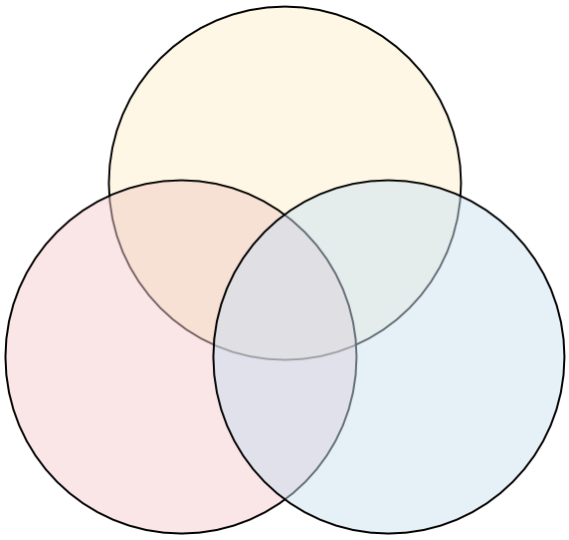
Google Drawings for Graphic Organizers

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Watch the video training for this content here - Google Drawings for Graphic Organizers - https://www.youtube.com/watch?v=0LjVHorFaQ4
All Google Drawings resources can be found at:
http://www.controlaltachieve.com/drawings

Graphic organizers

A **graphic organizer** is a tool that shares information, explains a concept, or illustrates a relationship using elements including images, shapes, text, colors, and connecting lines. They are sometimes referred to as **concept webs**, **mind maps**, **idea maps**, **flow charts**, **Venn diagrams**, and more. Graphic organizers can be used in education with any age group or subject area.

Students can greatly benefit from using and creating graphic organizers. **Benefits** can include:

- help students plan and structure projects
- help students with brainstorming
- help students examine relationships between concepts
- help students organize concepts and ideas
- help students determine cause and effect
- help students make connections
- increase student reading comprehension
- help students break apart a story into its main elements
- good for students who are visual and logical thinkers
- provides another option for communication

- help students make decisions
- help determine student understanding of concepts and relationships

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Why Google Drawings

There are many excellent tools for creating graphic organizers. Some are installable programs, while others are online. Some are free, while other cost money. Educators and students should be encouraged to try out many different tools to determine what works best for them and for specific situations.

However, one good choice for graphic organizers is Google Drawings. Here are some reasons why:

- Google Drawings is free
- It is easy to use, so even young students can work with it
- It works with your Google account, so you do not need another username and password
- It allows for collaboration, so students can work together on the same diagram.
- It comes with many shapes to be used in diagrams
- It has a tool to create curved and elbow connectors between objects
- You can easily add images from the built-in research tool
- You can also add images from many other sources
- It support hyperlinks, so objects can link out to websites
- Diagrams can be shared as template for students to work from
- Diagrams can be downloaded in several formats or can be shared and embedded online



Levels of use

When using Google Drawings for Graphic Organizers there are several **levels of use** based on the student's age and the nature of the project. On one end of the spectrum you can have a graphic organizer where the shapes and images are already provided, and the student is simply moving and connecting items, or typing in text. On the other end, you can have students creating a diagram entirely on their own from a blank drawing.

Most projects will fall somewhere in the following **three categories**:

1. Pre-made **activities**
2. Fill-in **templates**
3. Creating from **scratch**

Option 1: Pre-made activities

Pre-made activities are usually the easiest for students. In such projects the diagram will already contain the images and shapes the student will need to use, and there will be a specific purpose for the activity.

With such graphic organizers, the student typically will:

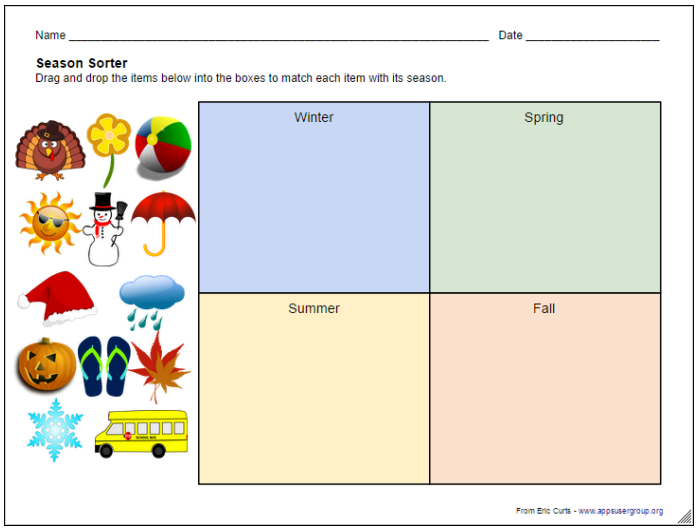
- drag and drop images and shapes

- connect images and shapes with arrows
- fill in shapes with colors

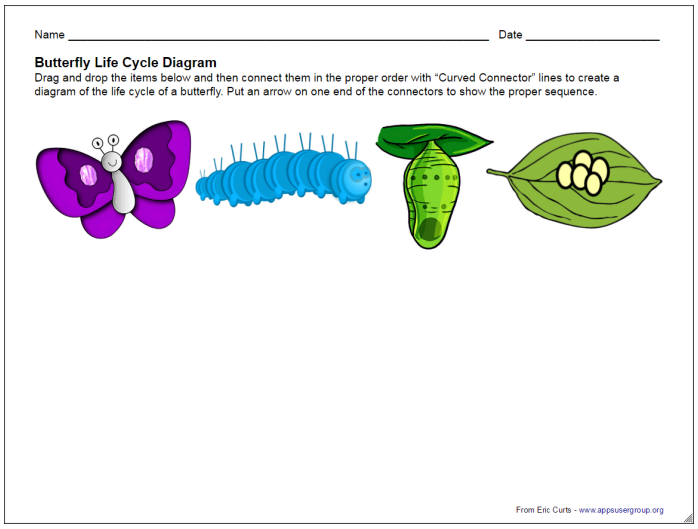
Usually the students will not insert their own shapes, images, and text, making these activities especially useful for young students. Since the students are not creating these graphic organizers, you will need to build the activity yourself, or find it from someone else.

