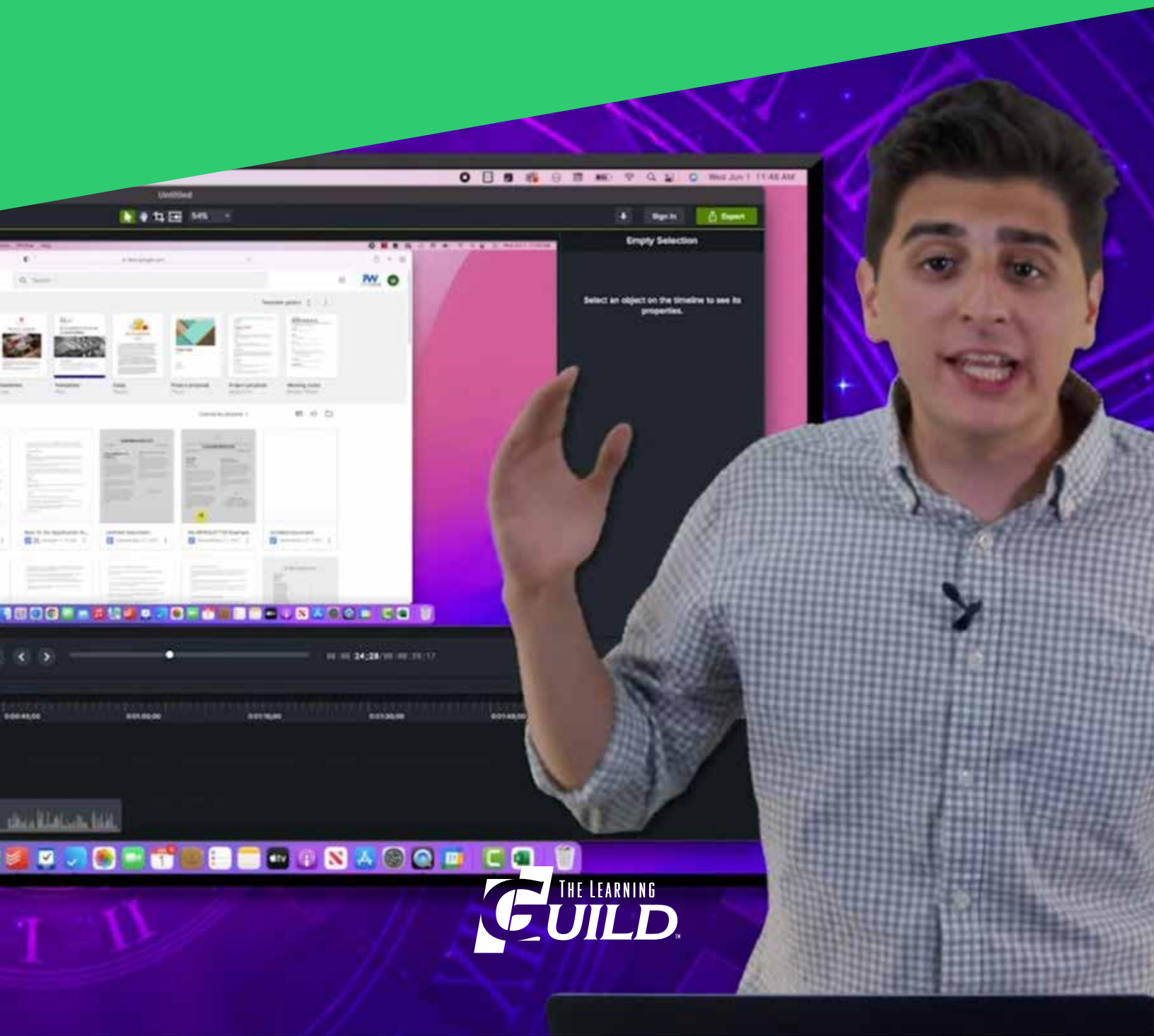


# Green Screen Video Production Primer



© 2022 by The Learning Guild. All rights reserved.

The Learning Guild  
120 Stony Point Rd., Suite 210  
Santa Rosa, CA 95401  
[www.LearningGuild.com](http://www.LearningGuild.com)  
+1.707.566.8990

Written by: Mark Lassoff  
Publication Manager: Susan Jacobs  
Publication Design: Tiffany Le Brun

You may download, display, print, and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organization. All other rights are reserved.

This is a FREE digital eBook. Other than The Learning Guild, no one is authorized to charge a fee for it or to use it to collect data.

Attribution notice for information from this publication must be given, must credit the individual author in any citation, and should take the following form: *Green Screen Video Production Primer*. Readers should be aware that internet websites offered as citations or sources for further information may have disappeared or been changed between the date this book was written and the date it is read.

# CONTENTS

---

Introduction	<a href="#"><u>4</u></a>
When To Use Green Screen Video	<a href="#"><u>10</u></a>
Getting Started with Green Screen: Equipment and Tools	<a href="#"><u>16</u></a>
Green Screen Post-Production Process	<a href="#"><u>20</u></a>
The Secret to Good Green Screen: Video Graphics	<a href="#"><u>33</u></a>
Conclusion	<a href="#"><u>35</u></a>
About the Author	<a href="#"><u>36</u></a>

# INTRODUCTION



It would be logical to think that green screen is an expensive, resource-intensive process. The reality is that green screen production is inexpensive and relatively easy.

*Mark Lassoff*  
*Founder, Tech Learning Network*



You've no doubt seen green screen technology at work. If you watch just about any local weather report, you see the reporter embedded against, and interacting with, an ever-changing series of maps and graphic displays.



*This on-camera presenter is working with a green screen.*

Green screen usage is hardly limited to tv weather reports, and green screen technology is also a significant facet of modern movie production. Recent movie blockbusters including *Avatar*, *Life of Pi*, and *Gravity*, were shot almost entirely using green screen technology. Based on its usage in film production and network-level broadcasts, it would be logical to think that green screen is an expensive, resource-intensive process. The reality is that green screen production is inexpensive and relatively easy.



*"Baby shark, doo doo doo..." (Thank me in an hour when that song is still in your head!) Pinkfong produced the most-watched YouTube video ever using a green screen. The live actors were shot against a green screen and then composited into the animation in post-production. (<https://youtu.be/XqZsoesa55w>)*

Learning videos often feature green screen production. The teen hosts and commentators of LankyBox appear embedded in the video as they discuss the 20 CRAZIEST Science Experiments Ever in one of their top videos ([https://youtu.be/uqQZ\\_tzNDyw](https://youtu.be/uqQZ_tzNDyw)).

The production flow we use at [Tech Learning Network](#) is completely green screen-based. We shoot our videos in our green screen studio and later compose the footage with our course graphics and the instructor's screen to teach software.



