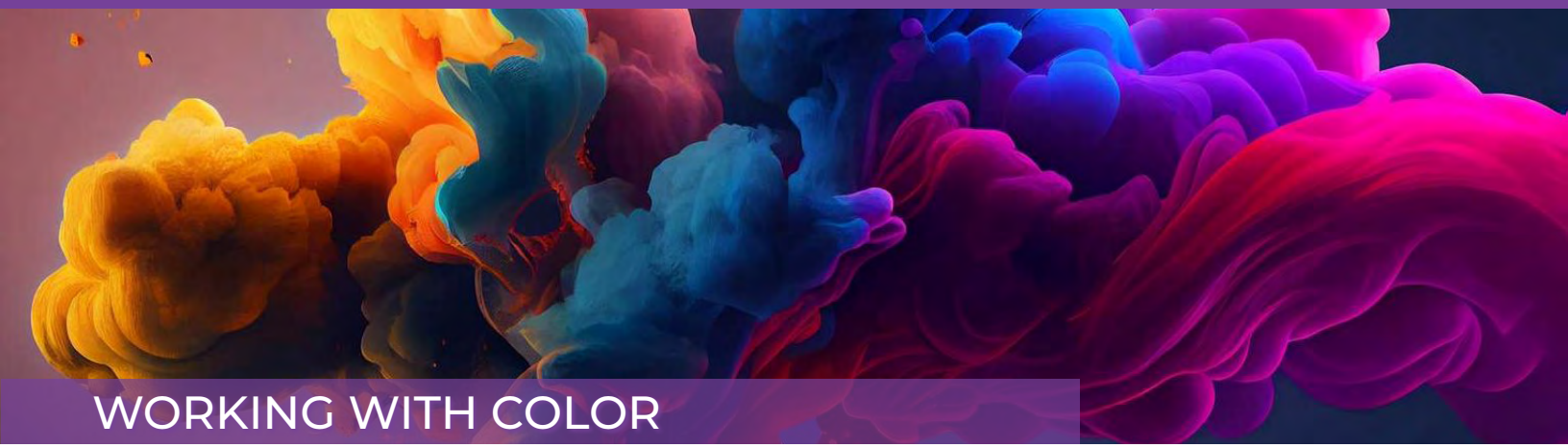
DESIGN FOR NON-DESIGNERS



WORKING WITH COLOR

Whether you're designing a presentation, training, or marketing collateral, your chosen color scheme can impact how your audience receives your message. This module outlines color's impact on audience engagement and offers tried and true processes to select harmonious colors to ensure the color schemes of your visual materials support your messaging and goals.

Color Theory

Color theory encompasses a set of rules and guidelines that enable the use of appealing color schemes in visual materials such as presentations, training, and marketing collateral.

Color is one of the most powerful tools in visual communication, as it has the ability to influence the emotions, moods, and behaviors of your audience.

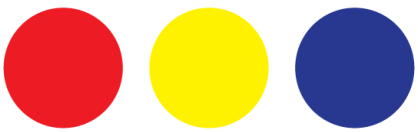
The Color Wheel

To organize colors effectively, the color theory uses a tool known as the color wheel. The color wheel categorizes colors into three main groups:

- Primary
- Secondary
- Tertiary

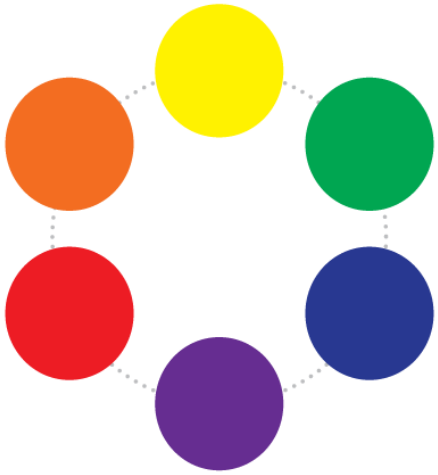
Primary Colors

Primary colors include red, yellow, and blue. Primary colors cannot be created by mixing other colors and serve as the base of all other colors.



Secondary Colors

Secondary colors are mixed from two primary colors adjacent to each other on the color wheel. The three secondary colors, arranged clockwise from the top right in the example, are green, violet, and orange.



Tertiary Colors

Tertiary colors are created by mixing two adjacent colors on the color wheel. The six tertiary colors, arranged clockwise from the top right in the example, are yellow-green, blue-green, blue-violet, red-violet, red-orange, yellow-orange.

Choosing a Color Scheme

Purpose, Audience, and Method of Delivery

Because color can influence emotions, moods, and behaviors, it is important to understand the purpose or goal of your visual materials and the audience viewing them.

What is the Purpose/Goal of your Visual Materials?

Understanding the purpose or goal of visual materials is essential. When used correctly, color can enhance and reinforce your message. However, the opposite can also hold true, and choosing colors that do not align with your message can easily undermine the effectiveness of your communication.

Who is Your Intended Audience?

Knowing your intended audience is closely aligned with the purpose and goal of your visual materials. In most cases, using a pink color scheme to deliver bad financial news is not a suitable choice. However, there might be exceptions if your audience is an organization that uses pink as its main branding color.

If your audience works in marketing, you may want bold, bright colors. On the other hand, if your audience is made up of executive staff, a neutral pallet is more appropriate. However, if the executive staff is known to have a more playful nature, you may consider deviating from a neutral pallet.

The bottom line is to remember that color evokes emotion, and much like the supporting purpose and goal, your color scheme needs to engage and speak to your audience.

What is the Method of Delivery?

Did you know that the same color of red can look vastly different when viewed on a screen compared to when it is printed? Display screens use **additive color space (RGB)** where they emit light at various levels (wavelengths) using red, green, and blue pixels to produce a spectrum of colors. On the other hand, printing relies on s**ubtractive color space (CMYK)** which involves creating new colors by removing wavelengths — thus subtractive. Additionally, when paints, dyes, or pigments mix, each material absorbs wavelengths it previously reflected. As a result, we perceive printed colors as much darker than those on a display screen.

When creating material for delivery on a display, you can incorporate darker or more vibrant colors taking advantage of the light provided by the screen to maintain the brightness of the colors. If you are working on material for print, you should print several color schemes to see which one translates best to print. In cases where a professional printer will handle the printing process, always ask for a hard copy proof; never rely on a digital proof for color accuracy.

