

Critical Thinking Questions

1. Explain the difference between linear and non-linear motion. What are examples of each kind of motion?
 - Linear motion is motion that follows a straight line, while non-linear motion does not follow a straight line and allows for unrestricted movement in any direction. An object moving at a constant pace on a straight path, such as a car driving along a straight road or a train travelling on a track, is an example of linear motion. Non-linear motion examples include an object moving in a circular direction, such as a vehicle going around a zigzag track, or an object moving in a curved path, such as a basketball being shot at ring. In animation, linear motion is most and best used when making 2d animation, whereas non-linear motion is more typically seen in 3d animation, however both movements may be applied in either 2d or 3d animation.
2. Imagine that an animated film is going to show a character who, although frightened, climbs a narrow mountain trail. What is one of the 12 principles of animation that you learned about in this unit that the animator might want to use in this scene?
 - The principle of anticipation is one of the animation principles that an animator could choose to apply in this scenario. This principle is preparing the audience for an action by displaying a shift in the character's physique or posture before the action occurs. Anticipation generates the sense that an action has a goal or direction when animating a character or object. In this case, the animator could show the character taking a deep breath, looking up at the trail, and tensing their muscles before they begin climbing. This adds suspense and makes the action feel more believable. When there is a sudden movement of a character and the viewer does not know why, it is awkward. So, it is important to inform your audience that there will be a lead movement in your animation.
3. Describe how you would use the principle of "staging" in a scene in an animated film that shows a triumphant moment in a soccer game played in a large stadium.
 - In animation, the staging principle refers to how an animator leverages the arrangement of a shot to guide the audience's attention and tell the story. A technique to accomplish this applying the staging principle would be to begin the scene with a wide view of the entire stadium, showing the player scoring the goal and the fans bursting in celebration. The animator may have the player stare out toward the audience as the camera closes in on him, a triumphant expression on his face and his arms raised in victory. The background

crowd would intensify the feel of magnitude and intensity of the scene. The animator might employ camera angles, lighting, and movement in this set-up to further highlight the victory and make the player appear more triumphant.

4. Describe a situation where an animator might choose to intentionally violate the principle of "slow in and slow out."
 - The "slow in and slow out" principle in animation refers to the idea that an animated movement should move at its quickest in the middle and at its slowest at its beginning and end. This idea gives the appearance of weight and motion and gives the animation a more realistic feel. To produce a certain effect, an animator may decide to intentionally violate the "slow in and slow out" rule in some circumstances. When attempting to depict a chase action, an animator could decide to shift from this principle. For example, if character 1 is using a vehicle to escape character 2 and the animator wants to make the scenario intense and rapid to create a car chase scene, they may do so without showing or by violating the "slow in and slow out" principle.
5. Imagine that you had been given the task of animating a crab walking along the seashore. How would you use the animation principle of secondary action to make the scene appear more realistic?
 - Secondary action is used to draw attention to the main action, which in this case is the crab walking. To emphasize this, I would animate the crab's hands or claws while it is holding something or by moving its claws while walking. To further emphasize the primary action, I would animate the sand of the seashore as it has footprints when the crab walks to make it appear more realistic. Along with that, I would animate the sea water as a background as it moves with the crab. It would enhance realism and make the animation look more genuine with these slight additional movements.

UNIT 5: LAB

Create Google Slides Animations

This lab will help you learn how to create animations with a Google Slides web-based presentation program. Later in this course, you'll be using what you've learned from this lab to create a professional Slides presentation that includes images, video, audio, and animation.

Step 1: Get Familiar with the Google Slides Interface

In this lab, we'll create a Slides presentation and practice using different animation techniques. The instructions included here will not be enough for you to learn how to use the tools. Here are two ways to get more information:

- Refer to the training materials provided within Slides. Once you're logged in, choose **Help > Training**. This will take you to Google's Learning Center for Slides.
- Search the internet for tutorial videos (specifically tutorials about animation in Slides). Set your search results to videos and use this keyword search: 'google slides animation tutorial'.