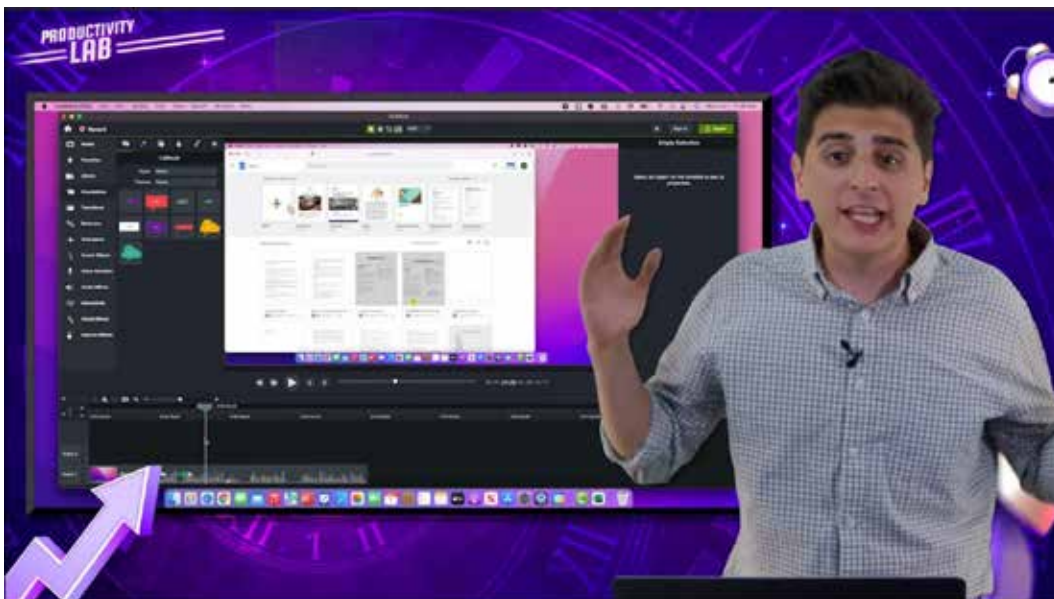
*A picture of Tech Learning Network's inexpensive green screen studio.*



We record instructors and on-screen experts against the green screen wall. Below is a frame from the instructor video. Tech Learning Network Content Team Leader [Mitchell Weinbaum](#) is mugging for the camera.



The on-screen instructor is composited with video graphics and, in this case, a video feed from his computer screen to create the final image.





The green screen has also become a popular and recognizable format for the teen and tween set. Twitch, a host site to thousands of live streamers, features many channels where hosts show themselves cut out of a green screen background, superimposed over a video game they're playing. TikTok is another channel where green screen video has become popularized. It's common for creators to inject themselves into TikTok short-form videos using green screen technology. For teens, surprisingly, green screen green has become a popular and practical color choice for teen bedrooms, as they use their bedroom walls for green screen video recording.



*TikToker @Office\_Skills uses a green screen to reach over 300,000 followers.*

# WHEN TO USE GREEN SCREEN VIDEO



With green screen  
hosts and graphics can  
interact, creating a more  
understandable and often  
more engaging experience.

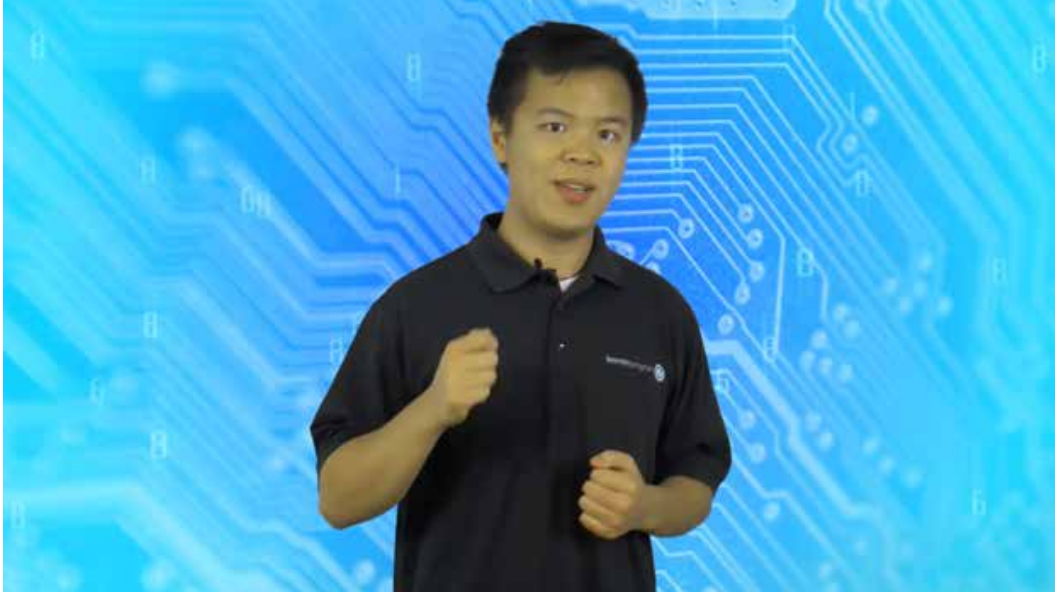


In our professional work we have found there are several cases where green screen-style video is a good option:

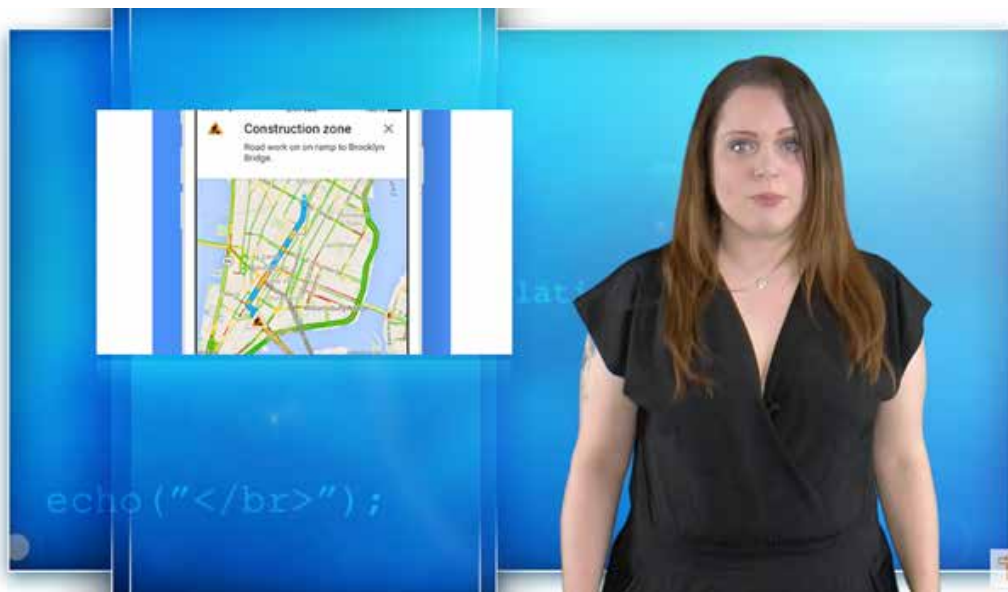
- ✓ When we want to increase viewer engagement. With the use of a strategically designed virtual studio, we can better engage the viewing audience. Remember that every facet of your video communicates a message and that while a natural setting, like an office or conference room, can work, green screen lets you take your audience anywhere. You can place any image or video behind the video subject using green screen technology. Some videos using green screens use a realistic backdrop, like in the still photo above, and others use a setting produced with 2-D or 3-D computer graphics programs.



*Green screen video allows me to host a video from a Hawaiian Island—a more engaging setting than my office. (Just trust me on this!)*



*Ziqaang Guan, also known as "Z", hosts a green screen video using a 2-D composite background.*



*Alison Downs presents in a highly stylized animated studio that many viewers have thought was real.*



When we want on-screen instructors to interact with information and graphics. On-screen informational graphics used to be a completely separate matter from the on-screen host or instructor. With green screen hosts and graphics can interact, creating a more understandable and often more engaging experience.



*Ultraviolet films use an animated infographic that includes a map of India in this video still.*



- ✓ When we are demonstrating a software interface. We can superimpose the instructor over a recording of the interface, allowing the instructor to present in real-time. Allowing the on-screen instructor to highlight minor interface elements on-screen can improve the overall learner experience.