Appropriate Use of Color for Audience | Knowledge Check

Complete the quick quiz below to see if you can identify a successful color scheme for the user's presentation:

Tristan is putting together a presentation that aims to present the recent financial data to the board. Unfortunately, the data shows that financial performance is lower than expected. Among the examples shown below, please select the ones that use an appropriate color scheme to effectively convey the message.

- ❒ Image 1
- ❒ Image 2
- ❒ Image 3
- ❒ Image 4

(See next page for correct response.)

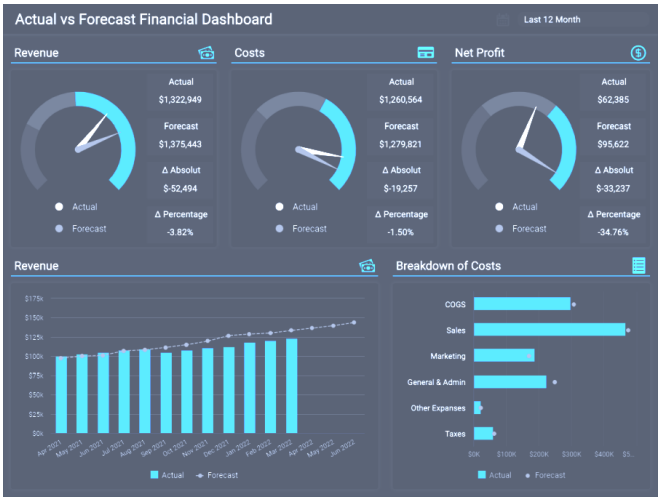


Image 1

Image 2

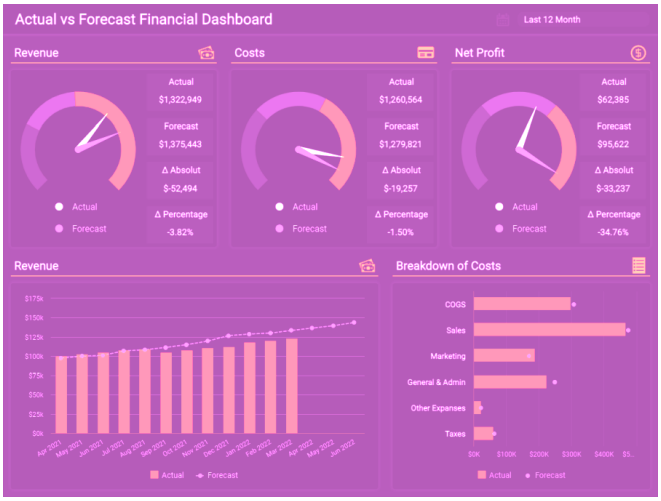


Image 3

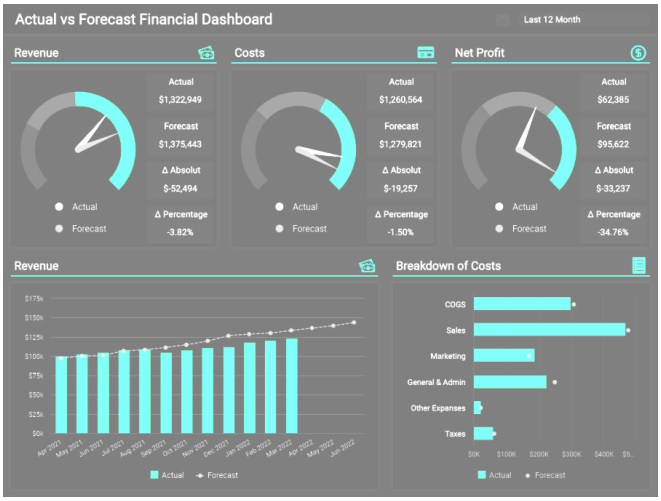
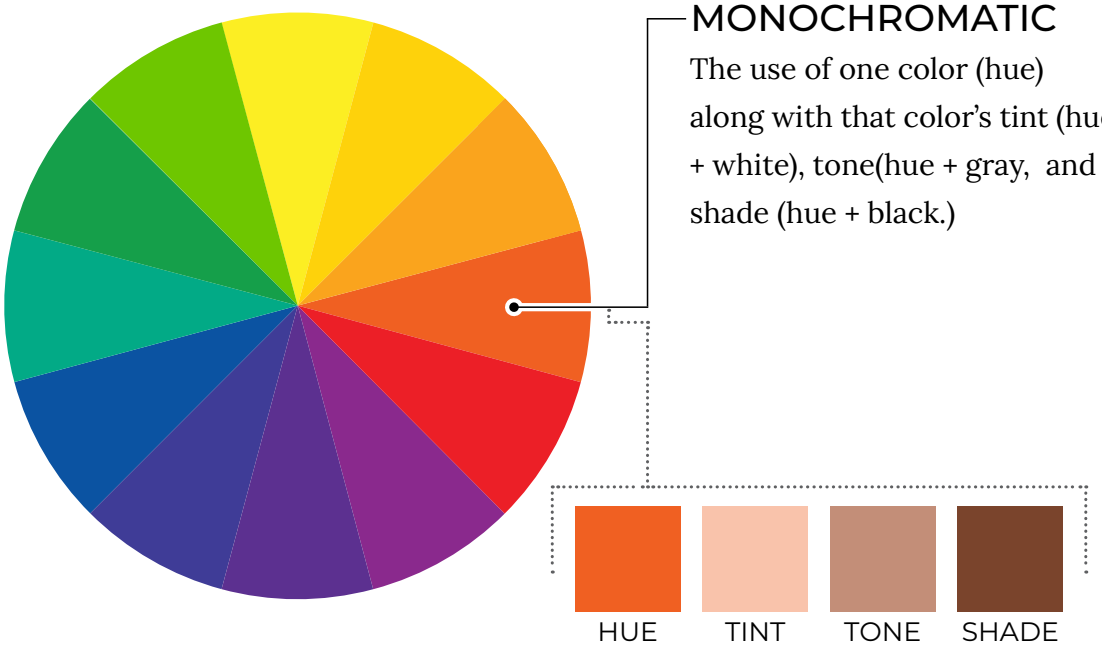
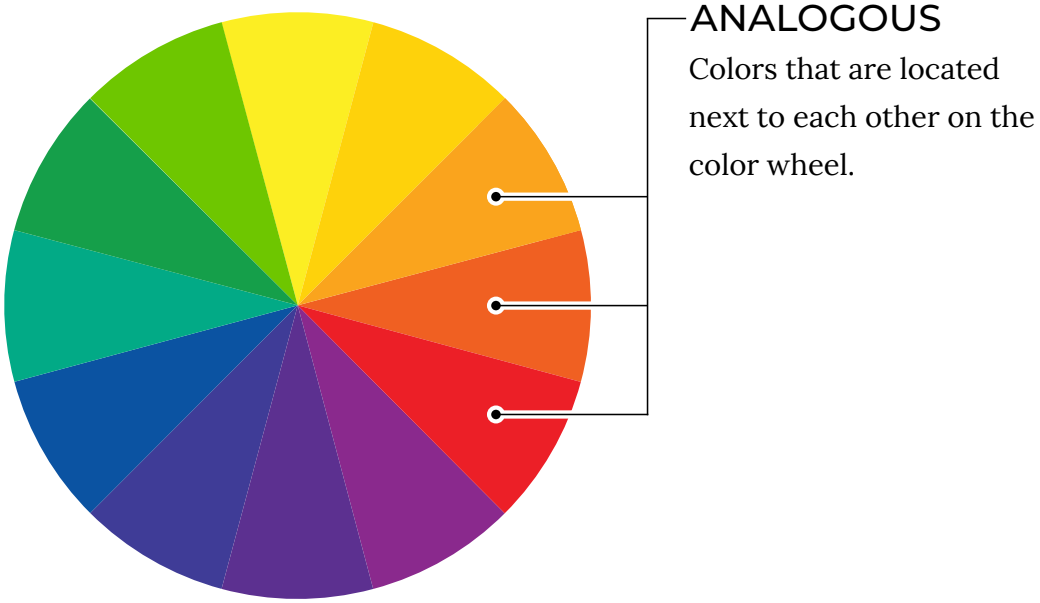


