**Graphic Design Notes**

**Graphic Design Fundamentals:**

1. **Color Theory:**
   * **Color Wheel:** Helps create harmonious color combinations and understand color relationships.
   * **Primary & Secondary Colors:** Primary colors (red, yellow, blue) are fundamental; secondary colors (orange, green, purple) come from mixing primary colors.
   * **Warm & Cool Colors:** Warm colors (red, orange, yellow) evoke energy; cool colors (blue, green, purple) are calming.
   * **Color Harmony:** Balances and unifies colors for a visually appealing design.
   * **Color Contrast & Legibility:** Enhances readability and guides viewer attention.
2. **Typography:**
   * **Font Styles:** Convey tone and personality, enhancing readability and visual interest.
   * **Font Sizes & Hierarchy:** Create clear visual hierarchy and improve readability.
   * **Line & Letter Spacing:** Ensure text readability and visual harmony.
   * **Text Alignment & Justification:** Improve readability and create visual balance.
3. **Composition:**
   * **Visual Elements:** Communicate messages, capture attention, and support brand identity.
   * **Design Principles:** Balance, proportion, emphasis, movement, pattern, unity, variety, contrast, alignment, and repetition.
   * **Layout & Grid Systems:** Organize content and establish hierarchy.
   * **Visual Flow & Direction:** Guide viewer attention and create engagement.
4. **Visual Hierarchy:**
   * **Organizing Content:** Use size, color, and position to create visual hierarchy.
   * **Focus Points & Emphasis:** Draw attention to key messages.
   * **Guiding Viewer Attention:** Direct viewers to key information and ensure clear communication.
5. **Design Principles:**
   * **Contrast & Legibility:** Enhance visual clarity and guide attention.
   * **Alignment & Consistency:** Create visual flow and establish a cohesive look.
   * **Repetition & Unity:** Create a cohesive look and establish visual identity.
   * **Proximity & Grouping:** Organize content and guide attention.
   * **White Space & Simplicity:** Improve readability and guide attention.
6. **Design Tools:**
   * **Adobe Photoshop:** Essential for raster graphics editing.
   * **Adobe InDesign:** Industry standard for page design and layout.
   * **Adobe Illustrator:** Essential for creating vector graphics, logos, and illustrations.
7. **File Formats:**
   * **Raster Images (JPEG, PNG, GIF):** Ideal for digital displays and vibrant colors.
   * **Vector Images (AI, EPS, SVG):** Scalable and editable, ideal for logos and illustrations.
   * **Document Formats (PDF, INDD):** Ensure compatibility, file integrity, and security.
8. **Design Process:**
   * **Research & Understanding the Brief:** Provide clear direction and ensure effective communication.
   * **Sketching & Conceptualization:** Generate and refine ideas.
   * **Design Development & Refinement:** Iterate and improve designs.
   * **Feedback & Iteration:** Refine work and ensure client satisfaction.

**Principles of Design:**

1. **Balance:** Distribution of visual weight (symmetrical, asymmetrical, radial).
2. **Proportion:** Relative size and scale of elements.
3. **Emphasis:** Creating focal points to draw attention.
4. **Movement:** Path the viewer’s eye takes through the design.
5. **Pattern:** Repetition of visual elements.
6. **Unity:** Cohesiveness of elements in a design.
7. **Variety:** Use of different elements to create interest.
8. **Contrast:** Differences between elements to create visual interest.
9. **Alignment:** Arrangement of elements along a common line.
10. **Repetition:** Consistent use of elements to reinforce unity.