*Spiel Creative cleverly uses a green screen to demonstrate SLR camera features. The producer uses a green screen to insert the on-screen host and the finger interacting with the camera “interface.”*

- ✓ When we are working within brand guidelines. We work with many clients who want their brand aesthetics included in the video. With several clients, all with varying brand requirements and one small green screen studio in Connecticut, we'd have to rebuild the studio after every client engagement, which would be costly and time-consuming.

With digital studios and green screen, we can shoot any number of brands in the same physical environment and insert the necessary brand elements in the post-production process. You can easily reuse digital studios for subsequent client engagements.

Adobe has an [interesting tutorial](#) on creating content with brand advertising, user content, and some green screen templates (available in Adobe Stock).

- ✓ When there is a sufficient budget for custom studio build-out. For the occasional client with a beer budget and champagne taste, green screen provides an opportunity to “meet in the middle” regarding video aesthetics. It is often more cost-effective to use a green screen and create graphic elements digitally than to build a studio according to client specifications.



# GETTING STARTED WITH GREEN SCREEN: EQUIPMENT AND TOOLS

“

If you are already recording video, getting started with green screen production doesn't require much additional investment.



If you are already recording video, getting started with green screen production doesn't require much additional investment. I'll assume you already have a camera, microphone, and other basics, and discuss the extra equipment and tools needed for the green screen production flow.

Let's start with the obvious: The Green Screen.

The term "green screen" really should be "green surface." You can obtain that surface by either purchasing a green screen from Amazon or another vendor. (There are dozens, and they all work equally well) or by painting a wall green. I recommend the latter.

Many purchase a green screen-specific paint like [Roscoe's Green Chroma Key Paint](#). It costs over \$100 a gallon and gives premium coverage. Our studio uses a hack that works quite well. [Behr Sparkling Apple](#) flat interior paint is the same color, at a quarter of the price.



*Wet paint! Our green screen wall right after our production crew finished painting. This photo is from our Westport, Connecticut studio.*

If you purchase a “blanket-style” green screen, do everything you can to get the wrinkles out and make it flat. Remember that the goal is to present a single shade of green (out of thousands) that can be knocked out of the image by post-production software. The sharper and more consistent your green surface, the easier the green screen work will be.

Once your green screen is ready, you need to light it for production. Again, you want your lighting to provide an even, consistent green. The surface doesn’t have to be extremely bright, but it shouldn’t be dark.

To ensure an even green screen, we use an iPhone app called [Green Screener](#). This app will show variations in your green screen color that may be difficult to detect with the naked eye. You can then adjust your lighting based on the Green Screener app.



*Don't wear green when appearing on the green screen/KTLA, Los Angeles.*

You can light your green screen wall or surface from the sides or above, and you should dedicate specific lights to the green screen. If you attempt to light your subject with the same lights you use to light your green screen you'll likely produce shadows, and shadows change the shade of green and make it more challenging to cut out the green screen in post-production.

Professionals would use a soft LED light like the Smith Victor Pro series to light their green screen. We use LED shop lights from Home Depot. These are shaped like traditional fluorescent lights but hold an LED bulb. They're meant to light a shop bench from above. If you mount them vertically, they do a great job lighting a green screen.

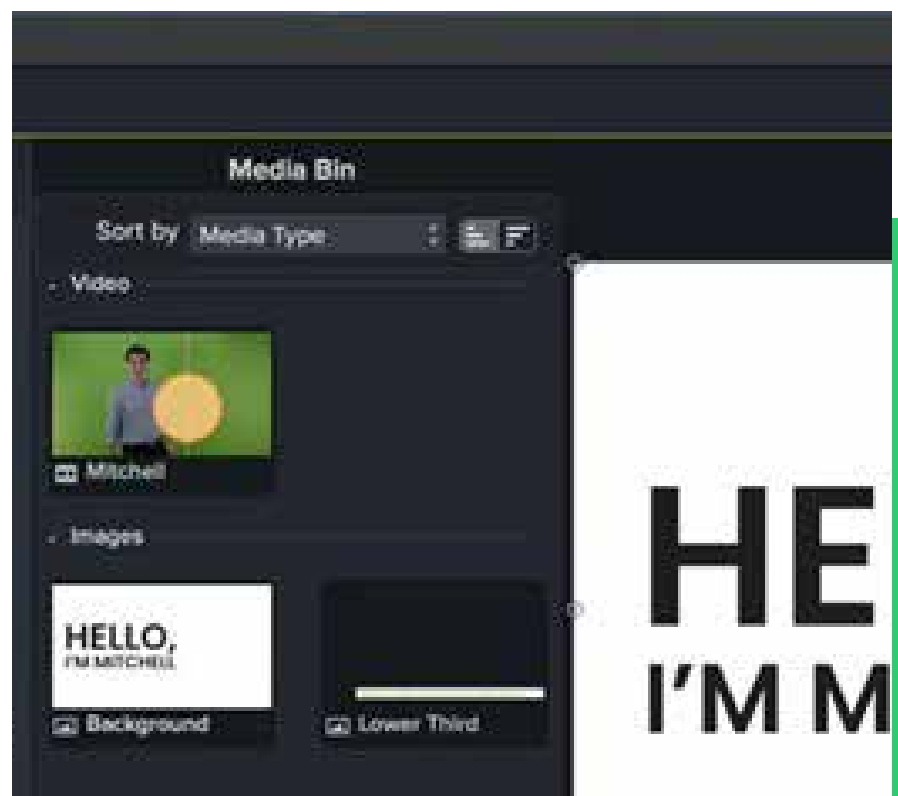
With your green screen surface and lights ready, you'll record your video as you usually would.

You're now ready for post-production.

# GREEN SCREEN POST-PRODUCTION PROCESS



There are two primary elements to consider in post-production: First, removing the green screen and secondly, what will be displayed on the screen instead.



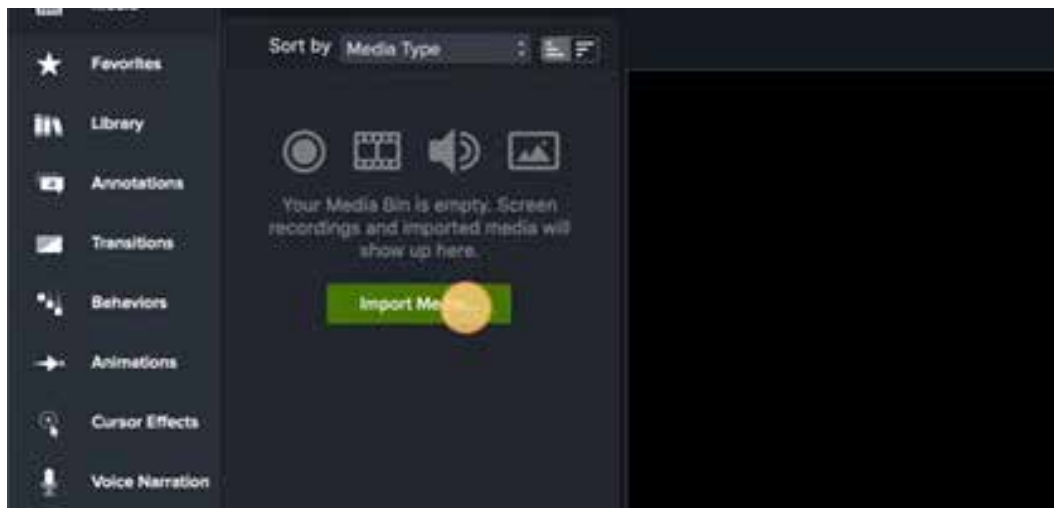
The magic of the green screen production flow happens in the post-production stage after the video has been shot. There are two primary elements to consider in post-production: First, removing the green screen and secondly, what will be displayed on the screen instead.