Image 4

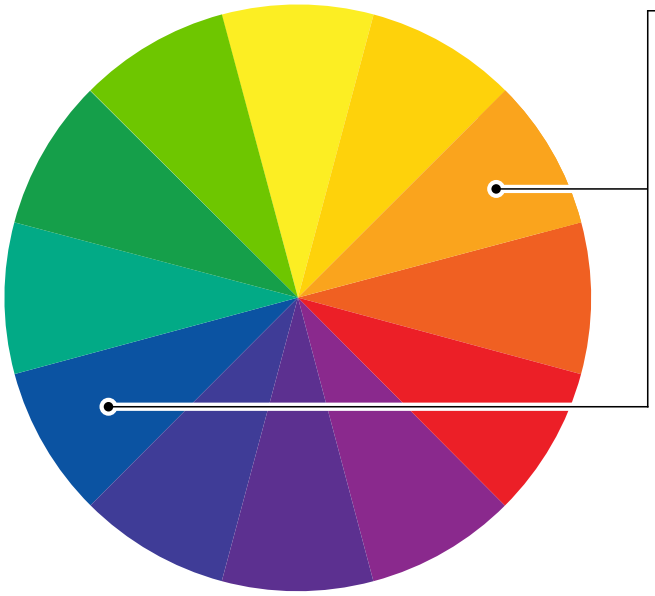
Choosing Colors Using the Color Wheel

Now that you have a solid understanding of the purpose of your material(s), your audience, and the delivery method, it's time to delve in to the fun part of selecting colors! But where do you start? Using the color wheel to select monochromatic, analogous, complementary, or triadic colors (as shown in the slideshow below) makes creating a harmonious color pallet easy.



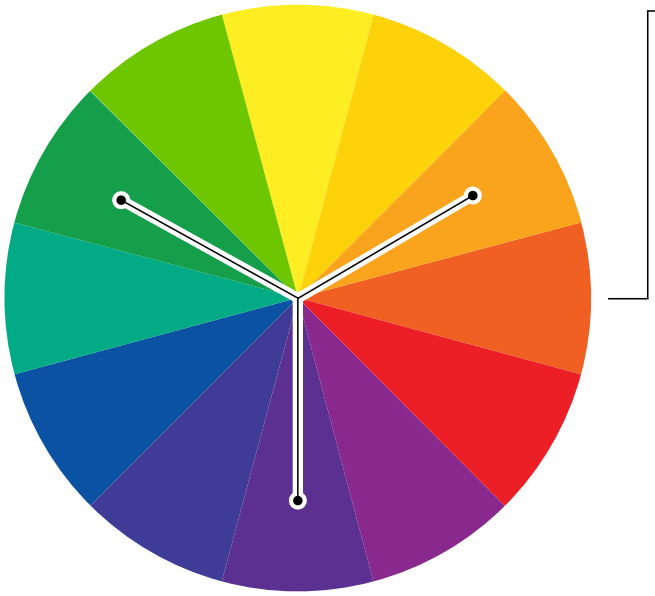


Knowledge check correct response from previous page:
Blue (Image 1) and gray (Image 4) are good choices for presenting negative financial information. Pink is generally a more cheery color and not appropriate for the content. While green is the color of money, it is generally used for positive financial information, not negative.



COMPLEMENTARY

Colors that are located across from each other on the color wheel.



