project 6

Candy Packaging

Your client, a candy manufacturer, has hired you to design and build the packaging for a new product launch at its anniversary party, which will be held at the annual candy expo. You will incorporate client-supplied elements and create custom graphics as you develop an attractive, modern box design.

This project incorporates the following skills:

- ❑ Using Image Trace to create a complex illustration
- ❑ Sampling colors to create custom swatches
- ❑ Using warp and 3D effects to add depth to artwork
- ❑ Creating type on an irregular path
- ❑ Controlling object blending modes and opacity
- ❑ Understanding and defining raster effect settings
- ❑ Previewing 3D artwork

Project Meeting

client comments

We're celebrating our company's 75th anniversary this year. For the annual candy expo, we are introducing SmartTarts™ — a new product that combines different flavor profiles and textures into a single candy. Response at early focus groups has been very positive, so we're excited about the potential.

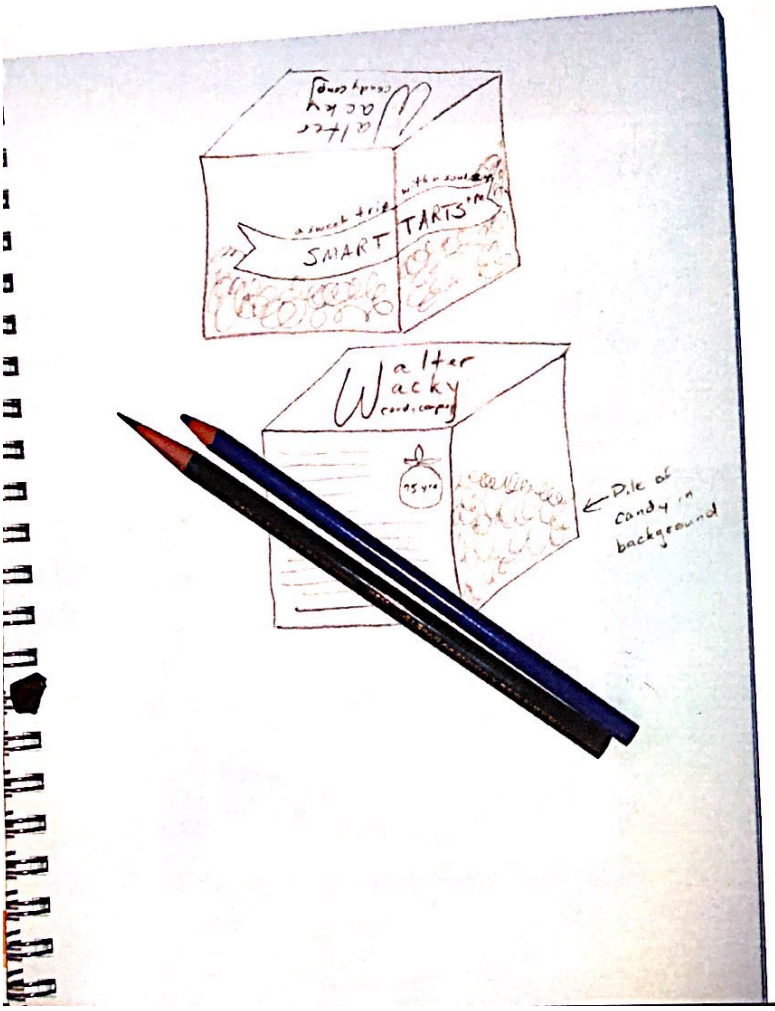
We would like to create a fun, colorful box to hand out product samples at our reception following the first day of the show. We'd like to give a larger sample size to the VIP guests who are invited to the party, so we need a box that is a 4-inch cube. Later we'll need to create a smaller box that we can use for show-floor samples, as well as final packaging that will be used for the retail product.

art director comments

We have a template from the printer with the package structure already laid out, based on an existing die that's used to cut the flat box from the press sheet. There's no need to reinvent the wheel, so use this template to build the finished box artwork.

The only thing they said they want is "fun, colorful" packaging, so we have complete artistic freedom for this project. They did send some components that need to be included: a background image, an anniversary logo, and some copy. They didn't send a company logo, so I think we'll try something creative with their company name.

Illustrator has all the tools you need to make this package technically accurate and aesthetically pleasing. When you finish the layout, you can even use built-in tools to create a comp of the final folded box.



project objectives

To complete this project, you will:

- ❑ Create the package file from a template
- ❑ Sample colors to create custom swatches
- ❑ Create warp and 3D effects
- ❑ Create type on an irregular path
- ❑ Change object blending modes and opacity
- ❑ Apply raster effects to vector objects and placed images
- ❑ Apply effects to pieces of a group
- ❑ Define raster effect settings
- ❑ Preview transparency flattening
- ❑ Flatten transparency in a PDF file
- ❑ Preview a 3D representation of the completed box artwork

Stage 1 Building the File Structure

When you work on a package design, it's important to realize that many types of packages have a standard size and shape. Although there is something to be said for standing out in a crowd, packaging design is often governed by the space allowed on store shelves — which means you probably won't have any choice regarding the size and shape of the package.

You also need to understand that packages are typically designed and printed as a flat layout, using a template to indicate edges and folds; they are then diecut, folded, and glued. The next time you finish a box of crackers or cereal, tear it apart along the glue flaps to see how the package was designed. Because these types of packages are common sizes, printers often have existing templates you can use.

Create the Package File from a Template

The printer for this package has provided you with a template file that includes the die-cut layout and folding guides. You will use this file as the basis for the entire project.

1. **Download `Candy_AI18_RF.zip` from the Student Files web page.**

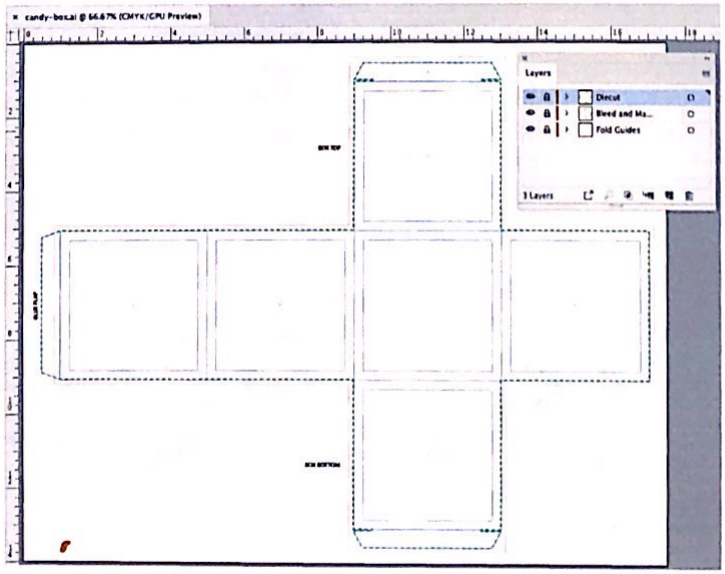
2. **Expand the ZIP archive in your WIP folder (Macintosh) or copy the archive contents into your WIP folder (Windows).**

   This results in a folder named **`Candy`**, which contains the files you need for this project. You should also use this folder to save the files you create in this project.

