



GRAPHIC DESIGN ESSENTIALS

With Adobe Software

**Joyce
Walsh**

B L O O M S B U R Y

Graphic Design Essentials

BLOOMSBURY VISUAL ARTS

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Graphic Design Essentials

With Adobe Software

Second Edition

Joyce Walsh

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Preface

Why Write This Book?

This book is inspired by my own experiences learning about graphic design. I remember being surprised that it's not easy. This is partly because novices must build two different areas of expertise to begin creating good work. In addition to learning the fundamentals of graphic design, we need to learn complex software. My book integrates these two, and this approach helps beginners learn the essentials more quickly, and in a way that reflects the nature of the field. Our creative process involves an integration of design strategy with creative software capabilities.

The goal of this book is to efficiently develop a strong foundation in graphic design and production capabilities, whether readers want to pursue design as a career, or gain skills that will complement other professions. This knowledge applies to a great variety of fields. Recently, in one semester, I had students studying advertising, business, computer science, engineering, a pastry chef, and a man who worked in the mayor's office.

This book can also be used by individuals who want to independently learn design strategies and Adobe software.

What You'll Learn

Throughout, my underlying goal is to help you develop solid design fundamentals coupled with professional software skills including Adobe Illustrator, Photoshop, and InDesign. You'll learn about fonts, colors, images, logos, and layouts to engage and communicate effectively in all media.

How To Use This Book

White pages: Each chapter begins with white pages that show examples of effective graphic designs from all over the world. The text explains why their design strategies are successful and how you can apply them in your own work.

Gray boxes: These boxes within the white pages provide you with design analysis and project development practice to reinforce what you're reading.

Yellow boxes: These provide concise yet professional strategies.

Blue pages: These pages introduce Adobe Photoshop, Illustrator, and InDesign with step-by-step software demonstrations that also reinforce design principles and provide professional tips. The software skills are presented incrementally, beginning with the use of essential tools and becoming progressively more complex. You are encouraged to go through the book in order, as this will comfortably build a useful set of skills.

Those readers who are more advanced are encouraged to read through the blue pages, as they provide design tips and strategies. By the end of the book, you will use Photoshop, Illustrator, and InDesign as professionals do, understanding which software is best for which task. The images you'll use in the software skills can be downloaded from <http://www.bloomsbury.com/graphic-design-essentials-9781350075047>

No experience is necessary! Let's go ...

About the Author

Joyce Walsh is an educator, writer, and designer. As a professor at Boston University, she has taught over 3,000 students and looks forward to many more. With a passion for design, along with academic and professional backgrounds in both the arts and technology, she develops innovative courses that integrate principles of design with creative software skills. Experienced in all areas of graphic design, her work is featured in international exhibitions and publications.

Joyce wrote the first book to combine design principles with software. This, the second edition, contains the latest in graphics software techniques and hundreds of new globally sourced designs.

Introduction

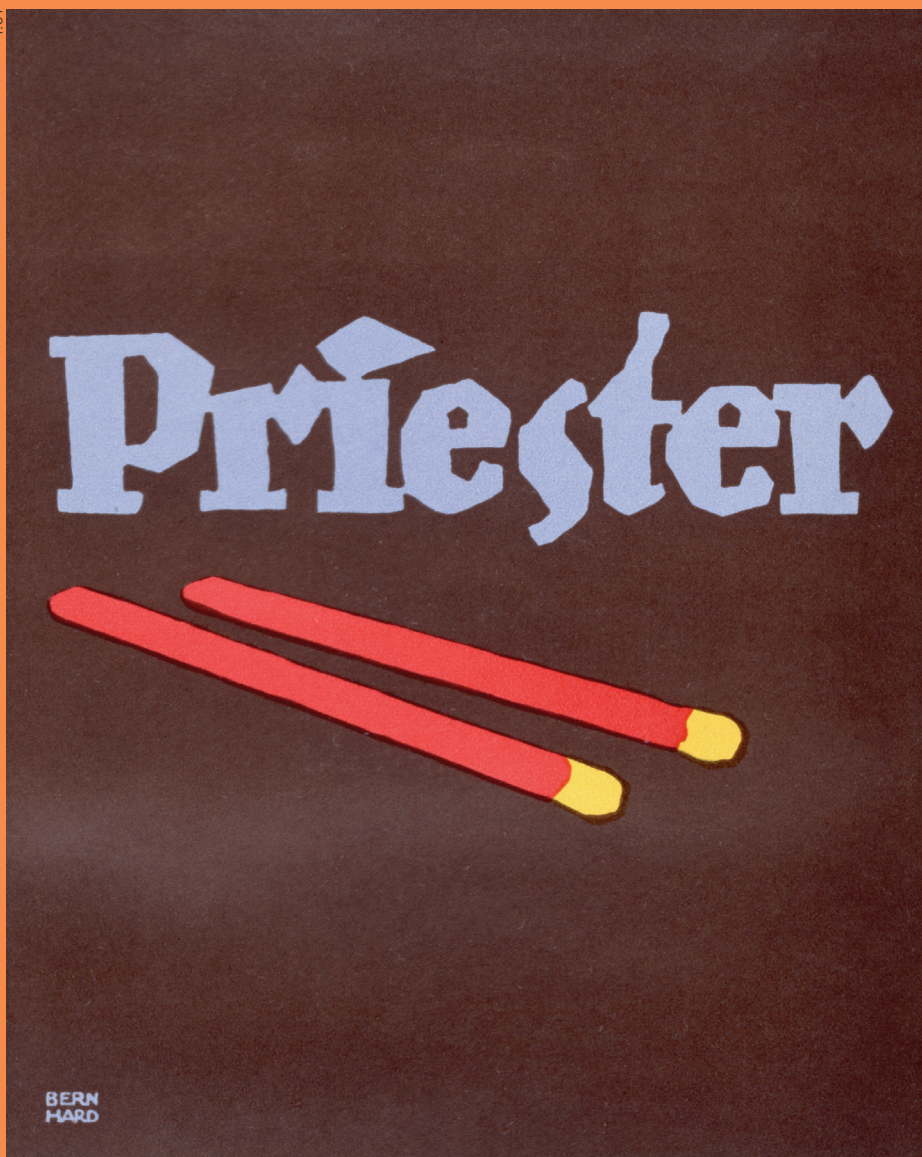


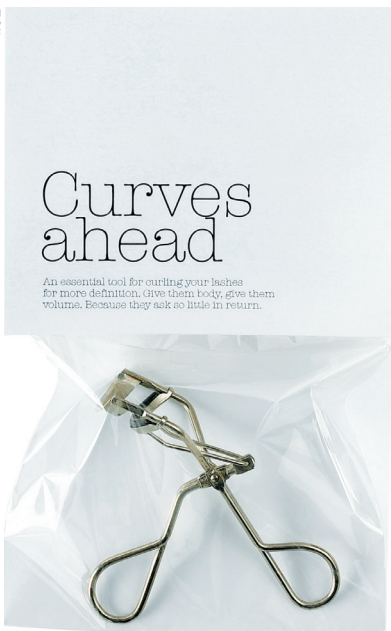
Lucien Bernhard, Priester matches poster, 1905

This Priester matches poster was considered a work of genius and made Lucien Bernhard famous. While a struggling young artist in Berlin, he won a poster contest with this radically concise design. His poster successfully reduced the style of commercial communication from complex lithographs (Art Nouveau posters) to one word and two matches. Bernhard's bold colors make the visually simple message powerful. He repeated his formula—flat background color, product name, and simple image—for over twenty years. His designs moved graphic communications forward and continue to inspire new designers to communicate with simplified form and bold colors.

Throughout this book you'll notice several historic examples that have helped shape graphic design over the past 120 years. These "hero" designers expressed their passion for type, image, color, and layout in their works. I hope they inspire you as you develop your skills in design.

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Graphic Design is Everywhere

Look around and you'll see that graphic design is everywhere. It's the most pervasive art form in our society. And when it's good, it's powerful. 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.

Would you like to produce powerful work such as that shown on this page? This book will teach you how to analyze designs to understand their underlying strategies. It will provide guidelines for successfully choosing and using colors, typefaces, images, and layouts. And it will teach you software skills with design exercises, so you can create your own influential graphic designs in all forms, both print and digital, from package designs to smart watch displays.

Design Concepts

+ Examples

+ Analysis

+ Software Skills

+ Projects

We'll use the formula above throughout the book. Each chapter provides explanations of design concepts, along with examples and analysis that reinforce this knowledge. This information is complemented with instruction in Adobe Creative Cloud software. The software skills are demonstrated with engaging exercises that will reinforce your understanding of design fundamentals. Projects provide you with opportunities for independent creative development using professional design software.

Adobe Creative Cloud

The Adobe Creative Cloud includes industry-standard software: Photoshop, Illustrator, and InDesign. 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. These three Adobe products share a similar interface that facilitates the beginner's ability to use the software.

A reassuring consideration: in this book software skills are built incrementally. Going through the chapters sequentially, you are provided with software instruction to perform each exercise. The software sections will advance your skills progressively. And the exercises reinforce design concepts, so you'll build design capability along with technical facility.

As you develop these skills, your confidence will grow. You will develop the ability to produce the ideas you have in your imagination. If you already know a bit of Photoshop or other programs, doing the exercises anyway will reinforce the design concepts and build your software skills to a professional level. In the later chapters, you will, as most designers do, combine your skills in all three programs to produce designs. Ready? Let's go!

Functional Fine Art

Designs of words and images are everywhere, and when done well, they're considered functional fine art. The goal of most graphic design is to communicate, but visual appeal can be subjective: what you like may differ from what another person likes. Regardless of style, good design enhances our lives, while bad design impedes communication and comprehension.

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Think about the graphic designs you've seen today. The examples on these pages represent the range we encounter daily: packaging, signs, logos, magazines, websites, and apps. Logos appear everywhere, from coffee cups to the tops of buildings, and act as stamps of quality and cost. Signs direct us to new locations, saving time or causing more steps. Advertisements, in print or flashing at you on the internet, can affect our purchases, whether we think we want a product or not. Magazines are designed to inform and influence readers.

Graphic designs facilitate our ability to get the information we need, yet we've all experienced poorly organized websites that are incomprehensible. From smartphone icons to book covers, graphic designs influence our behavior for better or worse. The design of this book was carefully constructed to enhance your reading and learning experiences. As we begin Chapter 1: Introduction, let's look at examples and begin analyzing design to discover the underlying strategies for success.

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Analyze Design

When the reality program *Survivor* began in the United States, millions were intrigued by this sociological competition and felt compelled to watch sixteen people trying to survive in the wilderness. But it's the logo that captivated me. It conveys a lot of information quickly and effectively. At a glance you see the name of the program and a tropical island environment. Now look closely at the images. They are actually very simple shapes—the top half of the oval has a collection of overlapping palm trees; look even closer, the trees are all the same shape, simply placed at varying angles and sizes to suggest density. Notice how the tips of the palms overlap the oval border—this technique creates depth, increasing visual interest.

Now look at the lower half of the oval: the image that we immediately perceive as island surf is actually one wavy black line against a blue background. It's remarkable what one line can convey. Limiting the number of colors in a logo is advantageous. Here there are only three: black, vivid blue for the water, and green for foliage. Although limited, this color palette immediately provides information about the environment. Next, look at the type. It appears roughhewn or hand-carved, suggesting the castaways' experience. Finally, notice how your eyes follow the entire design in a logical path. You perceived the image and read the text due to effective use of visual hierarchy: the name "Survivor" is largest, then the slogan "outwit, outplay, outlast" is in a simpler, smaller typeface. Your eye is led logically throughout all the information.

The following season, *Survivor* moved to another remote and hazardous location. The logo design strategy remained the same, yet modifications effectively convey the new locale in Australia. The new color palette is warm—orange, yellow and brown. It now looks hot and dry. The illustrations remain simplified—the wavy black line is smoothed, turned 90°, and repeated to suggest the wind-blown dry, red earth in the outback. There's a new graphic element in this logo—notice the notches on either side of the oval. While abstract, these subtly suggest Australian themes, alluding to Aboriginal art or boomerangs. In the logos chapter, we'll learn why simplicity is important in logo design: it enhances recognition and facilitates reproduction.