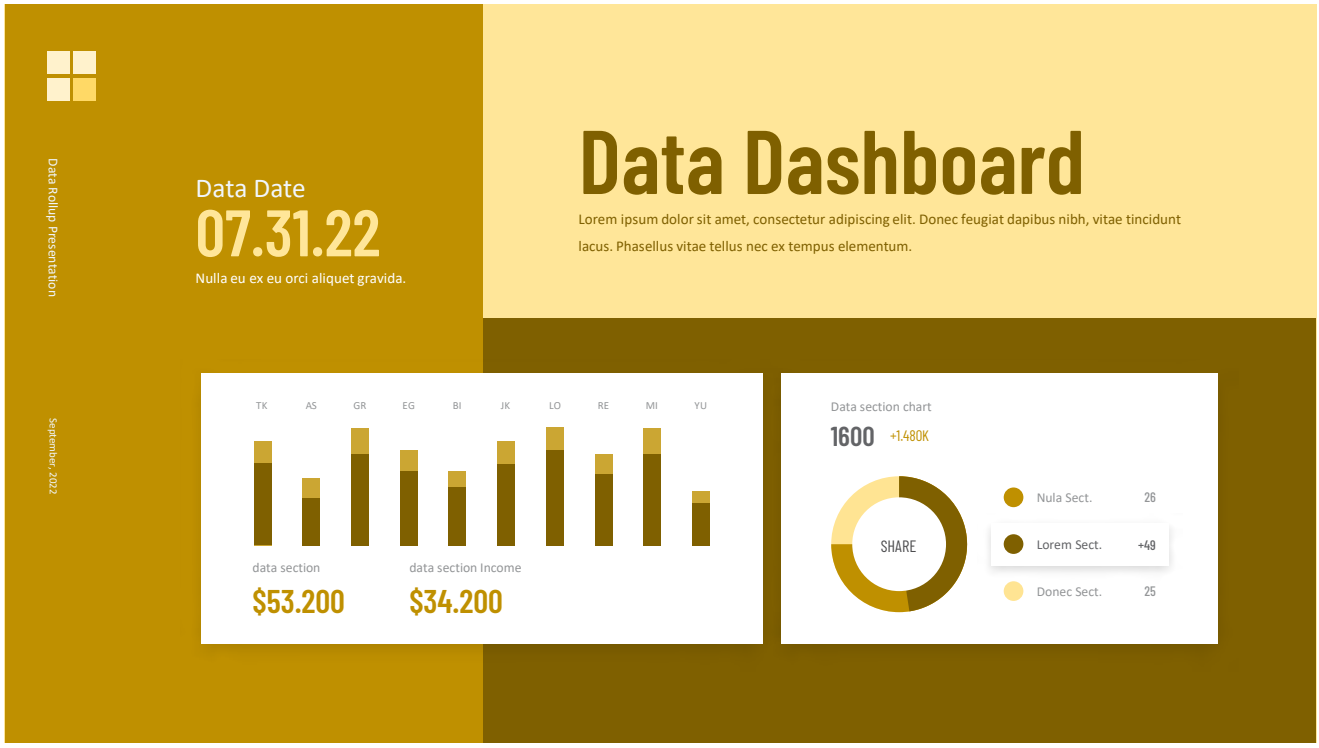
TRIADIC

Three colors positioned an equal distance from one another on the color wheel.

The following images show sample color schemes that represent monochromatic, analogous, complementary, and triadic colors using the color wheel:

