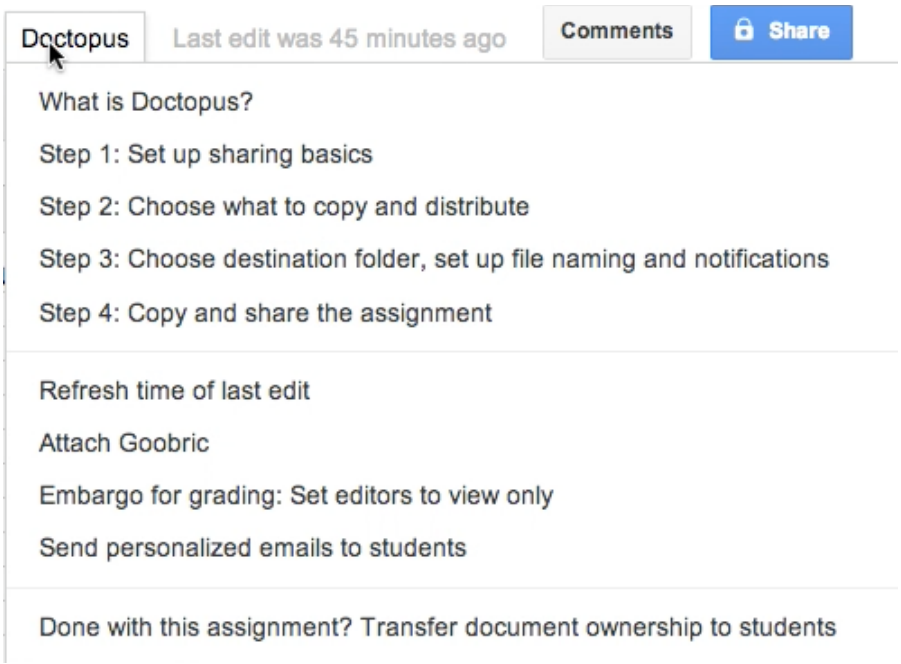
Doctopus: A helper script for managing Google Docs projects with students

Features

- Manages a single assignment for your class from one spreadsheet.
- Use your class roster to create and manage **pre-shared** student copies of a master Doc of any type (document, presentation, spreadsheet, PDF, etc.), or a folder of Documents in four handy sharing configurations:
  - **Project groups** - Great for jigsaws! Allows for different starter docs by student group.
  - **Individual - Differentiated** - Allows for different starter docs per individual by level.
  - **Individual - All the same**
  - **Whole class**
- Automatically grant **view-only** or **comment-only** privileges to the rest of the class to facilitate peer review protocols.
- Pre-organizes assignments into a folder of your choosing.
- Can copy and distribute whole folders full of Documents to students (with subfolders and files up to one level down)

It all begins with what I call a Doctopus Control Spreadsheet that you created in which you create these 3 columns. Notice that in this simulation, I am putting LB and Bill Jones at Level A and so they will get a different worksheet from Jane, Mary and Sally at Level B.



	A	B	C
1	NAME	EMAIL	GROUP OPTIONAL
2	LB	larrybirddoll@gmail.com	A
3	Jane Doe	summercore2@gmail.com	B
4	Bill Jones	summercore3@gmail.com	A
5	Mary Smith	summercore4@gmail.com	B
6	Sally King	summercore5@gmail.com	B
7			

Then you work through the 4 steps of Doctopus under the Doctopus menu that you now have. You get Doctopus once you install which I will show you on the next page.