3. **Create a new file by opening the `square-box.ait` template file from your WIP>Candy folder. Resize the view so you can see the entire artboard.**

   The file has three layers: one has guides indicating the location of the folds, one has guides that define margin and bleed areas for each panel, and one has the die lines for the box shape. The box's top and bottom panels are identified, as well as the flap where glue will be applied in the converting process to create the finished box shape. (You should notice that the red bleed guide does not extend to the end of the glue flap; the printer for this job has recommended that ink should not be printed in the gluing area — a common requirement for package printing.)

4. **Save the new file as a native Illustrator file named `candy-box.ai` in your WIP>Candy folder, then continue to the next exercise.**



Use Image Trace to Create a Complex Image

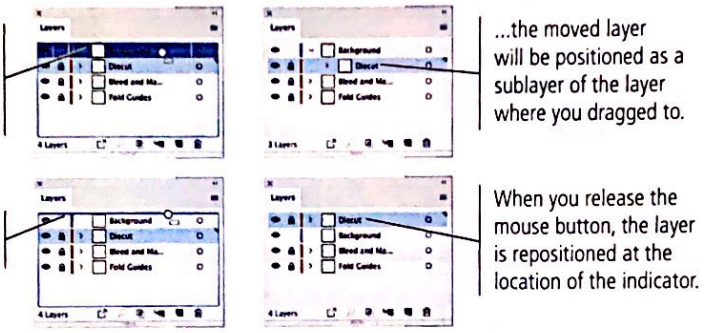
If you have completed the other projects in this book, you should have a solid foundation for creating basic and complex vector graphics, whether based on a sketch, based on a photograph, or from scratch. Another option — Image Trace — makes it very easy to create vector graphics directly from an image, using a variety of options to determine how realistic the resulting illustration will be.

1. **With candy-box.ai open, create a new layer named Background.**

2. **In the Layers panel, drag the Diecut layer above the Background layer.**

   The Diecut layer shows the location of the cut lines. Although it will not be printed in the final output, this layer needs to be visible while you create the basic package.

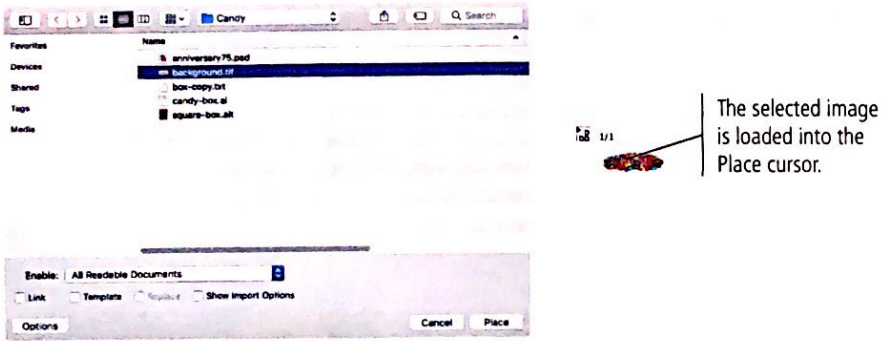
   Be careful how you drag the layer to reposition it. If you accidentally move the layer to the wrong place in the stack, or move it to be a sublayer of another layer, simply drag it again to the top of the layer stack.



> *Note:*
>
> *Even though the panel layers are above the guide layers, guides always appear in front of artwork.*

3. **Select the Background layer to make it the active layer.**

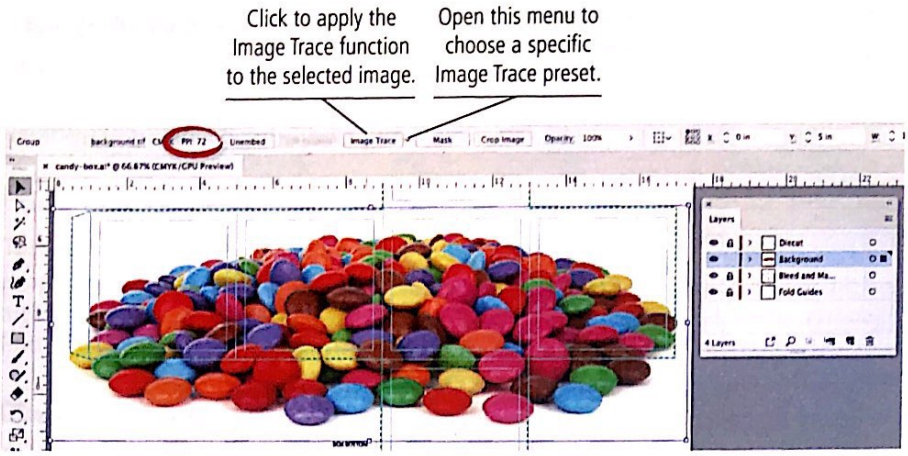
4. **Choose File>Place. Select the file background.tif in your WIP>Candy folder; make sure none of the options at the bottom of the dialog box are checked, then click Place.**



5. **Click the loaded Place cursor to place the selected image.**

6. **Using the Selection tool, position the placed file so the pile of candy extends across all four side panels and does not extend into the top panel. (Use the following image as a guide.)**

As you can see in the Control panel, the placed image is only 72 ppi, which is insufficient resolution for commercial printing. Because you are going to use this image as the basis for a vector illustration, the low resolution will not be a problem.



7. **Hide all but the Background layer.**

You don't need these layers for this stage of the process; hiding them allows you to better see the effect of the Image Trace process.

Note:

In the Layers panel, Option/Alt-clicking the Eye icon for a layer hides all other layers in the file.

8. **With the placed background image selected, click the Image Trace button in the Control panel.**

By clicking this button, Illustrator automatically traces the image using the default black-and-white preset.

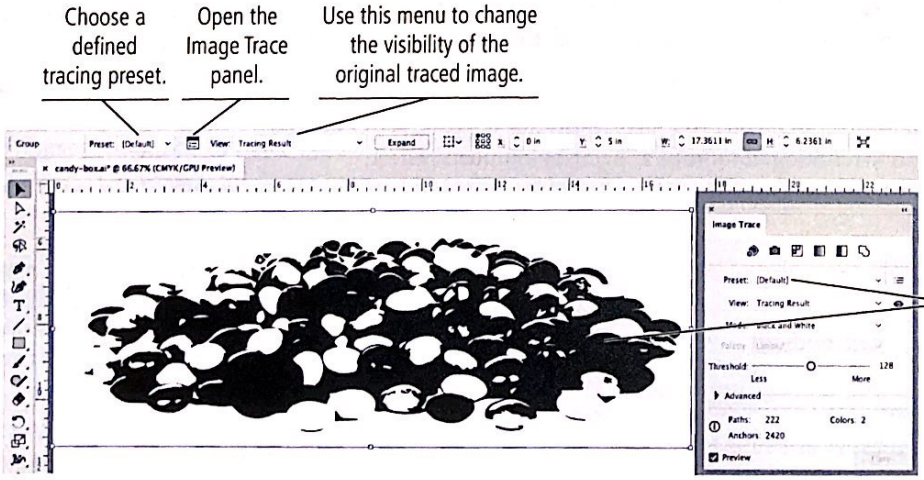
The result is a special type of object called an **image tracing object** (which you can see in the Control panel). As long as you don't expand the tracing object, you can change the settings to produce different results from the same picture.

