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The Green Screen Effect

The opening sentence in an article posted on edutechteacher.org titled Video in the Classroom states “In addition to being fun and motivating, video projects teach students to plan, organize, write, communicate, collaborate, and analyze (2012).” The author goes on to say “With the proliferation of webcams, phone cameras, flip cams, digital recorders, and editing tools, video has exploded in the media lives of students.” In other words, creating video clips in the classroom is a powerful tool for the advancement of student learning and it is something which children really like to do. As an added bonus I discovered how to add different backgrounds to video clips using something called the green screen effect.

The green screen effect is a technique used in video editing to replace one part of an image with another. The technique, called chroma key, is used by video editing software to select one color in the original video clip or picture (in this case green) and make it transparent so the image placed “behind” it comes through. The purpose of this paper is to demonstrate how easy it is to use the green screen effect with still photographs to make a short video clip with a cool background. See the images below:



You can imagine the fun you and your students will have using this technique with their video digital story telling projects in the classroom.

Required Parts

As in anything else in the world you can spend a little and you can spend a lot. The following budget is a good budget to start with:

Web Cam	30.00
Green Screen with stand	150.00
Lights	135.00
Video Editing Software	45.00
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Total	\$360.00

Digital Camera

Still photographs and video clips can both be edited using video editing software. You need a digital camera which can download images to your computer. This can be the most expensive part of your green screen budget, but you can get by using an inexpensive web cam. I found a web cam from Logitech on the Internet for \$30.00. I also found an impressive video camera on sale for \$299.00. Since I am demonstrating the use of the green screen effect on the cheap I chose to purchase the web cam.

Green screen background

There are a variety of ways to provide a green screen background. You can buy green screen paint

and paint the wall (\$75.00), purchase green screen material and mount it to the wall (\$75.00) or purchase green screen material with a stand (\$150.00). I chose to purchase the green screen material with a stand because then I have the flexibility to move the background to different locations.

Lighting

Lighting is very important. You will need at least 2 lights, one to light up the background, and one to light up the actor. I have gone around the block on this one, using regular incandescent lights, work lights (halogen) and florescent lights. I ultimately chose florescent lights for safety reasons: they are cooler and less dangerous than incandescent and halogen lights. I found a 2-florescent light kit from Tubetape.com on the Internet for \$130.95. See <http://www.tubetape.net/servlet/the-582/Cool-Flo--dsh--600/Detail> for more information.

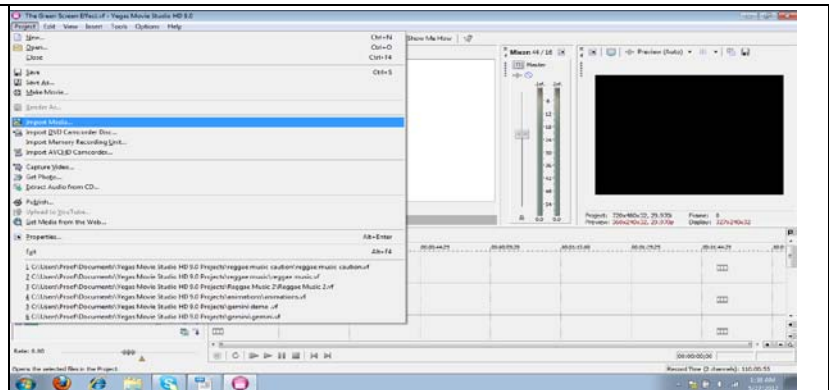
Editing Software

There are many versions of video editing software available. I chose Sony Vegas Movie Studio HD 11 because it works really well and also because it is inexpensive. Go to Sony direct for \$44.95.

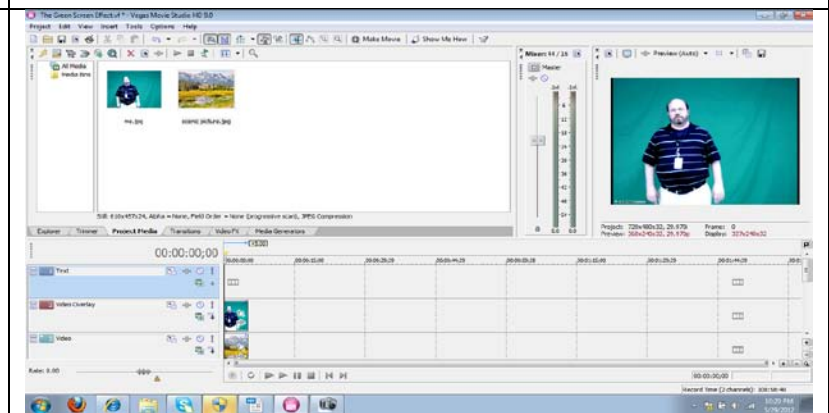
Creating the Green Screen Effect using Sony Vegas Movie Studio HD 11

The movie clip with the cool background above was created by completing the following 6 steps using Sony Vegas Movie Studio HD 11:

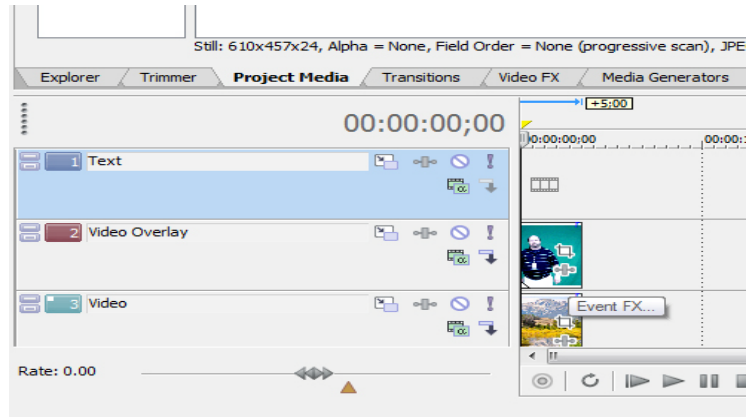
1. Import two pictures: the picture with the green screen background and the background picture.