Some examples of possible **pre-made activities** are shown below:

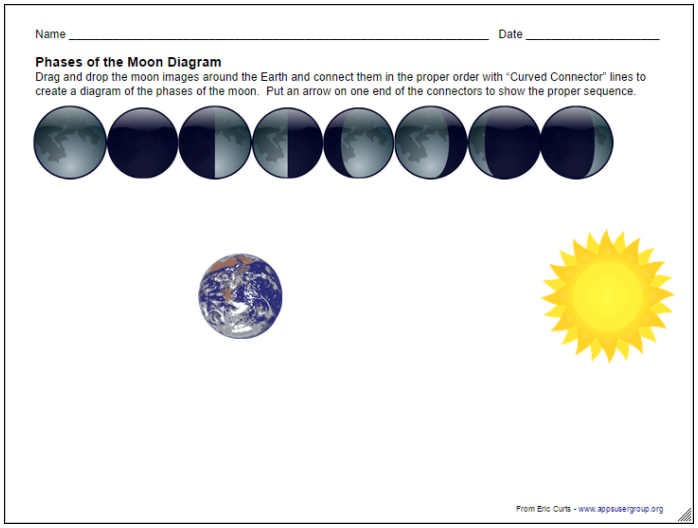
Season Sorter - student drags and drops images into boxes to match them to their season of the year.



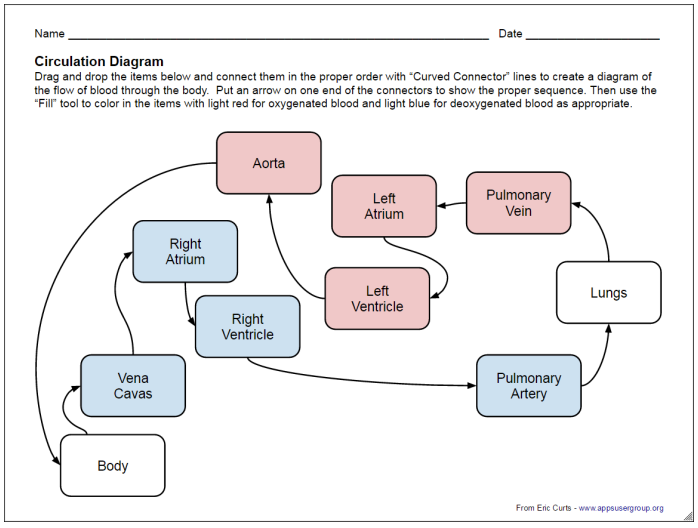
Butterfly Life Cycle - student arranges and connects images to demonstrate the life cycle of a butterfly.



Moon Phases - student arranges and connects images to illustrate the phases of the moon.



Circulation - student arranges, connects, and colors boxes to show the path of blood through the body.



To access a folder of **free pre-made activities**, click the link below:
http://www.controlaltachieve.com/p/resources-google-drawings.html

Option 2: Fill-in templates

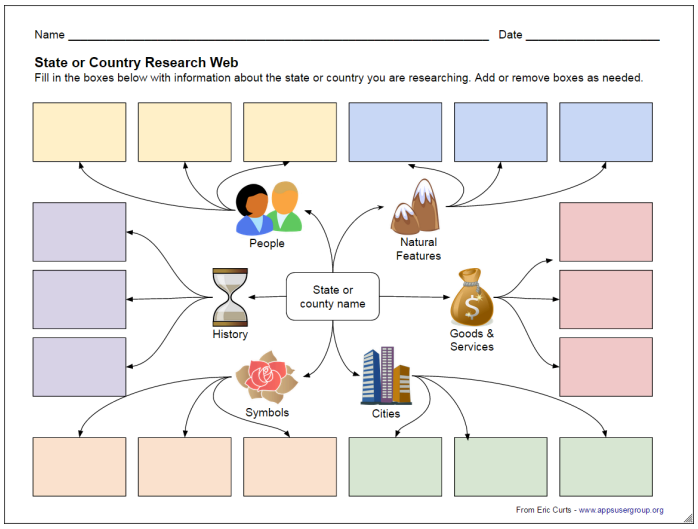
Another option for using graphic organizers is fill-in templates. Here students are provided with a template that already has the shapes and connections. The student's job is to type in text and possibly add images to the diagram to fill it out.

A fill in template may be designed for a general purpose, such as compare and contrast, elements of a story, or multi-step cycles. However, the template can be used again and again for different content.

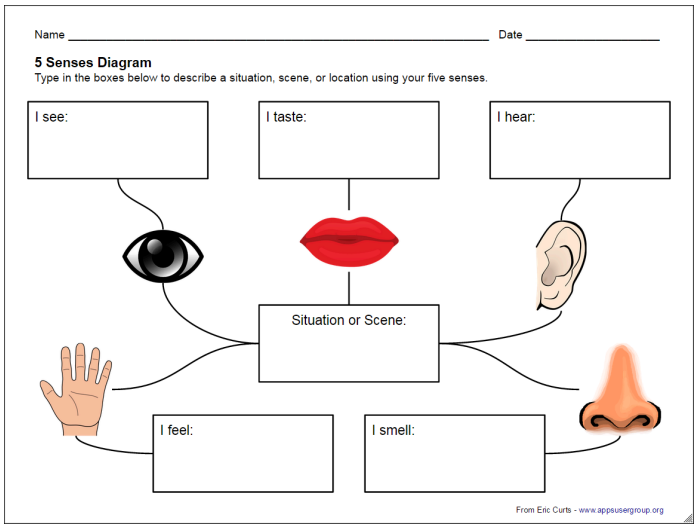
This option requires more work from the student, but still provides them with a guiding framework for the process. Again, since the students are not creating these graphic organizers, you will need to build the template yourself, or find it from someone else.

