

# How can choices in background and text color affect accessibility?

Many users will have visual impediments that will require good contrast in the documents you are producing.

This article answers the following questions about how to ensure the text in your document meets basic requirements for color contrast:

- [What are contrast ratios?](#)
- [How do I change foreground and background colors of text?](#)
- [How do I check my color selection for adequate contrast?](#)

## What are contrast ratios?

When one color is placed on top of another, the contrast ratio is the numerical value that describes the relationship between these two colors. The ratio is a measurement of how the brightest color (e.g., white) compares to the darkest color (e.g., black).

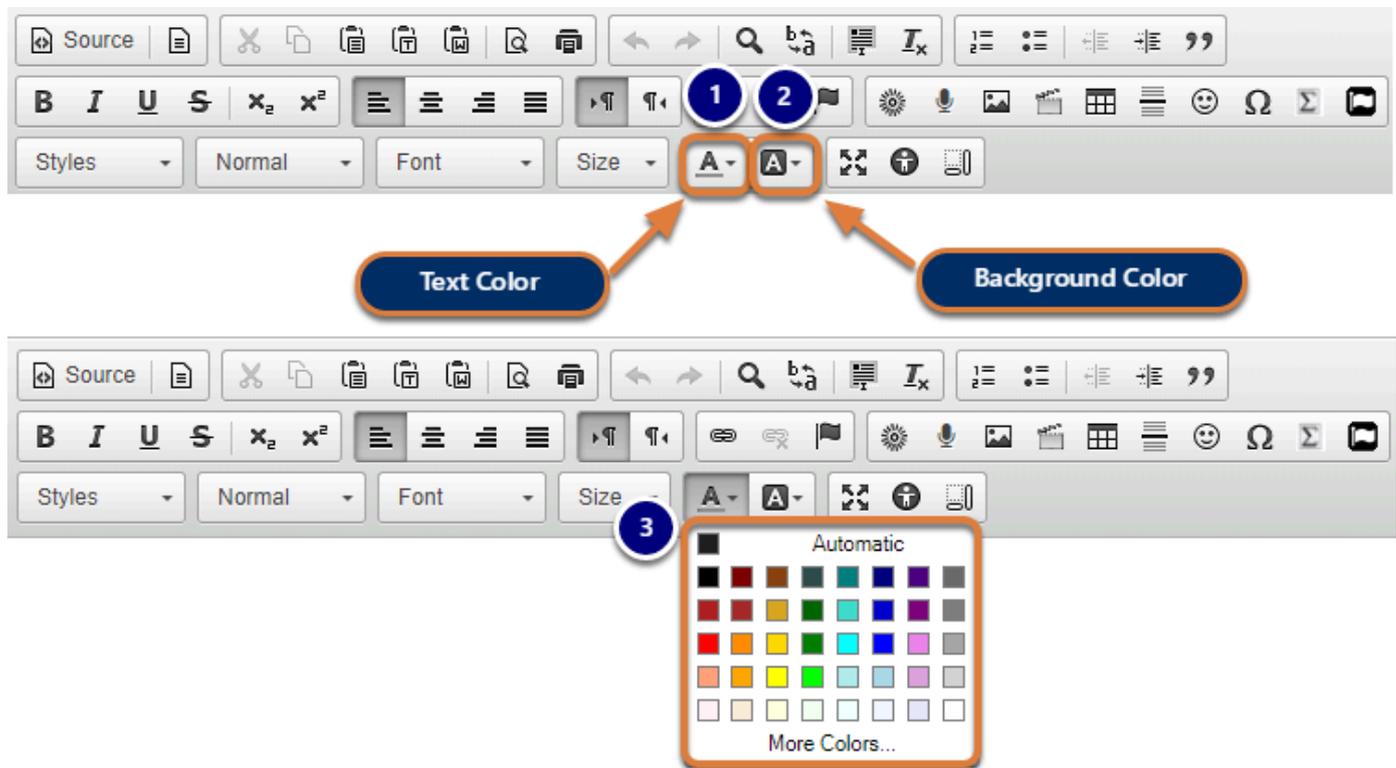
The contrast between background and foreground colors should have a ratio of **4.5:1 or higher**. Leaving the defaults of the editor is best - black text on white, with a ratio of **21:1**.

Text that is larger and has wider character strokes is easier to read at lower contrast. **Large text**, defined as text in an *18 point or larger* font, or **bold text** in a *14 point or larger* font requires a slightly lower contrast ratio, **3:1**.

The table below contains examples of text on backgrounds with varying contrast ratios, and indicates whether the level of contrast would be adequate.

