6 COLOR AND PAINTING

Lesson overview

In this lesson, you'll learn how to do the following:

- Use color modes and color controls.
- Create, edit, and paint with colors using the Control panel and shortcuts.
- Name and save colors, create color groups, and build a color palette.
- Use the Color Guide panel and the Edit Colors/Recolor Artwork features.
- Copy paint and appearance attributes from one object to another.
- Create and paint with patterns.
- Work with Live Paint.

This lesson takes approximately an hour and a half to complete. If needed, remove the previous lesson folder from your hard disk and copy the Lesson06 folder onto it.

Spice up your illustrations with colors by taking
advantage of color controls in Adobe Illustrator CS6.
In this information-packed lesson, you'll discover how
to create and paint fills and strokes, use the Color
Guide panel for inspiration, work with color groups,
recolor artwork, create patterns, and more.

Getting started

In this lesson, you will learn about the fundamentals of color and create and edit colors using the Color panel, Swatches panel, and more.

1 To ensure that the tools and panels function exactly as described in this lesson, delete or deactivate (by renaming) the Adobe Illustrator CS6 preferences file. See "Restoring default preferences" on page 3.

2 Start Adobe Illustrator CS6.

● **Note:** If you have not already done so, copy the Lesson06 folder from the Lessons folder on the *Adobe Illustrator CS6 Classroom in a Book* CD onto your hard disk. See "Copying the Classroom in a Book files" on page 2.

3 Choose File > Open, and open the L6end_1.ai file in the Lesson06 folder, located in the Lessons folder, to view a final version of the label you will paint. Leave it open for reference.

● **Note:** In Mac OS, when opening lesson files, you may need to click the round, green button in the upper-left corner of the Document window to maximize the window's size.

4 Choose File > Open. In the Open dialog box, navigate to the Lesson06 folder in the Lessons folder. Open the L6start_1.ai file. This file has some components already in it. You will create and apply color as necessary to complete the labels.

5 Choose File > Save As. In the Save As dialog box, navigate to the Lesson06 folder and name it **label.ai**. Leave the Save As Type option set to Adobe Illustrator (*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and click Save. In the Illustrator Options dialog box, leave the options at their default settings and then click OK.
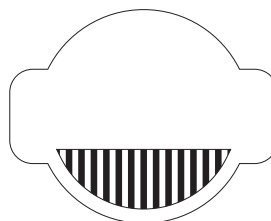
● **Note:** If you don't see "Reset Essentials" in the menu, choose Window > Workspace > Essentials before choosing Window > Workspace > Reset Essentials.

6 Choose Window > Workspace > Reset Essentials.

Understanding color

When working with color in Illustrator, you first need to understand color modes (also called color models). When you apply color to artwork, keep in mind the final medium in which the artwork will be published (print or web, for instance) so that you can use the correct color mode and color definitions. First, you will learn about color modes, and then you will learn the basic color controls.

Color modes

Before starting a new illustration, you must first decide which color mode the artwork should use, CMYK or RGB.

*   **CMYK**—Cyan, magenta, yellow, and black are the colors used in four-color process printing. These four colors are combined and overlapped in a screen pattern to create a multitude of other colors. Select this mode for printing.

*   **RGB**—Red, green, and blue light are added together in various ways to create an array of colors. Select this mode if you are using images for on-screen presentations or the Internet.

When creating a new document, you select a color mode by choosing File > New and picking the appropriate document Profile, such as Print, which uses CMYK for the color mode. You can change the color mode by clicking the arrow to the left of Advanced and selecting a Color Mode.
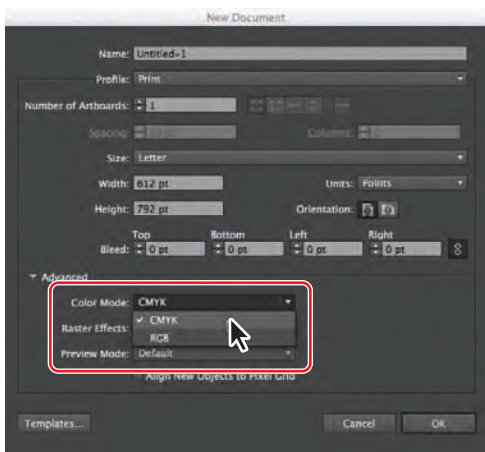
When a color mode is selected, the applicable panels open, displaying colors in either the CMYK or RGB mode. You can change the color mode of a document after a file is created by choosing File > Document Color Mode and then selecting either CMYK or RGB in the menu.
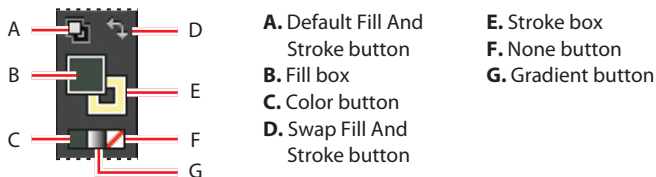
Understanding the color controls

In this lesson, you will learn about the traditional methods of coloring objects in Illustrator. This includes painting objects with colors and patterns using a combination of panels and tools, such as the Control panel, Color panel, Swatches panel, Gradient panel, Stroke panel, Color Guide panel, Color Picker, and the paint buttons in the Tools panel. You'll begin by looking at finished artwork to which color has already been applied.

1   Click the L6end_1.ai document tab at the top of the Document window.

3 Select the Selection tool (▶), and then click the green shape behind the text "Pizza Sauce."

Objects in Illustrator can have a fill, a stroke, or both. In the Tools panel, notice that the Fill box appears in the foreground, indicating that it is selected. This is the default setting. The Fill box is green for this object. Behind the Fill box, the Stroke box has a yellow outline.
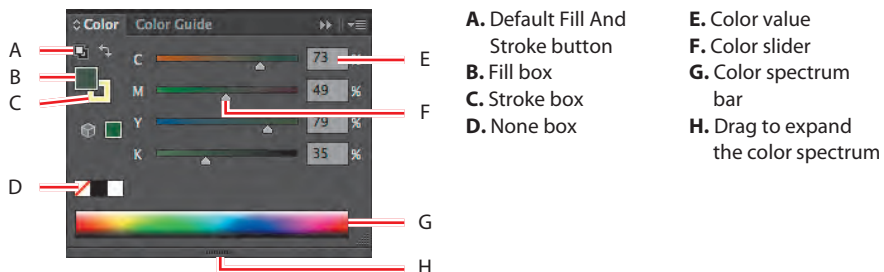

A. Default Fill And Stroke button
B. Fill box
C. Color button
D. Swap Fill And Stroke button
E. Stroke box
F. None button
G. Gradient button

4 Click the Appearance panel icon (▣) on the right side of the workspace.

The Fill and Stroke attributes of the selected object also appear in the Appearance panel. You can add, edit, or delete appearance attributes, which you can apply to other objects, layers, and groups. You'll use this panel later in later lessons.


A. Object selected
B. Stroke color
C. Fill color
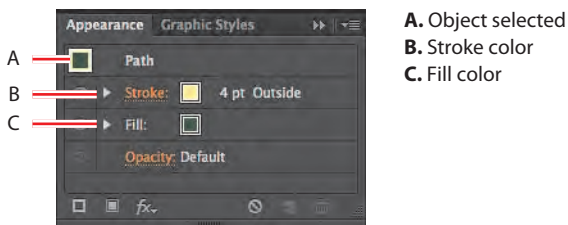
5 Click the Color panel icon (▣) on the right side of the workspace. Click the double-arrow to the left of the word "Color" in the panel tab to expand the panel, if necessary. The Color panel displays the current color of the fill and stroke. The CMYK sliders in the Color panel show the percentages of cyan, magenta, yellow, and black. The color spectrum bar is at the bottom of the Color panel.

A. Default Fill And Stroke button
B. Fill box
C. Stroke box
D. None box
E. Color value
F. Color slider
G. Color spectrum bar
H. Drag to expand the color spectrum

The color spectrum bar lets you quickly and visually select a fill or stroke color from a spectrum of colors. You can also choose white or black by clicking the appropriate color box.

6 Click the Swatches panel icon (▦) on the right side of the workspace. You can name and save document colors, gradients, and patterns in the Swatches panel, for instant access. When an object has a fill or stroke that contains a color, gradient, pattern, or tint applied in the Swatches panel, the applied swatch is highlighted in the panel.
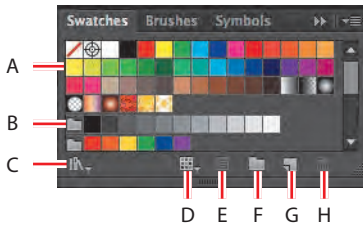
A. Swatch
B. Color group
C. Swatch Libraries menu
D. Show Swatch Kinds menu
E. Swatch options

F. New Color group
G. New Swatch
H. Delete Swatch

7 Click the Color Guide panel icon (◣) on the right side of the workspace. Click the green swatch in the upper-left corner of the panel to set the base color as the color of the selected object (labeled A in the figure below). Click the Harmony Rules menu, and choose Complementary 2 (labeled D in the figure).