Some examples of possible **fill-in templates** are shown below:

State Research Web - student fills in info about the state they are researching.

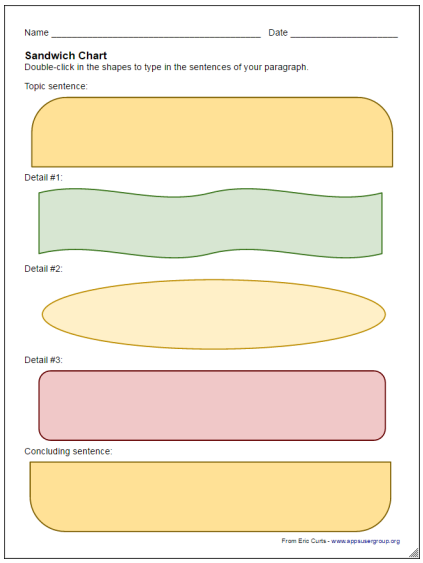


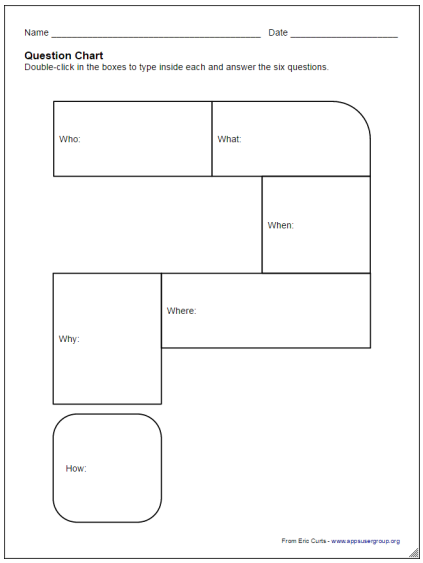
5 Senses - student describes a scene or situation with their five senses.



Sandwich Chart - student plans out the sentences for a paragraph they are writing.

Question Chart - student answers who, what, when, where, why, and how for a topic.





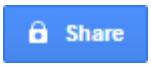
To access a folder of **free fill-in templates**, click the link below:
http://www.controlaltachieve.com/p/resources-google-drawings.html

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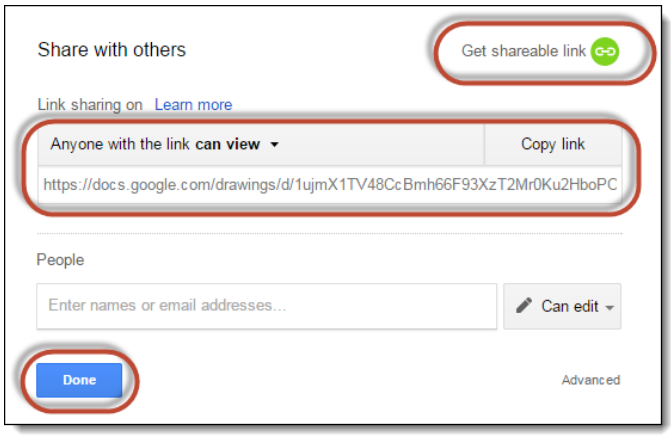
Sharing as View Only

For both of the first two options (pre-made activities and fill-in templates) you will be providing the students with a template from which to work. However, you do not want the students to actually change your original template. Instead you want them to work on a copy of the template that they can edit as needed.

To accomplish this you need to **share the original Google Drawing** with your students with **View Only rights**. There are several ways you can do this. Below are directions for one common option.

1. With your Google Drawing open, click the blue **Share** button 

in the top right corner
2. This will open the **Share with others** window.



3. Click **Get sharable link** in the top right corner.
4. This will now give anyone permission to **view the drawing** (but not make any changes) as long as they have the **link**.
5. **Note**: If you are using Google Apps for Education the default sharing will be with anyone in your domain rather

than the entire public.

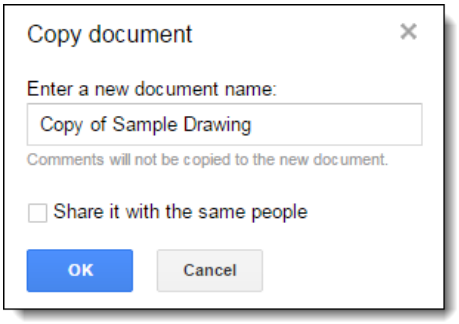
6. Finally **copy the sharable link** and click **Done**.

Now you just need to make that link available to your students. You can do this in several ways:

- **Email** the link to those who need it.
- Post the link on your **website**, blog, forum, or other online source.
- Put the link inside **another document** and share that document (perhaps as a document with a whole list of links).
- Turn the link into a **QR Code**, and then include the QR Code in other media. (A good QR Code generator can be found at: http://qrcode.kaywa.com/)
- Use a **URL shortener** to make the link smaller such as: https://bitly.com/ or http://tinyurl.com/ or http://goo.gl/

When the student click the shared link, the Google Drawing will open in view only mode. The student will not be able to make any changes to the Drawing template. Instead they will need to make a copy of the Drawing that they will own themselves and be able to edit. The student can do this as follows:

1. Open the shared Google Drawing.
2. Click **File** in the top menu bar.
3. Click **Make a copy…** from the drop down menu.
4. This will open a window where the student can give a name to their copy of the Drawing.
5. Now the student will have their own copy of the Drawing which they can edit however they need.



Option 3: Create from scratch

The final option for using Google Drawings for graphic organizers is to have students create their diagrams from scratch. This will give the students the most freedom and will show most clearly their understanding of their topic since they will need to build their diagram and link the parts together themselves.

However, this will also require the most of the students. They will need to be able to do several things with Google Drawings including:

- Create a new Drawing
- Plan the layout
- Insert shapes and images
- Add connectors between shapes and images
- Add text
- Fill shapes with color

The rest of this help guide will explain how student can create their own graphic organizers from a blank Google Drawing.