This charming letter D represents the Best of Drinks category in the *Washington Post's* Readers' Favorites site. The design team built each letter using relevant materials. The clear parts of the D are real glass. The clever use of color creates added appeal. Red and green are complementary colors, and their pale shades work well to suggest a refreshing beverage. A basic principle (contrast) and two elements of design (color and shape) create the witty and effective result. You'll read more on these strategies in Chapter 2: The Elements of Design.



Did this title design catch your eye? At this size, the three letters—ART—demand our attention, as they are so much larger than the rest of the text. This size contrast creates a focal point that pulls us into the story. There are two fonts in this design, with variations of sizes and weights. You'll learn how to effectively choose and use fonts in Chapter 3: Typography.



Illustration is less common than photography in graphic design, but it can be advantageous, as we see in this book cover. Illustration has a timeless quality, while photography can look dated quickly. If your project has a long shelf life, consider alternatives to photography. In Chapter 4: Images, we'll learn when it is advantageous to use illustrations in graphic designs.





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A LOCAL CHEESE PLATE

BY MARIE CALDWELL • PHOTO: MICHAEL PARRA

Cheese plates are popular for many reasons: They require no cooking, look festive and elegant, their DIY nature caters to picky eaters and there's a much-loved conversation starter, an expression of local pride.

While local cheese is always in season, your winter cheese board will look and taste a bit different from summer's. The cheeses themselves might vary in flavor based on the animals' seasonal diet—cows with rich and buttery to winter, when they're eating hay rather than grazing on fresh grass. And when local orchard fruit and berries are scarce, you'll need to be creative with your accompaniments. But with a little care and attention at the shop, your winter cheese plate can be a showstopper.

It need not be complex. For a small gathering, you might go the minimalist route and lay out beautiful bloomy-ribsed cheese and serve with a little jar of fruit preserves, a dollop of honey mustard and a spoon. To feed more people, choose three to five cheeses with a variety of textures (broadloom, triple-cream and nutmeg, sheep, goat). Also to balance the plate as you would a salad, mix in preserves with acidity, pickles, pepper, or even a small jar of honey.

Many are confused that blue cheese and soft cheese go well to eat together. That apples are great with cheddar? Bring these lessons to your cheese plate. If you pick cheese to serve, you'll find that you'll have a lot of opportunities to showcase local produce from your region. While your cheese board might introduce that season's abundance—crowned with berries and cascades of caramelized onions—a selected winter board can maintain focus on the cheese itself. Offer simple sliced baguette, toasted bread, or crackers, like Breville's Crackers, and a plate of five soft-ribsed cheeses, like Breville's Crackers, and a plate of five soft-ribsed cheeses, like Breville's Crackers. Make sure you have space for each cheese and consider slicing, rolling or crumbling about depending on the cheese to make it easy for your guests to serve themselves.

Next, choose a few seasonal accompaniments, some local and some from far away.

Dried blueberries, apricots or figs.
Fresh apple, quince or pear slices, tossed with lemon juice.
Spanish Marcona almonds, toasted walnuts or hazelnuts.
Local honey preserves, chutney or mustard.
Pickled ramps, onions or cucumbers.

For a bit more information on serving Massachusetts-made artisan cheeses, I turned to a local expert. Beth Park, owner of Lowell's Mill City Cheesemongers, recommends cheeses that are "complemented by what I think of as 'wintery' winter spices, like cloves, cinnamon and vanilla for a winter plate. Blue cheese is a creamy pair with cheese from Duxbury's Dairy to Duxbury, or paired with more potent. The cream adds just a hint of richness, but certainly doesn't create a 'cheese-on-cheese'."

Beth Park and Katie Quinn of Mill City's Mill City Cheesemongers, owner of Lowell's Mill City Cheesemongers, recommends cheeses that are "complemented by what I think of as 'wintery' winter spices, like cloves, cinnamon and vanilla for a winter plate. Blue cheese is a creamy pair with cheese from Duxbury's Dairy to Duxbury, or paired with more potent. The cream adds just a hint of richness, but certainly doesn't create a 'cheese-on-cheese'."

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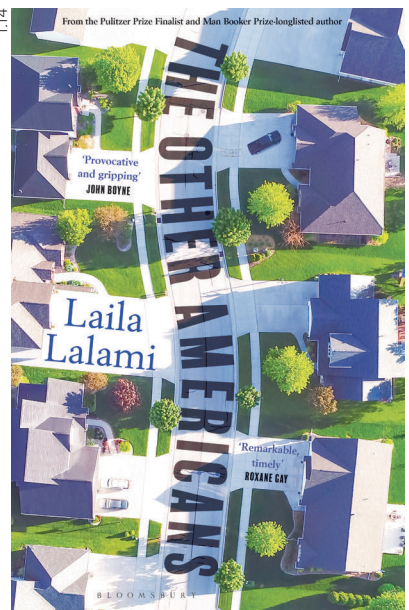
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Designers often use photographs to immediately communicate a message or set a tone. In this spread, we are attracted to the article because of the appetizing photo. So many cheeses! Am I hungry? The designer arranged over twenty foods by grouping them onto four cutting boards. The boards were then arranged in a grid format, so the many details are less overwhelming. In Chapter 4: Images, you'll learn how to choose photographs and reproduce them at their best quality.

This poster and tote bag use abstract shapes and colors to attract our attention. Abstract images can be beneficial because they may represent many different possibilities, and the audience can choose their own interpretations. Straightforward type, bold colors and a handmade quality suggest a contemporary and creative community at Second Home. The poster is a centered or symmetrical layout. The tote bag has an asymmetrical placement of the text and images. We will explore symmetrical and asymmetrical balanced designs in the Chapter 5: Layouts.

This book attracts our attention with the unusual direction of the title that runs along a suburban road. The illustration includes bird's-eye view of houses. White rectangles that look like driveways are used to showcase the author's name and subtitles. All the text aligns with white backgrounds that help complete the illustration with roads and driveways. In Chapter 5: Layouts, you'll learn the value of integrating type and image to ensure your text will be read.





Who doesn't love to pick up matchboxes as a memento of a night out? Simon & The Whale is a restaurant in New York City that draws menu inspiration from both coasts of the United States. The colors and handmade style of the logo evoke the relaxed and nostalgic mood you'll find at the restaurant. You'll learn brand design strategies in Chapter 6: Logos.

Many, if not most, graphic designs require multiple formats, as we see in these Shake Shack packages. The Shake Shack logo is recognized around the world. It is a flexible system we'll see more of in Chapter 7: Visual Themes. You'll learn how to create visual themes and apply repetition and variation to achieve cohesion, consistency, and rhythm throughout your designs.



Many graphic designs are multiple-page productions, such as websites, magazines, books, and annual reports. Printed or digital, the design cannot be understood at a glance, and the audience must click or flip through the pages for the complete experience. What are the similarities on the two pages of this Desk Plants brand guideline book? Consistency of fonts, image style, and layout provide unity and enhance comprehension of the publication. What are the slight differences on these two pages? The designer's challenge is to be visually cohesive, without falling into redundancy, throughout a publication or website. Strategies for achieving successful visual themes are covered in the last chapter. All the information and skills you've learned will come together in



Chapter 7: Visual Themes.

Graphic design influences our impressions everywhere we go. Both locally and when we travel abroad, 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.

The Cochon Dingue (crazy pig) sign contrasts comfortably with the traditional architectural details of the building. The wrought-iron sign hanger marries the contemporary design to the traditional architecture. The awning and shutters are the same blue as in the logo, inspired by the French flag. You'll read this beloved restaurant's brand update in the logo chapter.



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This sign is part of the wayfinding system for a riverside precinct in Queensland, Australia. Wayfinding designs consider humans' intuitive method for finding places, and supplement that with signs, pathways, lighting, and gathering places. This site's strategy encourages circulation and draws people down to the banks of the river. The identification and directional signs also provide history about the area. This area was rebuilt after a cyclone in 2015. Can you see how the materials were selected and designed for weather resistance?

Waltzing Matilda is a museum in the Australian outback. The rusted steel that forms the structure of the sign draws from the stark, arid landscape. The rugged, straightforward typeface reflects the area's stalwart identity. These materials were inspired by the outback's rock formations, prehistoric craters and warm colors.

We commonly see banners hanging in our communities; these are semi-permanent environmental graphics. Ideally, they reflect their locales. Real estate company Halstead wisely chose blue for this banner color. It is the Western world's most common favorite color, and blue conveys security and orderliness. The sans-serif font and angular logo also set a professional tone. Real estate transactions are often the largest financial investment people make; these details help to evoke confidence in the firm. What color might you avoid using for Halstead projects?

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Design Analysis: Environmental Graphics

Environmental graphics are relatively permanent graphic designs that influence our impressions of a location. You'll see them on lampposts, buildings, and stand-alone signage, sometimes called street furniture. Take a walk and find two local examples of environmental graphics, one good and one less successful. Consider what details lead to successful designs or unsuccessful designs. Make a sketch of each using a black marker.

Objective

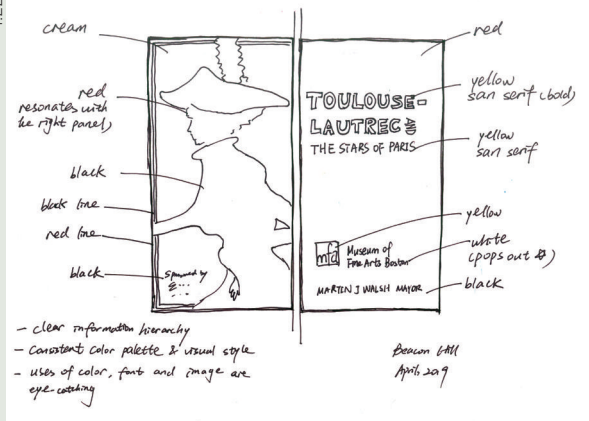
This exercise has multiple objectives. It reinforces the idea that graphic design is the most common form of art in our society, it provides an opportunity for analysis, and it allows you to become comfortable with sketching, so you can better communicate visual ideas.

To Do

Make sketches of two examples of environmental graphics, one good and one bad.

The primary goal is to start looking, analyzing and sketching. When we have this conversation in class, there's always a banner (including these) that are considered good by some and bad by others. As you go about your day, continue to analyze the many types of graphic design you encounter, noting how each design communicates its message. As you progress through this book, you'll learn about the underlying design strategies of successful projects. In the next section of this chapter, we'll begin to develop your software skills, another essential component in creating effective graphic designs.

1.22



Sketches by students
Yuling Lu and Val Su

1.23



Tip

Sketch each banner while observing—don't trust your visual memory. The sketch should show the outside proportion of the banners, the image, type style, and layout. Make the sketches with a black marker and add notes to indicate colors. This conveys the design without need for a careful rendering. The goal is to share visual ideas without having to make a time-consuming illustration. As many of us aren't skilled illustrators, this approach takes the pressure off.

Introduction to Adobe Photoshop

Photoshop is used to modify photographs and elaborate illustrations for use in designs. For every task you do in Photoshop, there are at least two ways to accomplish it, but my approach is to provide you with a method that leads to professional-quality results. If you've been using computers since early childhood, you'll understand many aspects of new software intuitively. In these exercises I will teach you the less intuitive Photoshop techniques.

The skills that you'll develop in these exercises will enable you to optimize the appearance of photographs and allow you to make realistic, surrealistic, and sometimes playful modifications to photographs. Photoshop's

capabilities are vast—even full-time professionals don't have the opportunity to explore every niche—so next we'll concentrate on the tools that will be most useful as you begin your design career.