Note:

You can also apply the default Image Trace settings by choosing Object>Image Trace>Make.

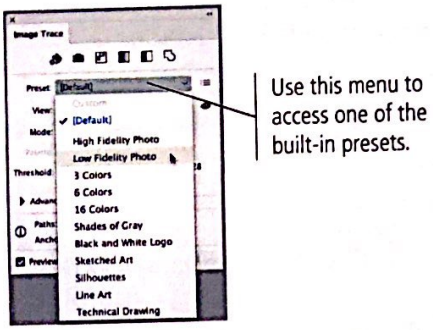
9. **Open the Image Trace panel (Window>Image Trace).**

When you trace an image, the original photo is hidden and the illustrated version appears in its place.

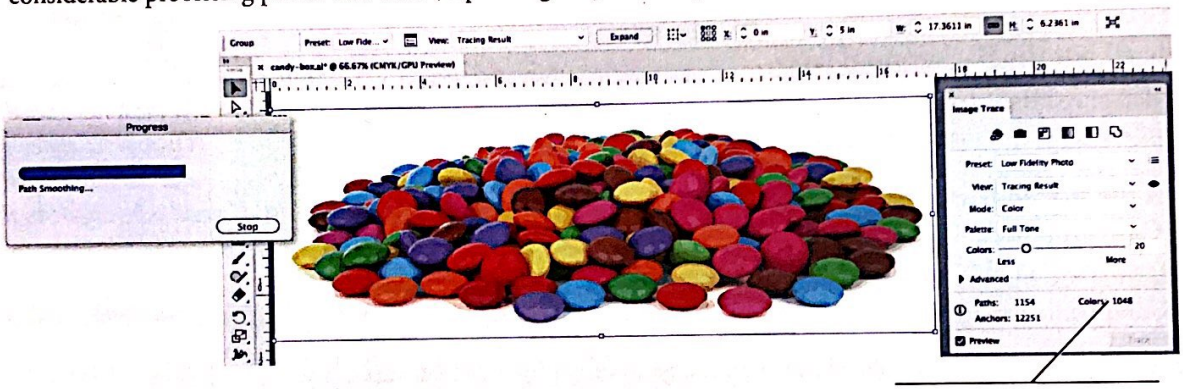


10. Open the Preset menu and choose Low Fidelity Photo.

Illustrator includes a number of Image Trace presets that you can apply to any image. These can be accessed in the Image Trace panel or Control panel when a tracing object is selected.



As long as you don't expand the tracing object, you can change the settings that generate the illustration. However, when the Preview option is checked at the bottom of the panel, every change requires Illustrator to reprocess the image to generate the correct curves. Because this is a rather large image, processing each change could take considerable processing power and time (depending on your computer).

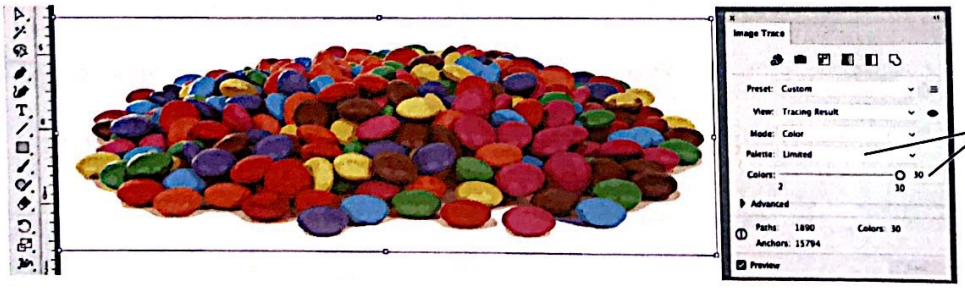


11. Open the Palette menu and choose Limited.

Using a limited color palette can reduce the complexity of the file. The Image Trace panel shows that you have reduced the tracing from 1000+ colors (from Step 10) to 30, which is the default option when using the Limited palette option. You can use the Colors slider to reduce the number of colors even further.

By allowing only a small number of colors, you force Illustrator to create larger objects of solid colors — ultimately resulting in more of a "paint-by-numbers" effect.

> ***Note:***
>
> *Increasing the number of possible colors creates a more realistic result (and a more complex illustration).*



12. **At the bottom of the panel, uncheck the Preview option.**

Rather than waiting to preview each change, it's a better idea to activate the preview after defining your initial choices; you can then toggle the preview on and off as necessary to reduce the time you spend sitting and waiting.

13. **Click the arrow to the left of the Advanced heading to expand the panel.**

14. **Change the Paths option to 75%.**

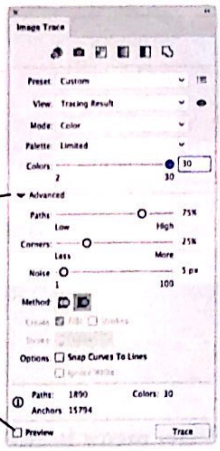
This controls how tightly the tracing conforms to the original image; a higher number means more tightly fitting paths.

15. **Change the Corners option to 25%.**

This controls how corners in the original image are represented in the tracing; a higher number results in more corners instead of rounded paths.

16. **Change the Noise option to 5 px.**

This controls the smallest-size area that is ignored in the tracing result; higher values mean fewer small spots of color in the tracing.



Understanding Image Trace Options

ILLUSTRATOR FOUNDATIONS

With so many options and sliders, the Image Trace panel might seem intimidating at first. As with any tool, it's easier to get the desired results if you understand the options.

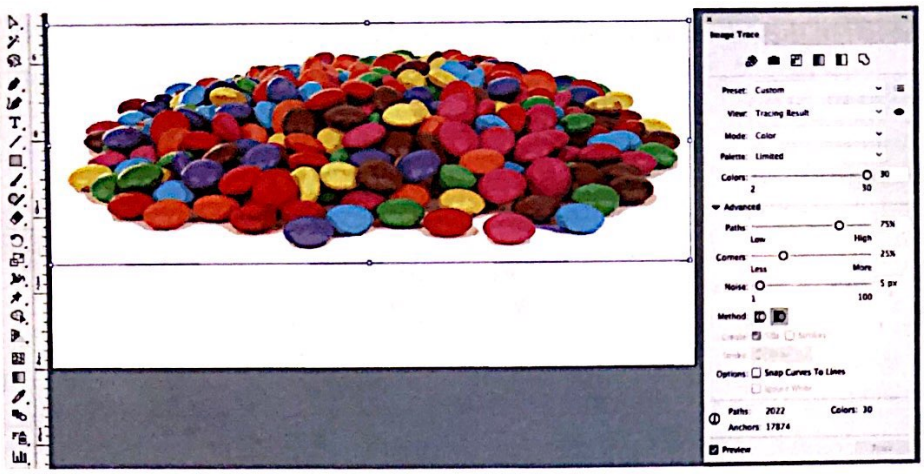
Buttons at the top of the panel apply specific color modes to the illustration: (from left) Auto Color, High Color, Low Color, Grayscale, Black and White, or Outline.