How to access Google Drawings

Google Drawings is part of Google Drive which you can access in several ways:

- **From Google services** - If you are already logged into your Google account, you will have an **App**

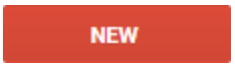
Launcher button in the top right corner of most of your Google-related websites. You can click the **App Launcher** button to see a list of Google services, and can choose **Drive**.

- **Web address** - Or you can just type in the direct address: https://drive.google.com

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How to create a new drawing

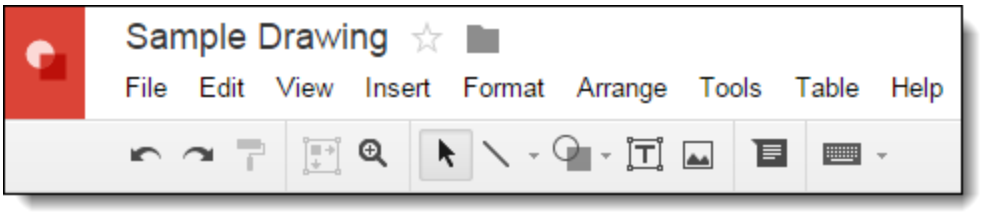
Once you are in Google Drive you can **create a new drawing** as follows:



- Click the **Create** button in the top left corner
- Then click **More** and **Google Drawings** from the drop-down menu
- Your blank drawing will now open. You can give it a name by clicking in the **Untitled drawing** box at the top left, and then typing in your title. You can click there again to change the title at any time.
- Google Drawings **automatically saves** your drawing after any changes you make.

Toolbar overview

Once you are in Google Drawings you will see a large blank area to create your drawing. Above that you will see the menu bar and toolbar. Below are the main features of these areas:



Menu bar - some common options on the menu bar are:

- **File** - Share, Download, Publish, Page setup, Print, and more
- **Edit** - Undo, Copy, Paste, and more
- **View** - Zoom in and out, Snap-to options, and more
- **Insert** - add a Textbox, Image, Link, Word art, LIne, Shape, Table, and more
- **Format** - text formatting, change shapes and connectors, crop images, image options, and more
- **Arrange** - Order, Align, Distribute, Rotate, Group images and more
- **Tools** - Spelling, Research, and more
- **Table** - insert and edit tables

Toolbar - some common options on the toolbar are:

 **Select** - use to select one or more items in the drawing

 **Line** - insert a Line, Arrow, Elbow Connector, Curved Connector, Curve, Polyline, or Scribble

 **Shape** - insert Shapes, Arrows, Callouts, and Equation symbols

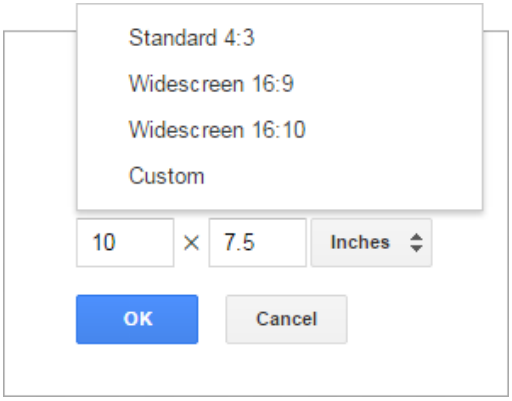
 **Text** - insert a text box

 **Image** - insert an image from uploading, webcam, URL, albums, Drive, and search

Page setup

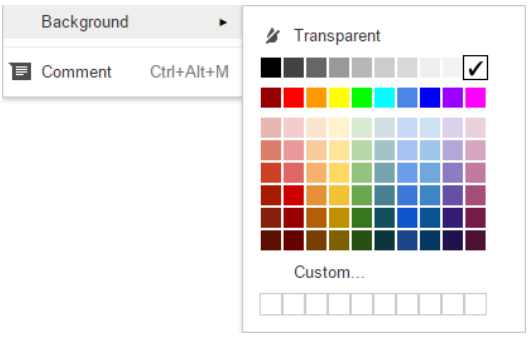
One of the first choices to make for the graphic organizer is the page setup. This allows you to set the width and height of the drawing canvas, so you can control the size and orientation (portrait versus landscape). Depending on the graphic organizer to be created, a certain layout may be more appropriate. To edit the page setup do the following:

1. Click **File** in the top menu bar.
2. Click **Page setup…** from the drop down menu.
3. This will open the **Page setup** window where you can choose the dimensions including:
    - Standard 4:3
    - Widescreen 16:9
    - Widescreen 16:10
    - Custom - where you can specify the width and height
4. Click **OK** when done.



By default your Drawing canvas will have a **transparent background** (indicated by a light checkerboard pattern).

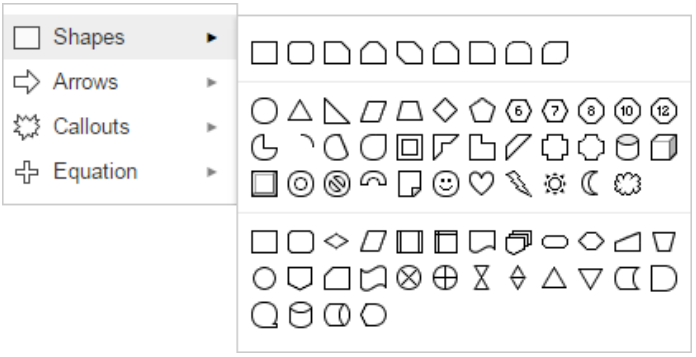
If you want you can set the background to a solid color by **right-clicking** on a blank area of the canvas and choosing **Background** from the pop-up menu.