Photoshop Tools

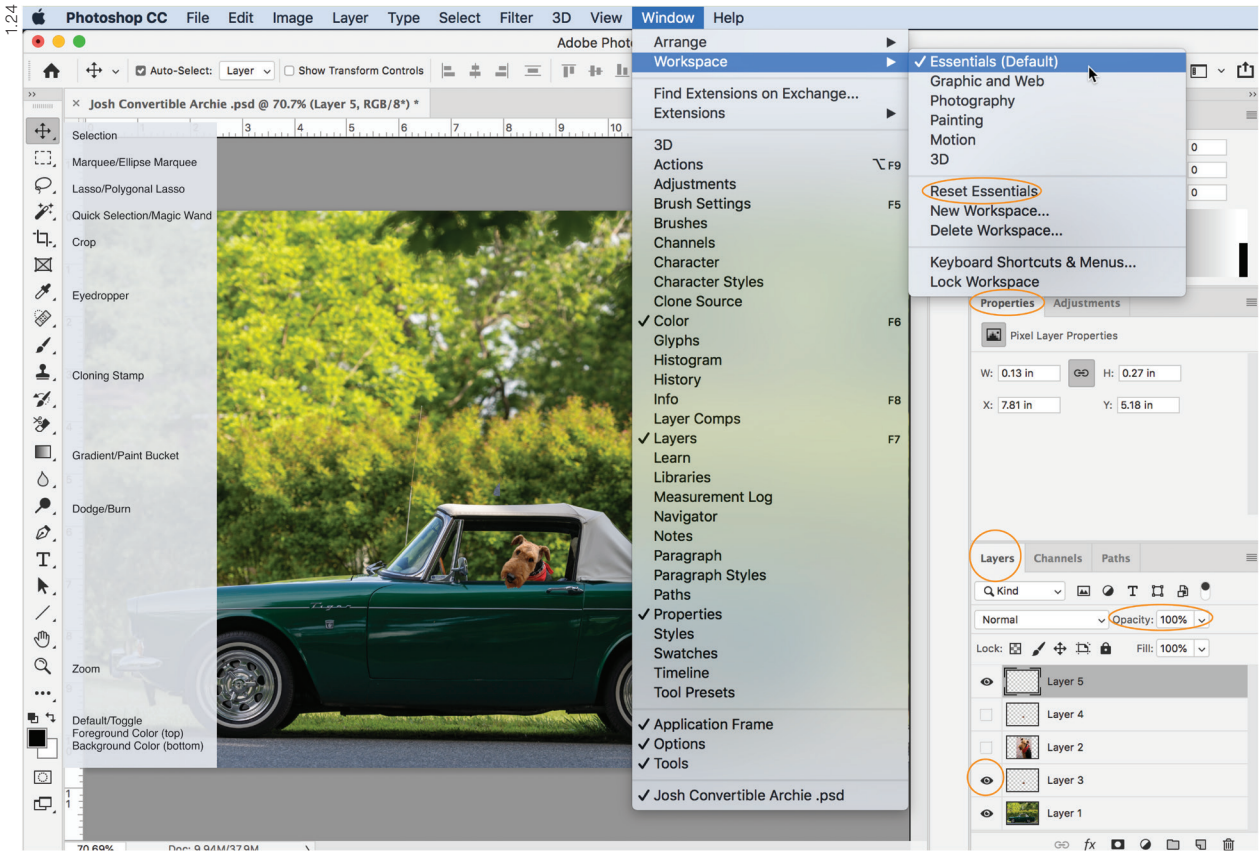
Let's get to know the software and start on the left with the toolbar. The most essential tools for achieving professional results are labelled. In the top position, the Move tool is used to reposition objects on the page.

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. The Type tool functions similarly to typical type tools; differences arise in the display of type in rasterized images.

When chosen, 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). These options change according to the selected tool. Keep an eye on these options or properties as you use the various tools.

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. As with all Adobe software we'll use in this book, the tiny button of black-and-white squares allows you to quickly change to default colors; the bent arrow is used to switch the foreground and background colors.

The Zoom tool behaves just like you'd expect; if not, turn off the Scrubby zoom box that appears in the Options bar when the Zoom tool is selected. You can also use keyboard shortcuts for zooming.

Layers: A Brilliant Feature

Photoshop layers are wonderful—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.

Make changes to a layer by clicking on the layer shown in the window. The layer is active when it appears highlighted or gray. Double-click on a layer in the window to apply layer styles such as shadows.

View or hide specific layers by clicking the eye icon in the left-hand column of the window.

















Once you have completed a design, you can choose to merge layers to reduce file size using the Layers panel menu. You'll learn to use layers in the first Photoshop Software Skills pages.

We work in the default Essentials Workspace. Set it under Window > Workspace > Essentials.

If at some point you can't find a window or panel, simply reset the workspace by choosing Window > Workspace > Reset Essentials.

Photoshop Keyboard Shortcuts

Here's a useful list of keyboard keystrokes that will save you time while creating projects.

deselect	 + 
view file full size	 +  (zero)
zoom in	 + 
zoom out	 + 
copy	 + 
paste	 + 
undo	 + 
multiple undos	 + 

Design + Software Skills 1: Photoshop Layers, Lasso, Image Adjustments

The software exercises throughout the book will build technical skills incrementally. You will quickly go from basics, such as keyboard shortcuts, to complex layouts, so do the exercises in the order they appear. The software instruction also reinforces design fundamentals and provides many tips for creating professional-quality work.

Objectives

This exercise has several objectives. You will build Photoshop skills for tools that are not intuitively understood, such as the Lasso and Polygonal Lasso; learn how to use layers; resize images proportionately; and useful keyboard shortcuts.

To Do

Open two images, copy one into the other. Learn to use the essential Lasso tool to select a figure, resize it, and put it in the driver's seat.

1

Download the photos

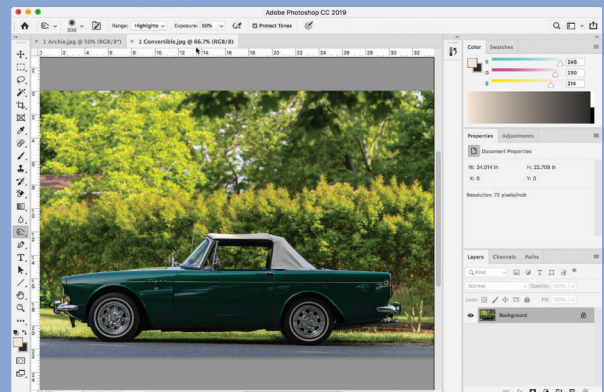
Download two images to your desktop, Convertible.jpg and Archie.jpg from <http://www.bloomsbury.com/graphic-design-essentials-9781350075047>



2

Open the files

Start Photoshop. Open the Convertible image file by choosing File > Open, then click on Convertible.jpg and press Open. Open the Archie photo the same way.



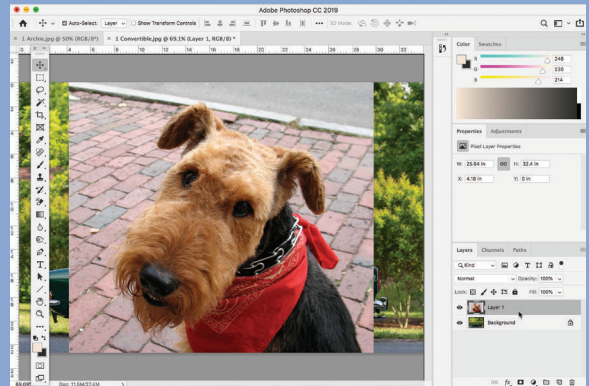
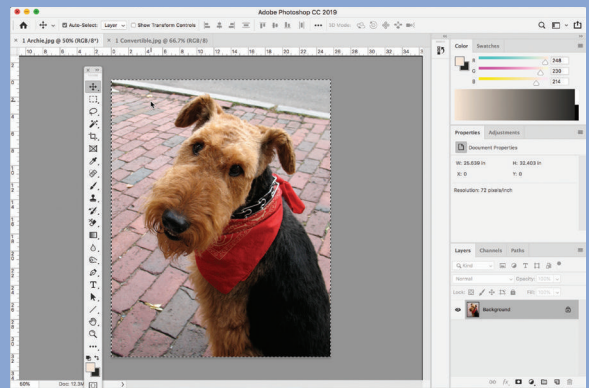
3

Copy

Look at the top of the window, click on the Archie.jpg tab. Press Command + A to select the entire image. The dotted line around the image indicates it is selected.

Now, click on the Convertible.jpg tab. Press Command + V to copy the Archie file into the convertible file.

Find your Layers window in the lower right. Click on the layer with the dog thumbnail image.

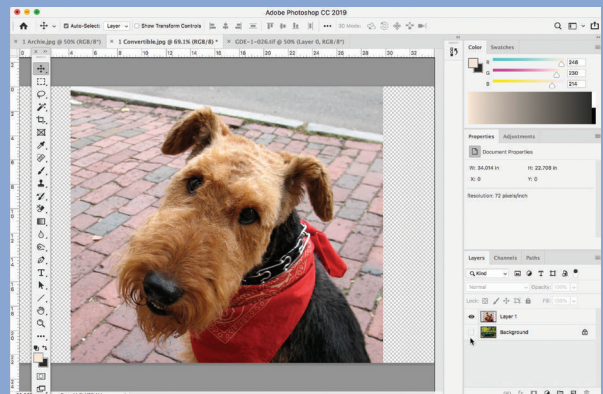
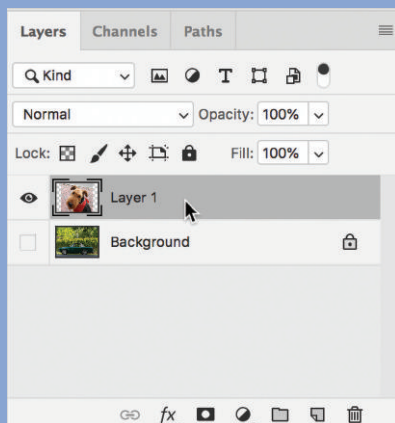


4

Layers

Notice there are two layers—this is a good thing! Layers allow you to edit separately.

Click on the Eye icon on the lower, background layer so it is invisible. Click on the dog layer so you can edit it.

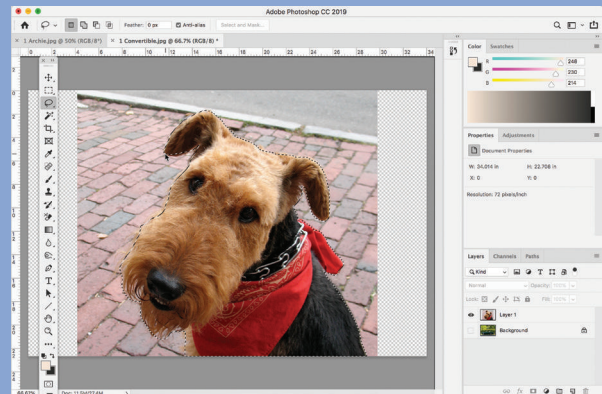
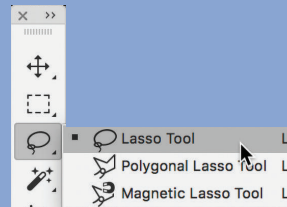


5

Lasso

Select the dog with the Lasso tool. First, confirm that you have the regular Lasso tool selected—this is the best choice for selecting outlines of organic shapes. The other Lasso options are the Polygonal Lasso tool, which is used to select straight edges, and the Magnetic Lasso tool, which is used to drive you insane. The magnetic version is one of those software tools that promises more than it delivers. In most instances, the regular Lasso and Polygonal Lasso will work more reliably than the Magnetic Lasso.

With the Lasso tool, click at the outer edge of Archie's left ear; keep holding your mouse button down as you drag around the dog's figure. No need for perfection here, it takes practice. Trace the entire figure, finally ending at the beginning point. Once completely around the dog, take your finger off the mouse. You should see that the entire figure is surrounded by a dotted line. This indicates that the object is selected.

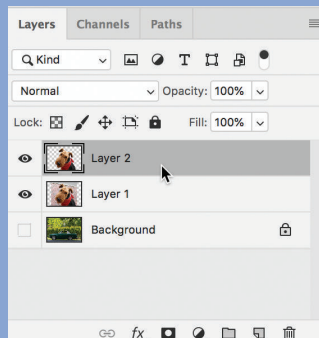


6

Copy and paste

While the dog is selected, press Command + C, then Command + V. This makes a copy in a new layer. Toggle off the visibility of Layer 1 by clicking on the Eye icon. Notice there is a gray checkerboard pattern indicating transparency. This is because of the lasso selection.

Be sure to click on Layer 2 to make it active; it will be gray, as you see here.



7

Resize

First, toggle on the visibility of the Background layer by clicking on the Eye icon. This will help us to scale Archie to fit the car.