- **Preset** includes a number of built-in groups of settings that produce specific results, such as Sketched Art or Technical Drawing.
- **View** changes what is visible in the document. You can show the tracing result with or without outlines, the source image with or without outlines, or only the source image.
- **Mode** defines the color mode (color, grayscale, or black and white) of the resulting illustration.
- **Palette**, which is available when the Mode is set to Color, defines the specific colors that can be used; the default Full Tone option allows Illustrator to use an unlimited palette to create the illustration.
- **Threshold**, which is available when the Mode is set to Black and White, defines the maximum tonal value that will remain white before an area is filled with black.
- **Colors.** When Full Tone or Automatic is selected in the Palette menu, this option defines the accuracy of illustration colors as a percentage; higher values result in a larger number of colors being used.

  When the Limited palette is selected, this option defines the specific number of colors Illustrator can use to trace the image. More colors create more depth, but also increase the complexity and number of points in the illustration.
- **Paths** adjusts how closely traced paths will follow the pixels of the original image.
- **Corners** defines the minimum angle that can be traced as a sharp corner instead of a smooth curve.
- **Noise** adjusts the smallest color area (in pixels) that can be drawn as a path.
- **Method** determines whether shapes in the illustration are created as abutting (left) or overlapping (right).
- When you use the Black and White color mode, you can use the **Create** options to define whether the illustration is created as fills, strokes, or a combination.
  - **Fills** results in solid-filled paths.
  - **Strokes** results in paths with an applied stroke color and weight. The Stroke Width field defines the maximum stroke weight that can be applied before a stroke will be recreated as a fill object.
- **Snap Curves to Lines** replaces slightly curved lines with straight lines.
- **Ignore White** does not create shapes to represent white areas in the image.

17. **Check the Preview option at the bottom of the panel to review the results of your choices.**

The change is subtle, but you should notice slightly more accurate path shapes (Step 14), fewer sharp corners (Step 15), and fewer small areas of isolated color (Step 16).



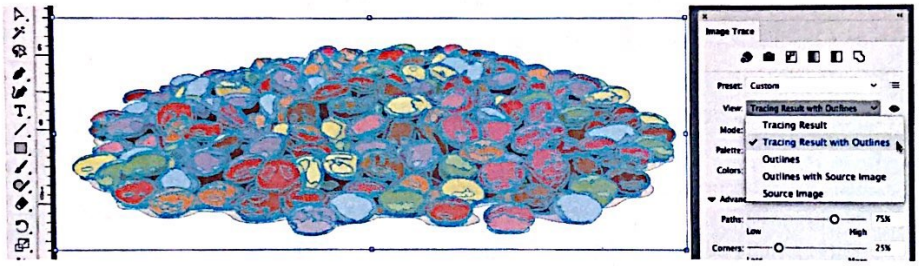
18. **Open the View menu in the Image Trace panel and choose Tracing Result with Outlines.**

By default, vector outlines that make up the image-tracing object are not visible in the document. Without expanding the image tracing object, these preview options allow you to view the resulting paths based on your current Image Trace settings.

When Tracing Result with Outlines is selected, you can see the vector paths that will make up the resulting illustration.

Note:

To access the individual anchors and paths, you have to expand the image-tracing object.

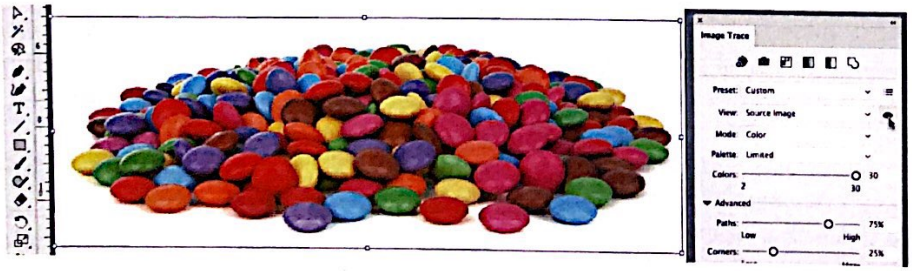


19. **Choose Tracing Result in the View menu.**

This turns off the path outlines and restores the illustration to full opacity.

20. **Click the Eye icon to the right of the View button and hold down the mouse button.**

You can click and hold this button to show the original image that is used to make the Image Trace. This provides a quick method for reviewing the original image, while still experimenting with the Image Trace options.



21. **Save the file and then continue to the next exercise.**

Sample Colors and Create Custom Swatches

Using the Eyedropper tool, you can select colors from other objects in the file, which makes it easier to create a cohesive package design. In this exercise you will sample three colors from the tracing image; you will use those swatches later for other elements of the design.

1. **With candy-box.ai open, deselect everything in the file.**

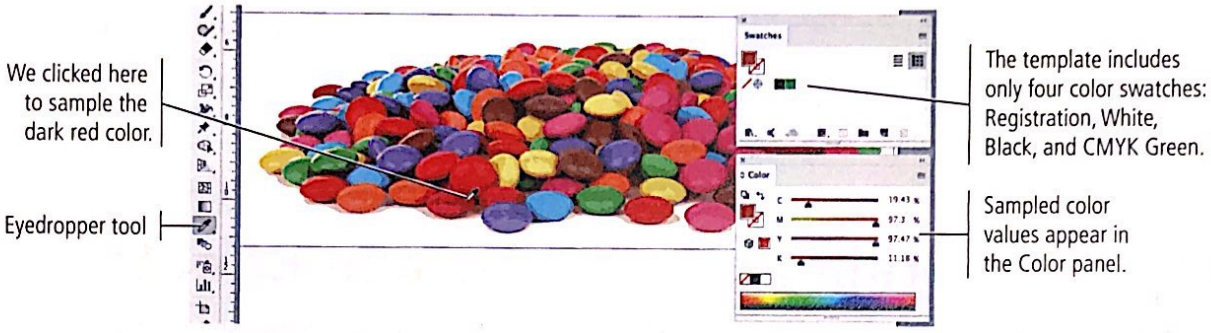
   In many instances, sampling a color with the Eyedropper tool automatically changes the attributes of any selected objects. Although this is not the case for a tracing object, you should get into the habit of deselecting objects before sampling new colors — unless you want to purposefully change the color of a selected object.

2. **Display the Swatches and Color panels, and then choose the Eyedropper tool in the Tools panel.**

   If you don't see the color sliders in the Color panel, choose Show Options in the panel's Options menu.

3. **Click the Eyedropper tool in a dark red color of the tracing object.**

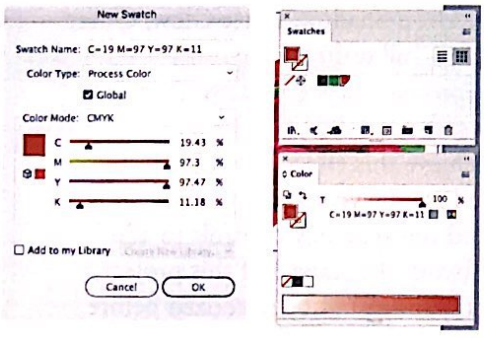
   Clicking with the Eyedropper tool changes the color in the Color panel; this method is called **sampling** color.



