



# Accessibility Core Skill # 2: Color

## Benefit to User

Sufficient contrast allows compensation for loss of contrast ability seen in moderately low visual acuity which typically accompanies aging and affects those with color deficiencies/blindness.

## Step by Step

1. Select a text color that contrasts from the background at least 4.5:1 for normal font and 3:1 for large font (18px or higher).
2. Check for adequate contrast on [WebAIM's Color Contrast Checker](http://webaim.org/resources/contrastchecker/) (<http://webaim.org/resources/contrastchecker/>).
3. Print color documents in black and white to check for legibility.
4. Do not rely on color alone to convey meaning. Check charts and tables to ensure they can be read in black and white (see Figures 2 & 3).

## Take-Aways

### Do (Accessible):

- Do choose text colors with good contrast from background.
- Do use multiple strategies for conveying information.

### Don't (Not Accessible):

- Don't depend on MS office default color schemes to be accessible.
- Don't use color alone to convey information.

Figure 1

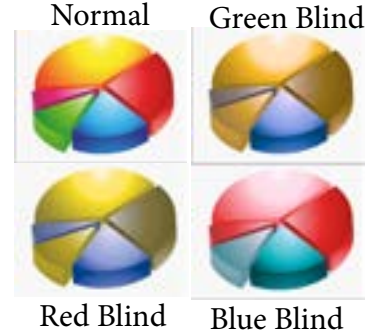
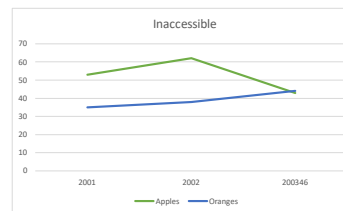


Figure 2

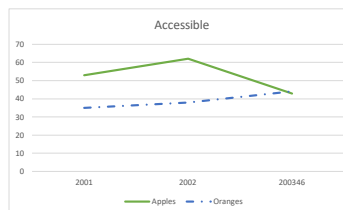
Scholarship Applications **will not be accepted late!** (Not accessible: Only color conveys this as important information and the contrast ratio is too low for this size font).

**Warning!** Scholarship Applications **will not be accepted late!** (Accessible: improved contrast and multiple strategies for conveying the importance of the information).

Figure 3



Inaccessible:  
Information is conveyed by color alone.



Accessible:  
Information is conveyed regardless of the ability to distinguish colors.

## Benefit to Author

- Clean readable designs.
- Convey information to all.

## High Level Overview

According to O'Conner (2014), an estimated 10% of the world population would benefit from documents designed to be easier to see:

- 7-10% of males experience some level of color vision deficiency (color blindness)
- Over 50% of people over the age of 50 have some degree of low-vision condition.
- Age-related conditions that reduce sensitivity to contrast and/or the ability to distinguish colors include macular degeneration, diabetic retinopathy, cataracts, and retinitis pigmentosa.

## Bonus Tips

Black text on white (contrast ratio 21:1) (pass)  
**Orange text on white** (contrast ratio 4:1) (fail)  
**Green text on white** (contrast ratio 2.5:1) (fail)

Black text on gray (contrast ratio 13.7:1) (pass)  
**Orange text on gray** (contrast ratio 2.6:1) (fail)  
**Green text on gray** (contrast ratio 1.6:1) (fail)