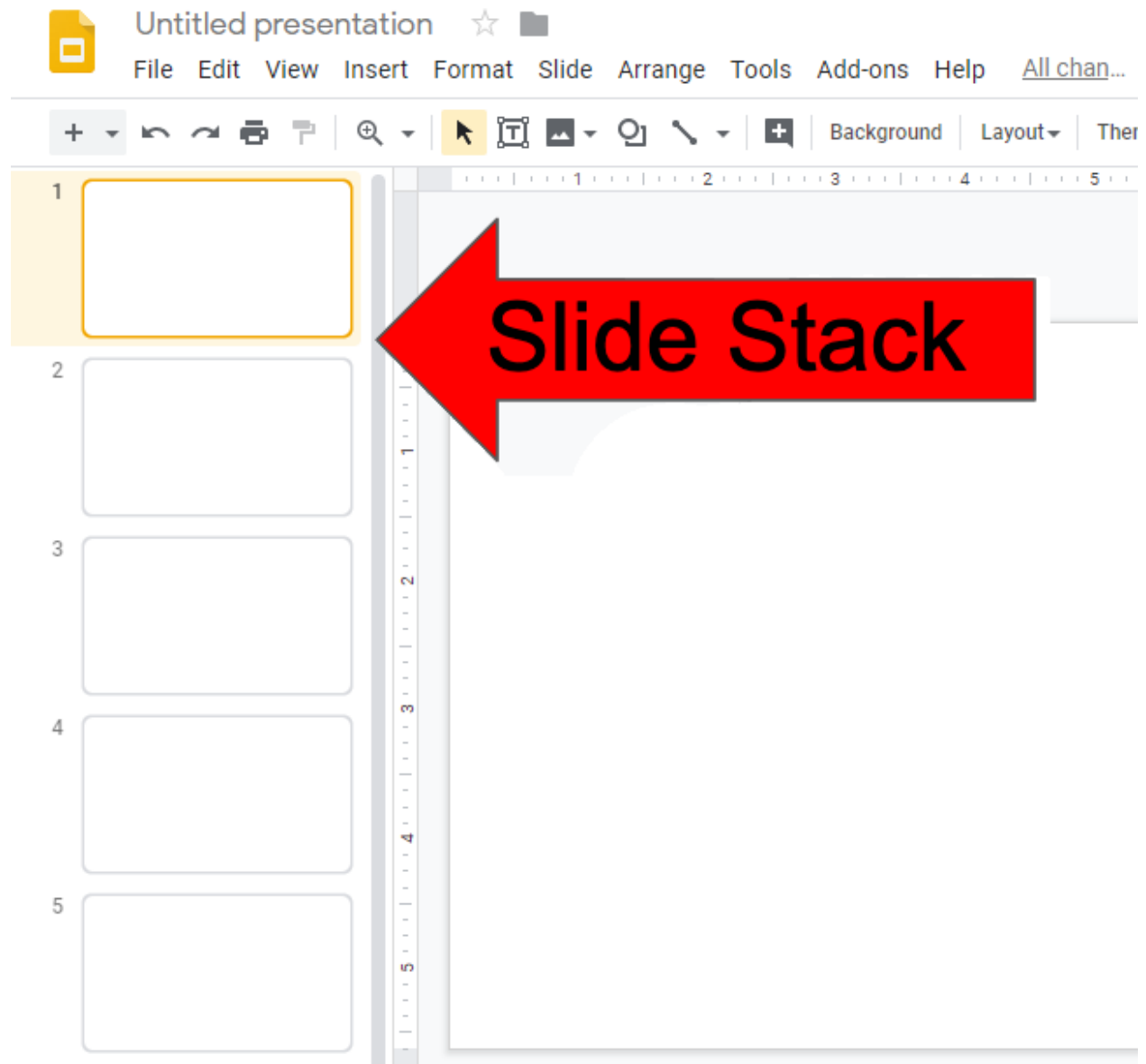
Step 2: Create a Google Slides Presentation

Create a new presentation in Google Slides without a template (just a plain white background). The first slide will have text boxes on it—delete these so that you have a plain blank slate to begin.