4. **With the Fill icon on top (the active attribute) in the Swatches and Color panels, click the New Swatch button at the bottom of the Swatches panel.**

5. **In the resulting New Swatch dialog box, activate the Global check box and uncheck the Add to My Library option. Click OK to accept the default swatch name and color values.**

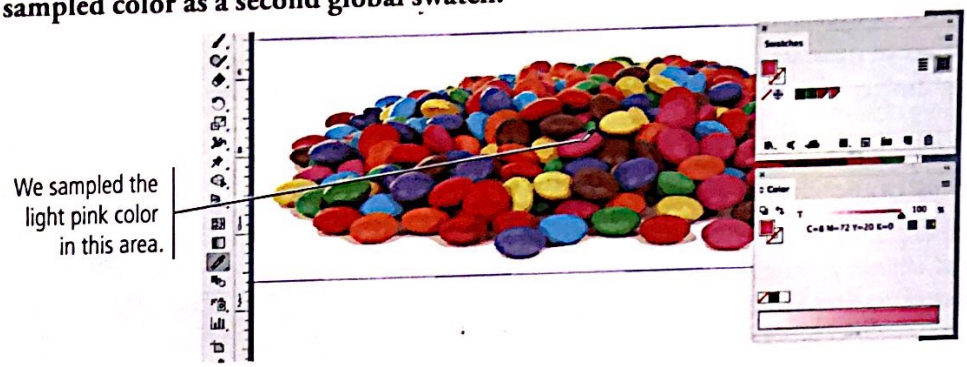
   The sampled color is saved as a swatch, so you can access the same color again later.



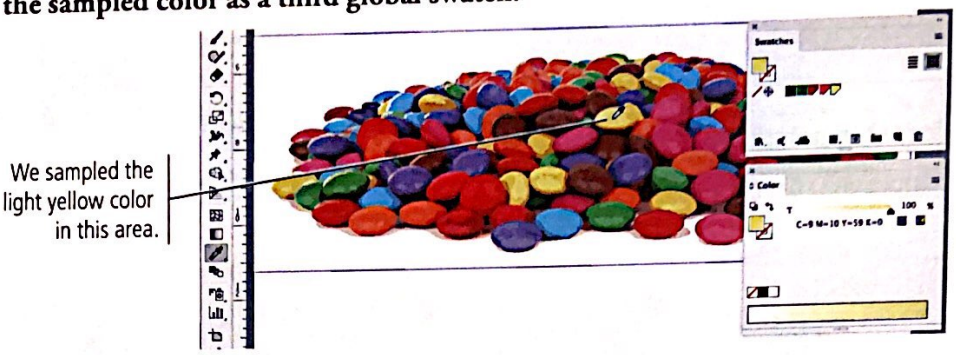
> *Note:*
>
> *If your Color and Swatches panels are docked, drag them out of the dock so you can use them both at once.*

> *Note:*
>
> *You could also simply click the New Swatch button in the Swatches panel to create a custom color swatch.*

6. **Use the Eyedropper tool again to sample a light pink color, and then add the sampled color as a second global swatch.**



7. **Use the Eyedropper tool again to sample a light yellow color, and then add the sampled color as a third global swatch.**

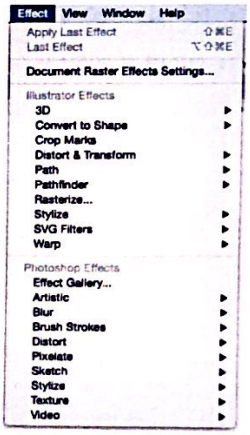


8. **Save the file and continue to the next stage of the project.**

Stage 2 Working with Styles and Effects

When you design a complex project such as this package, it helps to decide on a logical approach to accomplish the task. Rather than jumping around in the layout, it makes more sense to work on one panel at a time. In this stage of the project, you are going to use a number of tools and techniques to create the various pieces that are required, primarily using advanced type options and Illustrator effects.

Illustrator includes a number of effects for enhancing objects in a layout. Effects in Illustrator are live and non-destructive, which means they can be edited or removed from an object without destroying the original object.



When you work with effects, you should be aware that many of these options eventually result in rasterized elements, even when you apply them to vector objects.

Some of the Illustrator Effects — specifically Drop Shadow, Inner Glow, Outer Glow, and Feather options in the Stylize submenu — all utilize some form of graded transparency, and they all result in objects that reproduce as pixels (rasters) instead of vectors. For example, a drop shadow creates a soft-edge shadow object that blends from the shadow color to fully transparent. To achieve this effect on output, the shadow has to be rasterized into pixels that reproduce the visual effect.

In this stage of the project, you use effects and transparency controls to add visual interest to different elements of the box artwork. In Stage 3 of this project, you will learn how to control transparent objects that need to be rasterized before they can be successfully output.

Transform and Warp Design Elements

The first two side panels in this box require a banner-type object that highlights the product name. Rather than simply creating a flat banner, you're going to use built-in effects to create a three-dimensional banner that appears to wave around the box corner. You're also going to create the banner in two separate pieces so that the content for each side can be easily isolated later.

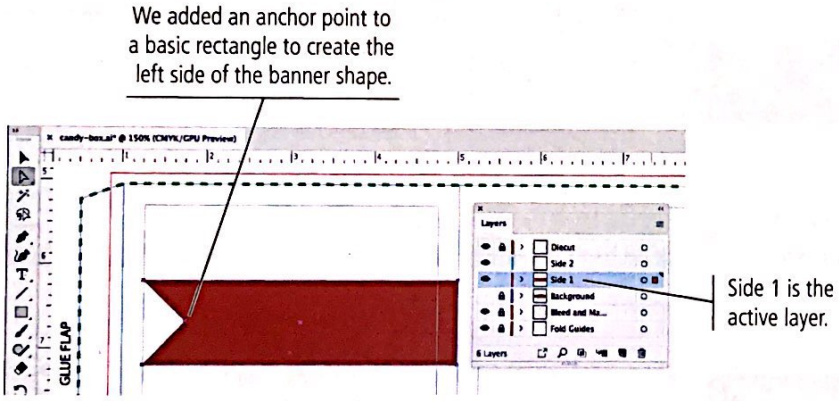
1. **With `candy-box.ai` open, lock and hide the Background layer. Show the Diecut, Bleed and Margins, and Fold Guides layers.**

2. **Create two new layers, named Side 1 and Side 2, immediately above the Background layer. Make Side 1 the active layer.**

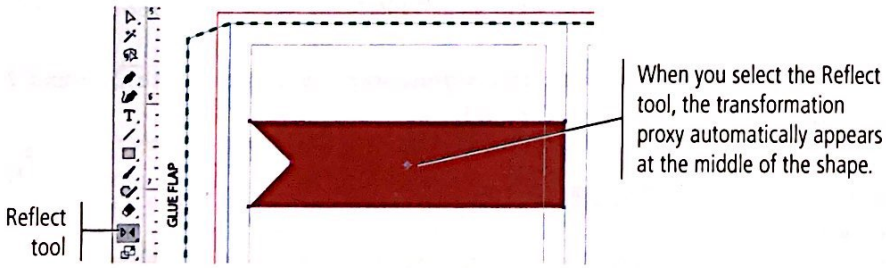
3. **Create a rectangle in the center of the left panel that is 3.75″ wide and 1″ high. Fill the rectangle with the dark red custom swatch and set the stroke to None. Position it so the shape's right edge aligns to the right edge of the left panel.**

   Use the image after Step 4 as a guide for positioning this object.