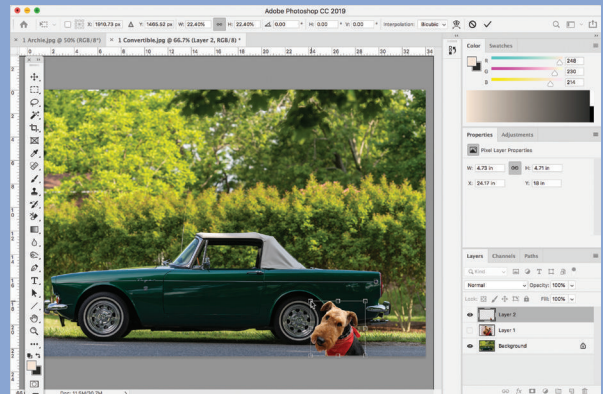
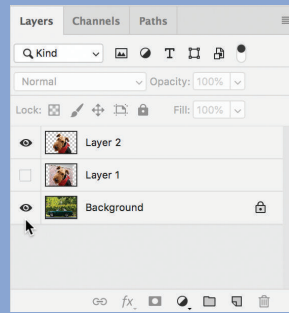
Select the Move tool at the top of the Toolbar. Confirm you are on Layer 2—it should be gray.

Resize the dog proportionately. Choose Edit > Transform > Scale. Use a corner handle and drag towards the center to make him smaller, then press Return. When resizing, handles appear around the figure. Press Return to see the resizing results and the handles disappear.

Click on the dog and drag him to the car window. Position him just below the window edge of the door. We're going to let his chin hang out. Adjust the scale, if necessary, using a corner handle.

Tip

Last year, Photoshop made proportionate resizing the default; there's no need to hold the Shift key down in Photoshop to resize proportionately anymore! If you do hold the Shift key down, it will allow disproportionate scaling.



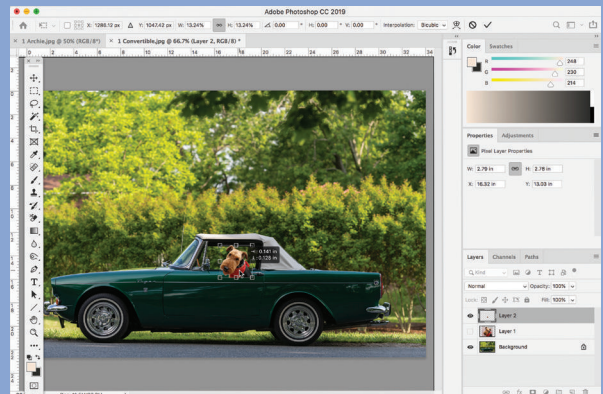
8

Zoom in

Use the Zoom tool to get a close look at the dog. Select the Zoom tool, place the cursor near the top left, hold the mouse button down, and drag to the lower right of the dog. Let go of the mouse button. You are now zoomed directly to the appropriate area of the image.

Tip

Anytime you want to see your entire image, press Command + 0.



9

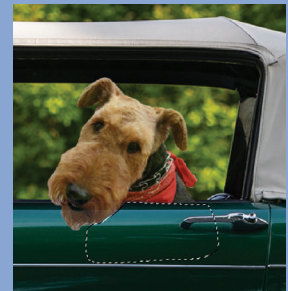
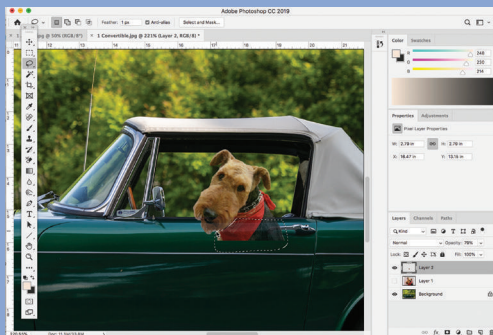
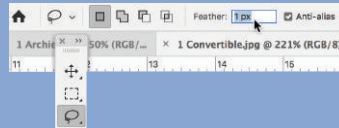
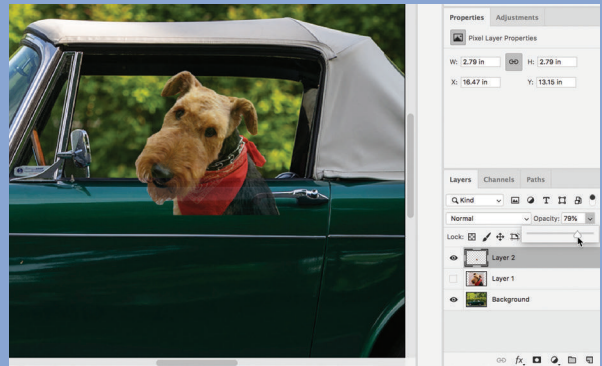
Trim

Adjust the Opacity setting temporarily on Layer 2 to about 80 percent. Now we can see the edge of the car window as we fine-tune this masterpiece.

Select the Lasso tool. In the Options bar, change the Feather setting to 1 px.

Select around Archie's beard, allowing his chin to hang out of the car. Press Delete. Press Command + D to deselect.

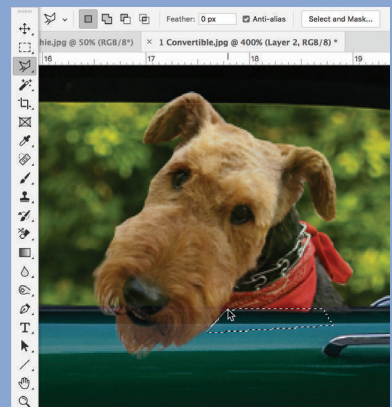
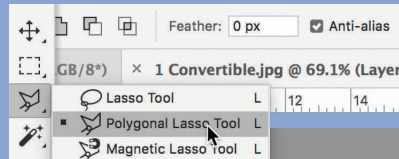
If necessary, you can zoom in again and use the Lasso tool to trim away the original background from Archie's face.



10

Trim

Now switch to the Polygonal Lasso to select a straight edge at the window. Notice the Feather setting goes to 0 px. This results in a sharp edge. Press Delete and then Command + D to Deselect. Change the Opacity percentage to 100 for Layer 2.



Tip

Typically, I use the Lasso with 0 px Feather edge for sharp-edge results. This image is an exception because of the furry subject.

11

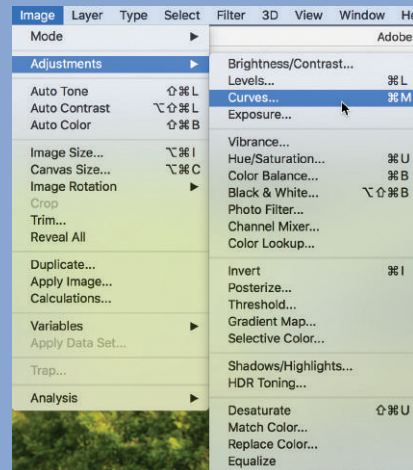
View full size

Press Command + 0 to show full size and admire your results.

12

Adjust exposure

Should you find a need to adjust a photograph's exposure, Photoshop provides automatic adjustments under the Image > Adjustments menu. Rather than relying on the auto-corrections, the best tool at this point for adjusting exposure is the Curves feature. Choose Image > Adjustments > Curves.



13

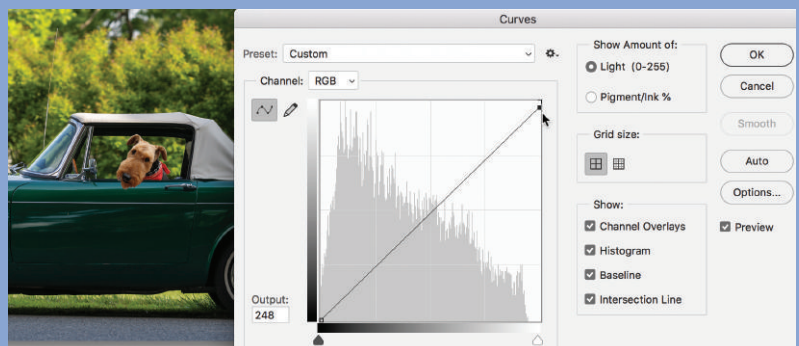
Curves window

Confirm that the Channel selection is RGB—this setting adjusts all colors in the image. Confirm that the lower left-hand corner bars display black.

To make the image slightly darker to match the car lighting, click on the line in the upper-right quadrant. Keep your finger on the mouse and tug ever so slightly down. Notice the change in the image—a very slight movement on the curve darkens the exposure.

To make your image lighter, click on the line in the lower-left quadrant. Keep your finger on the mouse and tug ever so slightly up. Notice the change in the image. A very slight movement on the curve makes significant changes to lighten the exposure.

When satisfied with your adjustments, press OK. To start over from the original image, you can press Cancel. Or, press Command + Z and reselect Image > Adjustments > Curves.



14

Practice

Save this work as a Photoshop file. Select File > Save As and choose Photoshop, the top option on the menu. That will preserve all your layers.

Now put yourself in the driver's seat. Open a head shot of yourself, copy it into this Photoshop file, and go through steps 1–13 again. Great work! Next, try your skills with a different vehicle; here I am in my dream-car.



Major Points Summary

- Graphic design is everywhere.
- Examples include packaging, logos, signs, advertisements, magazines, apps, books, websites ... The list goes on.
- All are forms of communication.
- Graphic design can influence our actions, purchases, and the way we live.
- Good design is functional fine art; it enhances our lives.
- Logos require simplified forms for effective recognition, recall, and reproduction.
- Contrast is used to attract attention to a design.
- Visual hierarchy created with typeface size and style choices improves comprehension.
- Layouts organize content to better communicate the message.
- Integrating type and image ensures the message will be read.
- Visual themes—consistent use of fonts, colors, and style of images—provide cohesion for multiple-page designs, such as apps, websites, ad campaigns, and magazines.
- Sketches help to communicate visual concepts.
- For accuracy, sketch while observing the object.

Software Skills Summary

Photoshop Introduction

Overview of the toolbox and the most commonly used tools for beginning designers: Move, Marquee/Ellipse, Lasso, Quick Selection/Magic Wand, Crop, Clone, Gradient/Paint Bucket, Dodge/Burn, Type, Eyedropper, Zoom, Foreground and Background Colors, Color Toggle, and Default Colors, Image, Adjustments, Curves.

Keyboard shortcuts.

Skills: Layers, proportionate resizing, Options bar, curves adjustments.

Tools covered in depth: Zoom, Lasso, Move, Magic Wand.

Recommended Readings

Each chapter combines design concepts + examples + analysis + software skills + projects on the elements of design, type, images, layout, logos, and visual themes. Additionally, every chapter will provide you with further reading or listening suggestions for each topic. To see more inspiring design, look for design annuals. These are published results of international competitions for the year's best design. Designers use these books, magazines, catalogs, websites, and even podcasts, for inspiration and to keep up with trends and the studios that are creating great work. The magazine *Communication Arts* publishes a highly anticipated graphic design edition every autumn. Its interactive annual is published in the spring, and all annuals are on their website: <https://www.commarts.com/>.

For advice and stories from successful designers, listen to Debbie Milman's podcast: <https://www.designmattersmedia.com/designmatters>.

Read Adrian Shaughnessy's classic, *How to Be a Graphic Designer Without Losing Your Soul*.

Another excellent resource is *Beauty* by Stefan Sagmeister and Jessica Walsh. This book explores design, philosophy, history, and science to understand how beauty impacts our lives.

Thank you to Joshua Sweeney, Shoot for Details, for this photo of the Sunbeam Tiger.

A complete list of the contributing designers and citations for books can be found in the Appendix.

The Elements of Design



**Michael Schwab, Golden Gate
National Park posters, 1995**

Michael Schwab's signature style provides timeless images that convey the drama and poetry of each Golden Gate National Park. These posters raised awareness and funding to support the costs of maintaining the parks. Raised on a farm in the Midwest, Schwab studied graphic design in Texas and New York, and he works in San Francisco. His recognizable and often-imitated style is minimalist, with the essence of each subject depicted in flat-black shapes, then enhanced with bold flat color. Notice how color sets a meaningful tone in each of these posters. The red sky over Alcatraz, an infamous prison, signals danger. What do the colors of the skies in the other posters convey?

