Graphic Design Basics: Color Theory

-Student Notes

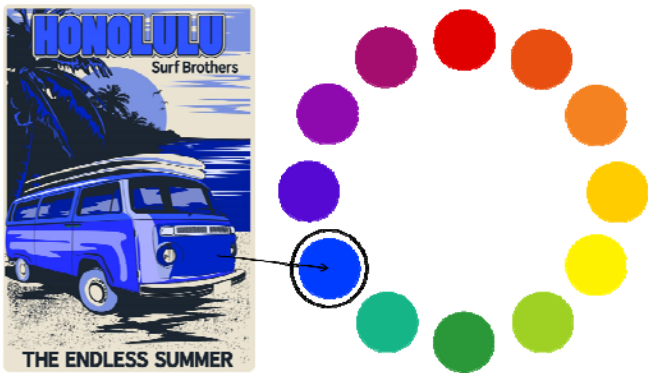
Directions:
Fill in the blanks.

Color Scheme Examples Segment

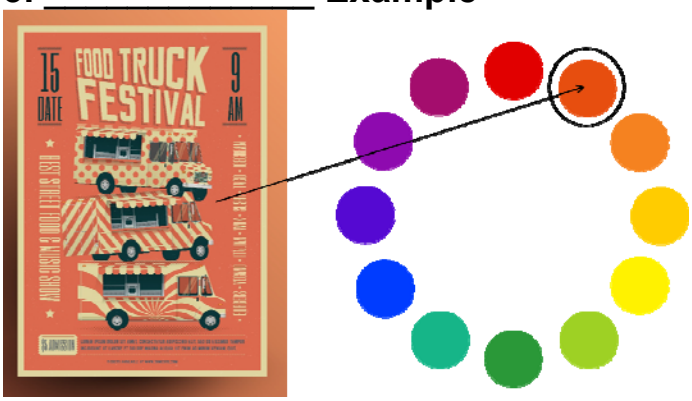
1. Color Schemes

- Are collections of colors which appear harmonious together
- Include:
  - _____
  - analogous
  - complementary
  - split complementary
  - _____ complementary
  - triadic

2. _____ Example



3. _____ Example



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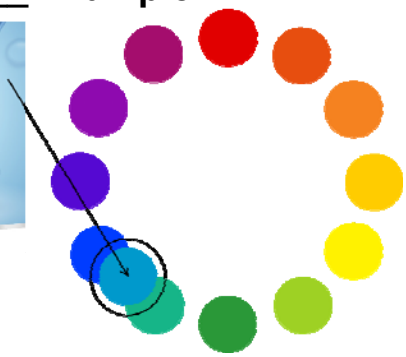
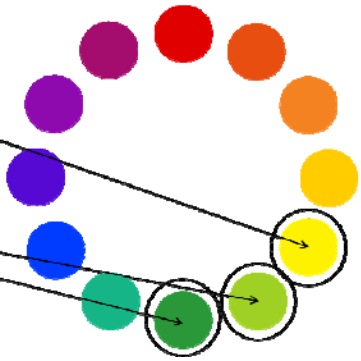
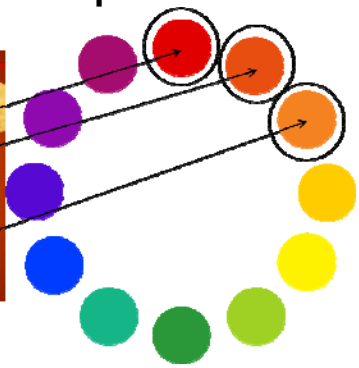
4. _____ Example