Step 3: Duplicate Slides, Grouping, and Linear Movement

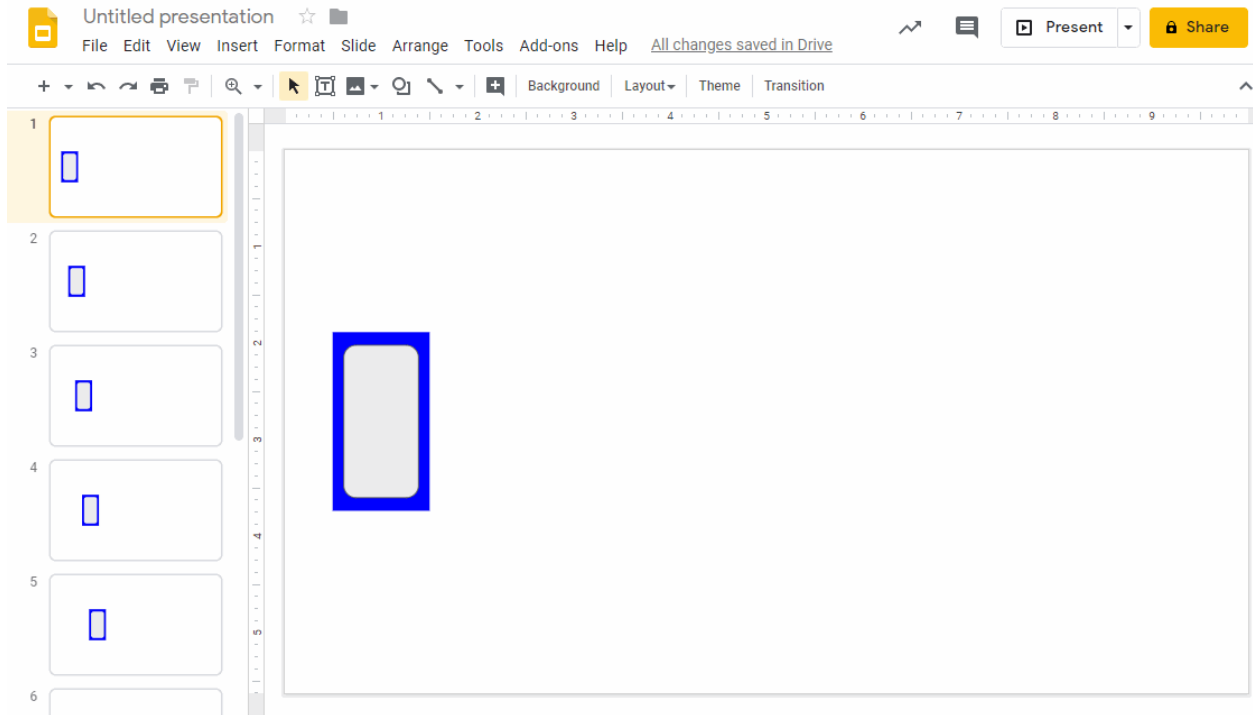
Remember that every animation is just a stack of still images presented in quick succession.

On the left-hand side of the Slides screen, you will see a sidebar where the slides appear like a stack. This makes Slides a great place to play around with some very basic animations.