2.01





Creating Powerful Designs

Emilio Ponzì's book cover illustration captures our attention with his clever use of design elements, especially color. Here, he contrasts warm and cool colors. Tans suggest dessert heat (notice the dozing dog). While the red title contrasts with pale greens and blues. Read on to learn the underlying strategies for using the elements of design to create engaging work.

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.

Lines

Let's start with a design exercise. Draw a rectangle, any size. Easy for you, right? Now, draw two lines. Are you hesitating? Suddenly, drawing two lines becomes a difficult decision. You've probably not thought much about lines before, but they are a basic building block of graphic design. In other words, an element of design.

Experienced designers know that all designs begin with four lines—the edges of the screen or page that determine the format. Of course, drawn lines are also used in graphic designs. The formal definition illustrates how varied lines can be: a line is simply a mark made by a tool as it is moved across a surface.

Because lines are fundamental, yet so varied, the ability to describe them effectively will lead you to more successful designs. There are a great variety of lines, but they all have three attributes: type, direction, and quality. Type refers to whether it is straight, curved or angular. Direction describes the line's virtual movement on the page. If your lines are horizontal,

you can describe them as running east or west. Vertical lines can be described as going north or south. Indulge your descriptive abilities when describing the line quality. Are your lines thick, bold, or stout; thin, narrow, or slender; wavy, rippling, or undulating? A regular line quality maintains its thickness throughout. The quality of a line drawn with a slanted calligraphy pen nib will change, going from thick to thin along its length. Look at the two lines you drew and describe them using these terms.

Some successful designs use lines, but no color or images, to produce intriguing results. This book cover uses line as abstract form to convey meaning. Columbia University's School of Architecture, Planning, and Preservation published this collection of selected student projects with a restrained cover design expressing many aspects of urban planning. What do these lines suggest to you? Pull the elastic that is the black straight line to reveal the title.

The High Line is a unique park in New York City that was developed



along abandoned, elevated railroad tracks that run along the west edge of Manhattan. It quickly became a favourite destination for New Yorkers and tourists to stroll through gardens planted into the old tracks while enjoying Hudson River views and breezes. Using only three lines, Paula Scher designed this initial H logo suggesting train tracks. Her goal was to avoid an illustrative design and to make it look more like tracks than an H.

Sidekick Solutions provides computer support services, and technicians leave these cards at clients' workspaces when their work is completed. Their logo symbol has two lines: one curved up and one down. These combine to create an S, but do you also see a smile? And on the other curve, do you see a round forehead atop two eyes, perhaps thinking of the solution?



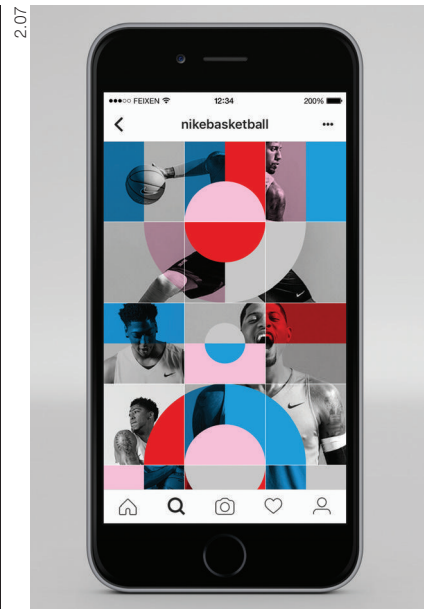
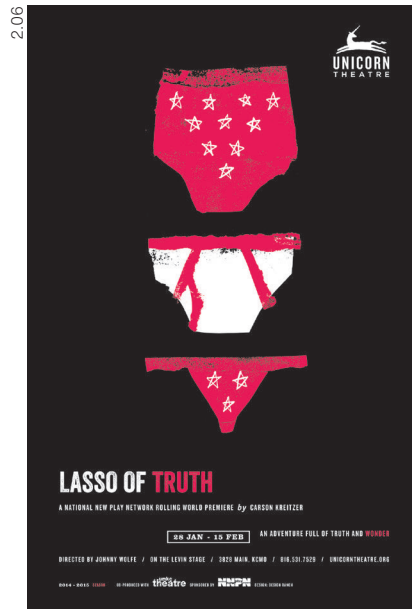
Shape

Using lines, designers translate the three-dimensional world into shapes. Shape is the general outline of something, whether the object is tangible or abstract. Shapes can also be defined as a closed form or closed path. They can be filled with color, texture, or tone, and they may appear to be flat or have volume.

The clever use of these immediately recognizable shapes draws our attention to this theater poster. *Lasso of Truth* is a play about the origin of Wonder Woman, and the three main characters are playfully represented by these similar, yet distinctive, shapes.

The shapes in this Nike Instagram design are created by the lines on a basketball court. These shapes and the background photos suggest the energy and excitement of the game.

Using minimal color and iconic shapes of dress-forms, hairstyle, croquet mallets, and balls, the play poster hints at the humor in this musical comedy adaptation of the classic mean-girl movie, *Heathers*. There's a cut-throat croquet scene in the movie. Coincidentally, the color pink and similar dress are darkly comic themes from the straight forwardly titled movie *Mean Girls*.



Value

Value, in visual art, is defined as the relative lightness or darkness of a color. Bloomsbury's *Object Lessons* is a series of books that feature an iconic object. These high heels are created with only three values, 100 percent white, 100 percent black and gray (50 percent black). Additionally, the use of value achieves effective visual hierarchy in the text. We see the 'high heel' white text first because it has the most contrast with the black background. The author's name in blue text is read second because it has less contrast with the black background. The other text, "Object Lessons" and "Bloomsbury", are smaller, thinner letters, providing the least contrast, and are placed on the peripheries to be read last.

The landscape for this book cover is created with several values of blue-green, emphasizing the cold location. The tallest mountain peak has an almost white value that suggests snow. Light values of colors are called tints and dark values are called shades. The author's name is an almost white tint, which creates contrast and

draws attention. Contrast is a term that describes the relative emphasis of an element used in a design.

Because the title is a dark value and smaller, creating less contrast with the background, we see the title secondarily. The use of contrast with the elements' value and size affects how we view the details of this design. The two figures in the illustration wear yellow and orange coats. Even though these are contrasting colors, they are smaller figures, so we may see them after we read the text. Typically, designers create one important area to have the most contrast and to become the primary focal point. Other smaller and less-contrasting areas can attract our eyes in a sequence that moves us through an entire design.

Bring Your Game's text is distorted to make a camouflage pattern in the next poster. Value is the design element that gives this image detail and texture. The values of this camouflage pattern are either 100 percent white or 100 percent black. Teasing through the open areas is a photo of basketball great LeBron James. Many gray values combine to create his profile and figure. Notice the values are stronger in his face and less so in his figure, a contrast drawing

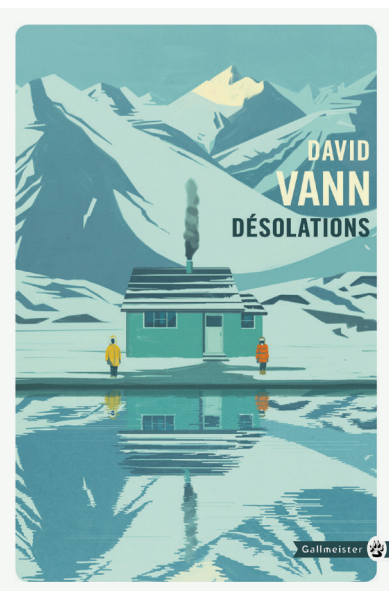
211



our eyes to his face. Overall, the foreground has high value contrast, and the photograph has relatively low-value contrasting. These careful design decisions affect how we view this design.

Contrast is often used to achieve greater functionality in graphic design. The words in this book, created with black ink on white paper, have high contrast value to achieve the greatest legibility. Likewise, the digital version of this book, websites, and apps use black text on white backgrounds to achieve highest contrast and best legibility on screens.

210



2.12



2.14



Texture

Texture in graphic design adds visual interest and conveys information. Some visual textures suggest inviting surfaces such as photos of rose petals or skin. Often, these types of images in advertisements suggest creamy products. Visual textures can also appear to be rough, like rust or sandpaper, to express a gritty quality. Here, we see contrasting textures: soft ice cream atop crunchy-looking cones look irresistible. And yes, that's a fish-shaped cone that doesn't taste fishy.

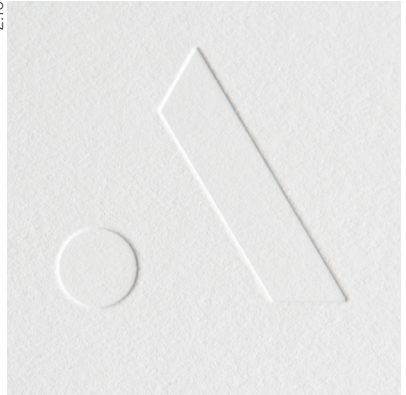
Posters for the Forward Festival provide a frayed, outdoor visual texture, suggesting they have been weathered by the elements.

This effect expresses that the design process always involves construction and deconstruction.

This handmade O represents the category Outdoor Events for the *Washington Post's* Favorites feature. Notice the grass texture contrasts with the smooth rainbow, and its red and pinks contrast with the greens on the bottom.

The cover image for "Fate" is a large rope knot that conveys a rough texture. This ominous effect is tempered with the pink background and the matte silver varnish, which adds subtle contrasting texture. These visual and tactile textures combine to create a mysterious book cover.

2.16



Graphic designers sometimes use tactile effects—real textures—to add unique qualities to designs. Tactile treatments created with embosses, die cuts or folds increase the probability of engaging your audience. Such effects encourage the viewer to pick up and investigate the piece, improving the likelihood that the client's message will be read. Blind embossing, created when a die is pressed into paper, subtly raises the A-shaped logo on the Aslan Foundation business card. The effect implies this organization has a thoughtful mission that perhaps is not obvious at first glance.

2.13



2.15



2.17



The Swag Shop sign is made with weathered steel and cutouts. These textures are features of the wayfinding system for this museum in the Australian outback. The materials and design were inspired by the stark, rugged landscapes of the bush.

The title on the book cover for *The Mirror* is reversed. This mirroring effect is enhanced with the use of silver metallic ink. This design uses two elements: texture and direction.

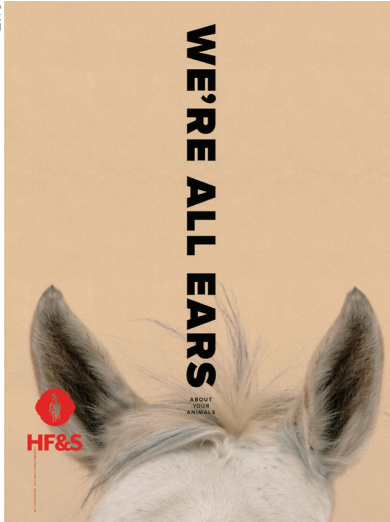
2.18



2.20



2.19



Direction

When an object is placed in an atypical direction, the resulting design engages the audience with a visual puzzle. This is an advertisement for a feed and supply company. The vertical direction of the headline is emphasized by its position between the horse's ears. Other posters in the series include dog, cat, and rabbit ears, as will be seen in Chapter 4 when we discuss photo cropping.

A head-standing skateboarder is the largest image on this two-page title spread, and she is the subject of the article. Her unusual direction captures our attention, and we are engaged with the playfully active collage in which letters and images intersect. Notice how one leg is behind the l's, and the other is in front. This detail helps create depth and visual interest.

HIGH
LINE
SECTION

2

OPENING IN JUNE

In the coming weeks, when Section 2 of the High Line opens to the public, history will be made once again. For the first time, visitors will be able to walk the High Line from its southern terminus at Gansevoort Street in the Meatpacking District through West Chelsea to West 30th Street at the edge of Hell's Kitchen—an entire mile above the streets of New York City.

The opening of Section 2 means our gardeners will tend over 50,000 new plants and care for a new 4,900-square-foot lawn, and our maintenance team will keep an additional half-mile of park clean and safe. As the High Line doubles in size, your continued support will help us operate and maintain the High Line at the highest standards possible.

