

Practical colour theory: Additive colour mixing

I'm going to throw it back to primary school real quickly, because when we talk about color correction and color balancing, fixing white balance issues, that sort of thing, we have to talk about something called additive color mixing. You'll remember for if you were in an art class in primary school, you learned about complimentary colors and primary colors and mixing them all together. And the principles kind of apply here, but just not the same colors. Exactly. So when we're talking about color grading and working digitally with color, so color that is on a screen color in video, our primary colors are red, green, and blue. And in this case, we call them primary because when they all mixed together evenly, in other words, in the same amount, there's the same amount of blue, same amount of green, same amount of red, they all produce white, all secondary colors are complementary to our primaries. And in this case, they are cyan, which complements red, of course, magenta, which complements green, and then yellow, which complements blue. And when these complementary colors mix evenly with when the secondary colors rather, when they mix evenly with their complementary In other words, the primary that they complement, they will also produce white. This is important to know in terms of color correction, because as you'll see, as we progress with these videos, we'll be working with waveforms that have our three primaries. And we're also going to be using controls that will introduce either a warmer tone to fix and balanced out or cooler one, or the opposite, you know, cooler tones to try and balance out warmer ones when there is too much of a warm tone and a short, you could say that you then have a warm cast and you need to fix it by adding in some cool tones back into the image to kind of counteract it. So that is why it's important to know this, because going in when you're trying to read these scopes, you're going to need to know the fact that when all of these are even in an image in other words, you got the same amount of reds and monitor read same amount of blue, things that are white in an image will actually be white. And that is our goal when we're doing a color correction is to get rid of those casts and make sure that things that are white in the scene. You know, like this table for instance, I know that this table is white, it needs to look white in the video and that is the goal of color correction and it helps to know that we're dealing with additive color mixing, where if we mix all three of our primaries together evenly, or introduce a complementary to the same degree that its primary exists in a shot, you will then end up with a color balanced image