The Color Guide can provide color inspiration while you create your artwork. It helps you pick color tints, analogous colors, and much more. In this panel, you can also access the Edit or Apply Colors feature, which lets you edit and create colors.
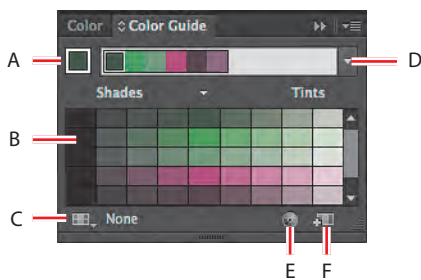
A. Set base color to the current color
B. Color variations
C. Limits the color group to colors in a swatch library

D. Harmony Rules menu and active color group
E. Edit Or Apply Colors button
F. Save color group to Swatch panel

● **Note:** The colors you see in the panel may be different and that's okay.

8 Click the Color panel icon (▣). Using the Selection tool (▶), click various shapes in the L6end_1.ai file to see how their paint attributes are reflected in the panel.

9 Leave the L6end_1.ai file open for reference, or choose File > Close to close it without saving your changes.

10 Click the label.ai document tab at the top of the Document window if you did not close the L6end_1.ai document.

Creating color

In this project, you will be working on artwork in the CMYK color mode, which means that will create your own color from any combination of cyan, magenta, yellow, and black. You can create color in a variety of ways, depending on the artwork. If you want to create a color that is specific to your company, for instance, you can use a swatch library. If you are trying to match color in artwork, you can use the Eyedropper tool to sample color or the Color Picker to enter exact values.

Next, you will create color using different methods and then apply that color to objects.

Building and saving a custom color

First, you will create a color using the Color panel, and then you will save the color as a swatch in the Swatches panel.

● **Note:** If an object is selected when you create a color, the color is applied to the selected object.

1. Choose Select > Deselect to ensure that nothing is selected.

2. Choose 1 from the Artboard Navigation menu in the lower-left corner of the Document window (if not selected), then choose View > Fit Artboard In Window.

▶ **Tip:** The values are each a percentage of 100.

3. If the Color panel is not visible, click the Color panel icon (⬛). If the CMYK sliders are not visible, choose the CMYK color model from the Color panel menu (▼☰). Click the Stroke box, and type the following values in the CMYK text fields: C=**19**, M=**88**, Y=**78**, K=**22**.

▶ **Tip:** To save a color you made in the Color panel, you can also click the New Swatch button at the bottom of the Swatches panel to open the New Swatch dialog box.
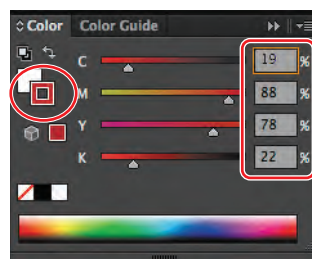
4. Click the Swatches panel icon (⬛), and choose New Swatch from the Swatches panel menu (▼☰). In the New Swatch dialog box, name the color **label background** and, leaving the rest of the options as they are, click OK.

▶ **Tip:** If you want to load swatches from one saved document into another, click the Swatch Libraries Menu button (⬛) at the bottom of the Swatches panel and choose Other Library. Then, locate the document with the swatches that you want to import.
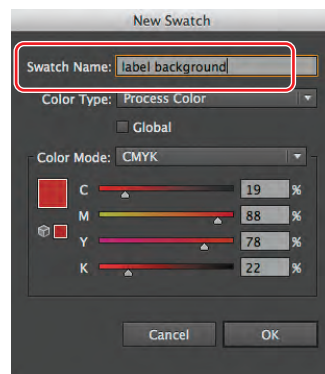
Notice that the swatch is highlighted in the Swatches panel (it has a white border around it). New colors added to the Swatches panel are saved with the current document only. Opening a new file displays a default set of swatches.
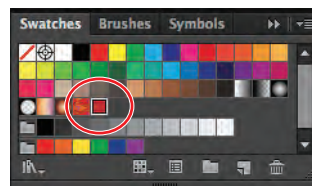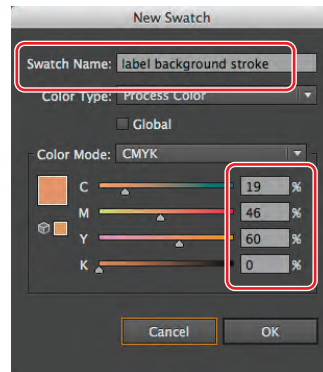
5 With the Selection tool (), click anywhere in the white-filled background shape on the artboard to select it. Click the Fill box at the bottom of the Tools panel. Click the Swatches panel icon () if the panel is not showing, and select the label background swatch. Choose Select > Deselect.
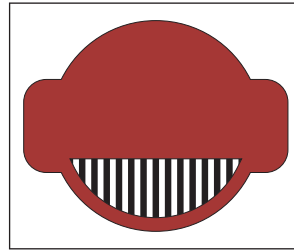
Next, you will create another swatch using a similar method.

6 In the Swatches panel, click the New Swatch () button at the bottom of the panel to create a copy of the selected swatch.

7 In the New Swatch dialog box, change the name to **label background stroke** and change the values to C=**19**, M=**46**, Y=**60**, K=**0**. Click OK.

● **Note:** If the shape had still been selected, it would be filled with the new color.

8 With the Selection tool (), click the shape again to select it. Click the Stroke color in the Control panel. When the Swatches panel appears, select the label background stroke swatch.

9 Change the Stroke weight in the Control panel to **7 pt**. Leave the Swatches panel showing.
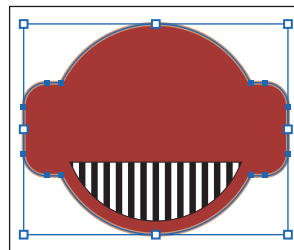
Editing a swatch

After a color is created and saved in the Swatches panel, you can edit that color. Next, you will edit the label background swatch that you just saved.

1 Select the Stroke box in the Tools panel. This expands the Color panel. Click the Swatches panel icon () on the right side of the workspace.

2 With the shape still selected, double-click the label background stroke swatch in the Swatches panel. In the Swatch Options dialog box, change the values to C=**2**, M=**15**, Y=**71**, K=**20**. Select Preview to see the changes to the logo shape. Change the K value to **0**, and then click OK.
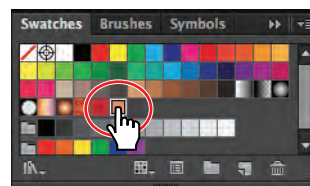
When you create a swatch and then edit it, the objects that already have that swatch color applied need to be selected to apply the change.

Next, you will change the logo background swatch to a global color. When you edit it, a global color automatically updates throughout the artwork, regardless of whether the objects that use that global color are selected.

3 With the shape still selected, click the Fill box in the Tools panel.

4 Double-click the label background swatch in the Swatches panel to open the Swatch Options dialog box. Select Global, and then click OK.

5 Choose Select > Deselect.

6 Double-click the label background swatch in the Swatches panel again to open the Swatch Options dialog box. Change the K value (black) to **70**. Select Preview to see the changes. Notice how the shape fill changes, even though the shape is not selected. That's the purpose of a global color. Click Cancel so that the color change is not saved.

7 Choose File > Save.
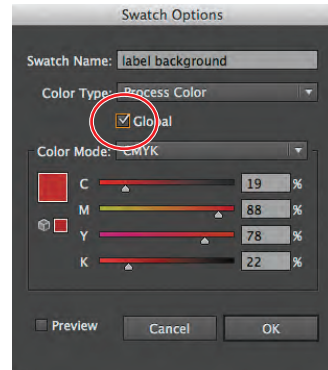
Using Illustrator swatch libraries

Swatch libraries are collections of preset colors, such as PANTONE and TOYO, and thematic libraries, such as Earthtone and Ice Cream. Illustrator has default swatch libraries that appear as separate panels and cannot be edited. When you apply color from a library to artwork, the color in the library becomes a swatch that is saved in the Swatches panel for that document. Libraries are a great starting point for creating colors.

Next, you will create a yellow spot color using a PANTONE+ library for another shape in the label. When this color is defined, it could be a warm, dark, or light yellow. This is why most printers and designers rely on a color matching system, like the PANTONE system, to help maintain color consistency and to give a wider range of colors, in some cases.

Creating a spot color

In this section, you will see how to load a color library, such as the PANTONE color system, and how to add a PANTONE Matching System (PMS) color to the Swatches panel.

1 In the Swatches panel, click the Swatch Libraries Menu button (⬛▾). Choose Color Books > PANTONE+ Solid Coated.

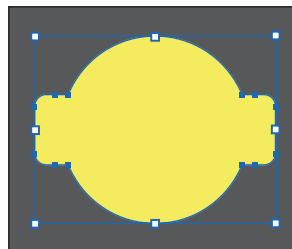The PANTONE+ solid coated library appears in its own panel.

2 Type **100** in the Find field. The PANTONE 100 C swatch is highlighted in the swatches. Click the highlighted swatch to add it to the Swatches panel. Close the PANTONE+ Solid Coated panel. The PANTONE color appears in the Swatches panel.

● **Note:** When you exit Illustrator and then relaunch it, the PANTONE library panel does not reopen. To automatically open the panel whenever Illustrator opens, choose Persistent from the PANTONE+ Solid Coated panel menu.