Let's start by creating a simple shape and creating some linear motion:

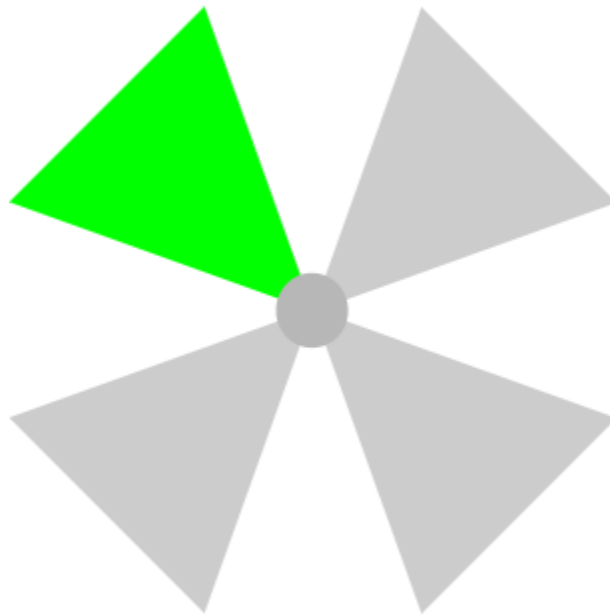
1. Create a simple two-part shape: a rectangle with a smaller rounded rectangle inside it.
2. Make both parts a different color so you can see them both.
3. To get the smaller rounded rectangle centered within the rectangle, select the rounded rectangle and then click your **Shift** key and one of the arrow keys at the same time (this will move the highlighted element one pixel at a time)
4. Once you've got the shape created, click **Shift** and then click on each of the two shapes—this will allow you to select them both. Then from the drop-down menu, choose **Arrange > Group**. This will group the two shapes together so that you can move them together.
5. Now we have an image that is ready to animate. First, duplicate the slide. Make sure it's selected and from the dropdown menus, choose **Slide > Duplicate**. Or use the keyboard shortcuts: **⌘ + D** (or **Ctrl + D**).
6. Once the duplicated slide appears, select the shape and then use the arrow keys to move it over by five to eight clicks. Make sure you don't move the shape up or down—just select it, and then use the right arrow key to move it.
7. Once you've got the second slide done, with the shape moved a little to the right, select the slide from the slide stack and then duplicate it (**⌘ + D** (or **Ctrl + D**)).
8. On the new duplicate (slide 3), select the shape and then use the right arrow key to move it five to eight more spaces. Now select slide 3 from the slide stack and duplicate it by **⌘ + D** (or **Ctrl + D**).
9. Repeat this process several times until you have 10 slides in your slide stack, and the shape has moved to the center of the screen. Now click on the top slide in the stack to select it, and then use the down arrow key to show the slides in quick succession. You have created a linear animation! It should look something like this:



Step 4: Duplicate Slides & Rotate, Non-Linear Movement

Now let's practice with creating some non-linear animation:

1. In the same Google Slides file, after the 10 slides you created for #3, add a new blank slide (**Slide > New Slide** or **Ctrl + M**).
2. On the new slide, make a simple shape out of four triangles and an oval. Click on the **Shapes** icon in the toolbar and choose the triangle. Then select the triangle and duplicate it three times (**⌘ + D** or **Ctrl + D**). Make the oval and three of the triangles gray and the fourth triangle a bright color. Arrange these shapes into a fan or pinwheel: use the **rotate** function (the circle at the top of the shape when it's selected) and the arrow keys to move the elements around (for even smaller movement, use **Shift + ↑**, **→**, **↓** or **←** arrow keys) until they look something like this:



3. Once you have the elements arranged, hold down **Shift** and click on each element until you have selected all five elements of the image. Group them (**Arrange > Group**).
4. Now select this slide in the slide stack and duplicate it (**⌘ + D** or **Ctrl + D**).
5. On the new slide, select the image and rotate it clockwise (to create the impression of circular motion); you can do this by hand by clicking on the circle that appears at the top of the box when you select it, but there is more possibility that you might move the shape slightly and make the animation look shaky. To make it easier, just select the image and then click **Arrange > Rotate > Rotate 90°**.
6. Repeat steps #4 and #5, rotating the image 90° each time until the odd-colored triangle has made a full circle (this will take five slides, with the first and last being the same).
7. Now click through the slide stack quickly and you'll see non-linear rotation.