Adding shapes

One of the most common elements of a graphic organizer is shapes. Boxes, circles, and other shapes can be used to hold text and can be connected together to show relationships, cause and effect, details, and more. Google Drawings provides over 130 pre-made shapes that can be inserted into a drawing and then edited as needed. To insert a shape:

1. Click **Insert** in the top menu bar, then click **Shape** from the drop down menu, or click the **Shape** button from the toolbar.
2. Next choose the category including **Shapes**, **Arrows**, **Callouts**, and **Equations**.
3. Then click on the specific shape you want.
4. Now your cursor will change into a **plus sign (+)**.
5. Go down to the drawing canvas, and then **click and drag** to create your chosen shape.
6. Note: If you hold your **Shift key** while dragging, the shape will keep its original proportions.



Once you have inserted your shape, you can modify it in many ways:


Click and drag the **square boxes** around the border of the shape to increase or decrease its size.


Click and drag the **circle** from the top of the shape to rotate it.


Click and drag the **yellow diamonds** (if available) to modify elements of the shape.

Double-click inside the shape to type text within the shape.


Click the **Fill color** button to fill the inside of the shape with any color.

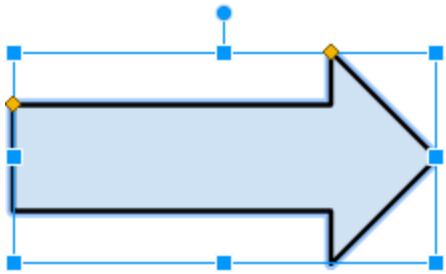

Click the **Line color** button to change the color of the border around the shape.

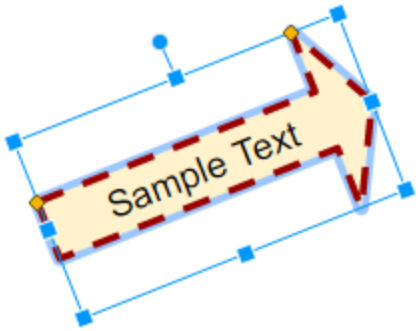

Click the **Line weight** button to change the thickness of the shape's border.


Click the **Line dash** button to change the style of the shape's border.


Click the **Insert link** button to hyperlink the shape to a website or email address.

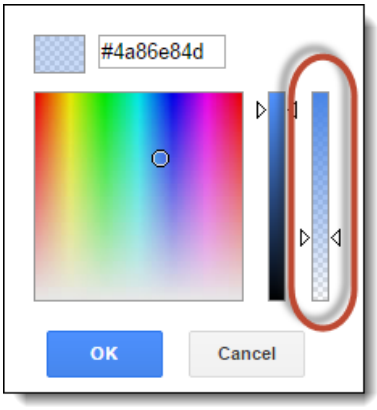
Below is a before and after example to show each of these changes to a shape:





Note: You can also make your image **semi-transparent** if desired. This can be useful for creating Venn diagrams where you want to have overlapping circles and still be able to see each circle. The option for this is burried a bit deeper in the settings, but can be applied as follows:

1. Click on the shape you wish to edit to make sure it is selected.
2. Fill the shape with the desired color using the **Fill color** button on the toolbar.
3. Now click the **Fill color** button again, but this time choose the **Custom** option at the bottom.
4. This will open a pop-up window.
5. Use the **slider** on the far right to adjust the **transparency** of the color.
6. When done click **OK**.



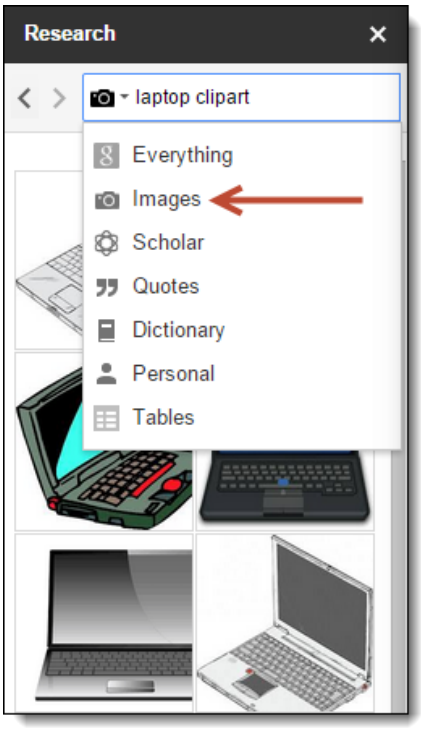
Adding images

In addition to the pre-made shapes that come with Google Drawings, you can insert images from many different sources. We will look at three main options including the Research tool, the Insert Image option, and drag and drop.

Research Tool:

The Research tool is a built-in tool that make it easy for users to search for content while working on a drawing, document, slideshow, or such. With the Research tool you can look for websites, images, quotations, articles, and more. This tool is a very convenient way to find and add images to your graphic organizer in Google Drawings.

1. Begin by clicking **Tools** in the top menu bar, and then click **Research** from the drop-down menu.
2. This will open the **Research panel** on the right side of the screen.
3. In the **search box** at the top, type in the word(s) you are searching for.
4. **Note**: If you are looking for clipart, you can include that in the search box, such as "laptop clipart".
5. **Note**: If you are looking for pictures with transparency around the image, you will have the most luck with PNG images, and can add that to the search box, such as "laptop clipart png".
6. To limit the results to just images, click the **filter button** to the left of the search box and choose **Images**.
7. Now you will get **thumbnails** of matching images in the Research panel.
8. To add an image from the results to your Drawing, simply **click and drag** the image over to your Drawing canvas.

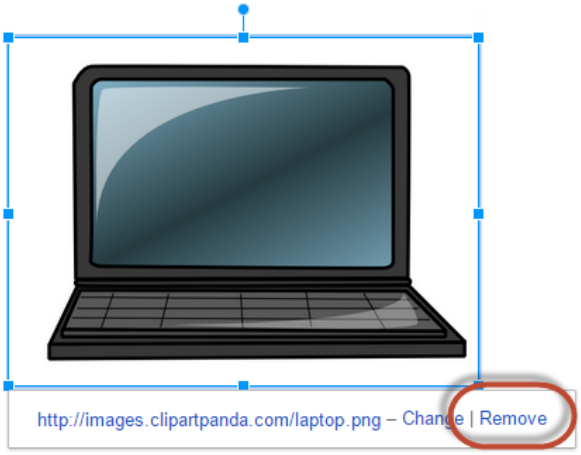


After you have inserted the image you can move it around the Drawing, change its size with the square handles on its border, and rotate it with the circle handle coming from its top.