3 Position the pointer on the artboard and, holding down the spacebar, drag to the right so that you can see both the white-filled shape off the left edge and the content on the first artboard.

4 With the Selection tool (▸), click the white-filled shape off the left edge of artboard 1 to select it. From the Fill color in the Control panel, choose the PANTONE 100 C color to fill the shape. Change the Stroke color to None (⬜).

5 With the shape still selected, Shift-click to select the original red label background shape on the first artboard. Release the Shift key.

6 Choose View > Fit Artboard In Window.

7 With the Selection tool, click the red shape once more to make it the key object.

8 In the Control panel, click the Horizontal Align Center button (⬓) and the Vertical Align Center button (▮▶) to align the yellow shape to the red label shape.

● **Note:** If you don't see the Align options, click the word "Align" in the Control panel to reveal the Align panel.

9 Choose Select > Deselect.

10 Choose File > Save. Keep the file open.
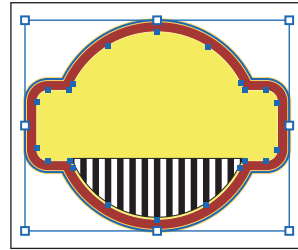
Why does my PANTONE swatch look different from the other swatches in the Swatches panel?

In the Swatches panel, the color type is identified by the icon that appears next to the name of the color. You can identify spot-color swatches by the spot-color icon (⬤) when the panel is in List view or by the dot in the lower corner (◪) when the panel is in Thumbnail view. Process colors do not have a spot-color icon or a dot.

By default, the PANTONE solid coated swatch is defined as a spot color. A spot color is not created from a combination of CMYK inks but is its own solid ink color. A press operator uses a premixed PMS color in the press, offering more consistent color.

A triangle indicates that the color is global. If a global color is edited, all color references used in the illustration are updated. Any color can be global, not only PANTONE colors. To learn more about spot colors, search for "spot colors" in Illustrator Help (Help > Illustrator Help).

Using the Color Picker

The Color Picker lets you select color in a color field and in a spectrum by either defining colors numerically or by clicking a swatch.

Next, you will create a color using the Color Picker and then save the color as a swatch in the Swatches panel.

1 In the lower half of artboard 1, with the Selection tool (▶), click one of the white bars in the lower part of the label shape to select the underlying white shape.

2 Double-click the Fill box in the Tools panel to open the Color Picker.

3 In the Color Picker dialog box, type these values into the CMYK text fields: C=**0**, M=**11**, Y=**54**, and K=**0**.

Notice that the slider in the color spectrum bar and the circle in the color field move as you enter the CMYK values. The color spectrum shows the hue, and the color field shows saturation (horizontally) and brightness (vertically).

4 Select S (saturation) to change the color spectrum displayed in the Color Picker. The color spectrum bar becomes the saturation of the orange color. Drag the color spectrum slider up until the S value is **60%,** and then click OK.

The white shape is filled with the yellow/orange color you just made in the Color Picker.
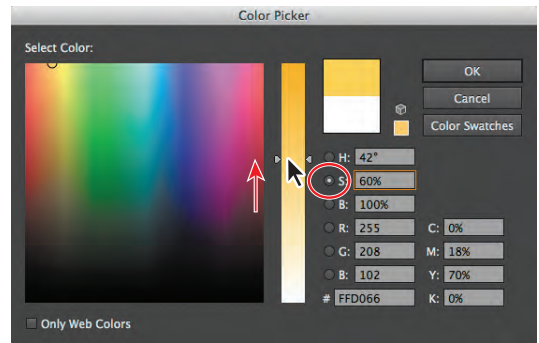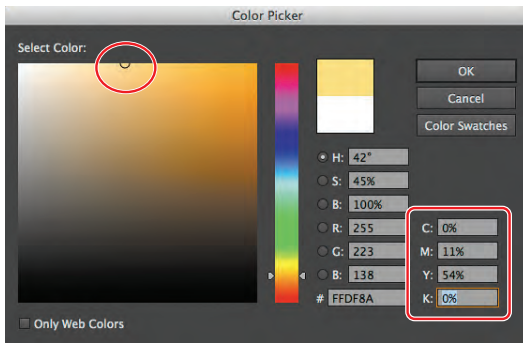
● **Note:** The Color Swatches button in the Color Picker shows you the swatches in the Swatches panel and the default color books (the sets of swatches that come with Illustrator) and lets you select a color from one. You can return to the color models view by clicking the Color Models button and editing the swatch color values, if necessary.

5 Change the Stroke color in the Control panel to None (⬚).

Next, you will save the color in the Swatches panel.

6 Ensure that the Fill box is selected (in front) at the bottom of the Tools panel.

This ensures that, when you create a new swatch, it is created using the fill of the selected shape.
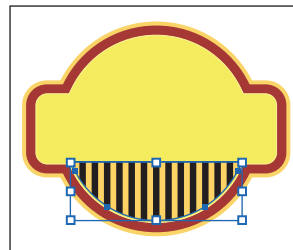
7 Click the Swatches panel icon (▦) to show the panel, if it's not already showing.

8 Click the New Swatch button (▣) at the bottom of the Swatches panel, and name the color **yellow/orange** in the New Swatch dialog box. Select Global, and then click OK to see the color appear as a swatch in the Swatches panel.

**9** Choose Select > Deselect and then File > Save.

Creating and saving a tint of a color

A tint is a mixture of color with white to make the color lighter. You can create a tint from a global process color, like CMYK, or from a spot color.

Next, you will create a tint of the yellow/orange swatch.

1   With the Selection tool, click one of the black bars in the lower half of the artboard. Change the fill color in the Control panel to the yellow/orange color you just made.

2   Click the Color panel icon (▦) to expand the Color panel.

3   Make sure that the Fill box is selected in the Color panel, and then drag the tint slider to the left to change the tint value to **20%**.

4   Click the Swatches panel icon (▦) on the right side of the workspace. Click the New Swatch button (◫) at the bottom of the panel to save the tint. Notice the tint swatch in the Swatches panel. Position the pointer over the swatch icon to see its name, yellow/orange 20%.
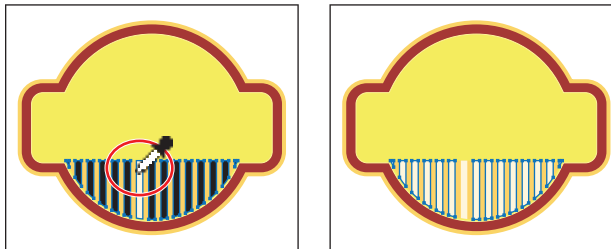
5   Choose File > Save.
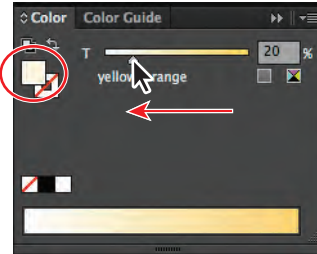
Copying appearance attributes

You can use the Eyedropper tool to copy appearance attributes from one object to another, including character, paragraph, fill, and stroke attributes.

1   Using the Selection tool (▶), select one of the black bars that has not yet been colored and then choose Select > Same > Fill Color to select the remaining black rectangles.

2   Using the Eyedropper tool (⚲), click the bar with the yellow/orange 20% fill applied. All the bars that are black pick up the attributes from the painted bar.

3   With the Selection tool, Shift-click to select the original bar.

4   Choose Object > Group.

5   Choose Select > Deselect and then File > Save.
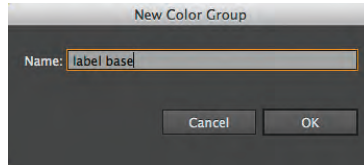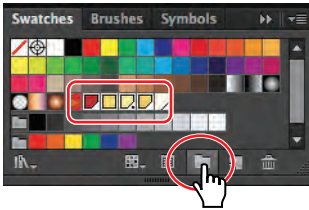
Creating color groups

In Illustrator, you can save colors in color groups, which consist of related color swatches in the Swatches panel. Organizing colors by their use, such as grouping all colors for a logo, is helpful for organization and to be able to edit all of those colors together, if necessary. Only spot, process, and global colors can be in a group.

Next, you will create a color group using the label colors you've created.

1 In the Swatches panel, click a blank area of the panel to deselect the color swatches. Click the label background swatch (red) and, holding down the Shift key, click the yellow/orange swatch to the right to select four color swatches.

▶ **Tip:** To select multiple colors that are not next to each other in the Swatches panel, Ctrl-click (Windows) or Command-click (Mac OS) the swatches you want to select.

2 Click the New Color Group button (▨) at the bottom of the Swatches panel. Change the Name to **label base** in the New Color Group dialog box, and click OK to save the group.
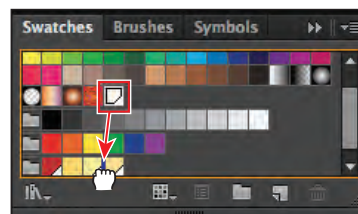

● **Note:** If objects are selected when you click the New Color Group button, an expanded New Color Group dialog box appears. In this dialog box, you can create a color group from the colors in the artwork and convert the colors to global colors.