**Additional Considerations:**

1. **User Experience (UX) and User Interface (UI) Design:**
   * **UX Design:** Focuses on the overall experience users have with a product, ensuring it is easy to use, intuitive, and meets user needs.
   * **UI Design:** Concentrates on the look and feel of the product's interface, including layout, visual elements, and interaction design.
2. **Branding and Identity:**
   * **Brand Identity:** Creation of logos, color schemes, typography, and visual styles that represent a brand.
   * **Consistency:** Maintaining a consistent visual style across all brand materials to strengthen brand recognition.
3. **Design Thinking:**
   * **Empathize, Define, Ideate, Prototype, Test:** Steps involved in the design thinking process to solve complex problems creatively.
4. **Accessibility:**
   * **Accessible Design:** Ensuring designs are usable by people with various disabilities, including color blindness, visual impairments, and mobility issues.
   * **Web Content Accessibility Guidelines (WCAG):** Standards for making web content more accessible.
5. **Responsive Design:**
   * **Adaptive Layouts:** Creating designs that work across different devices and screen sizes, ensuring a consistent user experience.
6. **Visual Storytelling:**
   * **Narrative Elements:** Using visual elements to tell a story or convey a message effectively.
   * **Infographics:** Combining data and visuals to communicate complex information clearly.
7. **Trends and Innovations:**
   * **Keeping Up with Trends:** Staying current with design trends, technologies, and best practices to ensure relevance and innovation in designs.
8. **Printing Techniques:**
   * **Print Production:** Understanding different printing techniques, paper types, finishes, and how they affect the final design.
   * **CMYK vs. RGB:** Knowing when to use CMYK for print and RGB for digital designs.
9. **Ethics in Design:**
   * **Ethical Considerations:** Understanding the ethical implications of design decisions, including cultural sensitivity, honesty, and respect for intellectual property.
10. **Portfolio Development:**
    * **Building a Portfolio:** Showcasing a variety of work to demonstrate skills and versatility.
    * **Case Studies:** Including detailed explanations of design projects to highlight problem-solving and creative processes.

Graphic design influences our purchases with distinctive branding, clever packaging, and persuasive advertising. It also engages us and enhances our comprehension of text in websites, apps, magazines, and books.

Photoshop is the leading professional software used to optimize photographic and complex images. Illustrator is used to draw on the computer and for single-page layout for print and screen. InDesign is multiple-page layout software and is used to organize designs prior to sending jobs to print shops or developers for digital products.

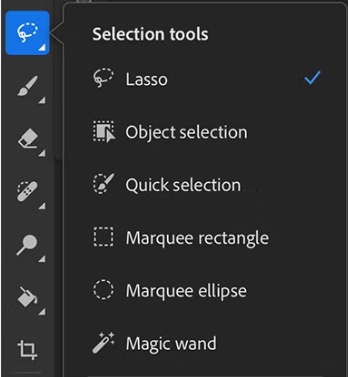
Designers often use photographs to immediately communicate a message or set a tone. Illustration has a timeless quality, while photography can look dated quickly. If your project has a long shelf life, consider alternatives to photography.

Abstract images can be beneficial because they may represent many different possibilities, and the audience can choose their own interpretations.

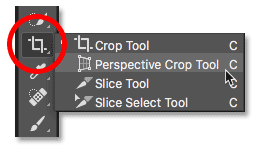
Visual themes and the use of repetition and variation can be used to achieve cohesion, consistency, and rhythm throughout your designs. Consistency of fonts, image style, and layout provide unity and enhance comprehension of a publication.

Most places have a visual character established by factors like their climate and architecture. Designers use these traits when creating environmental graphics, such as signs, wayfinding systems, and banners. Environmental graphics are physical, rather than digital, and have an impact on real life.

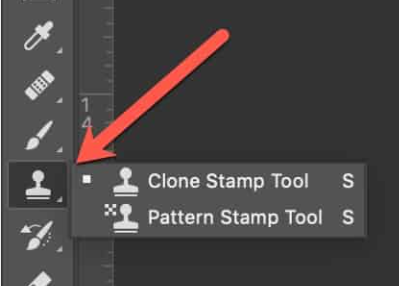
In Photoshop, areas of an image may need to be selected before you can change them. There are three primary tools for selecting. The Marquee tool selects geometric areas, usually rectangular or circular. Just below is the Lasso tool, which can select organic shapes. Next is the Quick Selection tool; however, when you hold the mouse button down, you can select the more professional Magic Wand tool, which detects similar colors and groups them into a useful selection.