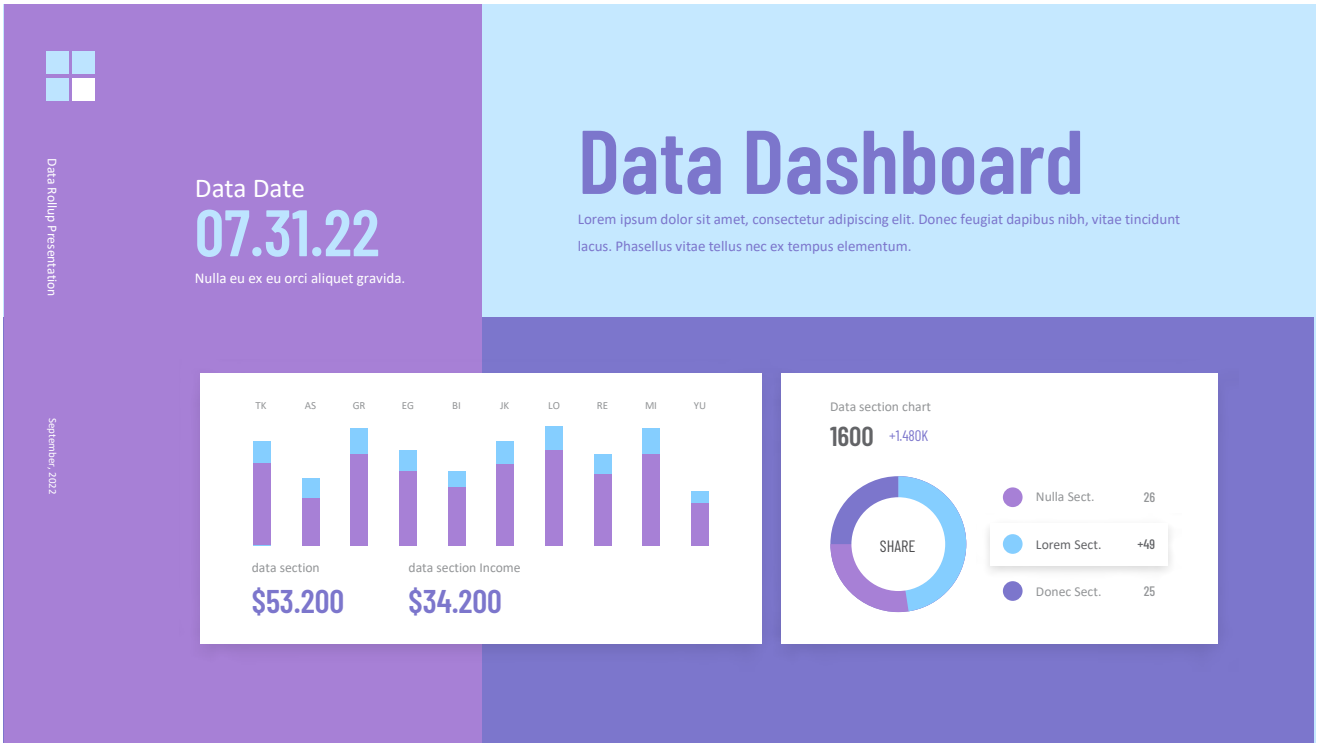
MONOCHROMATIC

HUE #BF9100 | TINT #FFE699 | SHADE #7E6000



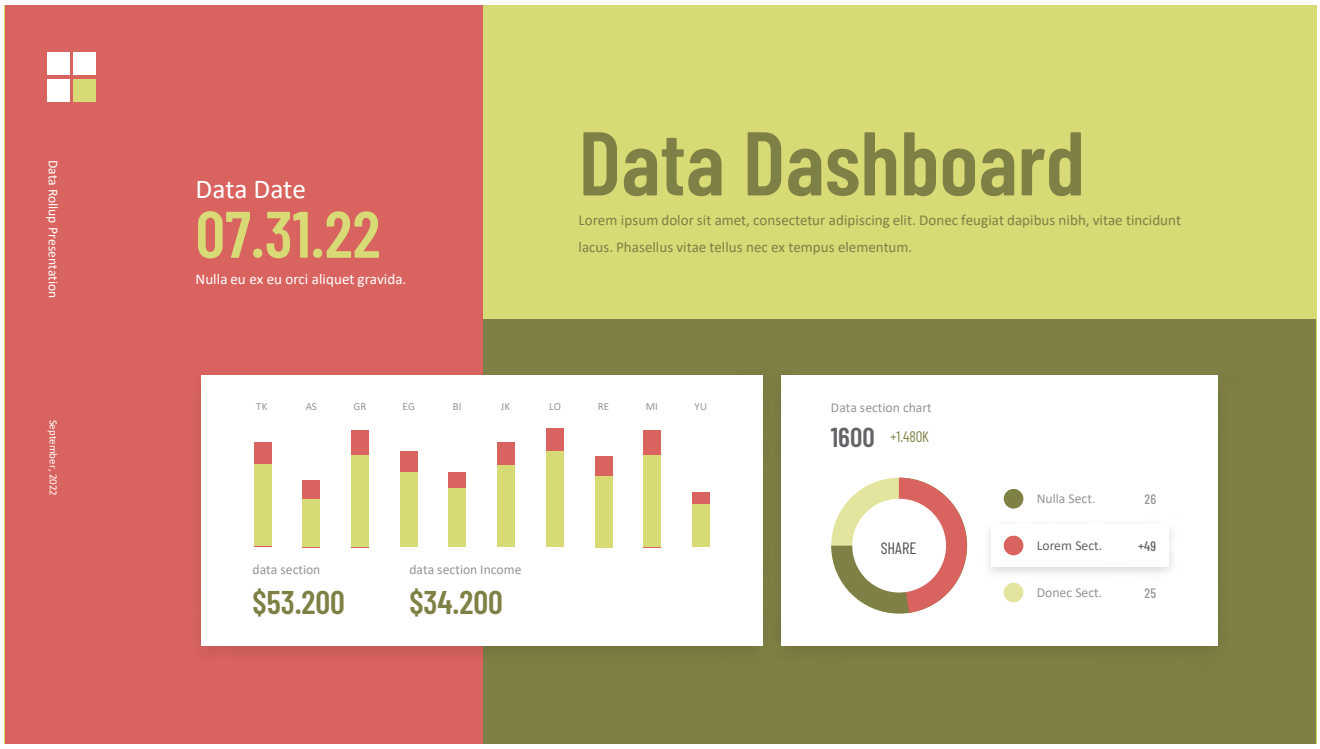
ANALOGOUS

#A77FD5 | #C5E8FE | #7C76CC



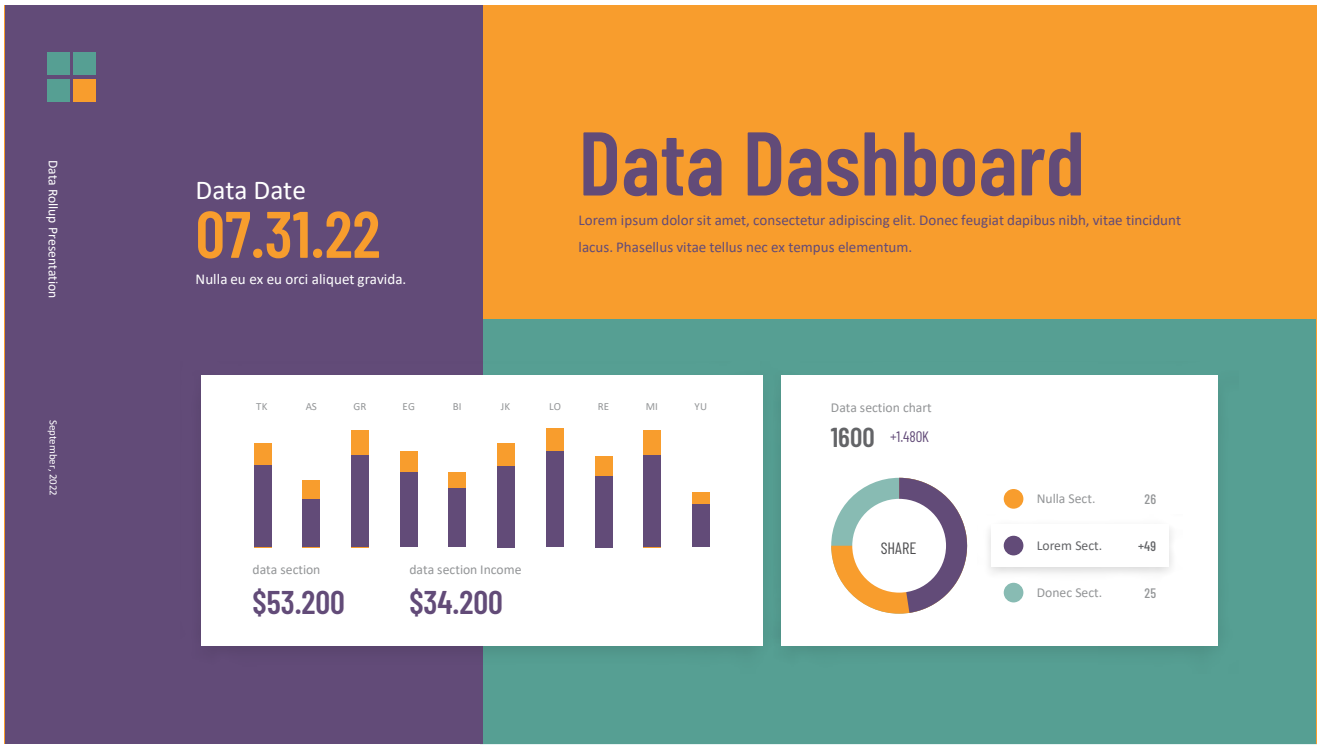
COMPLEMENTARY

#BF9100 #D8DA75 #7F8046



TRIADIC

#624B79 #F89C2D #56A093

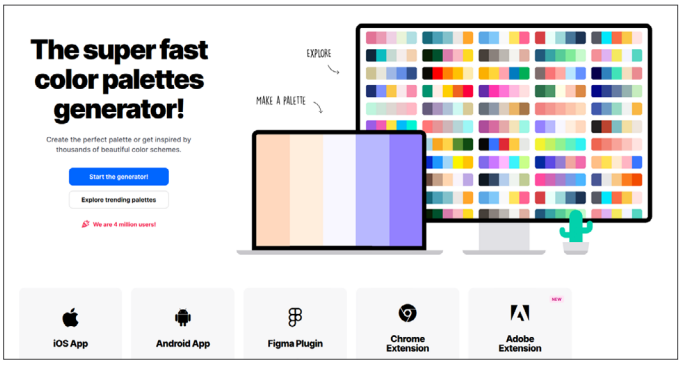


Choosing Colors "EZ Mode"

If choosing colors via the color wheel still feels overwhelming, there is an even easier way to choose color palettes; color palette generators! Several color palette generators are free to use, allowing you to save and even share color palettes! Many of these generators offer pre-made color palettes to make choosing even easier.