Thank you to The Arthur M. Blank Family Foundation, The Brown Foundation, Inc., of Houston, The Horace W. Goldsmith Foundation, Johnson Family Foundation, and The Tiffany & Co. Foundation for their generous support of the High Line's operations.

2



Size

This enormous “2” is inescapable for its atypical size and the use of a single digit as a title. For the new designer, using size as an element in design is relatively easy. Simply by enlarging the first letter at the beginning of an article, you have introduced contrast with the body text. This creates a focal point, an entry into the text, and is a typical strategy used in magazines. You will also use size to indicate hierarchy of information—variations show the relative importance of content.

Enormous letters are so big they don't fit on this tote bag, creating dynamic energy with a

visual puzzle. Most will immediately recognize the brand, but if not, there is a much smaller black-and-white name towards the bottom left. This creates effective visual hierarchy of information: we initially notice the large blue letters, and secondarily we notice the full name in smaller, regular weight, black-and-white text. You'll read more about this brand re-design in Chapter 6.

Size is often applied to images. Notice a few of the images in this collection of spreads from House Industries are enlarged and closely cropped. When we closely crop images, we achieve two goals: it allows viewers to examine details

of the objects, and it provides fresh takes of common objects. Notice that some of these spreads make titles or letters very large, creating visual interest and focal points, while also highlighting the font designs.

2.22



Unity

These playful and elegant two-page spreads demonstrate the effectiveness of both unity and contrast in a design. Notice the harmonious use of the same font, the consistent bicycle theme and matte copper ink throughout many of the spreads. These details demonstrate the appeal of unity. Unity is a basic principle of graphic design and dictates that all of the objects in a design be visually harmonious such as on these spreads and throughout this catalog. Now note the contrasts in the spreads: some text is horizontal, some vertical, some photos are smaller and in grids, others are intense close-ups, and large numbers and titles pop-up throughout. These design strategies achieve a visually consistent and compelling design.

Designers must be aware of how they handle formal elements. Whether you're designing a logo or a website, the formal elements are always the same. The elements are interdependent and interact with one another on the page—note when the overall design achieves unity and when contrast captures your attention.

We will explore the element of color in depth in the next section of this chapter.

223



Design Analysis: Elements of Design

Objectives

You will identify and analyze the use of the elements of design while reinforcing the concepts introduced in this chapter.

To Do

Find seven examples of designs in which a particular element of graphic design is used to create visual interest. Place these examples in your notebook.

Color

Color Connotations

Color has an immediate effect on its audience. Before type is read and the image is understood, color makes an impression. Red is passionate, whether in love or fury, and carries a strong visual message. It is favoured for designs ranging from national flags to sport cars. This theater booklet's red calendar is noticeable among dark pages, creating an effective design strategy. Because red is so strong, its intensity sometimes needs to be balanced with black to produce a more accessible effect.

Warm colors other than red can attract attention while feeling more innovative. Halstead's brand is designed to stand out in the very competitive New York real estate market. These window banners are inescapable, as their hot-pink text creates a textured pattern on the orange background. The panels are a welcome change from the usual brown paper that covers windows when a space is for rent, and the effect is contemporary and memorable.

Blue has many positive connotations. Dark values of blue, such as navy, suggest expertise, authority, and a seriousness of purpose. Medium values of blue are associated with honesty and cleanliness. Look at the cleaning products on grocery-store shelves to confirm this point.

Yellow is associated with warmth and wholesomeness, so it is often used for food-product designs to convey healthful messages.

2.24



2.25





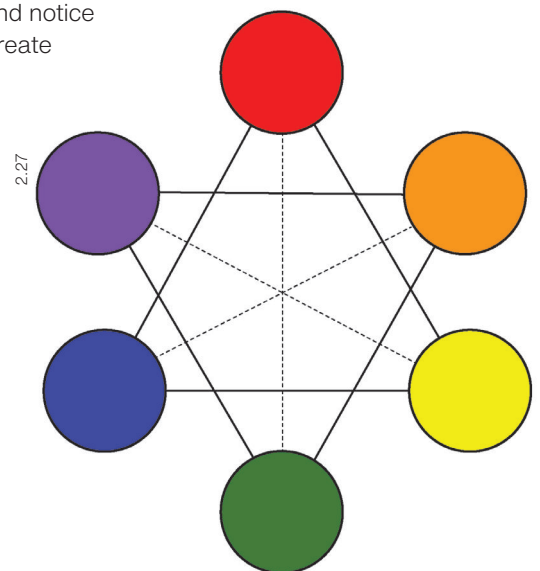
Green is also healthful, indicating freshness and the outdoors. As a term, green represents environmentally sustainable products, practices, and organizations. The Grounds is an oasis in the city of Sydney. Their café, gardens with roaming farm animals, and great coffee provide memorable experiences. An illustration of Fluffy, their resident macaw, graces a distinctive package for their coffee. In addition to the charming illustration, the use of green and blue conveys their commitment to sustainability of the environment in all of the Grounds' enterprises. See more color connotations in the Appendix.

Some people have a natural facility for using color, but for most of us, it can also be learned. Avoid using only your favourites, and select colors that are appropriate for the design. Would you recommend the use of hot pink to a client whose business is financial planning? Probably not: for a client in a conservative industry, it might be better to choose darker colors for immediate and appropriate impact. Pastel colors are commonly used for children's products and services, while deeper shades are considered more conservative. Observe when a design catches your eye and notice which colors are used to create particular effects.

Color Combinations

Color is a very powerful and provocative design element, but choosing multiple colors successfully can be challenging. Let's start with an understanding of color theory with a focus on the three primary colors (red, yellow, and blue) and the secondary colors (orange, green, and purple).

When these two groups are placed in overlapping triangles to form a circle, the relationships between the colors become apparent. Colors that appear opposite each other on the wheel are called complementary colors. Opposing positions are significant because these pairs of colors have the most contrast when used together. Contrast creates a visual dynamic that is often desirable in graphic design. The complementary color pairs are red and green, blue and orange, and purple and yellow. The following examples and design exercises will help you to recognize the visual power of these color combinations.



2.27

Hot and Cold

Blue and green hues suggest something cool and soothing, while red and yellow suggest warmth, even heat. Red, orange, and yellow are called warm colors; blue, green, and purple are cool colors. Designers often use more of the cool colors and less of the warm colors. Why? The warm colors do attract attention, but for a variety of reasons, too much is not always good thing. On computer screens, too much red can irritate eyes, and on white paper, yellow doesn't have enough contrast to be legible. Blue and green have many positive connotations, such as cleanliness and reliability, and they have good contrast with white backgrounds that are common in all media. It is often wise to use cool hues generously. We will learn to combine cool and warm colors for dynamic designs.

Few color interpretations are as universally agreed upon as warm colors and cool colors. This is likely due to our global human experience that the sun provides warmth, while water and foliage provide cooling effects.

2.28



2.29



This unusual book, *Hot to Cold*, examines sixty architectural sites from the hottest and coldest places on earth. Notice how the colors of the pages change from warm to cool as the topics cover different climatic conditions. The building diagrammed on the orange pages

is in a tropical rainforest. The buildings on the blue page are in Sweden. Depending on the ambient temperature, the book cover appears orange and the title says HOT, or the cover is blue with COLD appearing as the title.

Blue and Orange

In this photo of a room at NYU School of Law, cool blue chairs are dramatically set off against short orange walls. The contrast ensures you'll be engaged enough to notice the locations and then read the value of diversity message at the bottom left.

Lateral Cooking used only two ink colors throughout the book: orange is used to highlight page references, footnotes, and side-notes, and blue is overprinted within the illustrated chapter openers and on the endpapers. This cookbook encourages people to expand their repertoire without the need for more recipes. The design uses reference book conventions, such as the orange step detail, which allows easy navigation to a specific section in a lengthy publication.

This field of business cards pops most dramatically when placed against a blue background. Notice the saturation of both colors is similarly strong. These boldly contrasting hues get our attention.

2.30



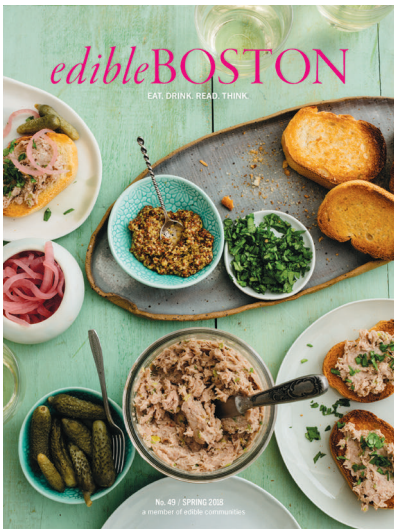
2.31



2.32



2.33



Red and Green

The *Edible Boston* hot-pink title pops against a mint green table. Look closely at the photo and notice the appeal of the variety of greens and pink foods is tempered by soft browns in the toasts.

When the pale green matchbook cover is opened, red matches strike our attention.

2.35



2.36



Yellow and Purple

The design for the Natural High festival is a vibrant use of two sets of complementary colors and promises a fun weekend. Bright yellow typography is highly visible against soft purples in the photo of this spread.

2.34

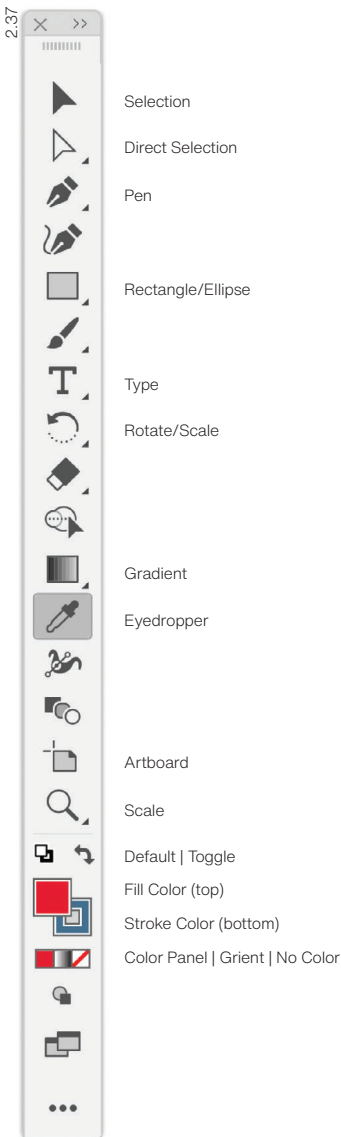


Introduction to Adobe Illustrator

Overview of tools in Illustrator Color Palette in Illustrator Drawing Tools in Illustrator

The Illustrator Toolbar

Of Illustrator's top ten tools—those that do most of the work—the most useful is the Selection tool. This black arrow is used for selecting an entire object or multiple objects.



You'll use an additional nine tools frequently to create projects. 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. Note the tiny black triangle at the bottom of some toolbar squares, which indicates multiple versions of a particular tool. 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. However, when you put your cursor over the Type tool, then press and hold the mouse button, you'll see variations of this tool. These include the Path Type tool for flowing text along any sort of line such as circles, waves, or an illustration (we'll cover these in Chapter 3). You will frequently use the Rotate and Scale tools. 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. At the bottom of the toolbar, you'll see a magnifying glass—this is your Zoom tool.

Here's a useful list of keyboard shortcuts to save time while creating projects. Good news: you can do unlimited undos in Illustrator. Depending on how much memory is available, you can undo your steps, in reverse order, by pressing Command + Z. At any time, press and hold the Command key to temporarily switch to the Selection tool while using another tool.

Keyboard Shortcuts

See note in Chapter 1 about including PC commands here.

View full page +

Zoom in +

Zoom out +

Copy +

Paste +

Undo +

Switch to Selection tool

Switch to Type tool

Temporary switch to Selection tool + (hold)

Temporary switch to Hand tool (hold)

Tip

We work in the **Essentials Workspace**. It is the default setting for the software. You can also set it by choosing **Window > Workspace > Essentials**. If at some point you can't find the **Properties** panel or other window, simply **reset the workspace** by choosing **Window > Workspace > Reset Essentials**.