There are several different video editing software packages available. We use two in our production flow. Because of its interoperability with the rest of the Adobe ecosystem, we use Adobe Premiere to edit video. We also frequently use TechSmith's Camtasia because it makes annotating screencasts and composite green screen videos easy.

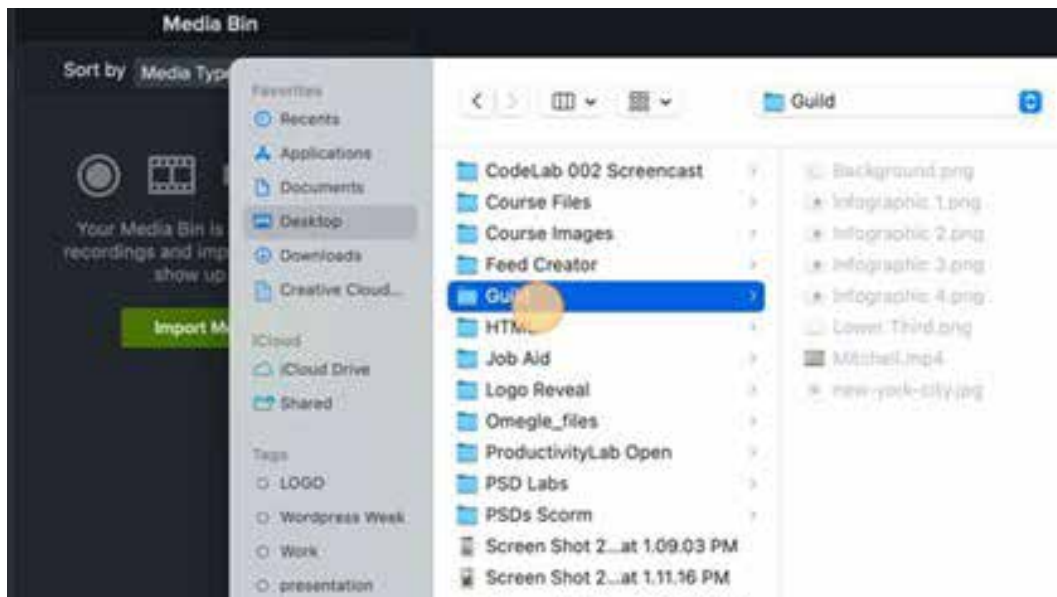
For this discussion, we'll be referring to [TechSmith's Camtasia](#), the package I recommend for beginners. Camtasia offers a generous free trial on their website.

The good news is almost any modern editing software you use will be able to apply a chroma-key effect and remove the green screen. Every editing package has a slightly different process for removing green screen backgrounds. Let's go through the process with Camtasia. You may [download the files](#) I used for this demo here.

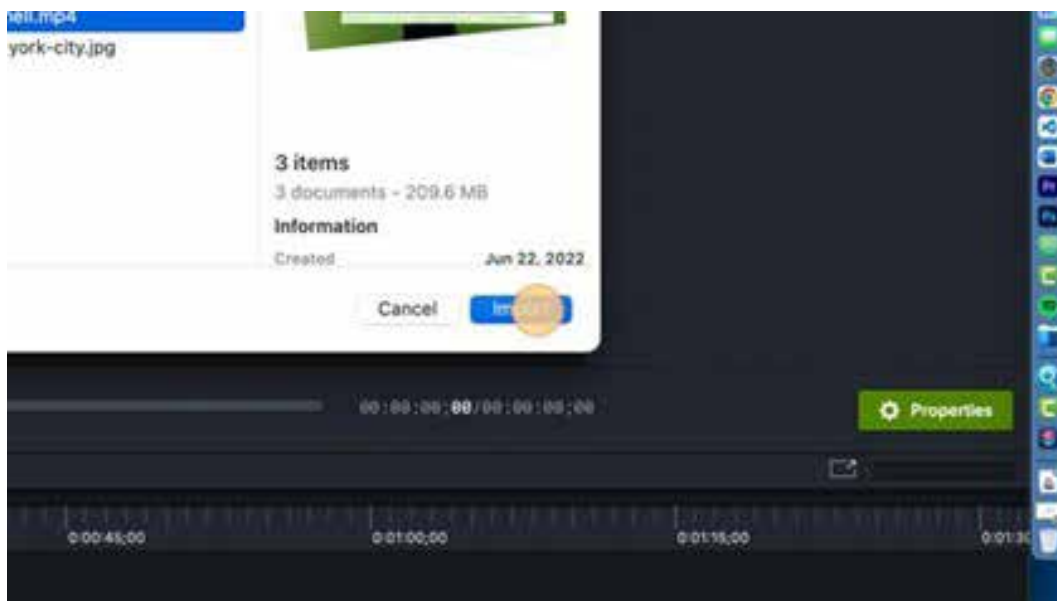
1. Open Camtasia and create a new project.
2. We'll import our video clips and graphics into the project by clicking "Import Media..."



3. Locate the files you want to import and select them. (You can select multiple files at the same time.). We're importing a green screen video of Mitchell, a background, and a lower third graphic.