Text Color	Background color	Sample	Contrast ratio	Passes Contrast Requirements?
 #BADFEE	 black	 Sample	14.878	Yes
 red	 black	 Sample	5.252	Almost (text should be larger)
 #FFFF00	 #00FFFF	 Sample	1.168	No

# How do I change foreground and background colors of text?

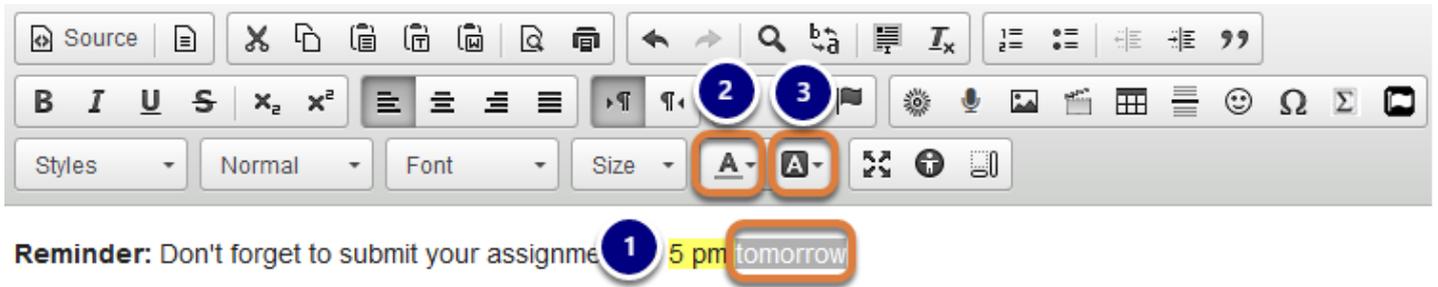


1. If you need to edit the text color, select the **Text Color** button, which resembles a letter A with an underline: A.
2. To edit the background color of the text, which displays as if you had highlighted the text with a highlighter, select the **Background Color** button to the right of the **Text Color** button. The **Background Color** button resembles a solid black box containing a light gray letter A.
3. Selecting either of these buttons will display a **Color Picker**, from which you can choose a color, such as **Black** or **Maroon**. **Yellow** is a **Background Color** commonly used to highlight black text. Select the desired color.

## How do I check my color selection for adequate contrast?

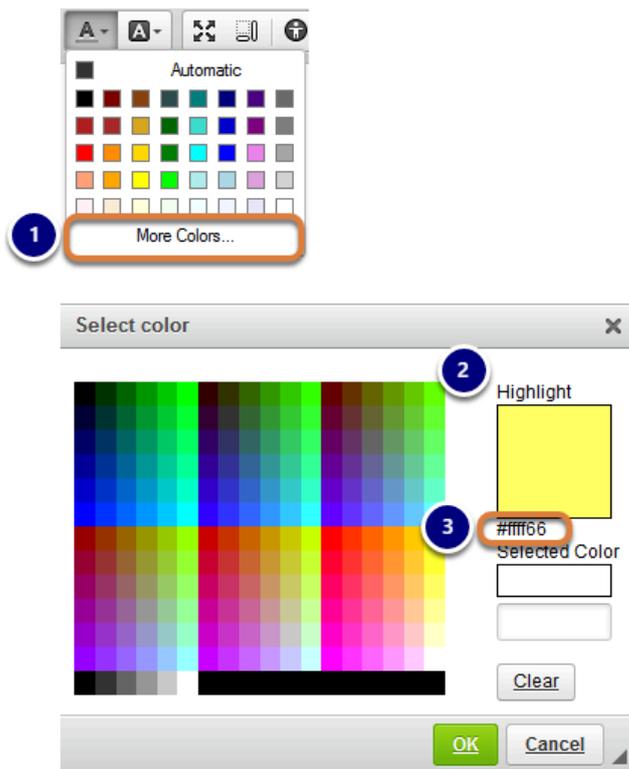
In most cases the contrast will be obvious, but if you need to verify, take the following steps.

## Select the colored text.



1. In the Rich-Text Editor, select some of the text with the foreground or background color you want to check.
2. Select the **Text Color** button to check the text color,
3. Or select the **Background Color** button to check the background color.

## Obtain the hex number for the color.



1. Select the **More Colors...** option in the **Color Picker**.
2. A *Select color* window will pop up. At the top right of the window, your selected color will be displayed under *Highlight*.

- Under this box with your selected color, you will see a 6-digit *hex number*, starting with #. This is the number that allows the internet browser to display the selected color. Record the 6-digit hex number for the color you have selected.

## Use the hex number(s) to check contrast.

WebAIM: Color Contrast Checker

Secure | <https://webaim.org/resources/contrastchecker/>

### Color Contrast Checker

[Home](#) > [Resources](#) > Color Contrast Checker

**Foreground Color** #000000 **Background Color** #FFFF66

Contrast Ratio **19.75:1**

[permalink](#)

**Normal Text**

WCAG AA: **Pass**

WCAG AAA: **Pass**

**Large Text**

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

To check how the **Text Color** you have selected contrasts with the background color behind your text or how your **Background Color** contrasts with the color of your text:

- Access an online color contrast tool such as [WebAIM's Color Contrast Checker \(opens new window\)](#).
- To use WebAIM's Color Contrast Checker, enter the hex number for your **text color** into the *Foreground Color* box and the hex number for your text's **background color** into the *Background Color* box. Alternatively, select the color block to the right of either text box to access WebAIM's color picker, then select a color.
- The contrast checker will tell you the colors *Pass* if they have enough contrast.