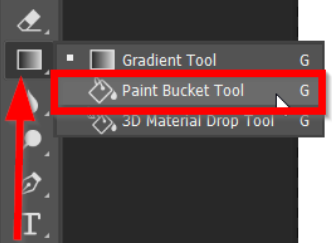
The crop tool is used to permanently change the image format. The very helpful Eyedropper selects colors from a photo to be used elsewhere, such as in text.



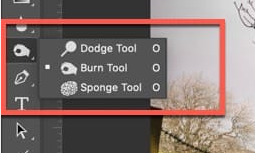
The Clone tool looks like a rubber stamp and has impressive copying capabilities, use this tool to make professional-quality image edits.



The Paint Bucket hides behind the Gradient tool and is handy for filling areas with a color.

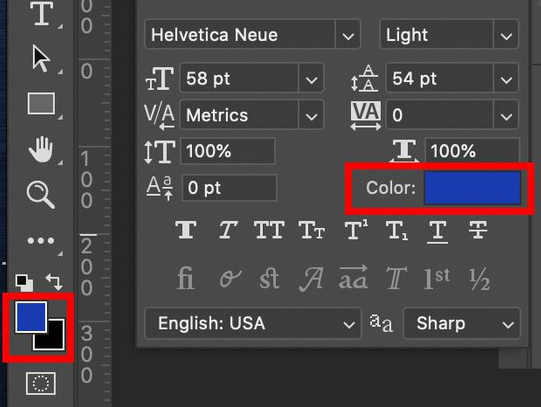


The Dodge and Burn tools lighten or darken the exposure of specific areas of a photo. By applying Dodging and Burning to selected areas of an image, you can lighten or darken them.



All the tools have custom settings that are displayed in the Options bar (at the top of the window) or the Properties panel (on the right).

At the bottom of the toolbar, the color squares functions are unique to Photoshop. On the top is the Foreground Color, the lower square is the Background Color. The selector allows you to quickly change to default colors; the bent arrow is used to switch the foreground and background colors.



Multiple layers allow you to make changes to specific areas of your image without affecting other areas. A new layer is created every time you paste an object or add text to a file. This allows you to edit images and format text or apply transparency (or other effects) to certain layers only. The layer is active when it appears highlighted or gray. View or hide specific layers by clicking the eye icon in the left-hand column of the window.

Logos require simpliﬁed forms for effective recognition, recall, and reproduction.

Designers manipulate any or all of the elements of design when developing projects. An element is one of the simplest principles of an area of study. In graphic design, the seven elements are: color; direction; line; size; shape; texture, and value.

1. Color

Color is the use of hue, saturation, and brightness to create visual interest and convey meaning. It can be used to draw attention, evoke emotions, and create harmony or contrast. Colors can be warm (red, orange, yellow) or cool (blue, green, purple), and can be combined in various ways to create different effects.

2. Direction

Direction refers to the visual flow or movement in a design. It can be created through the use of lines, shapes, and other elements to guide the viewer's eye through the composition. Direction can be horizontal, vertical, diagonal, or curved, and can help create a sense of energy, movement, or tension.

3. Line

Lines are continuous marks made on a surface by a drawing tool. They can vary in width, length, direction, and curvature, and can be used to define shape, create texture, and convey movement or direction. Lines can be straight, curved, diagonal, or zigzag, and can be thick or thin.

4. Size

Size refers to the relative magnitude of elements in a design. It can be used to create hierarchy, emphasize importance, and create visual balance. Size can be used to draw attention, create contrast, and guide the viewer's eye through the composition.

5. Shape

Shape refers to self-contained areas with height, width, and depth. They can be geometric (squares, circles, triangles) or organic (free-form, irregular), and can be used to create form, texture, and pattern. Shapes can be combined, overlapping, or nested to create complex forms and compositions.

6. Texture

Texture refers to the surface quality or "feel" of an element or design. It can be visual or tactile, and can be created through the use of lines, shapes, and other elements. Texture can add depth, interest, and emotion to a design, and can be used to create a sense of realism or abstraction.