5. _____ Example



6. _____ Example



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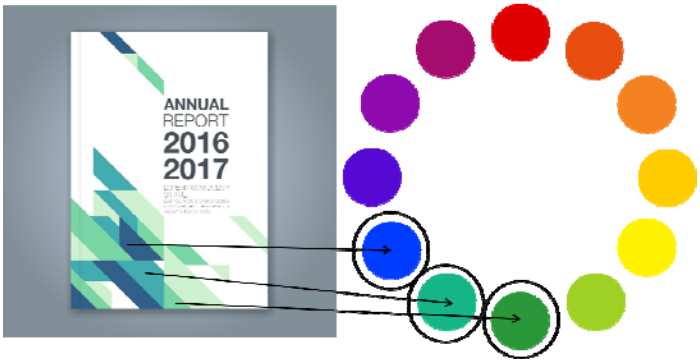
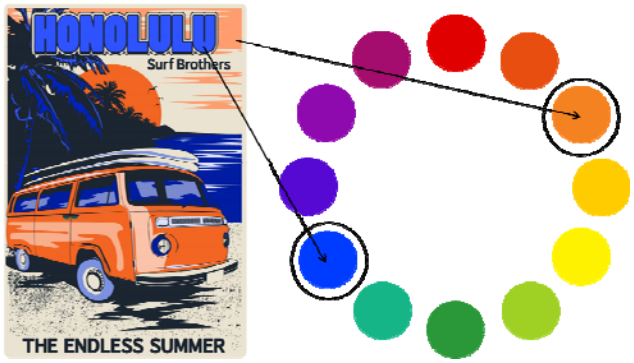
7. _____ Example

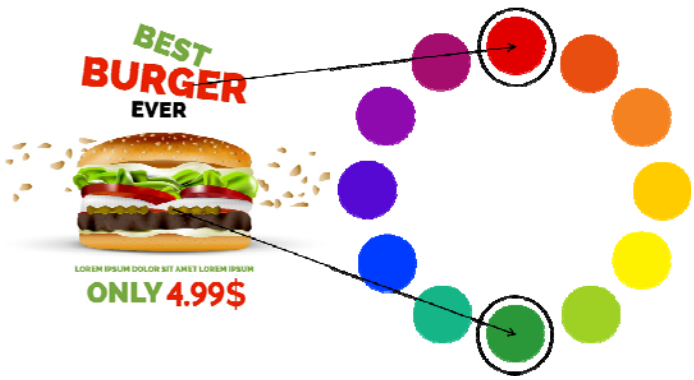
The colors in this design utilize an analogous color scheme, however the saturation and value of the hues have been adjusted.



8. _____ Example



9. _____ Example



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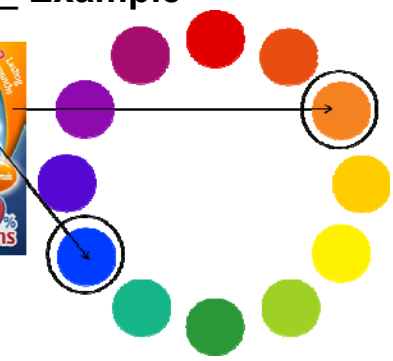
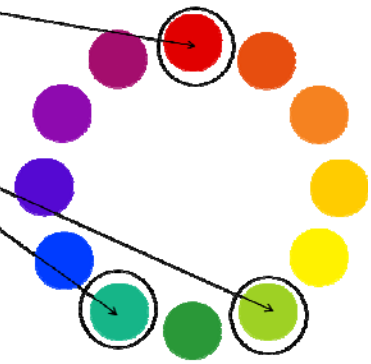
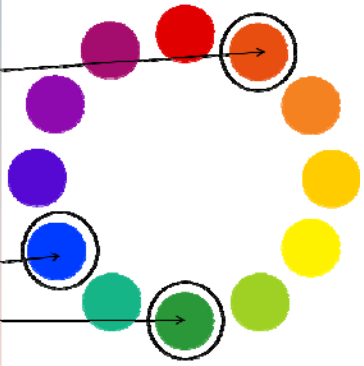
10. _____ Example



11. _____ Example



12. _____ Example



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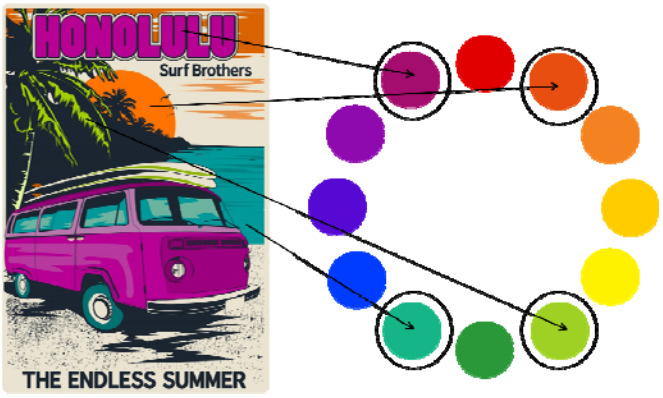
13. _____ Example