4. **Using the Add Anchor Point tool, add an anchor point to the left edge of the rectangle, halfway between the corners. Use the Direct Selection tool to drag the point right, creating the basic banner shape.**



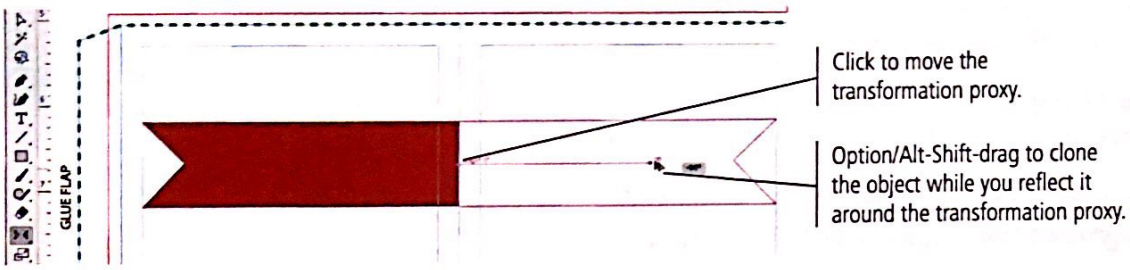
5. **Click the object's fill to select the entire shape, then choose the Reflect tool (nested under the Rotate tool).**



6. **Click the right edge of the selected shape to move the transformation point.**

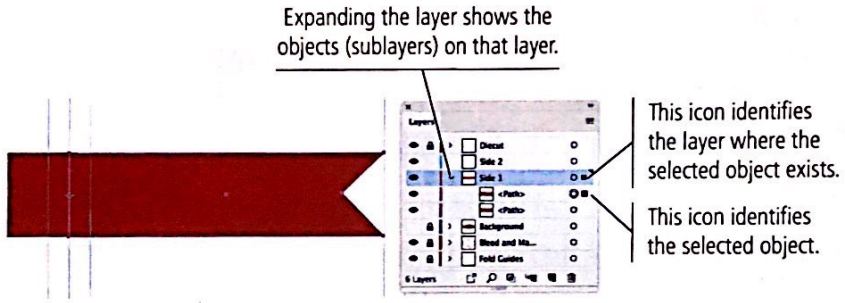
7. **Press Option/Alt-Shift, then drag right to clone and reflect the selected shape.**

Pressing Option/Alt allows you to clone the object while you reflect it. Pressing Shift constrains the reflection to 45° angles.

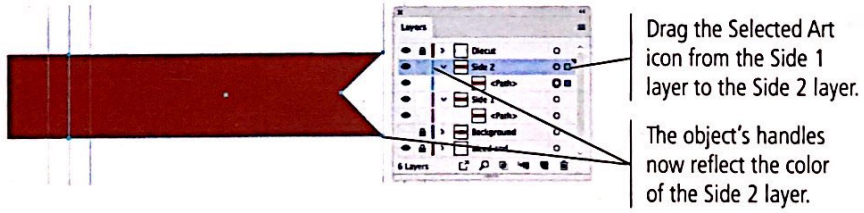


8. **In the Layers panel, expand the Side 1 layer. Drag the Selected Art icon to the Side 2 layer, then expand the Side 2 layer.**

Remember: Expanding a layer shows the objects contained on the layer (called sublayers). You can further expand sublayer groups so that you can show — and select — the individual elements in a group if necessary.

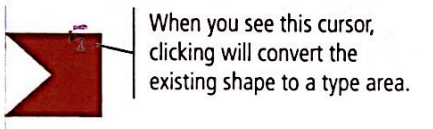


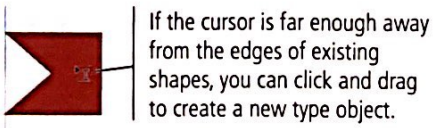
You can drag the Selected Art icon from the layer or from the actual selected object. If more than one object is selected, dragging from the actual layer name moves all selected objects to the new target layer.



9. **With Side 1 as the active layer, use the Type tool to create a point-type object near the center of the banner shape on the left panel.**

Be sure the cursor is not near the existing shape edge when you click with the Type tool. If you click too close to the edge of the existing shape, clicking with the Type tool will convert the existing shape into an area-type object. Use the shape of the cursor as a guide for when you can click to create a new type area.





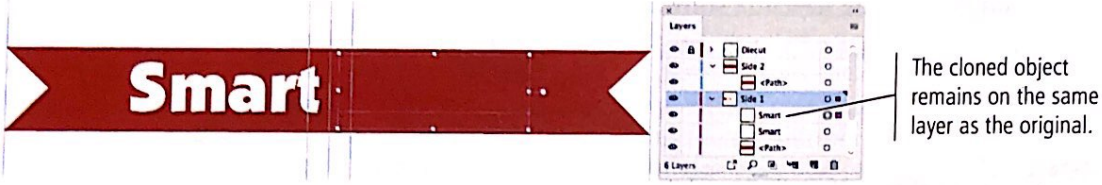
To work around this potential problem, you could also click to create a type object somewhere else, then drag it into position later.

10. **Type Smart to replace the default placeholder text, and then format the text as 60-pt ATC Garnet Ultra with a white fill and right paragraph alignment.**

11. **Position the type object so the text is centered vertically in the banner shape, 1/8″ from the right panel edge (as shown in the following image).**

12. **Using the Selection tool, press Option/Alt-Shift and drag the type object right until the bounding box is 1/8″ from the left edge of the second side panel.**

The cloned object automatically appears on the same layer as the original. Because these objects exist on Side 1, which is lower than Side 2, the red shape on Side 2 obscures the text in the cloned type object.



13. **In the Layers panel, drag the Selected Art icon to the Side 2 layer.**

When you move objects from one layer to another using the Selected Art icon, the objects are automatically moved to the top of the object stacking order on the target layer.

14. **Using the Control or Paragraph panel, change the selected object to left paragraph alignment. Use the Selection tool to reposition the type object to be 1/8″ from the left edge of the Side 2 panel area.**

You might want to reset the 0 point to the left edge of this panel, or you can simply use the artboard rulers to place the second type object properly.

15. **Change the type in the second object to Tarts.**

16. **Apply kerning as necessary for each type object until you are satisfied with the result.**

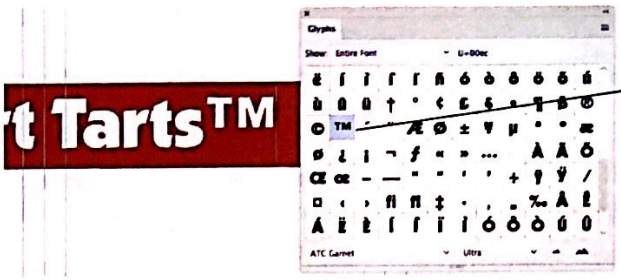
Note:

Feel free to toggle rulers on and off (View>Rulers>Show/Hide Rulers, or Command/Control-R) as necessary to complete the exercises in this project.