7. Value

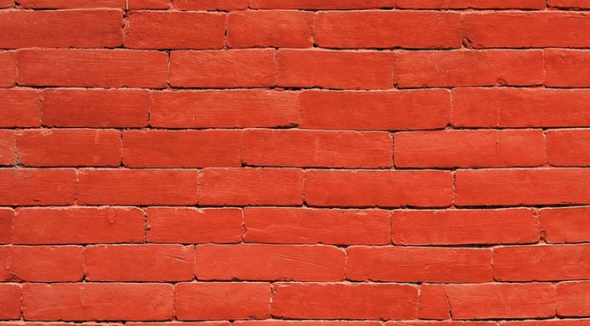
Value refers to the lightness or darkness of elements in a design. It can be used to create contrast, hierarchy, and visual interest, and can help guide the viewer's eye through the composition. Value can be used to create a sense of volume, depth, and dimensionality, and can be manipulated through the use of shading, gradations, and other techniques.

An example of how shape is used in graphic design: the lines used in this ad are based off of the markings on basketball courts. It also makes use of energetic pictures and color to draw the audience’s attention.



Light values of colors are called tints and dark values are called shades.

Graphic designers sometimes use tactile effects—real textures—to add unique qualities to designs. Even a simple picture, like the one below, can convey a sense of texture to the observer.



Color can elicit a sense of emotion in graphic design. The list below identifies the sentiments associated with each color.



Color theory focuses on the three primary colors (red, yellow, and blue) and the secondary colors (orange, green, and purple).

**The Color Wheel**

* A circular representation of colors, showing how they relate to each other.
* Primary colors (red, yellow, blue) are equally spaced from each other.
* Secondary colors (orange, green, purple) are created by mixing two primary colors.



**Color Harmony**

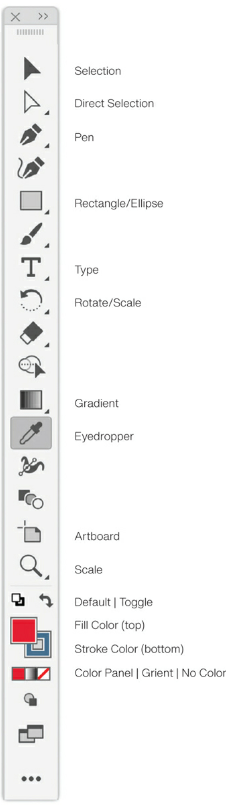
* Refers to the way colors work together to create a visually appealing effect.
* Principles of color harmony include:
  + Complementary colors (opposite each other on the color wheel)
  + Analogous colors (next to each other on the color wheel)
  + Triadic colors (equidistant from each other on the color wheel)

CMYK colors are vital in graphic design for printing, ensuring accurate color representation, consistency, and efficiency. They enable a wider color range, reduce ink usage, and produce a professional finish, making them essential for commercial printing applications.

RGB colors are essential for digital graphic design, ensuring vibrant colors on screens, flexibility in design software, and consistency across digital platforms, making them ideal for web, digital art, and video production.

In Adobe Illustrator, Pantone refers to a standardized color system used in printing, ensuring consistent and precise color representation, especially in branding and logos.

Adobe Illustrator’s toolbar has this layout:



The selection tool is often the most used, and can be employed to select either one objects or many.

Some tools have a black arrow toward the bottom right. This signals that there are other tools that can be selected beyond the main tool shown as the icon. Holding the mouse button down when clicking on these icons will reveal additional tools.

The white arrow is the Direct Selection tool. It is used to select a particular point on an object to make precise adjustments to graphics. The Pen tool will initially be challenging, but fun and rewarding, once you’ve had a bit of practice. It is used for drawing.

The Rectangle tool has important variations, including the Ellipse and Line tools. The Type tool generally works in the same way as most type tools in word-processing software.

The Path Type tool for flowing text along any sort of line such as circles, waves, or an illustration and is another tool available under the type tool.

The Gradient tool ﬁlls shapes with variations of chosen colors. The Eyedropper tool is useful for identifying objects’ specific hues. The Artboard tool allows you to customize the size of your design file.

The “Essentials Workspace” is the default tool environment in most adobe applications. In Illustrator, it can be selected by going to Window>Workspace>Essentials.