3 With the Selection tool (▶), click a blank area of the Swatches panel to deselect the color group you just created.

4 In the Swatches panel, double-click the yellow/orange swatch in the label base color group to open the Swatch Options dialog box. Change the values to C=**0**, M=**12**, Y=**54**, and K=**0**. Click OK.
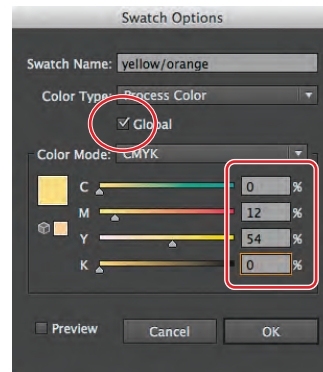
5 Click the yellow/orange 20% swatch, and drag it between the PANTONE 100 C swatch and the yellow/orange swatch in the label base color group.

You can also reorder the swatches within the group by dragging them.

6 Drag the PANTONE 100 C swatch to the right of the yellow/orange swatch.

● **Note:** If you drag the PANTONE 100 C swatch too far to the right, you may pull it out of the group. If that happens, you can always drag it back into the group.

**7** Choose File > Save.

Working with the Color Guide panel

The Color Guide panel can provide you with color inspiration as you create your artwork. Use it to pick harmony rules such as color tints, analogous colors, and much more. In this panel, you can also access the Edit Color/Recolor Artwork feature, which allows you to edit and create colors.

Next, you will use the Color Guide panel to select different colors for a second label and then you'll save those colors as a color group in the Swatches panel.

1 Choose 2 from the Artboard Navigation menu in the lower-left corner of the Document window.

2 With the Selection tool (▶), click the red background shape of the label. Make sure that the Fill box is selected in the Tools panel.

● **Note:** The colors you see in the Color Guide panel may be different from what you see in the figure. That's okay.

3 Click the Color Guide panel icon (◩) on the right side of the workspace to open the panel. Click the Set Base Color To The Current Color button (◼).

This allows the Color Guide panel to suggest colors based on the color showing in the Set Base Color To The Current Color button.
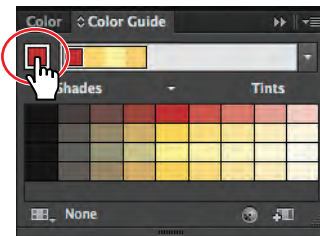
Next, you'll experiment with the colors in the label.

4 Choose Complementary 2 from the Harmony Rules menu to the right of the Set Base Color To The Current Color button in the Color Guide panel.

5 Click the Save Color Group To Swatch Panel button (◧) to save the colors in the Complementary 2 harmony rule in the Swatches panel.
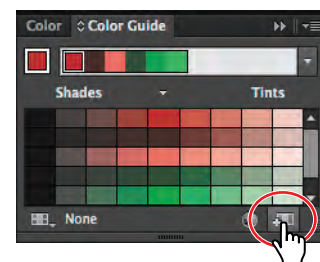
6 Click the Swatches panel icon (▦). Scroll down to see the new group added.

You can apply these colors to the artwork, and you can edit them.

7 Click the Color Guide icon (◩) to open the Color Guide panel.

Next, you'll experiment with the colors.

8 In the color variations in the Color Guide panel, select the fifth color from the left, in the second row. Notice that the logo changes color. Click the Set Base Color To The Current Color button (■) to try a new group of colors using the Complementary 2 harmony rule. Click the Save Color Group To Swatch Panel button (🔳) to save the colors in the Swatches panel.
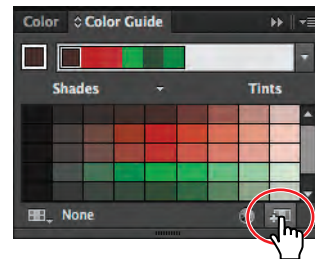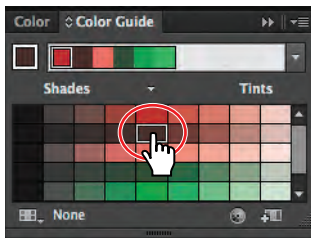
9 Choose File > Save.

Editing a color group

When you create color groups, either in the Swatches panel or in the Color Guide panel, you can edit them individually or as a group in the Edit Colors dialog box. You can also rename a color group, reorder the colors in the group, add or remove colors, and more. In this section, you will learn how to edit colors of a saved color group using the Edit Color dialog box.

1 Choose Select > Deselect, and then click the Swatches panel icon (▦).

2 Click the folder icon to the left of the last color group to select the group (you may need to scroll down in the Swatches panel).

Notice that the Swatch Options button (▤) changes to the Edit Color Group button (◉) when the group (folder) is selected. The Swatch Options button at the bottom of the panel lets you edit a single, selected color.
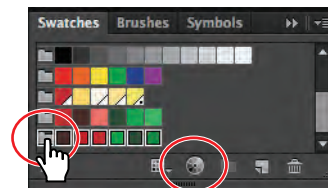
**3** Click the Edit Color Group button (◉) at the bottom of the Swatches panel to open the Edit Colors dialog box.

On the right side of the Edit Colors dialog box, under Color Groups, all of the existing color groups in the Swatches panel are listed. On the left side of the dialog box, you can edit the colors of each color group, either individually or as a group.

▶ **Tip:** To edit a color group, you can also double-click the folder icon to the left of the color group in the Swatches panel.

Next, you will edit the colors for the color group.

4   In the Edit Colors dialog box, the group of colors you are about to edit is shown in the upper-left corner. Select the name Color Group 2 above the Color Groups, on the right side of the dialog box, and rename the group **label 2**. This will be the name of a new color group you save later in the lesson.

5   In the color wheel, you'll see markers (circles) that represent each color in the group. Drag the largest red marker on the right side of the color wheel up and to the right edge of the color wheel.

6   Change the Brightness by dragging the Adjust Brightness slider below the color wheel to the right, to brighten all the colors at once. Leave the Edit Colors dialog box open.
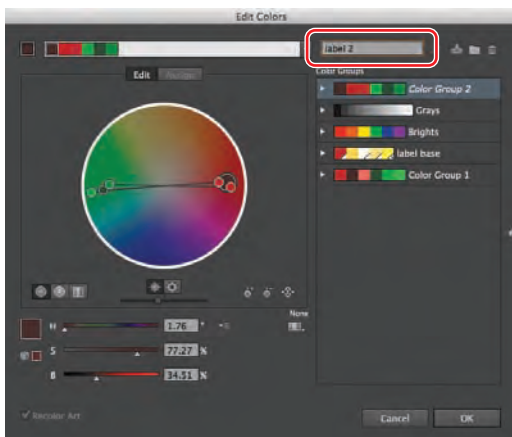
Rename the color group.   Edit the color and brightness.

● **Note:** You can match the H, S, B (hue, saturation, brightness) values below the color wheel in the Edit Colors dialog box to what you see in the figure, if you want to match exactly the color we achieved.

The Recolor Art selection at the bottom of the Edit Colors dialog box is dimmed because no artwork is selected. If artwork is selected when you open this dialog box, the dialog box is called the Recolor Artwork dialog box and any edits you make change the color group and artwork.

● **Note:** The larger marker in the color wheel with the double circle is the base color of the color group.

Next, you will edit the colors in the group independently and then save the colors as a new named group.

7 Click the Unlink Harmony Colors button (⬛) in the Edit Colors dialog box to edit the colors independently. The button will turn into the Link Harmony Colors button (⬛).

The lines between the color markers (circles) and the center of the color wheel become dotted, indicating that the colors can be edited independently.

8 Drag the larger red marker down and to the left, to the edge of the color wheel below the green color markers, to change the red color into a blue.

By moving the color markers away from the center, you increase saturation. By moving the color markers toward the center of the color wheel, you decrease saturation. When a color marker is selected, you can edit the color using the H, S, B sliders below the color wheel.

9 Click the Color Mode button (⬛) to the right of the H, S, B values below the color wheel, and choose CMYK from the menu, if the CMYK sliders are not already visible. Click to select one of the green markers in the color wheel, as shown in the figure on the right, below. Change the CMYK values to C=**65**, M=**0**, Y=**80**, and K=**0**. Notice the light green color marker move in the color wheel. Leave the dialog box open.

Edit a single color.   Edit another color.

● **Note:** It's okay if the color markers in your Edit Colors dialog box are different from those shown in the figure above.
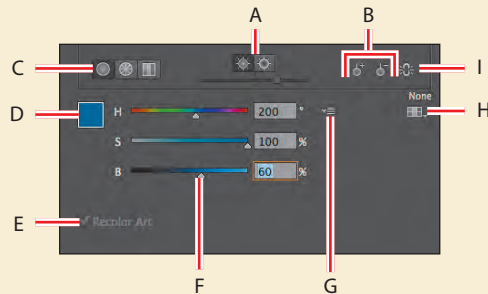
10 Click the Color Mode button (⬛) and choose HSB from the menu, so that next time you edit colors you will be using the HSB sliders.

11 Click the New Color Group button (⬛) in the upper-right corner of the Edit Colors dialog box to save the colors you've edited as a new color group named **label 2**.

▶ **Tip:** To edit a color group and save the changes without creating a new color group, click the Save Changes To Color Group button (⬛).

12 Click OK to close the Edit Colors dialog box. The label 2 color group is automatically saved in the Swatches panel. If a dialog box appears, click Yes to save the changes to the color group in the Swatches panel.