Note: By default when you insert an image through the Research tool, the picture will have a **hyperlink** applied that points to it original location on the Internet.

You may not want this link in your graphic organizer. You can remove the hyperlink as follows:

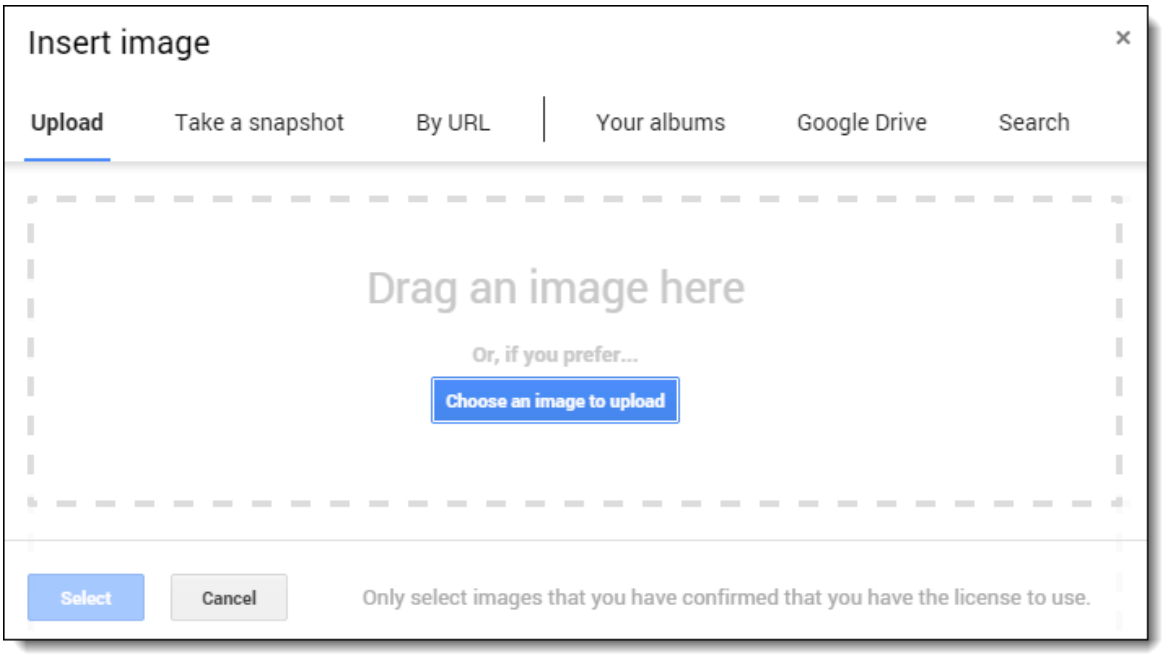
1. Click on the image to select it.
2. Click on **Remove** in the pop-up menu below the image.



Insert Image option:

You can also add images to your Drawing from several other sources. This can be done through the Insert menu option as follows:

1. Click **Insert** in the top menu bar, and then choose **Image** from the drop-down menu.
2. This will open the **Insert Image** window where you will have the choices below:
    - **Upload** - You can browse your hard drive or network drive to locate and upload an image.
    - **Take a snapshot** - If you have a webcam, you can take a picture and insert that.
    - **By Url** - You can paste the web address of an image that is already online.
    - **Your albums** - If you save pictures in Picasa Web Albums or Google+ Photos, you can browse through your albums and insert any image.
    - **Google Drive** - If you have saved images to your Google Drive, you can browse through those and insert any image.
    - **Search** - You can search for image from several online sources:
        - **Google** - A search of Google Images for public-domain pictures
        - **Life** - Pictures from Life Magazine
        - **Stock Images** - These are high quality clipart images



Drag and Drop option:

One final option for adding images to your graphic organizer is the **drag and drop method** where you can drag images directly from a web page and drop it right into your Drawing. The method works as follows:

1. Open up a **new tab** in your browser and **locate an online image** you would like to add to your Drawing.
2. Click and hold down on the image.
3. With you mouse button held down, **drag the image** over to your Google Drawing. This is easiest to do if you have two monitors. However, if you only have one screen, simply drag the image up to the browser tab for your Drawing, wait for the focus to shift to that tab, and then drag down to your Drawing.
4. Once the image is over the Drawing, release the mouse button to **drop the image** into the Drawing.

There are many excellent websites available to help you find images online. As always, be aware of copyright restrictions and fair use of images. Some good sites include:

- Google Images (advanced mode) - http://images.google.com/advanced_image_search?hl=en
- Open Clip Art Library - http://www.openclipart.org/
- Public Domain Clipart - http://www.pdclipart.org/
- WP Clipart - http://www.wpclipart.com/
- Pixabay - http://pixabay.com/
- MorgueFiles - http://morguefile.com/archive
- SoftIcons - http://www.softicons.com/
- Veezzle - http://www.veezzle.com/
- Pics 4 Learning - http://pics4learning.com/index.php?view=browse

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Adding text

Most graphic organizers include text for categories, descriptions, details, and content. With Google Drawings you can insert text on it own, or you can put it inside of a Shape.

To **insert text on its own**, do the following:

1. Click **Insert** in the top menu bar, then choose **Text** from the drop-down menu, or simply click the **Text box button** on the toolbar.
2. Now your cursor will change into a **plus sign** (+).
3. Go down to the drawing canvas, and then **click and drag** to create your text box (you can change it size and position later as needed).
4. Now **type your text** into the text box.