Step 5: Animate Text on Slides

Last, let's practice with animating text on a slide and slide transition animation. Create one more new blank slide in the same Slides file (**Slide > New Slide** or **Ctrl + M**).

1. Copy the following text chunk and paste it into a text box on the new slide. To do this, click on **Insert > Text Box**, and then paste the text inside the box.

Are your friends getting emails from you that you didn't send?

Chances are your email has been hacked

Don't worry! Here are two things you can do...

2. Make the text a large font so that the three lines take up the whole slide. Put white space between the three lines. Then practice with animating each line of text and how it enters the slide. To do this, highlight a string of text, and then click **Insert > Animation**.
3. An animation side-bar menu will appear on the right.
4. Highlight one of the lines of text and then click **+ Select** an object to animate.
5. When all the options appear, try several, and after each change, click **Play** to see the animation.
6. Practice with create different slide animations (Click where it says **Slide: No Transition** to choose).

Step 6: Set Sharing and Submit Link

Once you've completed steps #1 - #5, save your Slides file (you will have to give it a name first). Then click on **Share** and make sure that "Anyone with the link can view."

Then copy the URL submit the link to your teacher.

https://docs.google.com/presentation/d/11nengDF4OqfG8JJnIBTI4rktCwkmIzjO3BBouEjz7M/edit?fbclid=IwAR27L_4SJN0ai7NAXHUaK6npMBQMjPl8xsE7PSnV-eOxPLtuIIH-zivQ-pc

UNIT 5: Activity

Create a Short-Animated Video

Required Materials

- **PowToon** (requires login)
- Word processing software

The Setting

You're a digital media professional who specializes in creating animations and videos, and you work in the marketing department of FonSec, a company that creates privacy and security apps for smartphones.

FonSec is launching a new app and would like to do some "Public Service Announcement" (PSA) videos as part of its marketing strategy. The director of marketing wants to create a 30-60

second video to be played on FonSec's website and broadcast over its social media channels. He saw a video online that he liked and has sent you a link to it, along with a script he wrote and a few other details:

From: Ben Garcia

Subject: Short Animated PSA Ideas

Thanks for taking on this new project! As we discussed, I'd like you to create a short animated PSA video, 30-60 seconds long (any longer than that and I don't think people will keep watching). The video is about what to do if your email gets hacked. I think the overall look should be something like a short video about online privacy that I saw recently—the video simply animated basic drawings, text, and icons and included the audio of a narrator reading a script that aligned with the animation being shown. I would like for the video you create for this PSA to take on a similar format but with the slight changes that I've outlined below.

One thing I don't want to bother with for this particular project is a voiceover, so the message of the video will have to be carried out by the text that is animated on the screen. I've written a short script—please feel free to revise it as needed in order to make it work for the video. I have bolded what I think are the most important lines of text.

Script for Short Animated Video "Stay Safe in Cyberspace" (30-60 seconds)

Are your friends getting emails from you that you didn't send?

Chances are **your email has been hacked.**

Don't worry! Here are two things you can do.

First, **download a security software you can trust** and scan your hard drive.

Next, **change your password.**

It's a good idea to change your password often.

Stay safe in cyberspace!

Looking forward to seeing what you make! Thanks!

Ben Garcia
Director of Marketing

The Instructions

Step 1: The Software Choice

Since you know the video will be played online and that you'll probably need access to some simple drawings and icons, you've decided to use PowToon to create the animated video. You know that PowToon offers some pretty slick templates for animated videos, and since you've been asked to create this video in a relatively short amount of time, you've decided that using a template is the best way to go.