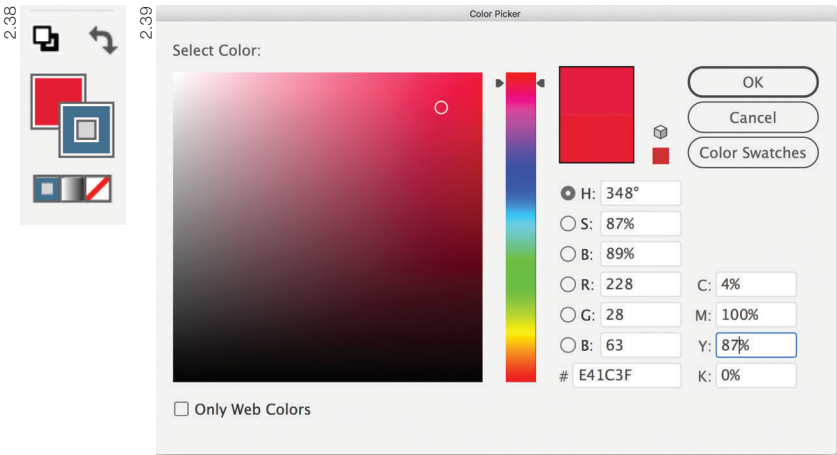
Color in Illustrator

Let’s look closely at the color tools in Illustrator. 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. You can set either to “no color” by pressing the small button with a red diagonal line (below right). The bent arrow toggles between Fill and Stroke colors. Click on the tiny white and black overlapping squares at the top left, to swap to these customizable default colors. To choose new colors, double-click on the either the Fill or Stroke square to open the Color Picker window.

The Color Picker window is the best tool for selecting unique colors in Illustrator. At first glance it has an intimidating array of coded letters and numbers, but a bit of study will allow you to understand every aspect of this window.

Hue | Saturation | Brightness

In the Color Picker window, you see several letters. The first column contains HSB. Hue, simply stated, is the name of the color. Illustrator displays a numeric value for hue that indicates the location of the color on the color wheel in degrees between 0 and 360. To understand this range, imagine the rainbow strip in the Color Picker is formed into a circle with red at the top. Think of the circle as a clock face. Near the top, or 12:00, is 0° for red. Yellow would be around 4:00, or 60°, and blue around 9:00, or 200°. Position the slider at yellow and blue on the hue spectrum and note the hue values. 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. Notice where the darker values of the color appear in the color field (the large square) inside the Color Picker



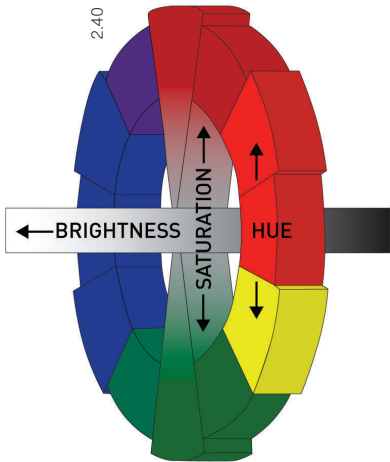
HSB	Name	Range	Effect
H	Hue	0 to 360	location on the standard color wheel
S	Saturation	0% to 100%	gray to fully saturated
B	Brightness	0% to 100%	black to white

window. The higher gray-content colors appear in the bottom third of the square. These colors are referred to as muted or shades. Highly saturated colors contain less gray. Consequently, the most saturated colors may be found in the upper-right-hand corner of the color field. 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.

Out of Gamut Sign

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. Gamut is the range of colors in any given color space. Designers work with many devices (computer displays, inkjet, and laser printers); each has a different color space. For example, a laptop display shows more colors

than inkjet printers, but printers can produce purer blacks. When a color cannot be displayed on a device, it is out of gamut. Heed the warning when producing work for clients—if the sign appears, click the triangle and the selection will switch to the closest printable color.



Initial	Color	Range
C	cyan	0% to 100%
M	magenta	0% to 100%
Y	yellow	0% to 100%
K	black	0% to 100%

Initial	Color	Range
R	red	0 (black) to 255 (white)
G	green	0 (black) to 255 (white)
B	blue	0 (black) to 255 (white)

CMYK

Cyan | Magenta | Yellow | Black

CMYK is a pigment-based subtractive color system that is synonymous with the four-color printing process. C is for cyan, a bright blue. M is for magenta, a bright pinkish-red. Y is for yellow, and K is for black. These four colors are used in combination to print all the colors in the spectrum.

This system has been used in various ink-based printing technologies for well over a hundred years: first lithography, then offset printing, and now desktop printing. When you use a color ink cartridge for your desktop printer, note the colors on the package: they are typically CMYK. The subtractive color system describes how we perceive ink-based color. As light strikes a printed page, the ink absorbs (subtracts) a portion of the color spectrum; what is not absorbed reflects back to the eye, resulting in the colors we see. When cyan, magenta and yellow are all absorbed by a pigment, the result is black, as the ink subtracts the colors.

RGB

Red | Green | Blue

The computer or phone display is a light source, so these primary colors are not the pigment-based primaries of red, yellow, and blue. They are instead the additive primary colors, red, green, and blue, also known as RGB.

Your computer screen creates color by illuminating red, green, and blue phosphors. When the colors combine, they can create most of the color spectrum. When all colors are combined at their fullest strength, they create white; consequently, this is termed the additive color system. To produce digital display graphics, designers work in the RGB color mode.

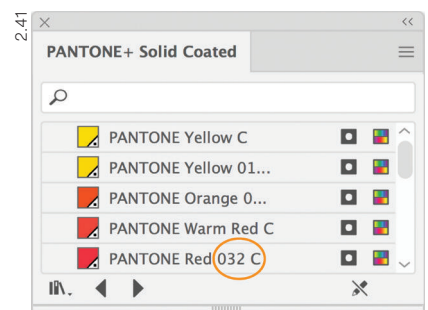
The RGB color mode provides brighter variations of colors compared with CMYK. When beginning a new project, always set the color mode initially. Choose the color mode by determining how the final design will be displayed. If the final design is to be printed, use the CMYK mode. If the final design will appear on a digital display, use the RGB mode. Avoid switching color modes within a file: your designs will lose color information.

The Pantone Matching System

Adobe provides designers the ability to view color swatches in libraries and to organize unique groups of colors into swatch libraries. The most widely used of these is the Pantone Matching System.

Pantone is an internationally used color system accessed through the swatch library. You should be aware of (not alarmed by) the term 'PMS.' PMS numbers refer to the Pantone Matching System. This is a standardized numbering system for colors, which enables designers and producers to specify particular hues by number. The use of PMS numbers guarantees that the specified hue will be reproduced consistently, no matter who or what is producing the work. For example, the Canadian government's maple leaf has a government-decreed Pantone number (PMS 032) so that the country's symbol is displayed consistently, whether on a government website or on a ferry boat to Vancouver Island.

When working with a particular company, designers specify the brand's PMS color. For the Tiffany's



website, designers select the signature robin's-egg blue that has its own Pantone number. This particular PMS number, 1837 (the year the store was founded), is patented, and its use requires approval by Tiffany's and Pantone.

In Illustrator, to access the PMS color chart under the Window menu, choose Swatches; then from the Swatch window's top-right hamburger menu, choose Open Swatch Library > Color Books > find the Pantone listings, and select one that suits your project, this one is Pantone + Solid Coated.

The most common choices are Pantone Solid Coated or Pantone Solid Uncoated. These terms refer to the finish of the paper: coated paper is very smooth, so the ink appears brighter. Uncoated paper is more porous, so the ink appears somewhat less vibrant. Designers must specify whether the color is coated or uncoated when submitting a job to a printer. These colors are also referred to as spot colors.

Each Adobe software accesses Pantone listings differently. In Photoshop, double-click on the toolbar foreground color to open the Color Picker window, next click on the Color Libraries button, then choose from the Book pull-down list; a common choice is Pantone + Solid Coated. In InDesign, from the Windows menu, choose Color > Swatches, now from the top-right hamburger menu, choose, New Color Swatch; in the New Color Swatch window, choose Spot, as the Color Type, and Pantone from the Color Mode list. You'll get used to it.

Only Web Colors

Only Web Colors is no longer relevant. If you are interested in the history, keep reading; otherwise skip to the next paragraph. Designers adhered to a web-safe color palette when websites began proliferating in the nineties until roughly 2009. A web-safe color palette acknowledged that while your monitor may have been capable of displaying millions of colors, web browsers displayed only 216 colors consistently. Checking the Only Web Colors button in the lower left of the window allowed you to view only these 216 colors.

Significant to website design, a six-digit hexadecimal number is listed at the bottom of the left-hand column, indicated by the # box. Website software such as CSS defines colors using the hexadecimal (sixteen-character 0–F) numbering system. The hexadecimal value for white is FFFFFFFF, black is 000000, and one of my favorite blues to use for websites is 006699.

Now that you are expert in the use of the digital Color Picker, let's create a color wheel using drawing tools in Illustrator.

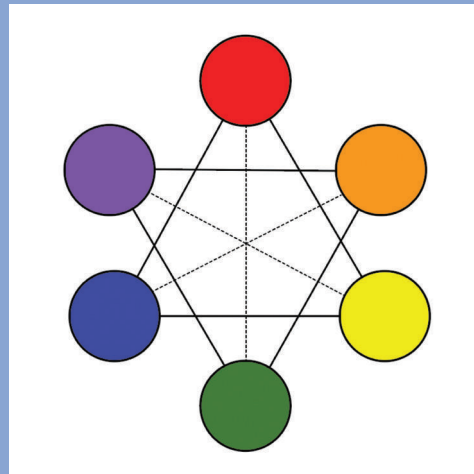
Design + Software Skills 2.1: Illustrator Drawing

Objectives

This deceptively simple exercise achieves several objectives, allowing you to develop skills in software drawing and deepen your understanding of color theory. The repetition required to draw the color wheel reinforces the ability to use the new tools.

To Do

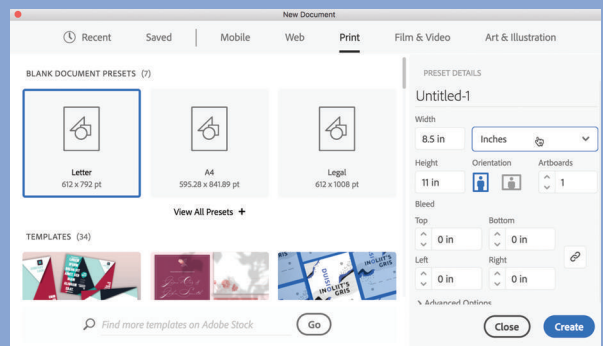
Draw the color wheel using Illustrator's drawing tools.



1

Make a new file

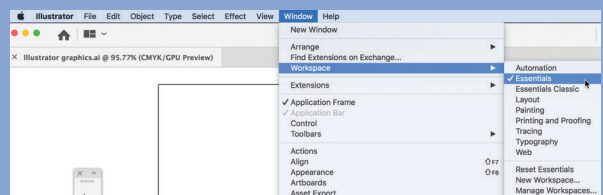
Start Illustrator and choose File > New or Press Create New. Select Print from the top line of the New Document window that appears. Select your preferred unit of measurement on the right pull-down menu. This will provide you with default letter size and set the color mode to CMYK. (If you choose Web or Mobile, your file will have pixel dimensions, and the color mode will be RGB.) Press Create. A blank document will appear on your screen. We're ready to go!



2

Confirm Essentials Workspace

We will use the Essentials Workspace throughout these Software Skills. Confirm you have the Essentials Workspace on the top right of your window. If not, go to the Windows menu and select Workspace > Essentials. If a panel accidentally closes, you can always refresh by selecting Windows > Workspace > Reset Essentials.



3

Choose a color

Select a red.