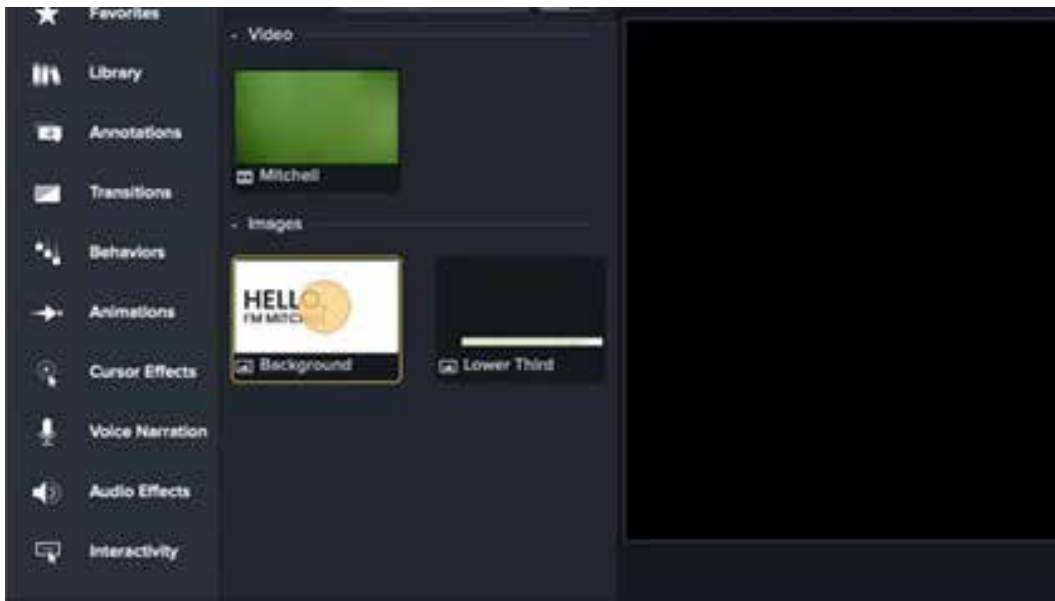


4. Click "Import".

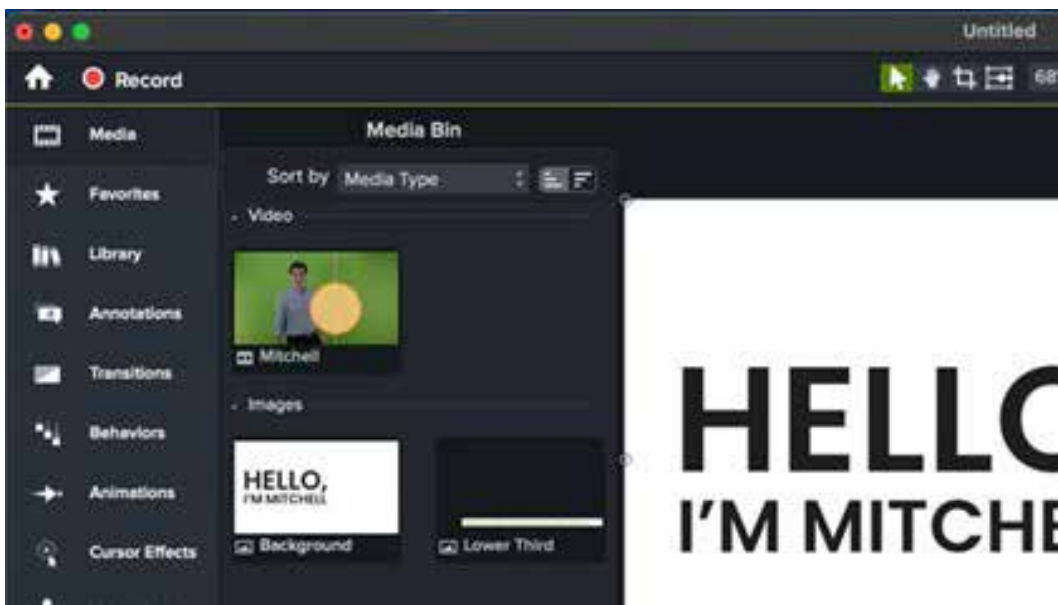




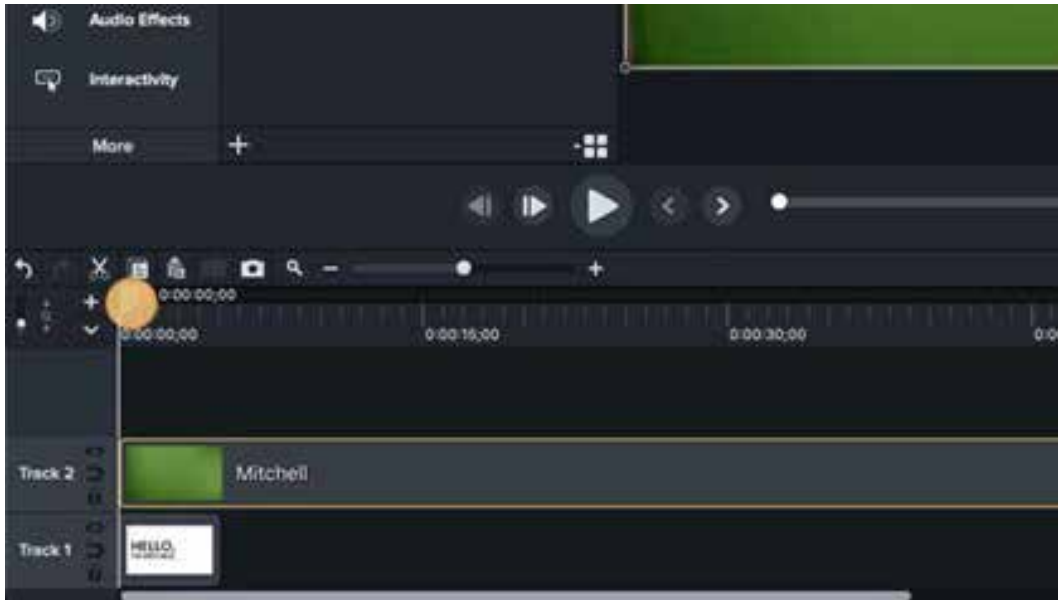
5. Click on the background layer for your video and drag on to Track 1 of the timeline. Camtasia will insert five seconds of background onto your timeline.



6. Drag the green screen video of Mitchell onto Track 2 of the timeline so it appears directly above the background.



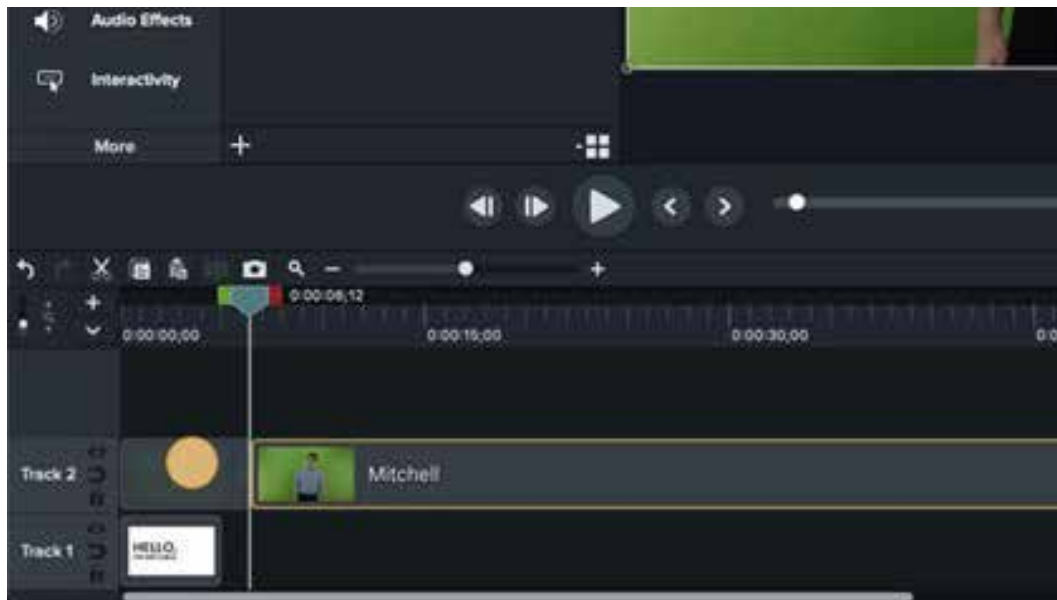
7. Find the portion of the video you would like to use for this clip by dragging the play head left and right.



8. When you've found your beginning and ending point, right-click (or CTRL-Click on a Mac) and choose, "Split at Playhead." This will cause cuts in your video layer.