14. _____ Example



15. _____ Example

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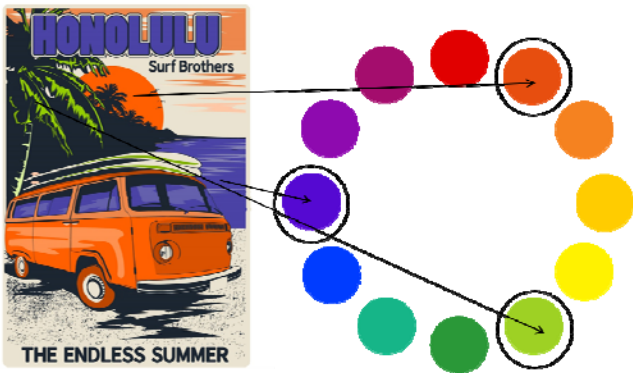
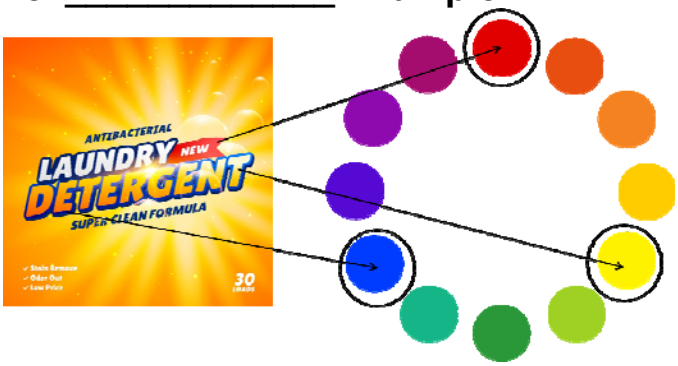
16. _____ Example

17. _____ Example



18. _____ Example



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19. _____ Example

Color Considerations Segment

1. Color Selection

- Should be based on the following considerations:
  - _____
  - context
  - _____ of color
  - psychological and cultural significance of color

2. Contrast

- Can be used to develop _____
  - is essential in color to ensure _____ can distinguish between colors

3. Contrast

- In color can be developed using:
  - saturation
    - mixing saturated and desaturated colors
  - _____
    - mixing shades and tints
  - proportion
    - using difference sizes of color fields
  - _____
    - mixing complementary colors
  - color temperature
    - mixing warm and cool colors
  - frequency
    - using one color more often

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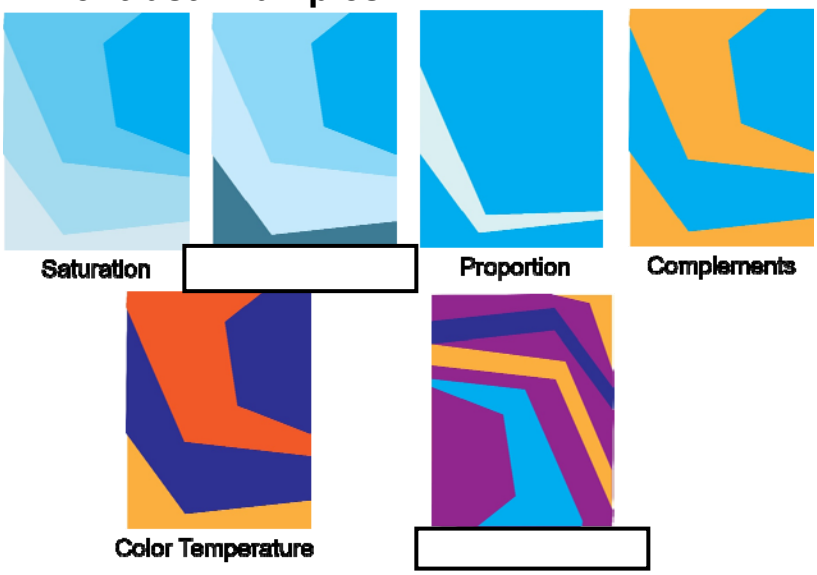
4. Contrast Examples



5. Context

- Can influence how a color appears
  - _____ colors placed next to each other can influence a viewer's perception of _____ of the colors