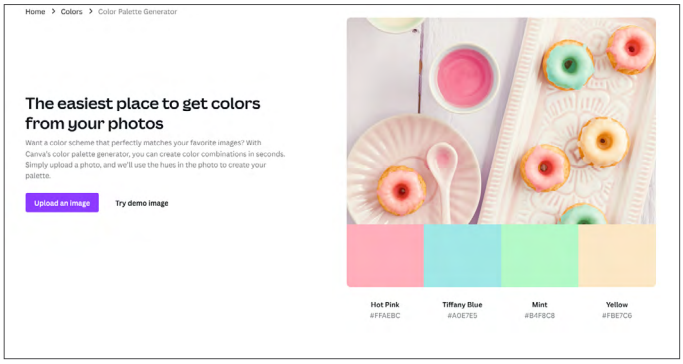
Coolors (coolors.co)

Coolors is a fast, user-friendly palette generator for all skill levels. It lets users create profiles to save ideas and is available as an iOS app and Chrome extension for convenience and customization.



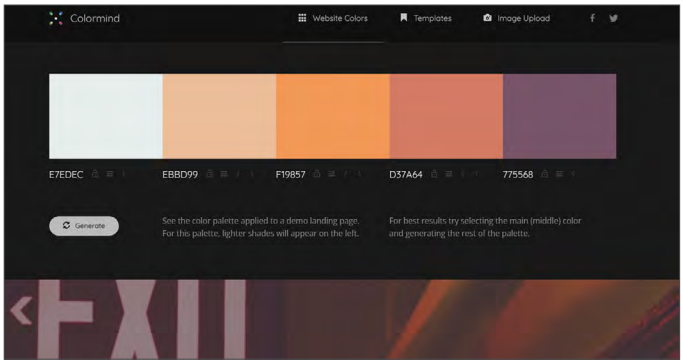
Canva (canva.com/colors/color-palette-generator)

Canva simplifies extracting colors from photos. Upload files on any device to get palettes with hex codes and charming names like Antique White and Sea Green—perfect for techies and creatives alike.



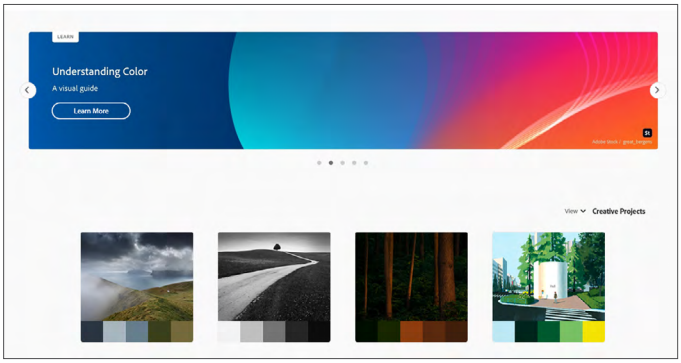
Colormind (colormind.io)

Colormind's AI-powered palette generator feels advanced and exciting. It improves with use, lets you upload images, or explore endless designer palettes.



Adobe Color CC (color.adobe.com)

Adobe, renowned for Photoshop, offers a respected color palette generator. Featuring a dynamic color wheel, it provides RGB and hex codes for convenience.



Color Considerations

Accessibility

Accessibility remains a crucial consideration. Over 2.2 billion individuals have some form of visual impairment that affects how they view color. A great infographic created by **Vennage.com** *(https://venngage.com/blog/accessible-colors)*, provides an overview of accessibility guidelines and examples of how individuals with color blindness perceive color.

For more information about using color and designing for accessibility visit ***Web Content Accessibilities Guidelines (WCAG 2.1)*** *(https://www.w3.org/TR/WCAG21)*

Value and Contrast

Value and contrast, closely tied to accessibility, refer to the distinction between colors. High contrast, like black and white, ensures clear separation, while low contrast, like white and gray, lacks clarity. For example, white text on a black background is easier to read than on a gray background. Colors without a hue, such as black, gray, and white, present less difficulty in evaluating value.

Evaluating value becomes trickier when colors with a hue are involved. The two examples below contain color combinations that are often used to capture viewers' attention. However, one of them fails to achieve this objective because the colors being used have a value that is too similar. To determine which example contains the issue, we can convert the images to grayscale to better look at the values.