13 Choose File > Save.

Editing color options

You can use the options in the lower portion of the Edit Colors dialog box to edit color, as described in the figure below.

A Show saturation or brightness and hue on color wheel.

B Add and subtract color tools.

C Color display options (smooth color wheel, segmented color wheel, color bars).

D Color of the selected color marker or color bar.

E Selected artwork is recolored when selected (the check box is dimmed when artwork is not selected).

F Color sliders.

G Color Mode button.

H Limit the color group to colors in a swatch library.

I Unlink harmony colors.

Editing colors in artwork

You can also edit the colors in selected artwork, using the Recolor Artwork command. Next, you will edit the colors for the artwork on the second artboard and save the edited colors as a color group.

1 Choose Select > All On Active Artboard.

2 Choose Edit > Edit Colors > Recolor Artwork to open the Recolor Artwork dialog box.

The Recolor Artwork dialog box options allow you to reassign or reduce the colors in your artwork and to create and edit color groups. All the color groups that you create for a document appear in the Color Groups storage area of the Recolor Artwork dialog box and in the Swatches panel. You can select and use these color groups at any time.

3   In the Recolor Artwork dialog box, click the Hide Color Group Storage icon (◀) on the right side of the dialog box.

4   Click the Edit tab to edit the colors in the artwork using the color wheel.

5   Click the Link Harmony Colors icon (⬤) to edit all the colors at the same time. The icon should now look like this ⬤.

6   Click the larger red color circle to select it. At the bottom of the dialog box, change the H value to **336**, the S value to **77**, and the B value to **25**.

Changing the H (hue) and S (saturation) values is the same as dragging the larger red circle in the color wheel. Changing the B (brightness) value is the same as dragging the Brightness slider.
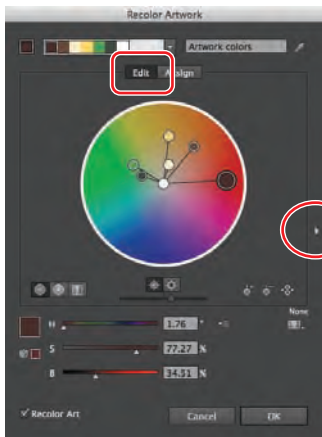
Hide the color groups.   Edit the larger red color.   The result.

The edit options in the Recolor Artwork dialog box are the same as the options in the Edit Colors dialog box. Instead of editing color and creating color groups to apply later, you are dynamically editing colors in the selected artwork. Notice the Recolor Art selection in the lower-left corner of the dialog box. When artwork is selected, you are editing the artwork.

7   Click OK in the Recolor Artwork dialog box.

8   Choose Select > Deselect, and then choose File > Save.

Next, you will get a color group from a community of users, using the Kuler panel.

Working with the Kuler panel

The Kuler panel is a portal to themed color groups, such as Ice Cream, created by an online community of designers. You can browse lots of color groups and download them to edit or use. You can also create themed color groups to share with others.

Next, you will download a themed color group for an Italian restaurant and apply color to it.

1 Choose 3 Artboard 3 from the Artboard Navigation menu in the lower-left corner of the Document window.

2 Choose Window > Extensions > Kuler.

● **Note:** You need an Internet connection to access the Kuler themes.

3 In the Kuler panel, click the Highest Rated menu and choose Most Popular. The Kuler panel shows you the newest themes, highest rated themes, and more.
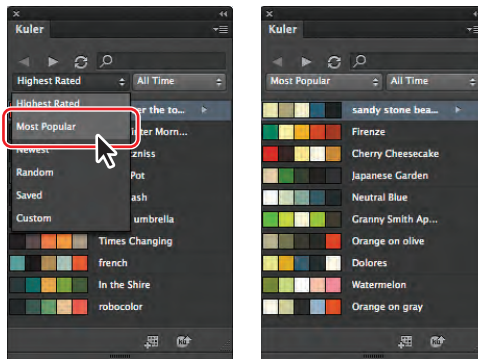
4 To search for themes, type **Italian restaurant** in the Search field at the top of the panel and press Enter or Return. This brings in the themes related to the words "Italian restaurant."

● **Note:** To learn more about the Kuler panel options, search for "Kuler panel" in Illustrator Help (Help > Illustrator Help).

5 Click the Italian Restaurant theme that looks something like this (⬛⬛⬜⬛⬛) in the search results (below the search field). If the Italian Restaurant theme does not appear, select another. Click the Add Selected Theme To Swatches button (⊞) to add it to the Swatches panel for the open document.
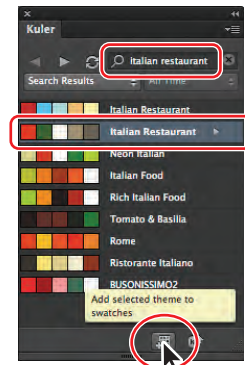
6 Close the Kuler panel.

7 Click the Swatches panel icon (⊞) to open the panel, if it isn't already open.

Notice that the new color group, Italian Restaurant, appears in the panel list of swatches (scroll down, if necessary).

8 Choose File > Save.

Assigning colors to your artwork

The Assign tab of the Recolor Artwork dialog box lets you assign colors from a color group to your artwork. You can assign colors in several ways, including using a new color group chosen from the Harmony Rules menu. Next, you will assign new colors to a third version of the label.

1 Choose Select > All On Active Artboard.

2 Click the Recolor Artwork button (⊕) in the Control panel.

3 Click the Show Color Group Storage icon (▶) (the small arrow) on the right side of the dialog box to show the color groups, if they aren't already showing. Make sure that, in the top left of the dialog box, the Assign button is selected.

On the left side of the Recolor Artwork dialog box, notice that the colors of the label are listed in the Current Colors column, in what is called "Hue-Forward" sorting. That means they are arranged, from top to bottom, in the ordering of the color wheel: red, orange, yellow, green, blue, indigo, and violet.

● **Note:** If the colors in the Kuler group you selected earlier were different than what we selected, the colors in this section will also look a little different and that's okay.

4 Under Color Groups in the Recolor Artwork panel, select the Italian Restaurant color group you saved from the Kuler panel.

On the left side of the Recolor Artwork dialog box, notice that the colors of the Italian Restaurant color group are assigned to the colors in the label. The Current Colors column shows what the color was in the label, and the New column shows what the color has become (or been "reassigned to"). Also, notice that the two yellow colors in the original label are now next to each other and are mapped to a single color. This is because there are only five colors in the Italian Restaurant group and six in the label.
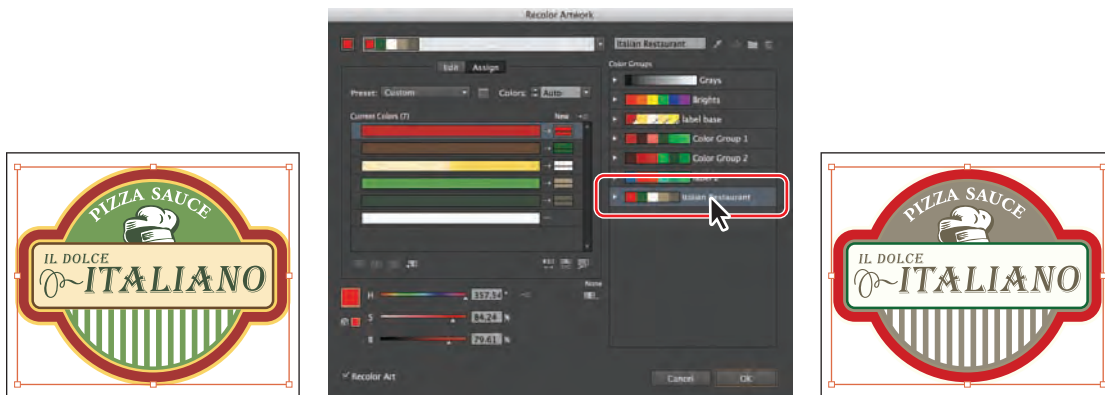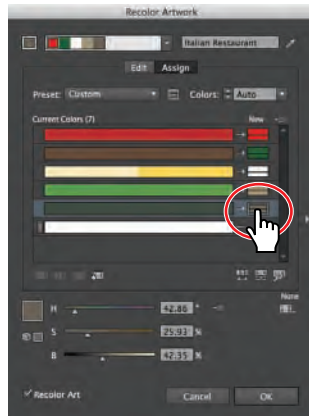

● **Note:** If the colors of the label do not change, make sure that Recolor Art is selected at the bottom of the Recolor Artwork dialog box.
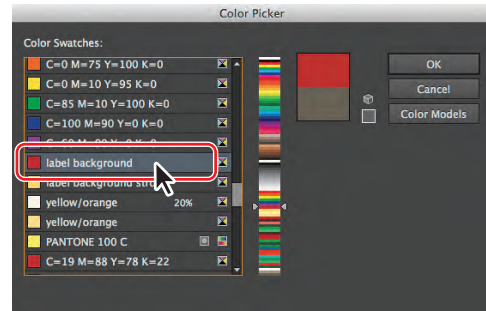
5 Click the Hide Color Group Storage icon (◀) to hide the color groups. Drag the dialog box by the title bar at the top so that you can see the artwork.