6. Context Effects

- Include:
  - lightness effect
    - a mid-value color will appear lighter on dark colors and darker on light colors
  - _____
    - contrast between two values of a hue will appear greater when on a background with a lightness value between the two colors
  - _____
    - colors of the same value and hue, will appear darker and less saturated on more saturated backgrounds

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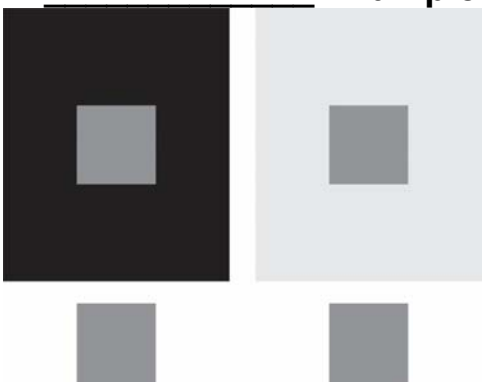
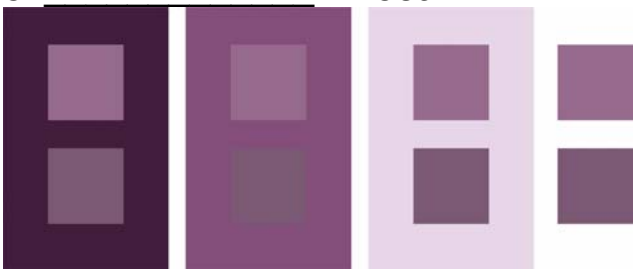
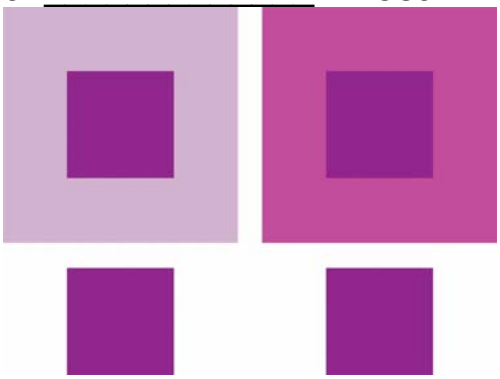
7. _____ Example



8. _____ Effect



9. _____ Effect



10. Spatial Effects of Color

- Refers to the way color influences where an object appears to be in a _____
  - in the natural world, colors tend to become cooler and _____ with distance
- Includes:
  - light colors appear larger than dark colors
  - warm colors appear closer in a design and cool colors fall back
  - desaturated colors appear to be farther back in a design

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11. Psychological & Cultural Significance of Color

Color	Psychological Significance	Cultural & Social Significance	Notes
Red	• Increased pulse • Increased blood pressure • Increased metabolism	• Energy • Passion • Desire • Anger • Heat • Aggression • Danger	Most visually dominant of all colors
Orange	• Appetite stimulant • Encourages discussion • Stimulates critical thinking • Most common least favorite color	• Fun • Fall • Creativity • Whimsy • Crassness • Loudness	Used for visibility enhancement (such as during hunting or on construction sites) because orange provides a strong contrast between the blues and greens found in nature

12. Psychological & Cultural Significance of Color

Color	Psychological Significance	Cultural & Social Significance	Notes
Yellow	• Babies cry more in yellow rooms • Enhances concentration • Increases anxiety • First color the eye will notice	• Joy • Sunshine • Summer • Caution • Jealousy	Most fatiguing color for the eye to look at
Green	• Calming and refreshing • Aids digestion • Reduces stomach aches	• Nature • Environmentalism • Fertility • Money • Success • Greed • Envy • Poison	Easiest color for the eyes to look at

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13. Psychological & Cultural Significance of Color

Color	Psychological Significance	Cultural & Social Significance	Notes
Blue	• Calming • Relaxing • Stimulates productivity	• Sea • Peace • Masculinity • Coldness • Depression	There are very few blue foods in nature and blue is commonly considered to be unappetizing
Purple	• Stimulates imagination	• Royalty • Luxury • Mysticism	Purple dye was difficult to make, so only royalty could afford purple fabric
White	• Can give people headaches because of the brilliance	• Light • Purity • Marriage • Innocence • Simplicity • Blankness	While it is considered good luck to be married in a white wedding dress in the U.S., it is considered bad luck to wear white on a wedding day in India

