Green Screen Forecasting

"Today the forecast will be sunny with a slight chance of rain this afternoon." Explore the science behind the green screens news forecasters use. Select a backdrop and film your own weather segment using chromakey technology.

TEKS:

TECH 3-5.2 A: The student is expected to draft, edit, and publish products in different media individually and collaboratively.

TECH 3-5.2 B: The student is expected to use font attributes, color, white space, and graphics to ensure that products are appropriate for multiple communication media, including monitor display, web, and print.

TECH 6-8.1 A: The student is expected to identify, create, and use files in various formats such as text, raster and vector graphics, video, and audio files.

TECH 6-8.4 F: The student is expected to transfer current knowledge to the learning of newly encountered technologies.

Materials:

- Paper
- Pencil
- Smartphone with the KineMaster app
- Solid colored wall
- Tripod (optional)

How To:

1. Download KineMaster from the App Store or Google Play.
2. Use a paper and pencil to write a script for your forecast. Choose a location and its weather conditions and rehearse what you want to say in your forecast.
3. Open up KineMaster, choose Aspect Ratio 16:9, and rotate your phone horizontally to landscape mode. This is the most common aspect ratio for filming videos.

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4. Before filming, upload and select an image of your location for your backdrop. This will be what shows up behind you for your weather forecast. Add this image by selecting "Media," then choosing "Photo" on the left hand menu. Tap on the photo you want to use.
5. Now you are ready to film! Set up your tripod or have a friend hold the phone in front of a solid colored wall. Make sure the wall is a different color from the clothes you are wearing.
6. Click on the red circle in the menu to start recording. Report the weather using the script you created.
7. When you are done recording, click "stop" and select "Add as Layer." This will layer your video on top of your background.
8. To remove the solid color backdrop in your video, tap on the video so that there is a yellow box around it. On the menu above, select "Chroma Key."
9. Enable chroma key. Tap on "Key Color" below it and select the color of the wall. There are more color options on the left hand menu.
10. Once the color is selected, you will see most of your background disappear. Adjust the two levels in chroma key until you get most of your background to disappear without making yourself disappear.
11. Scale and drag your video where you want to put it in front of the background.
12. Watch your video and explore the other editing tools KineMaster has to offer!
13. To share and save your video, click on the share button at the top right corner and select "Export."

STEM Explanation:
Chroma key technology works through the process of singling out a particular color in an image and then using computer software to make that color transparent. This allows another image, such as an animated weather map on the weather forecast, to show through. Green screens are a type of chroma key commonly used in filming because the color is not present in skin tones and is not commonly worn by people.

Career Connection:
Weather forecasters apply their meteorology skills to forecast what the weather will look like during a single day, week, or longer periods of time. They must know how to interpret graphs and charts that show data involving atmospheric pressure, climate, wind patterns, etc. to predict future weather conditions. Weather forecasters' predictions can be seen or heard on television, the radio, and the internet.

Resources:
https://savageuniversal.com/blog/beginner-guide-to-green-screens/
http://www.makerspaceforeducation.com/green-screen-technology.html
https://www.jmcacademy.edu.au/news/how-does-a-green-screen-work

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