6 In the New column of the Recolor Artwork dialog box, drag the red color down on top of the green color below it. See the first part of the figure below.

This swaps the green and red colors in the artwork order and changes the color in the artwork on the artboard.

7 Drag the colors back to their original order.

The colors in the New column show what you see in the artwork. If you click one of the colors, notice that the HSB sliders at the bottom of the dialog box let you edit that one color.

8 Double-click the darker brown color at the bottom of the New column.

9 In the Color Picker dialog box, click the Color Swatches button to see the document swatches. Select label background in the Color Swatches list. Click OK to return to the Recolor Artwork dialog box.
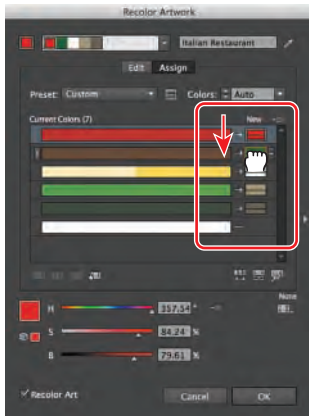
Reorder the New colors.   Double-click the brown color.   Select the label background swatch.

Next, you will make a few more changes to the colors in the label and then save the color edits to the Italian Restaurant color group.

10 Click the arrow between the lighter green color in the Current Color column and the light brown color in the New column.

In the artwork, the color on the label changes. By clicking the arrow between a current color and a new color, you prevent the current color in the row (the light green) from being reassigned to the new color (light brown). It stays light green (in this case).
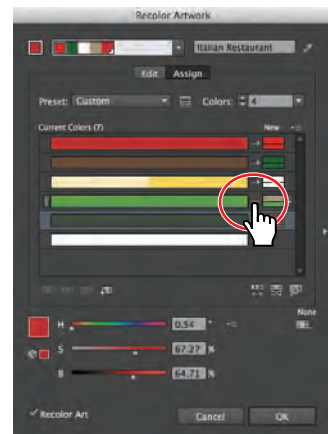
11 Drag the light green bar up on top of the dark brown bar in the current color list. Notice the color change in the artwork.
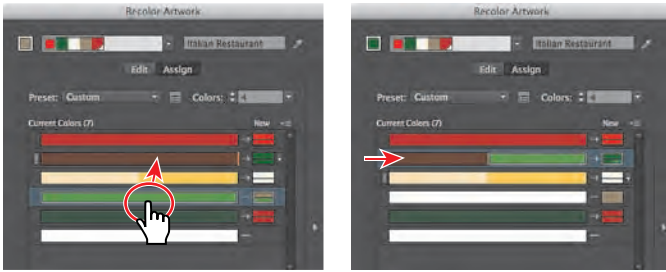
When you drag a color in the current color column onto another row in the same column, you are telling Illustrator to apply the same new color (the green in this case) to both colors. The green color in the New column is split into three sections (![green bar]). The darkest color in the row (the dark brown gray) is replaced with the green. The lighter green color is replaced with a proportionally lighter tint of the green.

12 Click the Show Color Group Storage icon (▶) to show the color groups on the right side of the dialog box. Click the Save Changes To Color Group button (▣) to save the changes to the color group without closing the dialog box. Click OK. The color changes that you made to the color group are saved in the Swatches panel.

13 Choose Select > Deselect and then File > Save.

Adjusting colors

Next, you will change the original label on artboard 1 to use CMYK colors only. You'll convert the yellow color PANTONE 100 C to CMYK.

1 Choose 1 from the Artboard Navigation menu in the lower-left corner of the Document window.

2 Choose Select > All On Active Artboard.

3 Choose Edit > Edit Colors > Convert To CMYK.

The colors in the selected label, including the yellow PANTONE 100 C, are now CMYK. There are many options in the Edit > Edit Colors menu for converting color, including Recolor With Preset. This command lets you change the color of selected artwork using a chosen number of colors, a color library, and a specific color harmony (such as complementary colors).
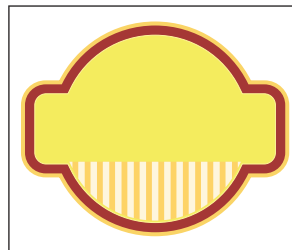
**4** Choose Select > Deselect and then File > Save.

Painting with patterns

In addition to process and spot colors, the Swatches panel can also contain pattern and gradient swatches. Illustrator provides sample swatches of each type in the default Swatches panel and lets you create your own patterns and gradients. In this section, you will focus on creating, applying, and editing patterns. To learn more about working with gradients, see Lesson 10, "Blending Colors and Shapes."

Applying existing patterns

A pattern is artwork saved in the Swatches panel that can be applied to the stroke or fill of an object. You can customize existing patterns and design patterns from scratch with any of the Illustrator tools. All patterns start with a single tile that is tiled (repeated) within a shape, starting at the ruler origin and continuing to the right. Next, you will apply an existing pattern to a shape.

1 Choose Window > Workspace > Reset Essentials.

2 Click the Layers panel icon (⬛) to expand the Layers panel.

3 In the Layers panel, click to select the visibility column to the left of the layer named pattern.

4 Click the Swatches panel icon (▦). In the Swatches panel, click the Swatch Libraries Menu button (▨) at the bottom of the panel and choose Patterns > Decorative > Vonster Patterns to open the pattern library.

5 Using the Selection tool (▶), select the white filled shape toward the top of the artboard. In the Control panel, change the Stroke color to None (⬜). Make sure that the Fill box toward the bottom of the Tools panel is selected.
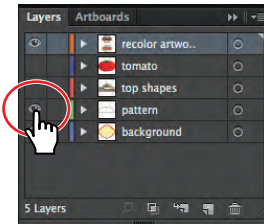
● **Note:** This last step is important. When you apply a pattern swatch, it applies to the stroke or the fill that is selected.

▶ **Tip:** Because some supplied patterns have a clear background, you can create a second fill for the object, using the Appearance panel. For more information, see Lesson 13, "Applying Appearance Attributes and Graphic Styles."

6 Select the Blazer pattern swatch in the Vonster Patterns panel to fill the path with the pattern. Close the Vonster Patterns panel, and notice that the pattern swatch fills the shape and is added to the list in the Swatches panel. Click the Swatches panel icon to collapse the panel.
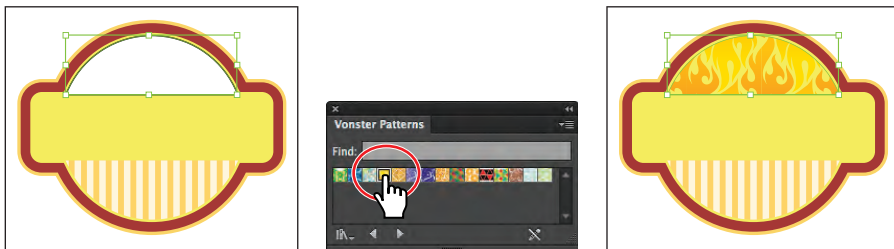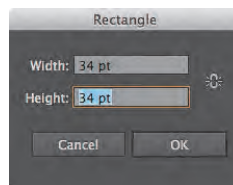
7 Choose Select > Deselect and then File > Save.

Creating your own pattern

In this section of the lesson, you will create your own custom pattern and add it to the Swatches panel.

1 Select the Rectangle tool (■) in the Tools panel. Click once in a blank area of the artboard to open the Rectangle dialog box. Change the Width to **34 pt** and the Height to **34 pt**, and then click OK.

Notice that the new rectangle has the same pattern fill as the shape in the previous steps. You will use this shape as the basis for your new pattern.

2 With the rectangle selected, press the letter D to set the default stroke (black) and fill (white) on the selected shape. A pattern that you create cannot contain another pattern.

3 With the rectangle selected, choose Object > Pattern > Make. Click OK in the dialog box that appears.

When you create a pattern, Illustrator enters Pattern Editing mode, which is similar to Isolation mode you've worked with in grouped content. Pattern Editing mode allows you to create and edit patterns interactively, while previewing the changes to the pattern on the artboard. The Pattern Options panel (Window > Pattern Options) also opens, giving you all of the necessary options to create your pattern.

● **Note:** You don't have to have anything selected to start with a blank pattern.
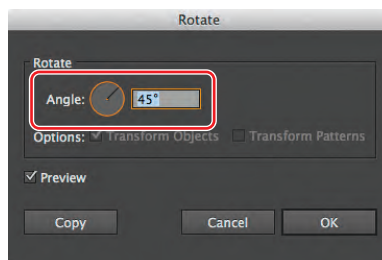
4 Select the Selection tool (▶), and click the center rectangle to select it. Press Ctrl++ (Windows) or Command++ (Mac OS) twice to zoom in.

Notice the series of lighter colored rectangles around the center rectangle. This is the rectangle shape repeated into a pattern and dimmed to let you focus on the original rectangle.
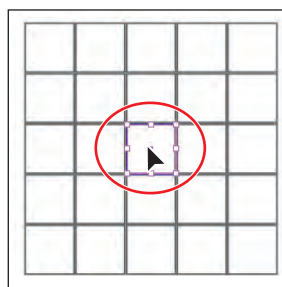
● **Note:** A pattern can be composed of more than one shape. For instance, to create a flannel pattern for a shirt, you can create three overlapping rectangles or lines, each with varying appearance options.