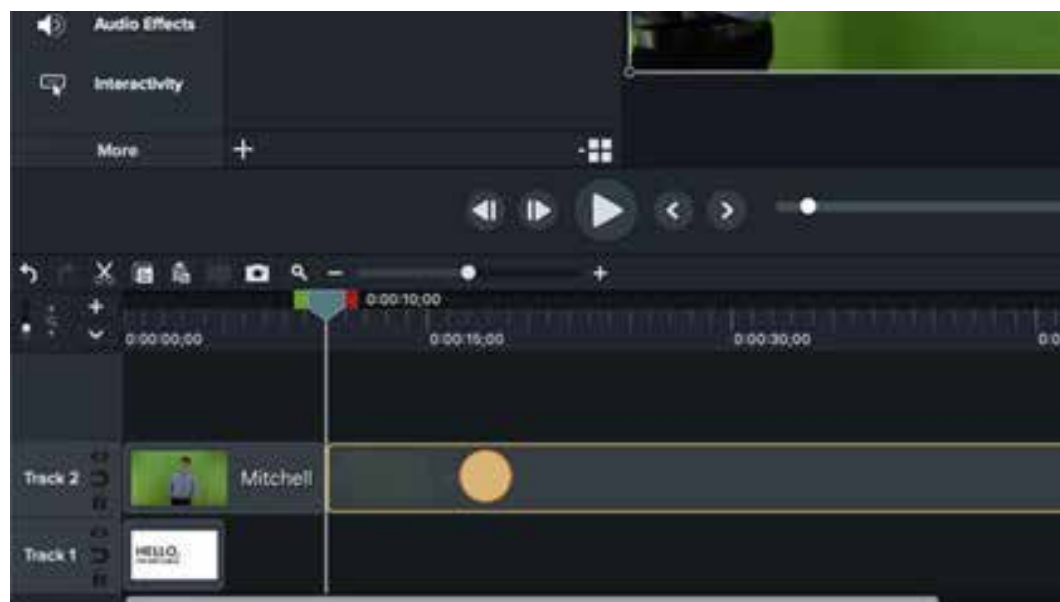


9. Click on the unneeded section of the video before your cut.



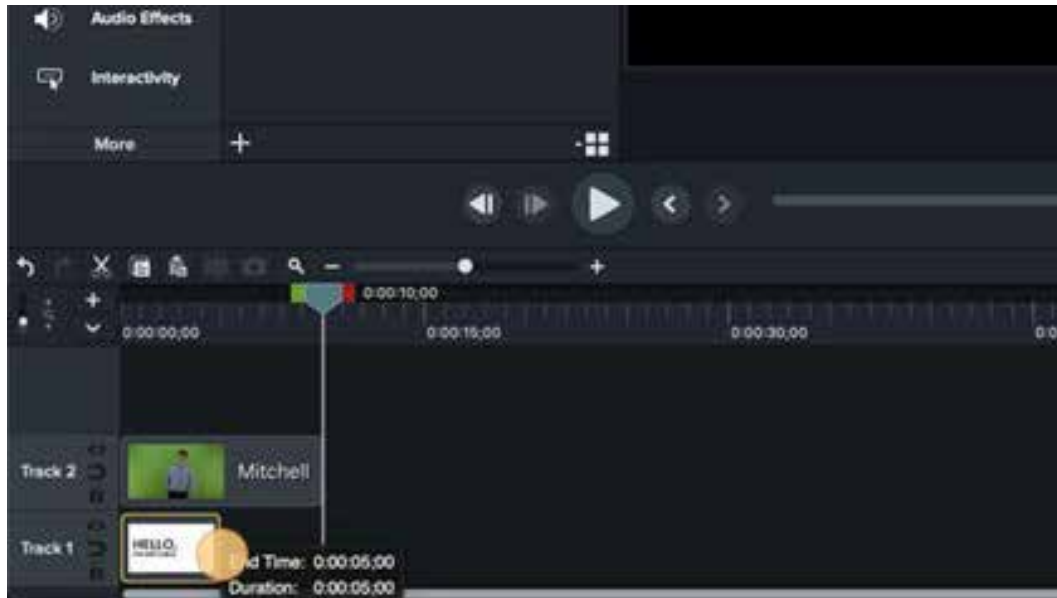
10. Press [[Delete]]

11. Repeat this process for the extra video after the portion of the video you'd like to retain.

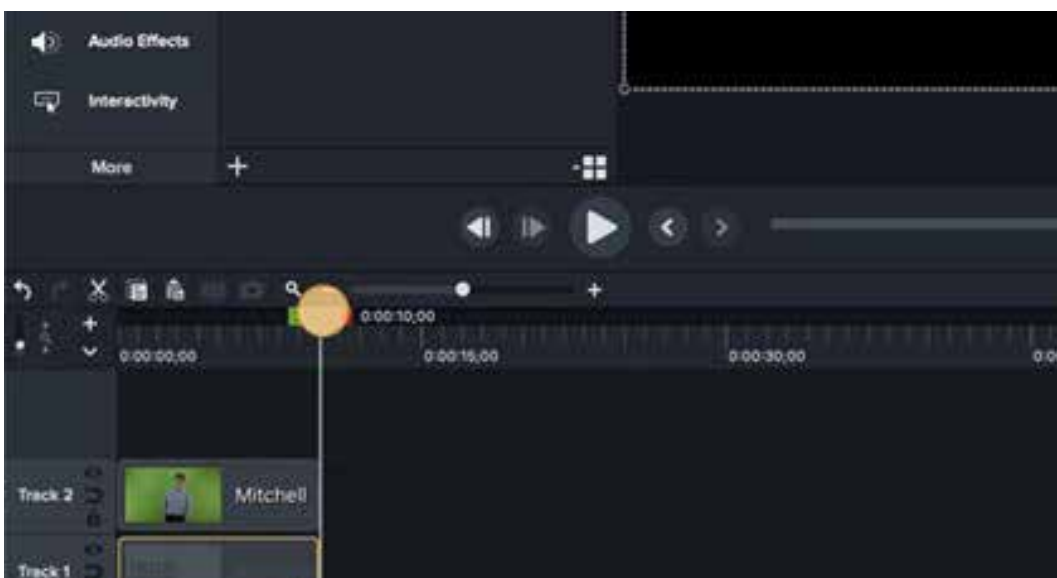


12. Press [[Delete]]

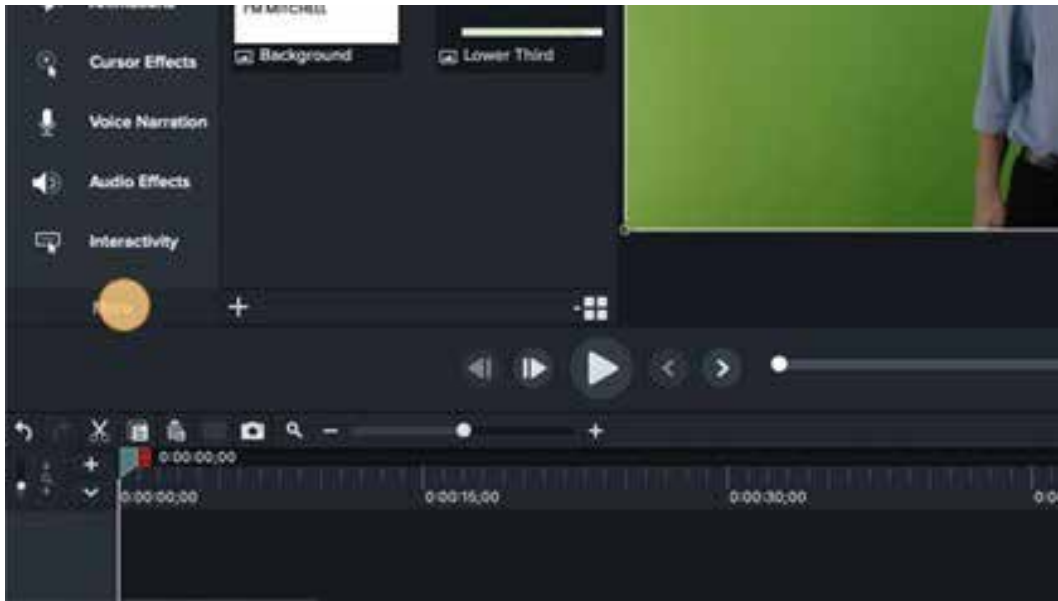
13. Drag the bottom layer containing your background to the right so that it's an identical length to your video of Mitchell. We want to ensure that you don't run out of background before the end of your video.