Once you have inserted text in your text box, you can modify it in many ways:


Click and drag the **square boxes** around the border of the text box to increase or decrease its size.


Click and drag the **circle** from the top of the text box to rotate it.

Double-click inside the text box to edit the text.


Click the **Fill color** button to fill the inside of the text box with any color.


Click the **Line color** button to change the color of the border around the text box.


Click the **Line weight** button to change the thickness of the text box's border.

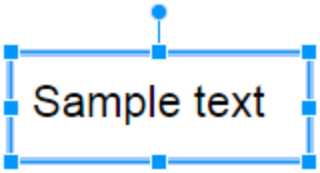

Click the **Line dash** button to change the style of the text box's border.


Click the **Insert link** button to hyperlink the text to a website or email address.

You can also use the normal text formatting options such as **Font**, **Font size**, **Bold**, **Italic**, **Underline**, **Text color**, and more.

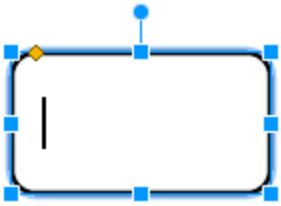


Below is a before and after example to show each of these changes to a text box:





Another option for adding text, is to **insert text into the pre-made Shapes** provided with Google Drawings:



1. Insert a Shape as normal (from **Insert**, then **Shape**)
2. Now simply **double-click** inside the Shape.
3. A blinking cursor will appear in the Shape and you can **type in your text**.

Adding connectors

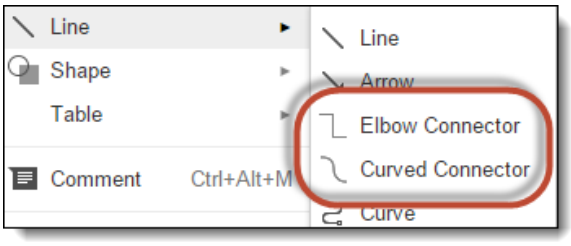
The real power and purpose of a graphic organizer is to show how concepts are related to each other. This is most often accomplished by connecting the images, shapes, and text with lines or arrows to indicate relationships, cause and effect, sequencing, and more.

Google Drawings has two special tools for this purpose: the **Elbow Connector** and the **Curved Connector**. These are different from normal lines in Google Drawings in a few ways:

- They automatically snap on to the sides of your shapes, images, and text boxes.
- They automatically curve or bend to find the best path from one shape to another.
- When you move your shapes, images, and text boxes, the connectors stay attached to them.

To add a connector between two objects, so the following:

1. Click **Insert** from the top menu bar, then **Line** from the drop-down menu.
2. From the pop-up menu choose either **Curved Connector** or **Elbow Connector**.
3. Your cursor will now turn into a **plus sign** (+).



4. Now **hover your mouse** over one of you objects and you will see that multiple **purple circles** will show around its edges. These are **connector points** for your line.
5. **Click** on the purple circle you want and **hold down the mouse button**.
6. With the mouse button held down, move you mouse over to the other object.
7. That object will now display purple circles for its connection points.
8. **Hover** you mouse over one of the purple circles and **release the mouse button**.
9. The connection will now be made between the two objects.



After you have attached the connector line, you can modify it in many ways. Simply click on the connector line to select it and then do the following:

 Click the **Line color** button to change the color of the connector line.

 Click the **Line weight** button to change the thickness of the connector line.

 Click the **Line dash** button to change the style of the connector line.

 Click the **Arrowhead start** button to change the beginning end of the connector line.

 Click the **Arrowhead end** button to change the terminating end of the connector line.

Other modifications include:

- Switch between Curved and Elbow Connectors - click **Format**, then **Change connector**.
- Use shortest path for connector - click **Format**, then **Reroute connector**.
- Move connector points - simply **click and drag** the connector end to a different purple circle connection point.

Managing objects

Now that you are able to add shapes, images, and text boxes to you Drawing, you may find your canvas getting pretty crowded. Google Drawings provides several tools in the **Arrange menu** to help clean up and organize your objects.

First, you will need to **select the object** (or objects) that you wish to manage. You can do this by **clicking and dragging** your mouse to select them all at once, or by holding down your **Shift key** and clicking on them one at a time. Once you have the objects selected, click **Arrange** in the top menu bar. Below are your options:

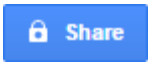
- **Order** - move 1 or more objects in front of or behind other objects
- **Align horizontally** - move 2 or more objects to the left, center, or right edge of the group
- **Align vertically**- move 2 or more objects to the top, middle, or bottom edge of the group
- **Center on page** - center 1 object of selection of objects vertically or horizontally on the page
- **Distribute** - equally space 3 or more objects horizontally or vertically across the group
- **Group** - merge 2 or more objects together
- **Ungroup** - un-merge the objects in a group

Also, if you want more precision when moving an object than just dragging and dropping, you can select the object, then hold down your **Shift key** while pressing the **arrows keys** on your keyboard to move the object one pixel at a time.

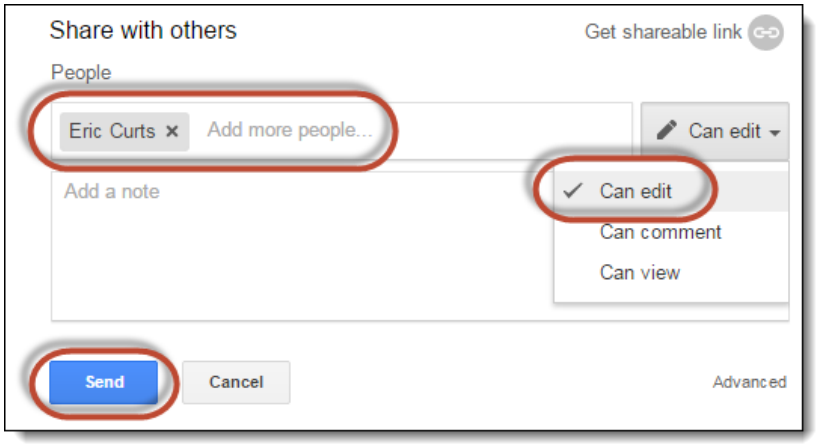
Collaboration

One of the most powerful features of Google Apps is the ability to work with other people on shared documents, slideshows, drawings, and more. If students need to work together to create a graphic organizer, Google Drawings makes it easy for them to collaborate live on the same Drawing.