5 With the shape selected, double-click the Rotate tool (↻) in the Tools panel. In the Rotate dialog box, change the Angle value to **45**. Click OK.

Notice the blue rectangle in the center of the pattern. This indicates the tile edge (which is a part of the pattern definition area).

6 Select the Selection tool and, pressing the Shift+Alt (Windows) or Shift+Option (Mac OS) keys, drag the top bounding point of the selected rectangle down until the width and height are approximately 30 pt.

Notice that the tile area (the blue box) didn't change in size and that the rectangles have more space between them. At this point, you can edit the existing artwork, add new artwork, or delete artwork.
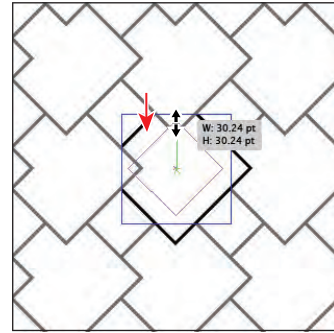
7 In the Pattern Options panel, change the Name to **checker** (the name is what appears in the Swatches panel as a tool tip). Choose Hex By Column for the Tile Type.

You have three Tile Type choices: the default grid pattern, a brick style pattern, or the hex pattern. The Brick Offset options can be selected when you choose a brick Tile Type.
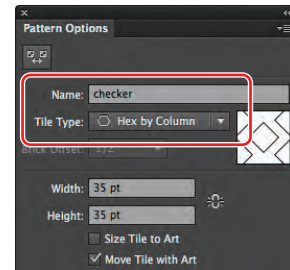
8 Click the Pattern Tile Tool button (🔳) in the upper-left corner of the Pattern Options panel. Position the pointer over the right, middle tile size control widget of the blue tile. Press the Alt (Windows) or Option (Mac OS) key, and drag the widget to the right a bit to make it wider.

To stop editing the pattern tile, you can either select any tool in the Tools panel or click the Pattern Tile Tool button (🔳).
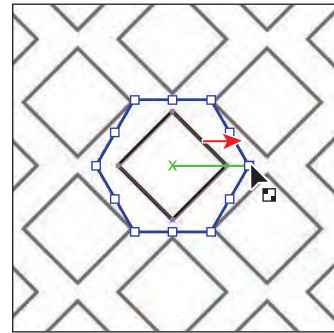
Instead of manually dragging to resize the tile with the Pattern Tile Tool, you can also enter values in the Width and Height fields in the Pattern Options panel. You can do this only if Size Tile To Art is not selected.

**9** Select Size Tile To Art in the Pattern Options panel.

The Size Tile To Art selection fits the tile area (the blue hex shape) to the bounds of the artwork, changing the spacing between the repeated objects. You can manually change the width and the height of the pattern definition area to include more content or to edit the spacing between.

10 Change the H Spacing to **5** pt, and change the V Spacing to **-5** pt.

▶ **Tip:** The spacing values can be either positive or negative values, to move the tiles apart or to bring them closer together.

11 For Overlap, click the Bottom In Front button (⬧), to see the change in the pattern.

The artwork in a pattern may begin to overlap, due to the size of the tile or the spacing values. By default, when objects overlap horizontally, the left object is on top; when objects overlap vertically, the top object is on top.
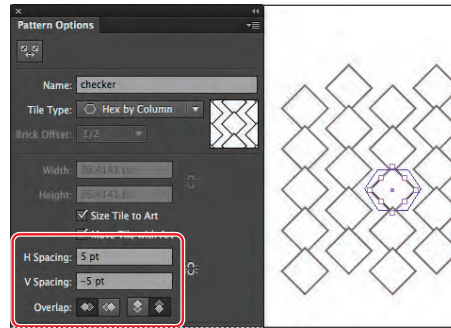
The Pattern Options panel has a host of other pattern editing options, including the ability to see more or less of the pattern, called Copies. To learn more about the Pattern Options panel, search for "Pattern options" in Illustrator Help.

12 Choose Edit > Undo Pattern Options *twice* to remove the overlap change and the vertical spacing change, but keep the horizontal spacing at 5 pt.

13 Select Show Swatch Bounds at the bottom of the Pattern Options panel to see the dotted area that will be saved in the swatch. Deselect Show Swatch Bounds.

14 With the rectangle still selected, change the Fill color to CMYK Cyan in the Control panel.

15 Click Done in the bar along the top of the Document window.

16 Choose File > Save.
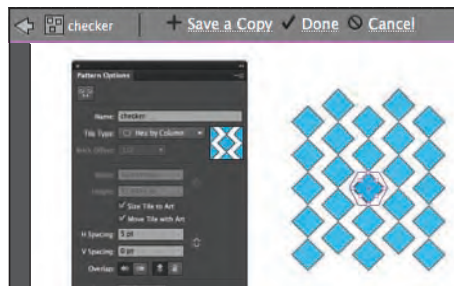
> **Tip:** If you want to create pattern variations, you can click Save A Copy in the bar along the top of the Document window. This saves the current pattern in the Swatches panel as a copy and allows you to continue creating.

Applying a pattern

You can assign a pattern using a number of different methods. In this lesson, you will use the Swatches panel to apply the pattern. You can also apply the pattern using the Fill color in the Control panel.

1 Choose View > Fit Artboard In Window.

2 With the Selection tool (▶), click the shape filled with the Blazer pattern swatch near the top of the artboard.

3 Select the checker pattern swatch from the Fill color in the Control panel.

4 Choose Select > Deselect and then File > Save.
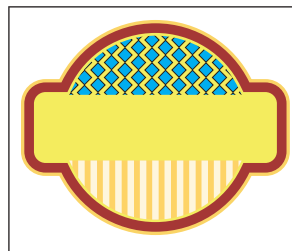
● **Note:** Your pattern may look different, and that's okay.

Editing a pattern

Next, you will edit the saved pattern and then update all instances in your artwork.

1 In the Swatches panel, double-click the checker pattern swatch to edit it.

▶ **Tip:** You can also select an object filled with a pattern swatch, and with the Fill box selected in the Tools panel, choose Object > Pattern > Edit Pattern.

2 In Pattern Editing mode, with the Selection tool, click to select the center diamond shape in the tile. In the Control panel, change the fill color to the yellow swatch named **label background stroke** (in a color group) and the Stroke weight to **0**.
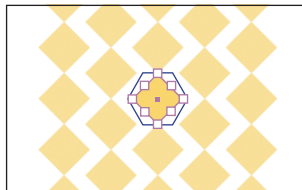
3 Click Done to exit Pattern Editing mode.

4 Click the shape with the checker pattern fill to select it. Double-click the Scale tool (⬚) in the Tools panel to make the pattern larger without affecting the shape. In the Scale dialog box, change the Uniform Scale to **110%**. Deselect Scale Strokes & Effects, if necessary. Deselect Transform Objects, which selects Transform Patterns, and select Preview to see the change. Click OK.
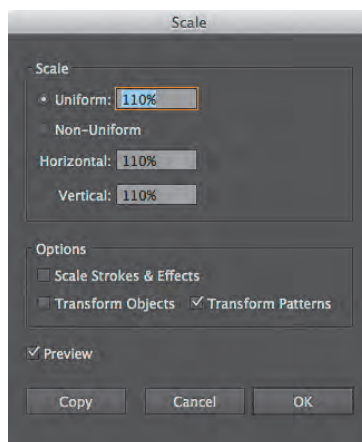
5 On the artboard, select and delete the original white rectangle that you used to create the pattern.

6 Open the Layers panel, and make all layers visible by selecting the Visibility column to the left of the tomato and top shapes layers. Click the Layers panel icon to collapse the panel group.
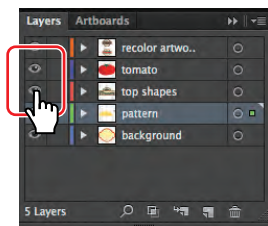
7 Choose Select > Deselect and then File > Save.

8 Choose File > Close.

Working with Live Paint

Live Paint lets you paint vector graphics intuitively, by automatically detecting and correcting gaps that otherwise would have affected how fills and strokes were applied. Paths divide the drawing surface into areas, any of which can be colored, regardless of whether the area is bounded by a single path or by segments of multiple paths. Painting objects is like filling in a coloring book or using watercolors to paint a pencil sketch. Live Paint does not edit the underlying shapes.

Creating a Live Paint group

Next, you will open a file and paint objects using the Live Paint Bucket tool.

1   Choose File > Open, and open the L6start_2.ai file in the Lesson06 folder.

2   Choose File > Save As. In the Save As dialog box, name the file **greetingcard.ai** and navigate to the Lesson06 folder. Leave the Save As Type option set to Adobe Illustrator (*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings and then click OK.

3   Use the Selection tool (▶) to drag a selection across the three white flower shapes on the artboard. The rest of the content is locked.

4   Choose Object > Live Paint > Make.

This creates a Live Paint group that you can now paint using the Live Paint Bucket tool (🔲). Once a Live Paint group is created, each path remains fully editable. When you move or adjust a path's shape, the colors are automatically reapplied to the new regions that are formed by the edited paths.

▶ **Tip:** You can tell it's a Live Paint group because of the special bounding box around all three shapes.