Red on black

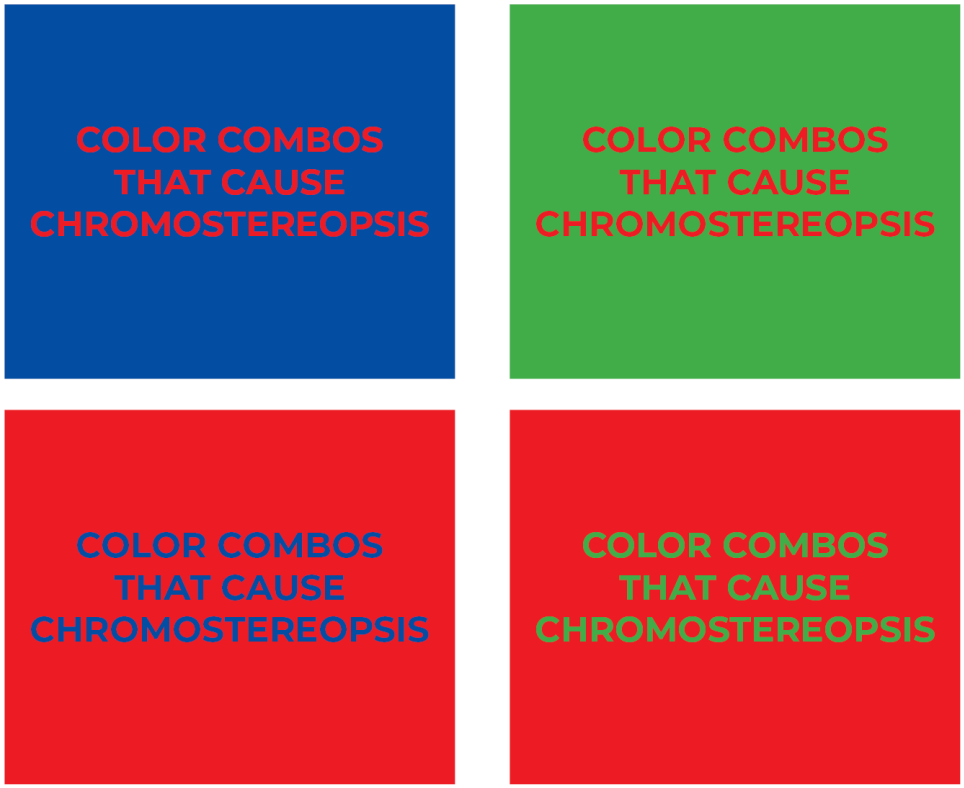
Yellow on black

Red on black grayscale conversion

Yellow on black grayscale conversion

Looking at the examples above and their grayscale versions, we can see that the values for the yellow on black have much more contrast than that of the red on black, making the yellow on black color combination a better choice to ensure ADA compliance.

Some color combinations can pose significant readability challenges due to a depth effect called *chromostereopsis*. Chromostereopsis occurs when certain color combinations stimulate different parts of the eye (rods and cones) due to the wavelengths involved, resulting in severe readability issues and eye fatigue. These color combinations include highly saturated versions of blue and red, as well as green and red (see examples below,) which are best to avoid.



If you are required to use red/blue or red/green color combinations, changing the lightness/darkness, or even a slight change in hue will help with readability.

Less is More

Color is a great tool to create cohesion and draw attention to focal points; however, the adage "too much of a good thing" is especially true regarding color. While knowing how to use color is important, it is equally important to know when not to use color. For example, we often work with content that contains several essential points, it may seem logical to assign a different color to each point to emphasize their significance to the viewer. However, this approach can lead to confusion as shown to the right in *Example 1*.

Can you identify the important takeaways in *Example 1*? Most likely not. You probably only read part of the text, as the rapid and frequent changes of color make it difficult to read in its entirety.

A better choice is to select a few important points and use a single color, combined with styling techniques such as bolding the text, to highlight them effectively as shown to the right in *Example 2*.

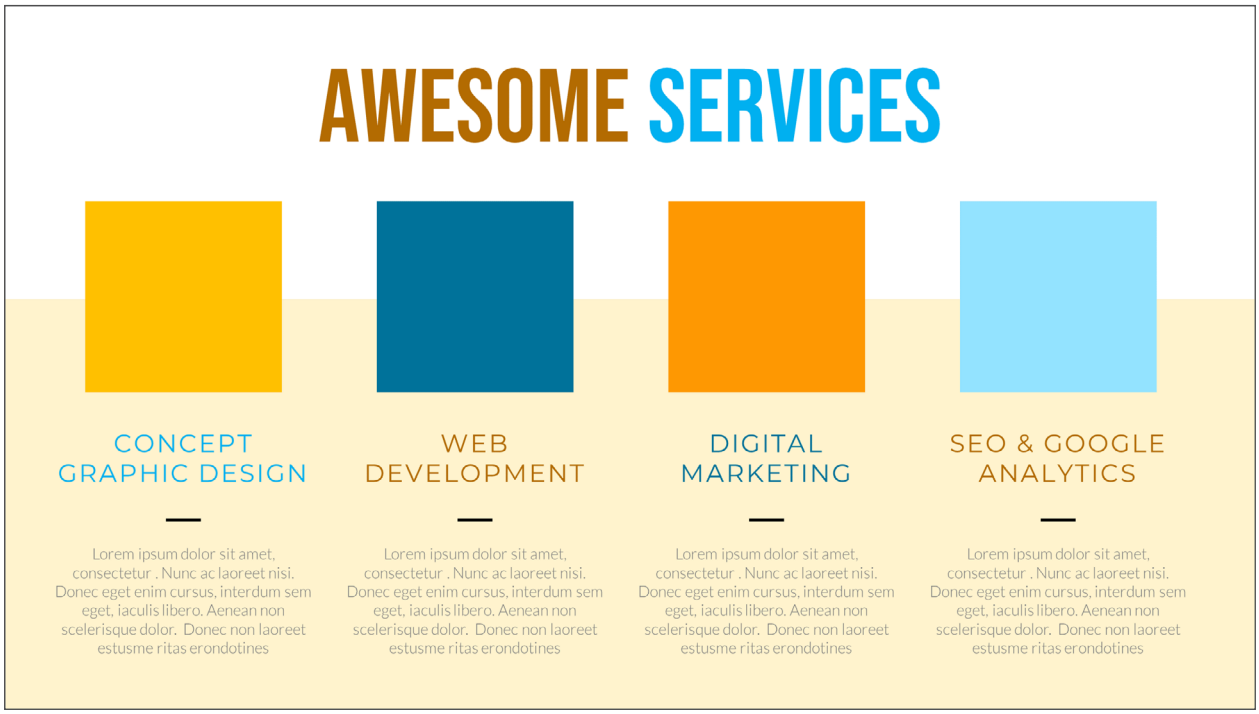
Everything on this page is incredibly important! It is so important that we need to make sure our viewers read every word! Unfortunately when we make every line (and even some of the words) important by using color, nothing will stand out as important, thus rendering our design completely useless.