14. Psychological & Cultural Significance of Color

Color	Psychological Significance	Cultural & Social Significance	Notes
Black	• Boosts self-confidence • Makes other colors appear brighter and more saturated	• Night • Authority • Formality • Mystery • Evil • Emptiness	In China, black is commonly worn by little boys
Gray	• Does not evoke strong emotions	• Neutrality • Bad weather • Cloudiness • Old age	Gray is its own complimentary color

Color Systems Segment

1. Color Systems

- Are used to configure color according to the _____
  - most design programs will allow designers to determine the color system which is most effective for a project's _____

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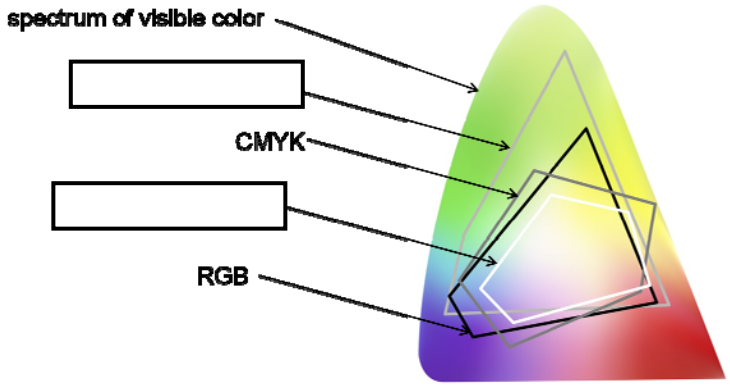
2. Color Systems

No color system can replicate the full spectrum of color the human eye can detect. The full range of color a color system can display is called a gamut.



3. Color Systems

- Are split into two types
  - subtractive color
    - begins with _____ when there are no colors and ends with black when all colors are mixed
    - more color means a darker result
    - pigment color sources are subtractive
  - additive color
    - begins with _____ in the absence of color and ends with white when all colors are mixed
    - more color means a lighter result
    - light color sources are additive

4. Color Systems

- Include:
  - CMYK
  - _____®
  - RGB
  - _____

5. Cyan, Magenta, Yellow, Black (CMYK)

- Is also called 4-color or _____
- Is the color system used in digital printing and _____

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6. Cyan, Magenta, Yellow, Black (CMYK)

- Are mixed to create a full range of colors
  - colors are adjusted by changing the _____ of each of the four colors
  - colors are created by printing very small dots on top of each other so the human eye _____ the colors together

7. Cyan, Magenta, Yellow, Black (CMYK)

- Is not recommended for designing on a _____ because CMYK is configured to the color gamut achievable on print materials which is significantly smaller than the color gamut achievable on digital screens
- Is a _____ system

Most digital printers now have the ability to print even from RGB color spaces, however the printed colors will be converted from the RGB information in the design program to a close CYMK approximation. To ensure the best quality color, designers are always recommended to use the appropriate color system for a more predictable result.

8. Pantone® Matching System (PMS)

- Is a _____ color system created by the commercial printing company Pantone®
- Contains a collection of color swatches which relate to specific inks
  - sometimes called "_____"
- Should not be used for:
  - printing in full color
    - color plates would need to be made for each individual color

9. Pantone® Matching System (PMS)

- Is best used for:
  - designs which require a _____, for example, in logos or brands which require a specific color match
    - PMS allows designers and printers to ensure certain colors are consistent throughout materials
    - can be used in addition to the typical CMYK _____
  - one or two color print jobs
    - cheaper than four color printing

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10. Red, Green, Blue (RGB)

- Are mixed to achieve a full range of colors
  - colors are adjusted by using a value between _____ which refers to the light emission which will be displayed in each of the colors
- Is best used for digital displays because it is formatted for additive color
- Is not recommended for _____

11. Hue, Saturation, Brightness (HSB)

- Is a color system based on the color wheel
  - hue is adjusted _____, to refer to a location on the color wheel
  - saturation is adjusted using a percentage, from 0 percent which is no saturation to 100 percent which is full saturation
  - brightness refers to the value of the color which is a percentage, _____ the hue does not have any white or black, above 50 percent increases amount of white and below 50 percent increases amount of black in the color

12. Hue, Saturation, Brightness (HSB)

- Is commonly used for _____ because the color adjustments are _____ than with other systems