17. **Place the insertion point at the end of the second type object, then open the Glyphs panel (Window>Type>Glyphs).**

18. **Scroll through the panel to find the trademark symbol (TM). Double-click that glyph to add it at the location of the insertion point.**

The trademark symbol is a single character (glyph) even though it has two letters.



Note:

On Macintosh:

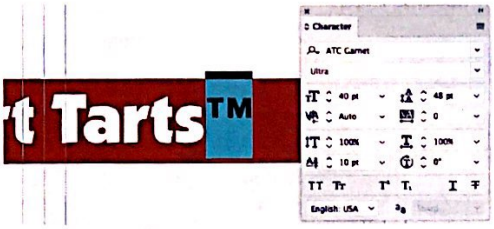
Type Option-2 to enter the trademark glyph ™.

Type Option-R to add the registration glyph ®.

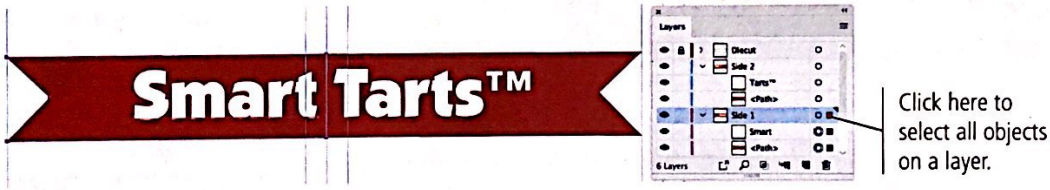
Type Option-G to add the copyright glyph ©.

19. **Highlight the trademark character. In the Character panel, change the type size to 40 pt and change the baseline shift to 10 pt.**

If you don't see the Baseline Shift field, choose Show Options in the panel Options menu.



20. **In the Layers panel, click the empty space to the right of the Side 1 layer to select all objects on that layer.**



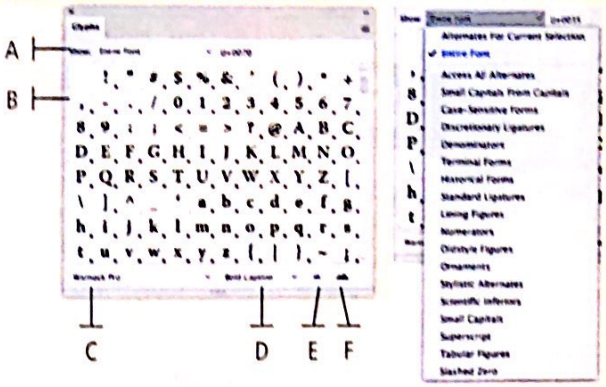
21. **With both shapes on the panel selected, choose Object>Group.**

22. **Repeat Steps 20–21 for the Side 2 panel.**

23. **Save the file and continue to the next exercise.**

Understanding the Glyphs panel

The Glyphs panel (Window>Type>Glyphs or Type>Glyphs) provides access to all glyphs in a font. Using the panel is simple: place the insertion point where you want a character to appear, then double-click the character you want to place.



- **A** Access recently used glyphs, regardless of the active font
- **B** Double-click a glyph in the chart to add it at the current insertion point
- **C** Change the font family that is displayed in the panel
- **D** Change the font style that is displayed in the panel
- **E** Zoom out (make glyphs in the panel grid smaller)
- **F** Zoom in (make glyphs in the panel grid larger)

By default, the panel shows the entire active font, but you can show only specific character sets using the Show menu.

ASCII is a text-based code that defines characters with a numeric value between 001 and 256. The standard alphabet and punctuation characters are mapped from 001 to 128. Extended ASCII characters are those with ASCII numbers higher than 128; these include symbols (copyright symbols, etc.) and some special formatting characters (en dashes, accent marks, etc.).

OpenType fonts offer the ability to store more than 65,000 glyphs (characters) in a single font — far beyond what you could access with a keyboard (even including combinations of the different modifier keys). The large glyph storage capacity means that a single OpenType font can replace separate "Expert" fonts that contain variations of fonts.

Unicode fonts include two-bit characters common in some foreign language typesetting (e.g., Cyrillic, Japanese, and other non-Roman or pictographic fonts).

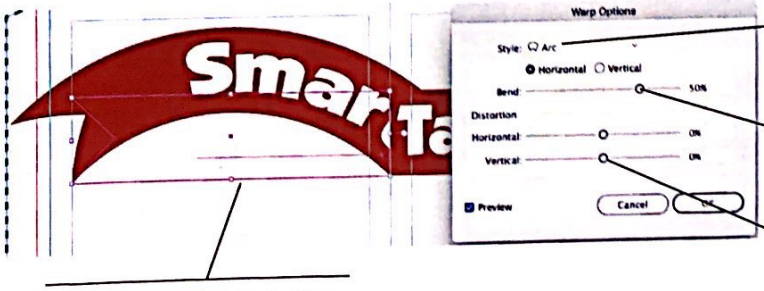
Apply a Warp Effect

The Warp effect allows you to easily distort objects in predefined shapes, based on the selected style, direction, bend, and distortion values. The Warp effect, like most Illustrator effects, is non-destructive, which means you can change the applied settings at any time to change the resulting shape.

1. **With candy-box.ai open, select the group on the Side 1 layer.**

   You can use the Layers panel to select the group, or simply click the group on the artboard with the Selection tool.

2. **With the group selected, choose Effect>Warp>Arc. In the resulting Warp Options dialog box, activate the Preview check box.**



The icon for each warp style suggests the result that will be created.

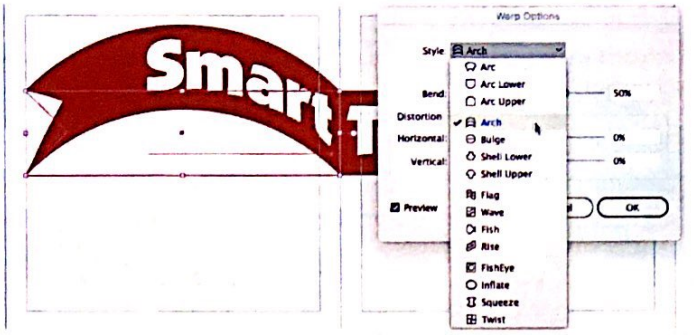
The Bend value determines how much warping will be applied.

Distortion values change the horizontal and vertical perspectives.

The bounding box and paths reflect the actual objects without the applied appearance attributes.

3. **Choose Arch in the Style menu.**

As the Arch icon suggests, the object's left and right edges are unaffected by an Arch warp.

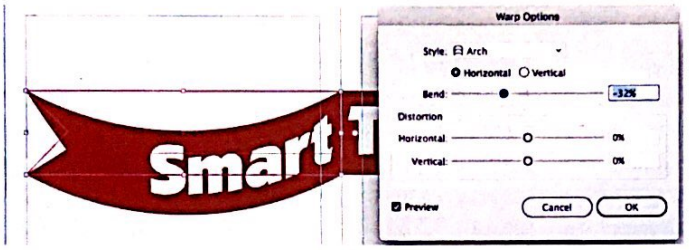


Note:

You can choose from any of the 15 styles in the Style menu (these are the same as the options listed in the Effect>Warp submenu).