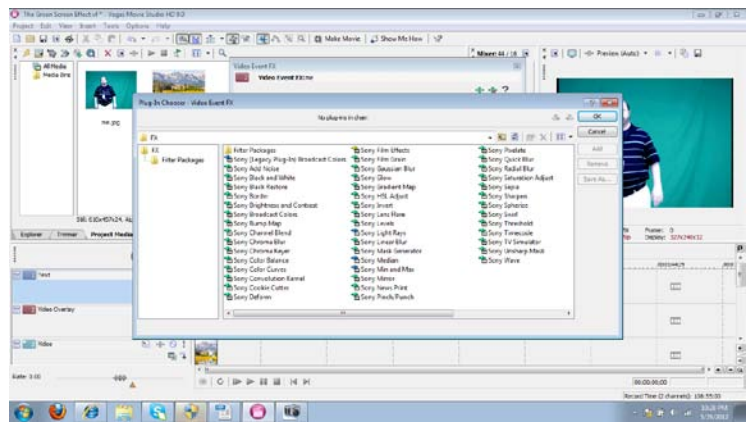
2. Drag the picture with the green background to the Video Overlay track and drag the background picture to the Video track.



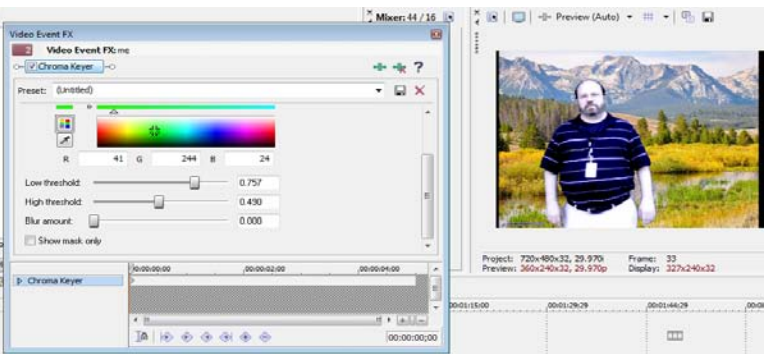
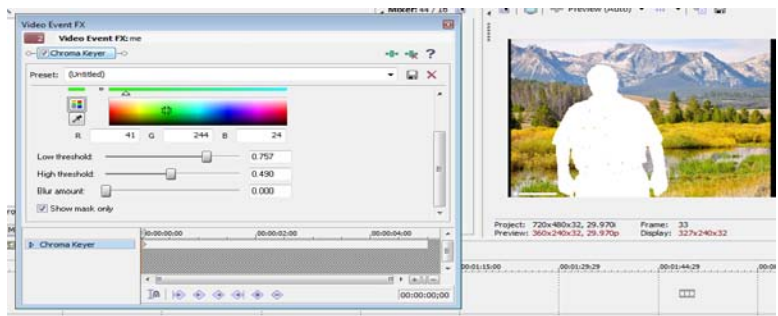
- Click on the Event FX button in the Video Overlay track. This button shows up as a big + on the picture.



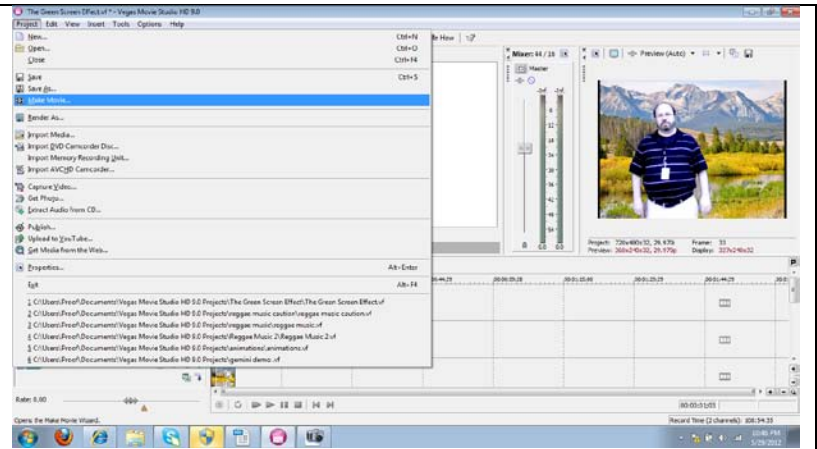
- Choose Sony Chroma Keyer.



- Choose the green screen preset. Click on the box that says show mask only. Fiddle with the low and high threshold until the picture is all white and the background picture is clear. Then uncheck the show mask only box.



6. Click on Project and then click on Make Movie. Click next on the following two screens and bingo you have a video clip made from two pictures and the green screen effect.



Now What?

This is just the beginning of course. Luckily you can find lots of video editing tutorials posted on Youtube. For example, I went to Youtube.com, entered 'sony vegas hd green screen', clicked on the first choice and got a great tutorial video clip at the following link:

<http://www.youtube.com/watch?v=q3ANgHA9dSs&feature=pyv&ad=7012136323&kw=sony%20vegas%20green%20screen>

Good luck in the future with your video digital storytelling projects. I think you will find it well worth the time it takes to use the green screen effect on many of your video clips.

References

Video in the Classroom taken from eductechteacher.org at <http://edtechteacher.org/index.php/teaching-technology/presentation-multimedia/112-video>