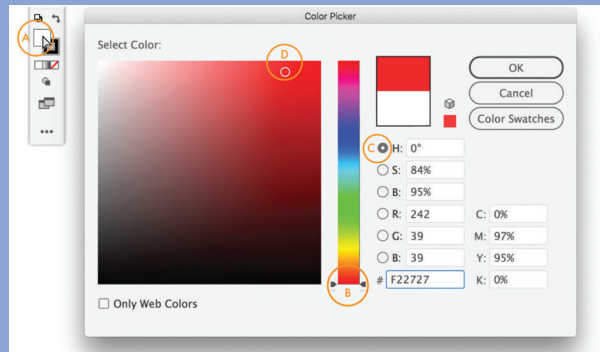
(a). First double-click on the Fill Color square

(b). To see a selection of reds in the large square, slide the arrows on the rainbow spectrum to the bottom

(c). If your Color Picker does not appear as in this image, confirm that H (hue) is selected

(d). Choose a true, saturated red by moving your cursor to the top right of the Color Picker square

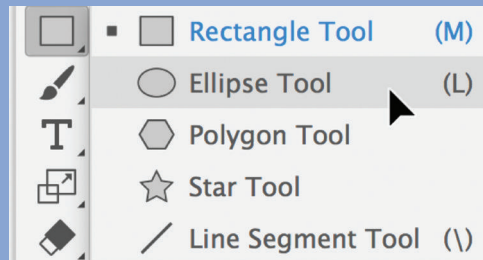
Click OK to select red and close the window.



4

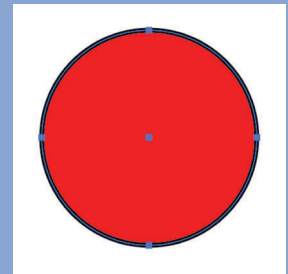
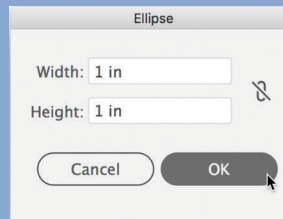
Make a circle

Place your cursor over the Rectangle tool, click, and hold. Select the Ellipse tool and release.



5

While the Ellipse tool shows in the toolbox, click once on your file workspace. Illustrator will place your object wherever you click, so click in the top center area of your page. Make the height and width 1 inch (2.5 cm), and then select OK. You've successfully drawn your first object. Admire its bold symmetry for a moment.

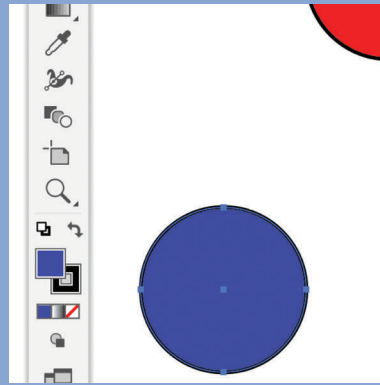


6

Make more circles

Now, draw the other colors in the wheel. Reposition your cursor lower and to the left to create another circle.

Next, double-click in the Fill Color square again to bring the Color Picker window into view. Move your cursor along the hue spectrum bar to choose a blue, then select a specific true blue from the large square color field.



7

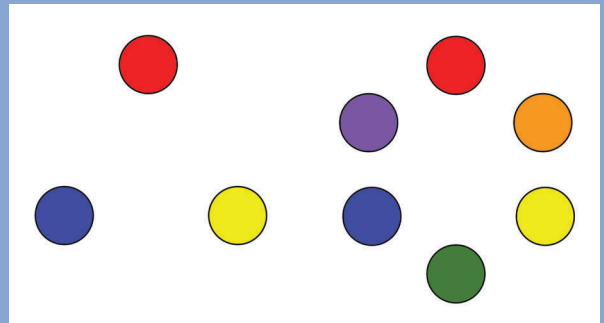
Make the wheel

Repeat the above directions to draw another circle and make it yellow.

If your virtual triangle looks a bit wobbly, you can move a circle after the color has been changed. Choose the black Selection tool, click over a circle, and while holding the mouse button down, nudge it into position.

Tip

A shortcut to the Selection tool is to hold down the Command key. Your cursor will temporarily change to the Selection tool, allowing you to move the circle. Once the circle is moved, and you release the Command key, your cursor returns to the Ellipse tool mode.



Continue to follow the directions in steps 4–6 and add three more circles—orange, green, and purple—to complete the wheel. Position the colors into a wheel using the Selection tool.

8

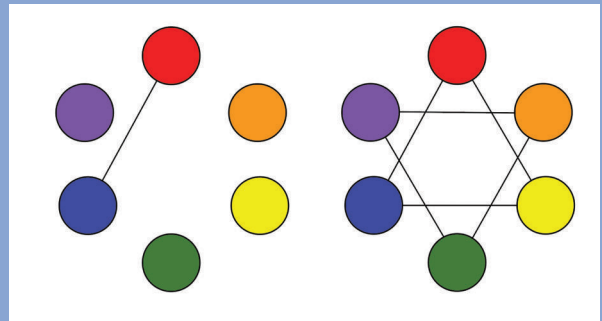
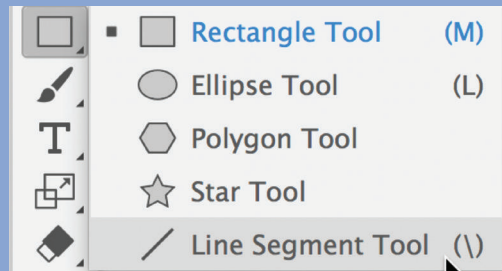
Draw the lines

Draw black lines to connect the two triangles that indicate the primary-color and the secondary-color groups.

Select the Rectangle tool and hold to select the Line tool from the sub-tool window. The Line tool will automatically switch your color selection to black stroke and no fill color.

Place your cursor on the lower-left-hand curve of the red circle, hold the mouse button down, and drag the cursor to the top right of the blue circle, then release the mouse button.

Repeat this step to draw solid black lines among the color groups.

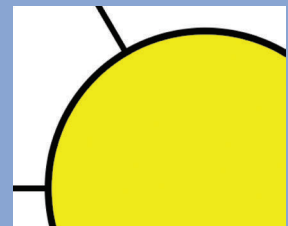
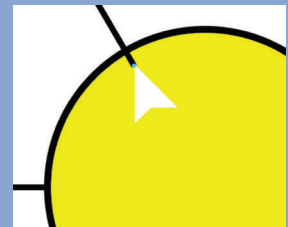
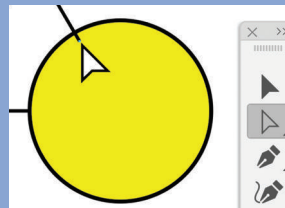


9

Make adjustments

If you want your lines to meet perfectly with the black circles, make small adjustments to one end of a line with the Direct Selection tool. Choose the white Direct Selection tool.

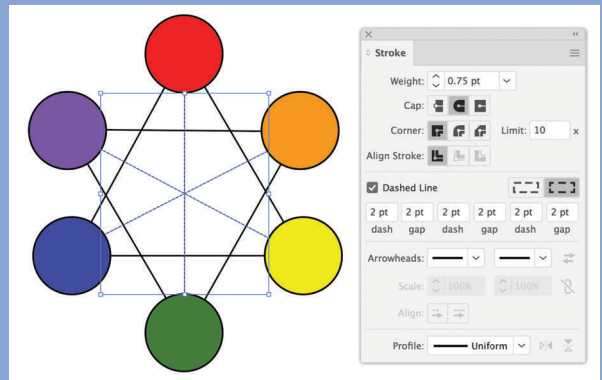
First, "click off" by clicking into the white background area so that nothing is selected. Then click directly on the end of the line you wish to adjust. Click on the blue square at the end of the line and drag it into position.



10 Draw dashed lines

Draw three new lines between the complementary color pairs (red and green, blue and orange, purple and yellow). These three lines will cross in the middle. Use the black Selection tool to select all three lines by dragging a little rectangle at the intersection of these three lines.

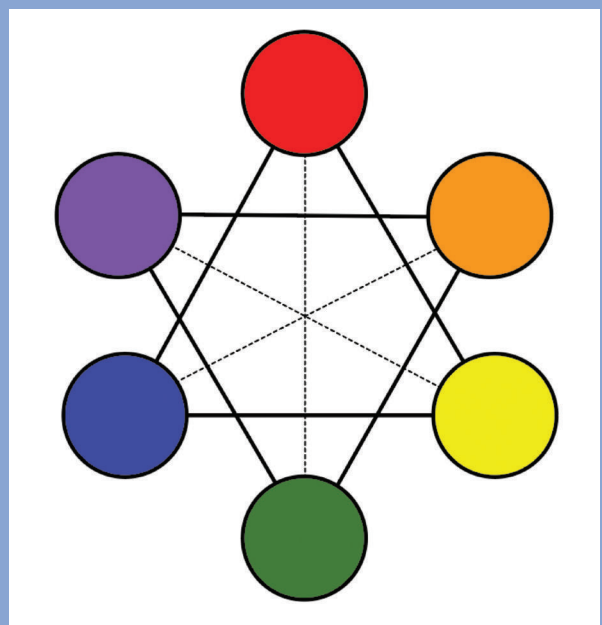
From the Windows menu, open the Stroke palette. Check the Dashed Line box and fill in values for the dashes and gaps. Start with 2 pts each, then try experimenting with other values.



11 Finishing off

You can make the lines and circle outlines thicker by selecting them and then increasing their weight in the Stroke window.

Save your work by using the keyboard shortcut Command + S. Phew. You have completed your first Illustrator drawing. Well done. Break time!



Design + Software Skills 2.2: Photoshop Vector vs. Raster Images

Objectives

Demonstrate the differences between Illustrator and Photoshop image types, called vector and raster images. This exercise also shows the compatibility of Illustrator and Photoshop. In addition, you'll use one of the fun features of Photoshop: Filters.

To Do

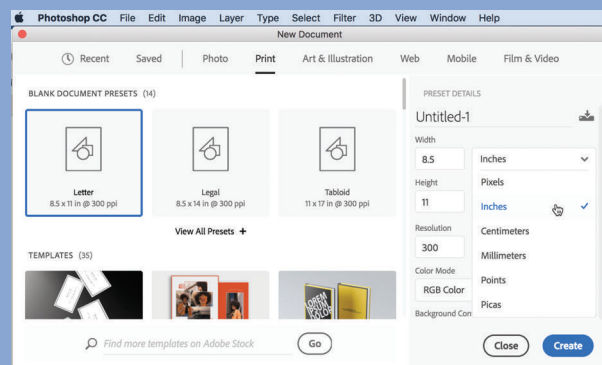
Copy the color wheel from Illustrator to Photoshop. Compare the two types of images: vector and raster. Then get creative in Photoshop by applying various filters to the color wheel graphic.

Photoshop was introduced in Chapter 1. Now let's expand your Photoshop skills.

1

Create a new file

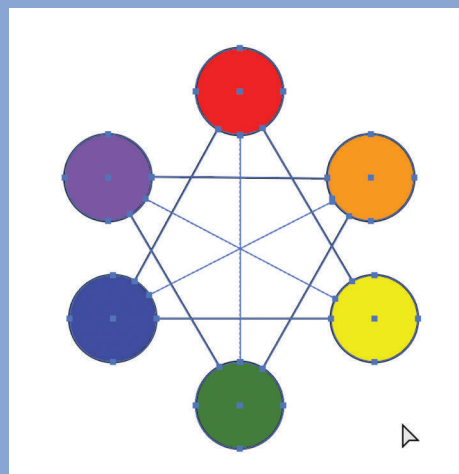
Open Photoshop and create a new file by choosing File > New. Choose Letter size, inches, Resolution set to 300, and leave the remaining options as the default values. Press Create and a new file will open on your screen.



2

Copy the wheel

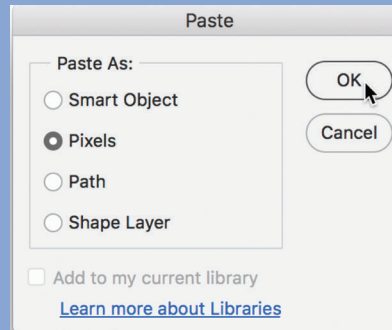
Return to your Illustrator color wheel file for a moment to copy it into Photoshop. In Illustrator, click on the file. Use keyboard shortcuts to select the entire image and make a copy. Press Command + A, then Command + C. Your image will look like this when the color wheel is selected.



3

Paste in Photoshop

Return to your Photoshop file by clicking on the Photoshop icon in the dock. Press Command + V to paste the color wheel into your file. Photoshop will prompt you for a Paste type. Select Pixels, because this graphic will be converted to a raster image. Then click the OK key to place the graphic into your file.



4

Layers

Note that the graphic is placed into a new layer. Remember, Photoshop creates a new layer every time you paste an object into a file. Layers allow you to edit graphics independently; it's a very good thing.