To share edit rights with another person, do the following:

1. Click the blue **Share** button 

in the top right corner.
2. This will open the Share with others window.



3. In the **People** box enter the email addresses for the people you want to share with.
4. From the drop-down box to the right choose the level of permissions you want to give them, such as **Can edit** if you want them to work on the Drawing with you.
5. Click **Send** when done to share the Drawing.
6. The people will now receive an email with a link to the Drawing, and the Drawing will show up in the Google Drive in their **Incoming** folder.

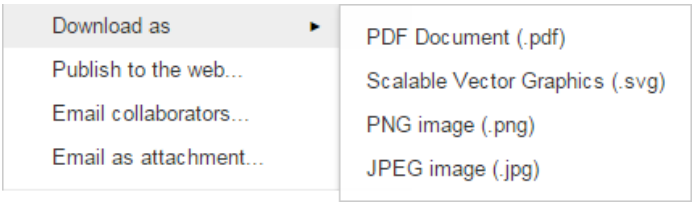
Publishing

When you are all done creating your graphic organizer, the last step is to show the final product to others. There are many ways to take your Google Drawing and make it visible for others. Below are three of the more common options.

Option 1: Download as an image file

One of the simplest option is to download your Google Drawing as a standard image file.

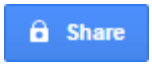
1. Click **File** in the top menu bar.
2. Choose **Download as** from the drop-down menu
3. You can choose any of these image formats:
    - PDF Document (.pdf)
    - Scalable Vector Graphics (.svg)
    - PNG image (.png) - my recommendation
    - JPEG image (.jpg)

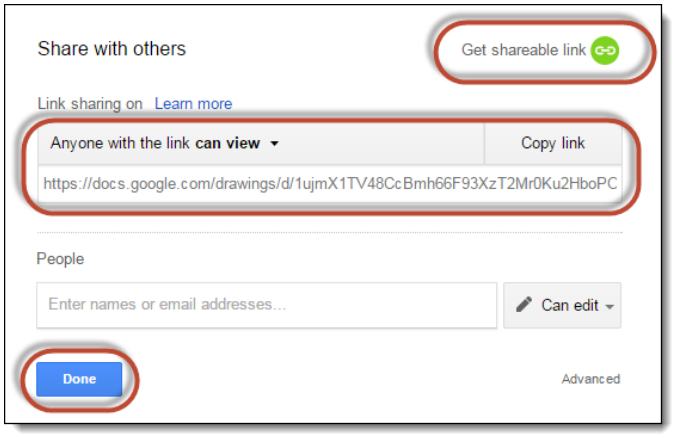


The image will now download to your computer. You can use the image however you want such as posting on your website, sharing on social media, emailing to others, and more.

Option 2: Share as view only

Just like you can share your Drawing with collaborators for editing, you can also share your Drawing in view only mode. This will allow others to see your graphic organizer, but not make any changes to it.

1. With your Google Drawing open, click the blue **Share** button 

in the top right corner
2. This will open the **Share with others** window.
3. 

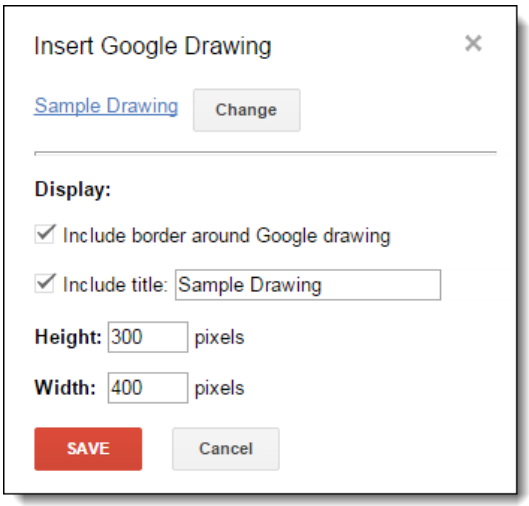
4. Click **Get sharable link** in the top right corner.
5. This will now give anyone permission to **view the drawing** (but not make any changes) as long as they have the **link**.
6. **Note**: If you are using Google Apps for Education the default sharing will be with anyone in your domain rather than the entire public.
7. Finally **copy the sharable link** and click **Done**.

Now all you have to do is provide the link to anyone you want to see the Drawing. You can send it in an email, post it on your website, share it through social media, and more.

Option 3: Embed in a Google Site

If you use **Google Sites** to create your web page, you can easily embed your Google Drawing into your Site.

1. First begin by going into **edit mode** for a page on your Google Site.
2. Now click **Insert** in the top menu bar, followed by **Drive**, and then **Drawing**.
3. This will open a window where you can **browse your Drive** to find the Drawing you wish to embed.
4. **Click on the Drawing** you want and then click **Select**.
5. You will now get a window where you can adjust the settings for the Drawing including having a **border**, displaying a **title**, and the Drawing's **Height** and **Width**.
6. When done, click **Save**, and then **Save** again to exit edit mode.



The Drawing will now be embedding in your web page. A benefit to embedding your Drawing this way, rather than adding it as a standard image file, is that any **hyperlink** you added to the Drawing will still function. Visitors to your website will be able to click on objects in your Drawing to go out to their hyperlinked websites.

Other resources

- Bring me to your organization: My training and consulting services - on-site or online - link
- All of my free training materials, help guides, presentations, videos, and more - link
- Additional resources for “Google Drawings for Graphic Organizers” - link

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