The two large color squares in the toolbar are the Fill and Stroke colors. The color on top is the Fill color. The color below is the Stroke (outline) color. The bent arrow toggles between Fill and Stroke colors. To choose new colors, double-click on the either the Fill or Stroke square to open the Color Picker window.



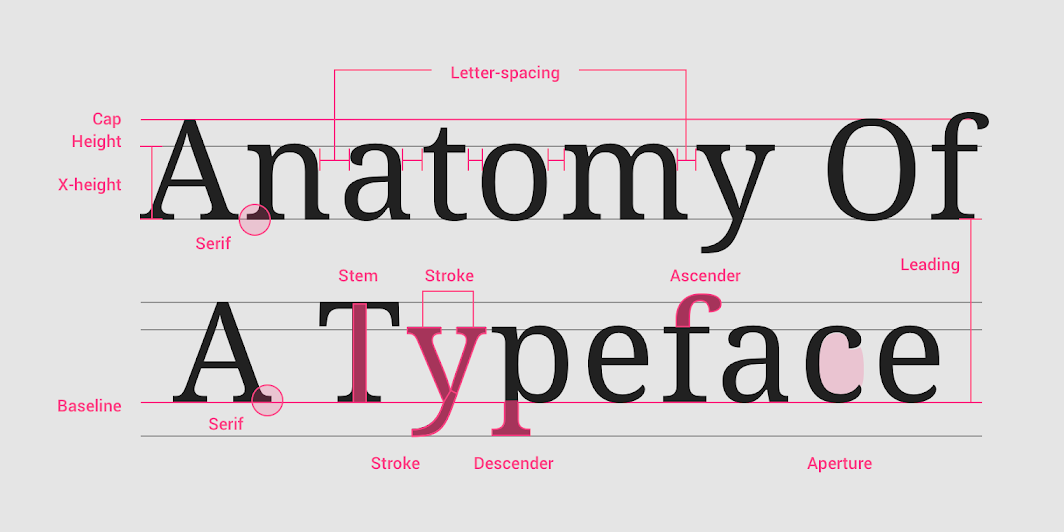
You can do unlimited undos in Illustrator.

Hue, simply stated, is the name of the color. Saturation can be thought of as the intensity of the color. Also referred to as chroma, it indicates the amount of gray in a color. Highly saturated colors are referred to as bold or true. Brightness is the amount of white in a color. Brighter hues appear in the upper left of the Color Picker square and are often called tints.

A tiny triangle with an exclamation point sometimes appears next to the current and previous color rectangles to indicate that the current color is out of gamut. In Adobe Illustrator, a gamut is the range of colors a device or medium can accurately display or print. Defined by color models like RGB, CMYK, or PANTONE, Illustrator's gamut warnings and soft proofing help designers work within these limitations, ensuring accurate and predictable color representation in their artwork. When a color cannot be displayed on a device, it is out of gamut.

Now deprecated, web-safe color palettes acknowledged that while your monitor may have been capable of displaying millions of colors, web browsers displayed only 216 colors consistently. Significant to website design, a six-digit hexadecimal number was used to specify color. Website software such as CSS defined colors using the hexadecimal (sixteen-character 0–F) numbering system. The hexadecimal value for white is FFFFFF, black is 000000, and one of my favorite blues to use for websites is 006699.

The illustration below shows key terms that will aid your ability to combine typefaces effectively and design layouts. The terms labelled within the gray lines are essential for novices.



Typeface refers to the overall character set of a particular design. Font refers to the complete set of characters in any given size and style.

Serifs are the notches at the ends of letterforms. A typeface without serifs is called sans serif.

Old-Style refers to typefaces with characteristics that were typical when metal type printing was adopted in Europe. Use Garamond, Palatino, and other Old-Style typefaces when your page design needs to achieve an overall uniform appearance.

Transitional typefaces have more refined forms than Old Style ones, with more contrast and deeper bracketing to the serifs. Use Transitional typefaces for readability and subtle elegance.