1. Go to PowToon and create a free account.
2. Once logged in, go to **Support > Tutorials** and watch the tutorial called "How to Make a PowToon from A to Z in Just a Few Minutes."
 - Note where you found this tutorial—this page may come in handy if you want to watch other tutorials later.
 - If you already watched this video while reading the unit, then skip to #3.
3. Click on **Templates** in the menu on the left of the page and you will be taken to a page of templates. Click on the templates for **Learning & Development**. The templates in these categories are closest to what your director has asked you to create.
4. Choose a template to work with and begin revising it with the script from Ben.
5. Use Ben's script to help you identify the key frames in the animation (in this case, key frames will be the ones with the most important text—Ben has bolded it in his script). Make sure these key frames get the most focus when the animation plays.
6. The template you choose will probably already have music for the audio. You can keep this music or change it out for other music (available on PowToon or other royalty-free music you find on the internet). As much as possible, make sure that the music matches the action on the screen.
7. PowToon contains both free and "pro" content—you may have chosen a template that contains pro content (which when you try to export, will say you have to pay to use). If this is the case, just delete the pro content and replace it with free content. You do not have to pay for PowToon to complete this activity.

Step 2: Design and Layout

Even though you are using a pre-designed template, you will be revising it and creating something new out of it. Keep the basic principles of layout and design in mind as you create, and remember, use these principles to guide your viewers' focus.

TABLE 1 Principles of Design

Typography	<ul style="list-style-type: none">• Serif vs Sans Serif• Variety of font size• Variety of font color• Animated typography<ul style="list-style-type: none">◦ Use hierarchy—the most important text stays on the screen the longest; it may be presented in larger fonts or in alternate colors.◦ Do not over-animate so that viewers don't know where to focus
Color Theory	<ul style="list-style-type: none">• Primary, secondary, tertiary colors• Complementary and contrasting color palettes• Hue, saturation, and value• Colors and emotions they evoke
Design and Layout	<ul style="list-style-type: none">• Rule of Thirds• Proportion• Balance• Symmetry• Unity• Repetition (of font, color, size, line thickness)• Variety• Perspective• Background/foreground• Animated layout

- Consider the direction of how elements move in and out of the screen. Use the path of motion to guide viewers' focus.

Step 3: Linear and Non-Linear Movement

As you plan and design your animation, use both linear movement and non-linear movement.

Linear: The element you are animating moves in a straight line, either from side to side, top to bottom/bottom to top, or diagonally, but still in a straight line. Linear movement works best when you want your viewers' eyes to follow an element across the screen. In western languages, we read from left to right and top to bottom, so take that into account as you animate the text in your video.

Non-linear: The element you are animating moves but not in a straight line. If having an element rotate in a circle or semi-circle will help to make a point, that would be a good use for non-linear animation in your video.

Step 4: Export Your Completed Video, Post Link, and Annotate

Once your animation is complete, export it so that it can be viewed. Click the **Export** button in the top right corner. There are many options to choose from in terms of how you export; for our purposes, selected **Share Link**.

Please post that link in word processing document, and then write a short paragraph about your process. Your paragraph should describe the process of developing your animated short video. Make sure to identify two time-stamps in your video: linear movement and non-linear movement. Also, explore what layout and design principles you followed to guide your viewers' focus.

Submit your word processing document to your instructor.

https://www.powtoon.com/online-presentation/esBTb5p7t2X/?utm_medium=social-share&utm_campaign=studio+share&utm_source=copy+link&utm_content=esBTb5p7t2X&utm_po=44055922&mode=movie

At first, I planned to create my own animation and do it on 3d but due to lack of time I stucked to the guidelines. So, I used the Powtoon ready made templates to start my animation. I look for the most suitable template as possible to match the theme of this animation. After looking, I modified the templates according to the script of the animation, I changed the background video that matches every script and add some elements that will also further highlight the theme of the animation. And I also changed the music that I think will match the animations and its contents. For the non-linear and linear motion, it can be seen from 15-20 seconds of the animation and for the ending animation for about 42-44 seconds. And of course, upon designing and layouting my animation and its contents, I also mind different rules or design principles to create a good-looking animation.