14. You can see the actual video time to the right of the play head. This video is exactly 10 seconds long.



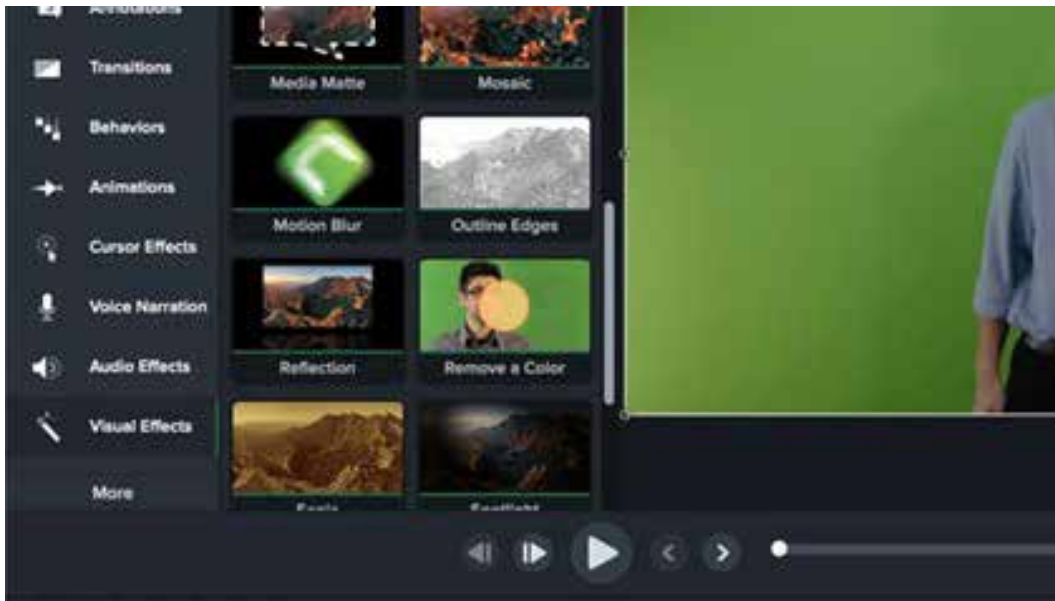
15. Click “More” if you don’t see the Visual Effects tools listed in the panel on the left side of the Camtasia interface.



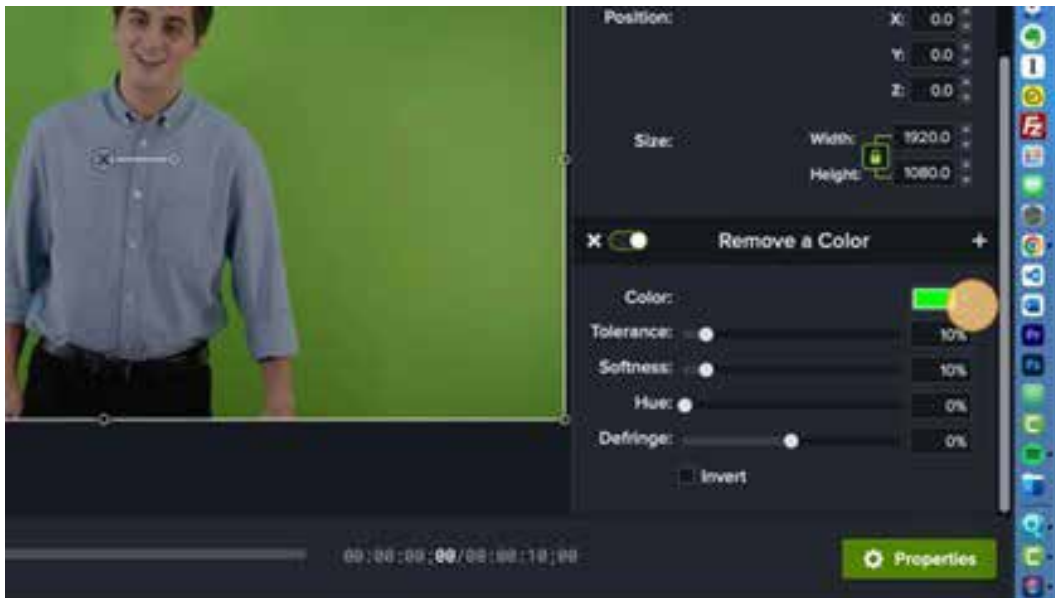
16. Click “Visual Effects”.



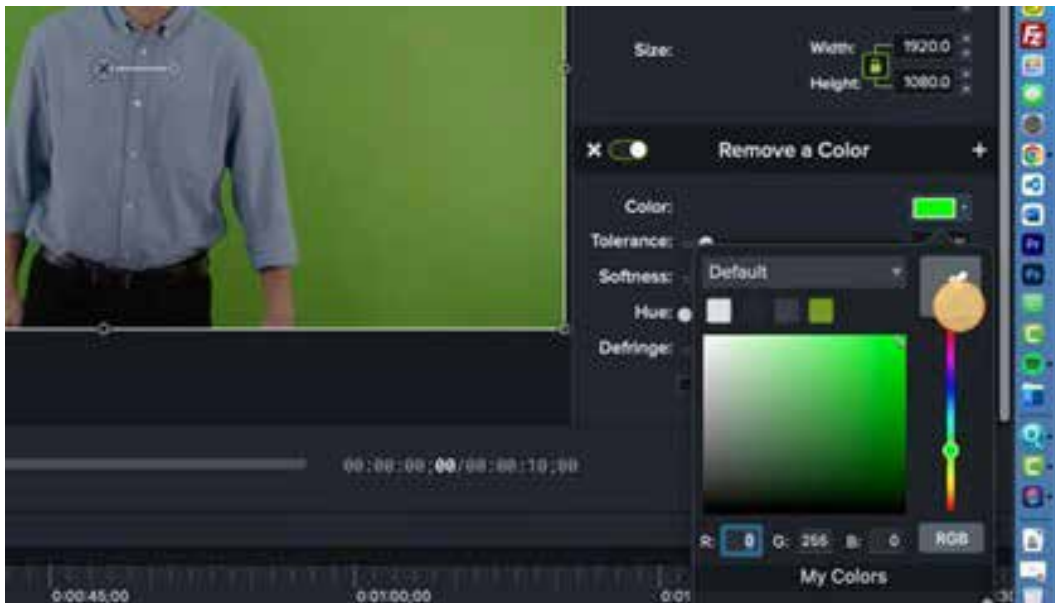
17. Locate Remove a Color in the Visual Effects tools. Drag the Remove a Color effect on top of the Mitchell layer of the timeline, applying the effect.



18. You'll notice a “Remove a Color” panel has opened on the right side of your interface. Click the eyedropper tool.



19. With the eye dropper tool click on a shade of green near the middle of the spectrum in the video—an area of the green screen that doesn't appear too light or too dark.

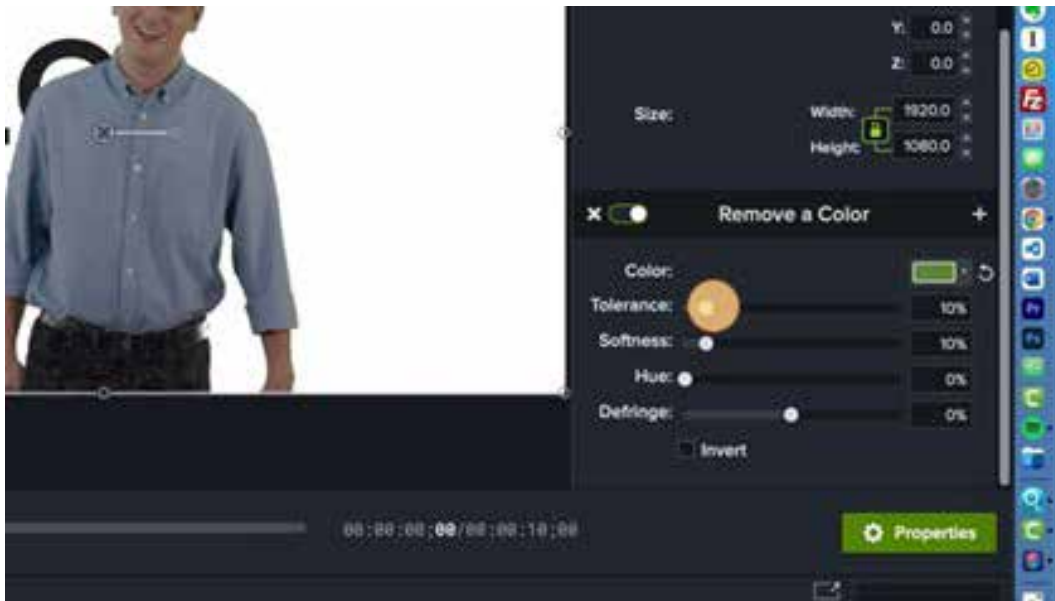


20. At this point the green screen will disappear and you'll be able to see the graphic layer behind Mitchell.





21. Click the Tolerance tool within the Remove a Color panel and drag it to the left slowly until Mitchell no longer appears transparent. Make careful notes of the edges of the video.