The Modern letter style is characterized by a distinct contrast between the thick and thin strokes and hairline serifs abruptly set at right angles to the stems. Use Modern typefaces for their cool, crisp appearance. This style is not the best choice for large amounts of copy—the extreme contrast between the thick and thin strokes creates an overall irregular appearance on the page.

Slab serifs are a type of serif font characterized by thick, block-like serifs, often used for headings and display text due to their high legibility and attention-grabbing appearance. In your page layouts, try Slab Serif titles combined with sans-serif body copy for a clean yet dynamic page appearance. Slab Serif fonts are wonderful to use for digital products, such as apps and websites, because Slab Serif fonts are mono-weight—the thickness of each letter is consistent, and this is beneficial for digital displays.

Sans-serif typefaces have a more casual style than serif typefaces, yet they are usually just as legible. Sans-serif typefaces, such as Myriad, are frequently used for online text. Websites, email, and text messaging are often produced with sans-serif typefaces because their mono-weight lines result in better legibility on computer screens.

Scripts appear to be hand-drawn, often suggesting calligraphy. Commonly used fonts include the elegant Snell, sassy Zapfino, heavier Viktor, and friendly Renata. Tips for scripts: Avoid using all capital letters with scripts, and limit their use to small amounts of text, not entire paragraphs.

While they add a distinctive, immediate voice to your designs, many novelty letters can be difﬁcult to read. With their unique shapes and embellishments, these fonts are not necessarily concerned with legibility.

Rather than simply providing information, fonts can also provide immediate emotional expression.

Start with a decision about the attitude and tone of your design. Then search for one or two typefaces that match the desired mood. Details, weight, and height create character. Heavy and bold suggests immediacy, while serifs can feel conservative, and thin serifs will look somewhat similar—as well seem classical. Sans serif fonts often convey more contemporary or casual tenors. The right typeface sets the proper tone for your design and helps establish a voice for your copy.

A classic approach to selecting typefaces is to use two fonts in each design: one for titles and one for the body copy—one serif, one sans serif.

Try to use typefaces that have the same x-heights when combining two typefaces. In this way your design will achieve an elegant unity.

A type family contains all the variations of a particular typeface. Superfamily typefaces contain both serif and sans-serif versions.

Computer software has the ability to make changes to these carefully designed letters. Just because the software makes distortions possible, it doesn’t mean we should indulge.

Typefaces that are trendy can make your design look dated quickly: consider the life span of your project when choosing the typeface.

Justified type refers to lines of text in which all the lines are the same width.

A general guideline is to make your columns forty-five to seventy-five characters wide. Counting letters and spaces, sixty-six characters is considered ideal. For multiple columns, use forty to fifty characters.

Left alignment is very commonly used in websites, magazines, annual reports, packaging, and captions. This format has a more informal appearance than justified copy. It is also called flush left and ragged right.

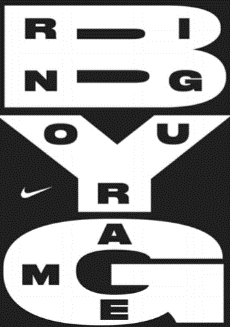
Right alignment aligns the text along the right axis. It is most unusual in paragraph form because it is difficult for the eye to keep searching for the beginning of each line. It is best reserved for titles or a group of lines that help to balance a page layout.



Centered copy is best used for title pages, invitations, and small amounts of copy. Be aware that some development software for responsive websites may only allow centered text.

Asymmetrical formats are used in designs to make dramatic statements. Each line, word, or letter is placed in a unique position. This format is sometimes used with elaborate typefaces to achieve better balance among letterforms.

Contour formats follow a shape or image. This technique grabs attention. The trick is to keep the margins between the shape and text consistent.



The Pen tool in Illustrator will initially be challenging, but it is fun and rewarding once you have had a bit of practice. It is used for drawing.



The Direct Selection tool is used to select a particular point on an object for making precise adjustments to drawings. Keep in mind, the black Selection tool selects an entire object with many points.

The Type tool generally works in the same way as most Type tools in word-processing software. However, when you put your cursor over the Type tool, then press and hold the mouse button, you’ll see variations.