5   Select the Live Paint Bucket tool (🔲) from the Shape Builder tool (🔲) group in the Tools panel. Before painting, click the Fill color in the Control panel and select the yellow/orange swatch in the Swatches panel.

● **Note:** You may need to press the Escape key to hide the Swatches panel.

6   Position the pointer over the center of the Live Paint group. As you move over Live Paint objects, they are highlighted and three color swatches appear above the pointer. The swatches represent the three adjacent swatches in the Swatches panel. The center swatch is the last selected color. Click when the larger, center flower shape is highlighted.

▶ **Tip:** You can also drag across multiple shapes to apply color to them all at once.

7 Move the pointer to the left, to the overlapping shape. Click the Left Arrow key twice to highlight the light yellow color in the three swatches above the pointer. Click to apply the color to the flower.

● **Note:** You can also switch to a color other than the one selected in the group by clicking a color in the Swatches panel.

8 Paint the remaining three flower shapes using the colors you see in the figure at right (yellow, pink, and dark pink). Before clicking to apply a color, press the Left and Right Arrow keys to cycle through the colors in the Swatches panel.

Painting strokes with the Live Paint Bucket tool is just as easy as painting fills. First, you need to enable the option to paint strokes.

● **Note:** To learn more about the options in the Live Paint Bucket Options dialog box, search for "Paint with the Live Paint Bucket tool" in Illustrator Help.

9 Double-click the Live Paint Bucket tool in the Tools panel. This opens the Live Paint Bucket Options dialog box. Select the Paint Strokes option, and then click OK.

Next, you'll remove the inner black strokes from the shapes and retain the outer black strokes.

10 Position the tip (▶) part of the pointer directly over the stroke, between the center shape and the light yellow filled shape, as shown in the figure. When the Stroke pointer (↘) appears, click the Left Arrow key to select None and then click the stroke to remove the stroke color.

11 Position the pointer directly over the stroke, between the center shape and the light pink filled shape, as shown in the figure. When the Stroke pointer appears, ensure that None appears in the swatches above the pointer and then click the stroke to remove the stroke color.

12 Choose Select > Deselect to see how the strokes are now painted. Then, choose File > Save.
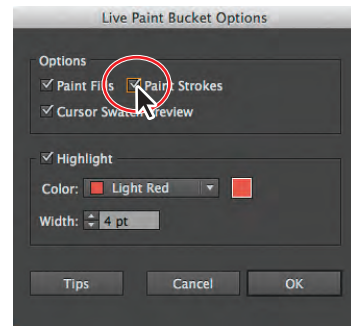
Editing Live Paint regions

When you make a Live Paint group, each path remains editable. When you move or adjust a path, the colors that were previously applied don't just stay where they were, like they do in natural media paintings or image-editing software. Instead, the colors are automatically reapplied to the new regions that are formed by the edited paths. Next, you will edit the paths and add another shape.

1 Select the Selection tool (⬉) in the Tools panel, and then hold down the spacebar and drag the artboard to the right to reveal the white flower shape off the left edge of the artboard.

2 Select the flower shape, and choose Edit > Copy.

3 Double-click the Hand tool (✋) to fit the artboard in the Document window.

4 With the Selection tool, double-click the Live Paint group.

Illustrator enters Isolation mode and allows you to edit each shape independently.

5 Choose Edit > Paste. Drag the pasted flower shape down to the lower left so that it overlaps the center flower, as shown in the figure.
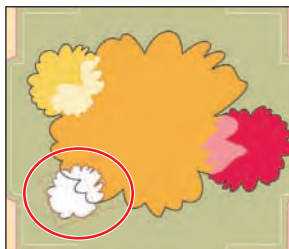
6 Select the Live Paint Bucket tool (🪣) in the Tools panel, and paint the outer half of the pasted flower with dark green and the inner half with light green.

7 Position the pointer directly over the stroke, between the center orange shape and the green-filled shape. When the Stroke pointer appears, click the Left Arrow key to highlight None and then click the stroke to remove the stroke color. Do this for the last remaining stroke inside the green-filled shape as well.

8 Select the Selection tool, and drag the green-filled flower shape a little up and to the left, to reposition it. Notice how the color fill changes.

9 Select the Direct Selection tool (⬉) in the Tools panel, and position the pointer over the small yellow flower in the upper-left corner. Click one of the anchor points on the edge of the center flower (located in the middle of the small yellow flower), and drag to reposition it.

Notice how the paths are still completely editable and the colors are automatically reapplied to the new regions that are formed by the edited paths.

Next, you will add a white color to the center of the larger flower so that you can add text and make it readable.

10 Press Ctrl++ (Windows) or Command++ (Mac OS) twice to zoom in. Press Escape to exit Isolation mode, and then choose Select > Deselect.

11 Expand the Layers panel by clicking the Layers panel icon (▨) on the right side of the workspace. Click the visibility column for the layer named text (just above the eye icon for the layer named live paint). Collapse the Layers panel group.
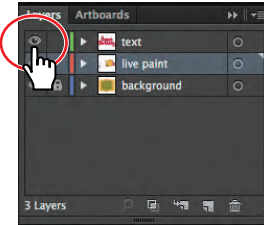
12 Select the Selection tool (▶), and double-click the flower shapes to enter Isolation mode.

13 Select the Line Segment tool (⟋) in the Tools panel. Change the Stroke color to white in the Control panel.

14 Click the center of the orange flower and, in the Line Segment Tool Options dialog box, change the Length to **2.55** in and the Angle to **0**. Click OK, and leave the line selected.

15 Select the Selection tool. In the Control panel, with the center point selected in the reference point locator (▦), change the X value to **4.48** in and the Y value to **1.8** in to position the line and leave a small gap on the right end of the line between the end of the line and the flower shape.
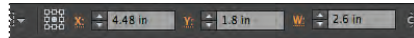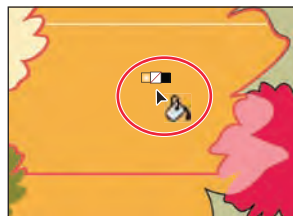
16 Select the Line Segment tool (⟋) and draw another line below that by pressing the Shift key and clicking the right edge of the green flower and then dragging to the right, to the point where the line snaps to the left edge of the light pink shape. The Smart Guides (View > Smart Guides) help you snap the line to the shapes.

17 Select the Live Paint Bucket tool in the Tools panel, and position the cursor over the center of the large orange flower, between the lines. *Do not click*.

Note that the bottom line "closes" the bottom of the flower shape, but the top line may not close the top of the path. That means that if you were to click (don't), the color would fill everywhere that the red outline surrounds. The red line in the figure below has been enhanced to see it more easily.
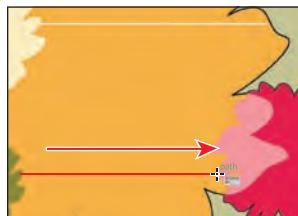
Draw the bottom line.   Hover to see the paint area.

Working with gap options

Next, you will work with the Gap Options dialog box.

1 Choose Select > All.

2 Choose Object > Live Paint > Gap Options. In the Gap Options dialog box, select Gap Detection, if it is not already selected. Choose Medium Gaps from the Paint Stops At menu.
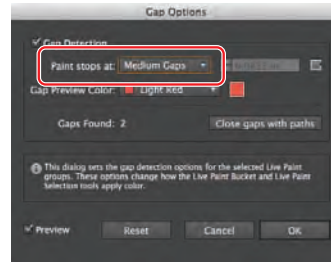
The Gap Preview Color is set to highlight any gaps it detects in red. Setting the gap detection stops paint from leaking through some of the gaps between objects as you paint. Look at the artwork to see any gaps highlighted in red. The gap between the top line and the right edge of the flower shape should be closed with a red line. If not, you can try choosing Large Gaps from the Paint Stops At menu. Click OK.

3 Select the Live Paint Bucket tool (⚄), and cross over the space between the two lines you drew. Make sure that white is showing in the swatches above the pointer, and then click to fill the space with white.
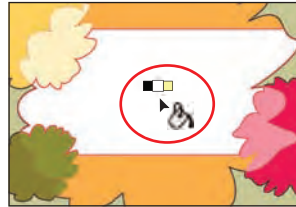
4 Choose View > Fit Artboard In Window.

5 Select the Live Paint Selection tool (⚄) in the Tools panel, from the Live Paint Bucket tool group. Click the top yellow/orange shape, and Shift-click the bottom yellow/orange shape, as shown in the figure below. Choose the gradient swatch named background from the Fill color in the Control panel.
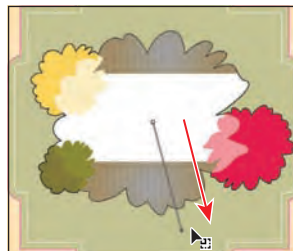
6 Select the Gradient tool (▣) in the Tools panel. Make sure that the Fill box is selected towards the bottom of the Tools panel. Drag from the center of the large flower shape (in the white area) down and to the right to create a uniform gradient across both shapes.

7 Select the Selection tool (▶), and press Escape to exit Isolation mode and to see the "Happy Birthday" text on the artboard.

Select the pieces.   Drag with the Gradient tool.   The final result.

8 Choose File > Save then File > Close.