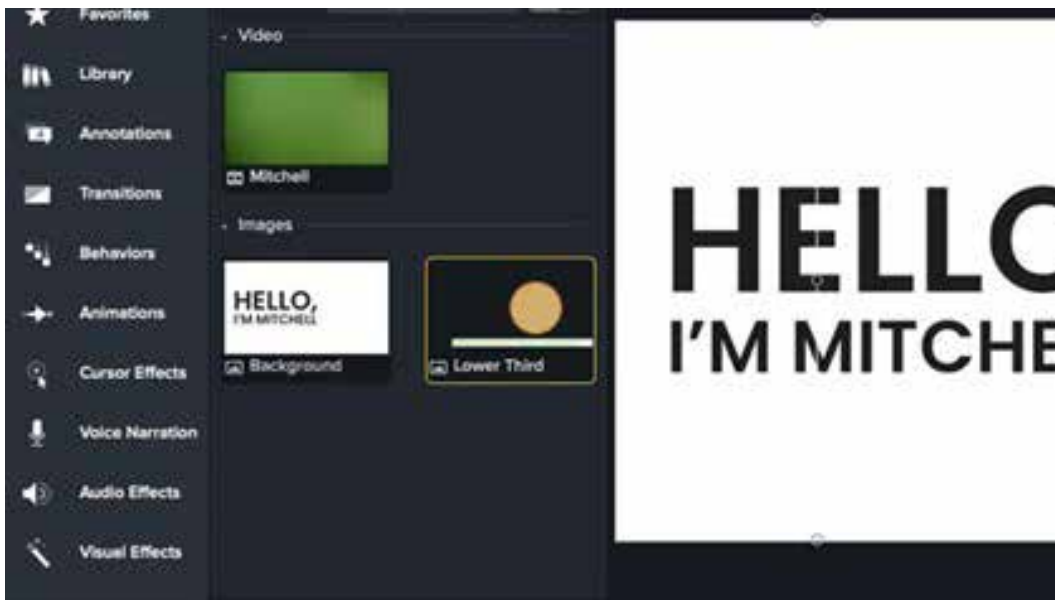


22. You can drag Mitchell to the right so he's no longer blocking the text behind him. Hit the spacebar to test your video in Camtasia. Congratulations! You've applied the Green Screen effect!

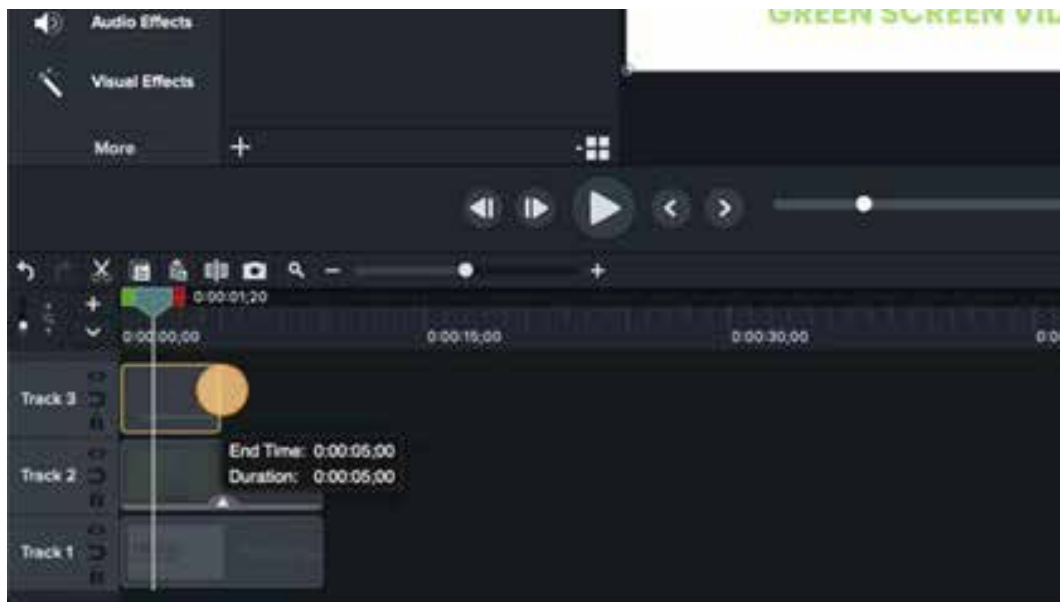


We can still add additional elements to our project. Using a green screen doesn't preclude the use of graphics, images, annotations, and other elements. We can add the lower third graphic to the video in just a few more steps.

1. Drag the Lower Third graphic to the timeline, dragging it on to Track 3, which should be the layer just above Mitchell. If you don't see Track 3, it will appear when you drag the Lower Third graphic in the correct vicinity.



2. Drag the right side of the layer to the right so that it's the same duration as the existing layers.



3. Hit the spacebar to test your video in Camtasia. You may want to drag your timeline play head all the way to the left to see the video from beginning to end.

# THE SECRET TO GOOD GREEN SCREEN: VIDEO GRAPHICS



The quality of the graphics you put behind and use with your green screen video is just as important as your production process.



The quality of the graphics you put behind and use with your green screen video is just as important as your production process. If you're not a graphic or motion designer, there are a number of locations online that allow you to purchase and download virtual studios. In my opinion, these studios are often overly complex and fail at being realistic looking.

We make our own virtual studios in Photoshop by finding appropriate background images and compositing those with our video.



*This virtual studio composite with the author uses both the computer screen and the green screen video of the author to composite the final video shot.*

In this example, a green screen is used to present a motion animation of the video host making this lower third different and more engaging.



A simple virtual studio design that allows us to easily switch between the screencast and the on-screen presenter.



## Conclusion

The green screen opens a world of possibilities for online education. My goal in this article and in the accompanying video is to get you moving in the right direction. I'm sure with the creativity found in the instructional design industry, there are impactful possibilities on the horizon.

I'd love to see your work, answer questions, or help you get started with green screen. Please reach out to [mark@techlearningnetwork.com](mailto:mark@techlearningnetwork.com)!

# About the Author

## **Mark Lassoff**

*Founder, The Tech Learning Network*

Over two million people have learned coding and design from Mark Lassoff. Mark and his company, the Tech Learning Network, are pioneers in new media learning, having created the first streaming media network dedicated to learning workforce and career skills. The Tech Learning Network produces broadcast-quality learning content that focuses on digital skills such as design, coding, and digital productivity. Mark is an in-demand speaker and has traveled the world to teach. He was named to the 40 under 40 in both Austin, Texas, and Hartford, CT. In 2017, Mark was awarded the prestigious Learning Guild Guild Master Award.