Example 1

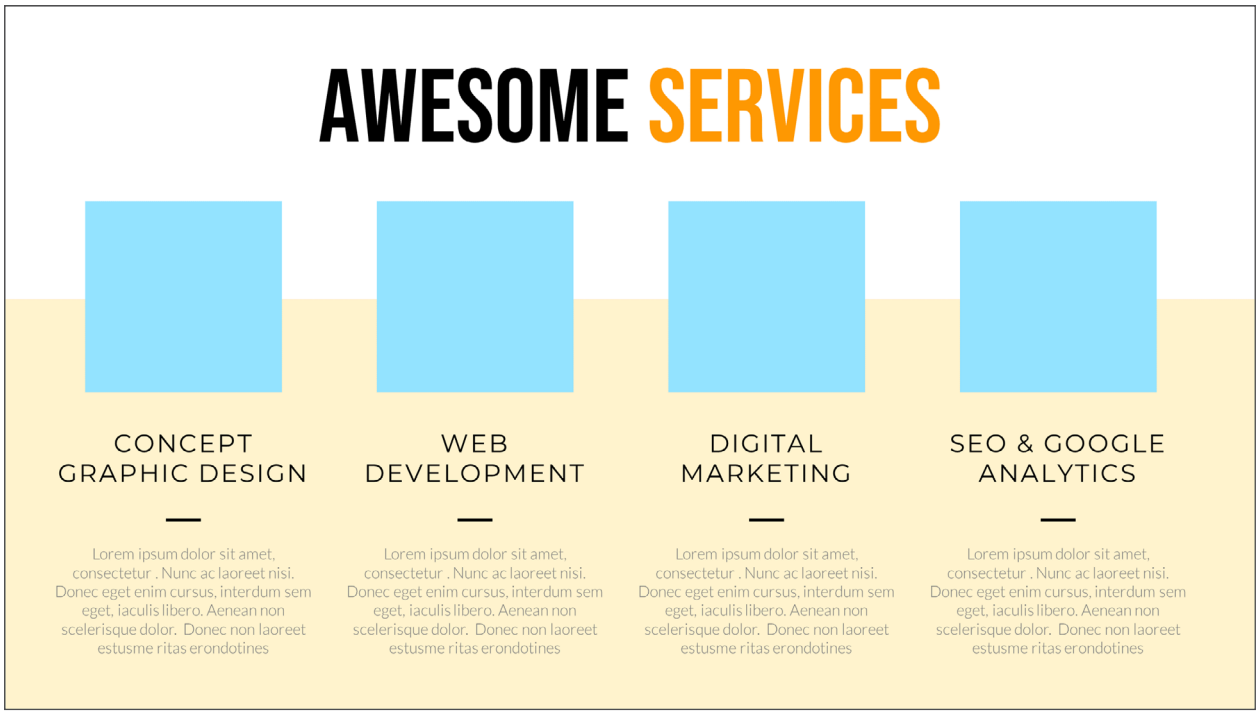
Everything on this page is incredibly important! It is so important that we need to make sure our viewers read every word! **Unfortunately when we make every line (and even some of the words) important by using color, nothing will stand out as important,** thus rendering our design completely useless.

Example 2

By limiting color to a few key points, you not only make those points stand out to the viewer, but you also ensure the text between the colors stand out! The same concept is true for color used in presentations and trainings. While the slide in *Example 1* below uses complementary colors, there are too many variations which viewers may find distracting. Narrowing your color scheme down to 3-4 colors a shown in *Example* 2 will be less distracting and will help keep your viewers engaged.



Example 1

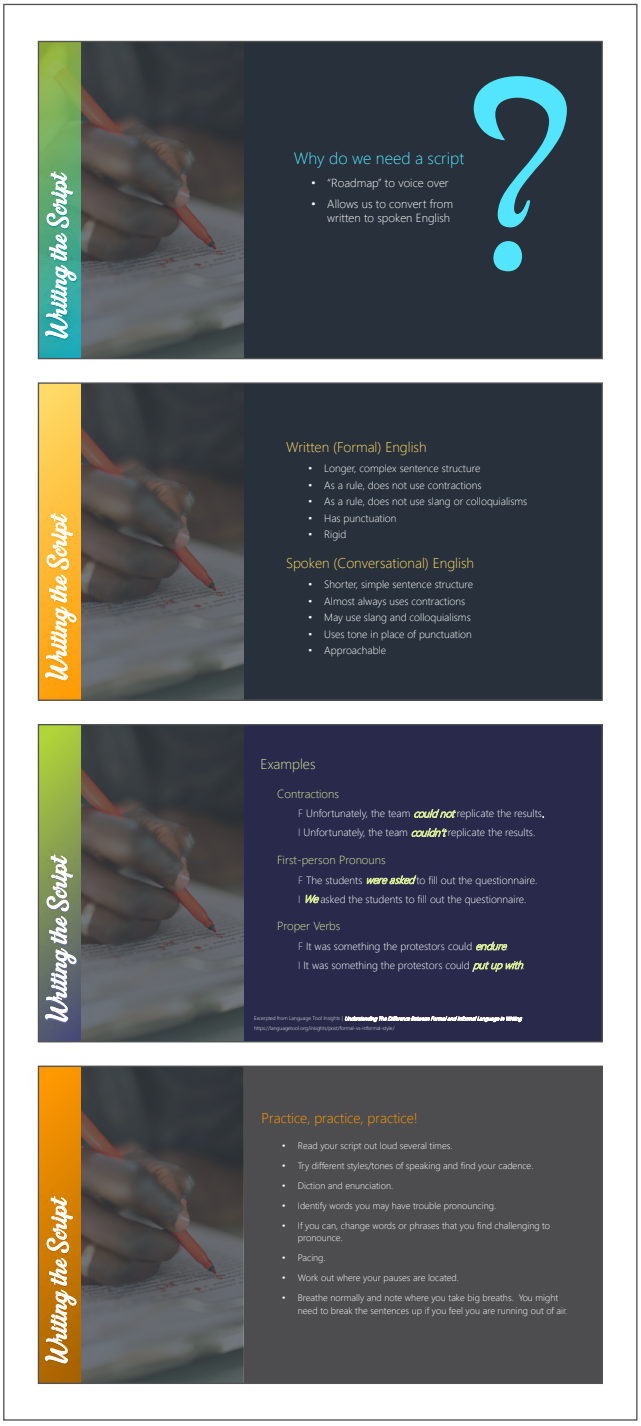


Example 2

Consistency

Consistency plays a vital role once you have chosen your color scheme. It is important to maintain consistency throughout your design as seen in *Example 1* below. While swapping colors, as seen in *Example 2* below, may seem insignificant, it can distract viewers from your intended message as they often subliminally search for reasons behind the color shift. To avoid distractions and stay on track, avoid changing the presentation's color scheme across pages or slides.

Example 1



Example 2