4. **Change the Bend value to -32 and click OK to apply the warp.**

The warp effect is treated as an appearance attribute. When the warped object is selected, you can see the original object shape.



Note:

Effects dialog boxes remember the last-used settings.

5. **In the Layers panel, expand the Side 1 and Side 2 layers if necessary so you can see both groups.**

6. **Press Option/Alt, then click the Target icon for the group in Side 1 and drag to the target icon of the Side 2 group.**

The filled target icon indicates that effects and/or transparency attributes have been applied to a specific object. You can move those attributes to a different object by dragging from the filled icon to the hollow icon of another object.

By pressing Option/Alt, you are actually cloning the appearance attributes of the original object and applying those same attributes to another object.

This icon indicates that an appearance attribute has been applied.

Option/Alt-drag the filled target icon to clone the appearance attributes to another object.

7. **Select the group on the Side 2 layer, then open the Appearance panel.**

Remember: Effects in Illustrator are non-destructive. You can use the hot-text links in the Appearance panel to change the settings of a specific effect at any time. You can hide a specific effect by clicking the Eye icon in the Appearance panel, or permanently remove an applied effect by dragging an effect listing to the Appearance panel's Delete button.

8. **Click the Warp:Arch hot text to reopen the dialog box for the applied effect.**

Choosing the same option more than once in the Effect menu actually applies a second instance of that effect to the selected object. Use the Appearance panel to modify the settings of an applied effect.

9. **Change the bend value to 32 and click OK.**

10. **Save the file and continue to the next exercise.**

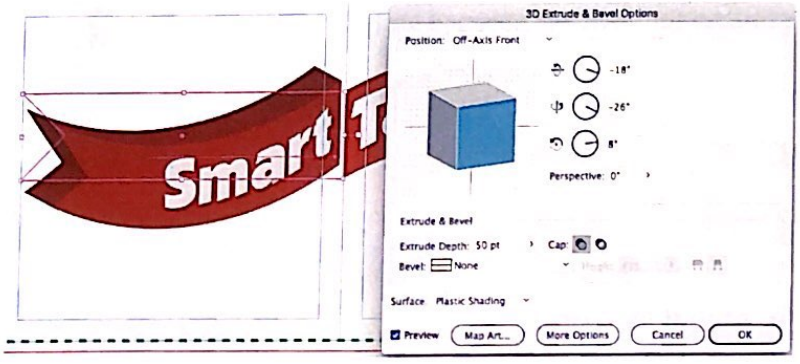
Create a 3D Effect

3D effects allow you to create three-dimensional objects from two-dimensional artwork. You can simulate depth by changing an object's rotation along three different axes, or use extrusion settings to basically "pull" (extrude) an object in three directions. You can also control the appearance of 3D objects with lighting, shading, and other properties.

1. **With candy-box.ai open, use the Selection tool to select the banner group on the Side 1 panel.**

2. **Choose Effect>3D>Extrude & Bevel and activate the Preview option.**

In the 3D Extrude & Bevel Options dialog box, the cube/preview shows the approximate position of the original object (the blue surface) in relation to the object created by the settings in this dialog box.

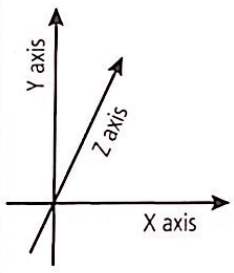


Note:

The X Axis value rotates an object around an invisible horizontal line.

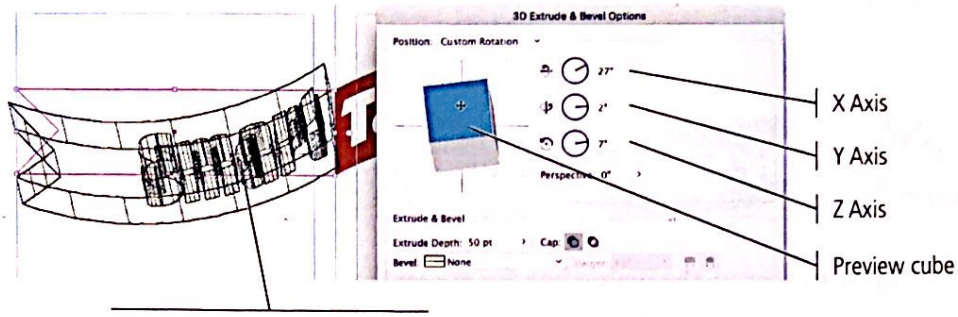
The Y Axis value rotates an object around an invisible vertical line.

The Z Axis value rotates an object around an invisible line that moves from the front of an object to the back.



3. **Click the preview icon and drag it around.**

As you drag the preview cube, the values in the three fields change, based on how and where you drag. In the layout, the selected group also changes because the Preview option is active.



While you move the preview icon, the object appears as a wire frame (the basis of 3D artwork).

> ***Note:***
>
> *The surface of the object only appears after the wires are calculated internally.*

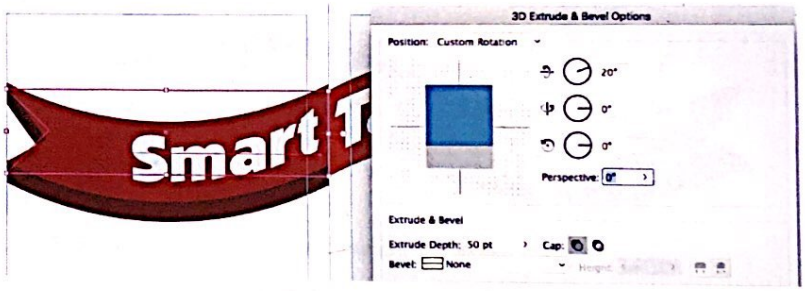
4. **When you're done experimenting with the preview, specify the following values:**

X Axis = 20°

Y Axis = 0°

Z Axis = 0°

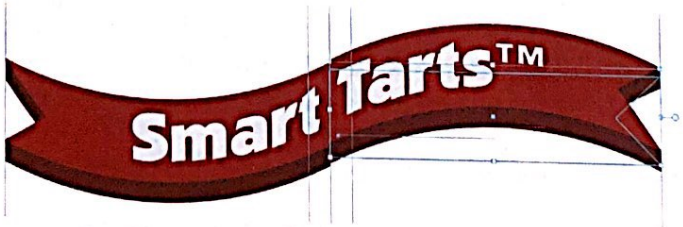
Extrude Depth = 50 pt



5. **Click OK to apply the effect.**

6. **Select the banner group on Panel 2, then choose Effect>Apply Extrude & Bevel.**

The top menu option shows the last-used effect. If you use this menu command, the effect will be applied with the last-used settings. You will not see the effect's dialog box.



> ***Note:***
>
> *Illustrator remembers the last-used effect, and the specific settings you used to apply that effect. The top of the Effect menu includes the option to apply the last-used effect without opening the related dialog box, or to open the dialog box for the last-used effect.*

7. **Using the Arrow keys, nudge the second banner group up or down until the two objects align to each other.**

The Extrude & Bevel effect can slightly shift objects on the artboard. To restore the appearance of a single banner extending across both box panels, you have to nudge the extruded banners back into the correct position.

8. **Save the file and continue to the next exercise.**

Create Type on a Path

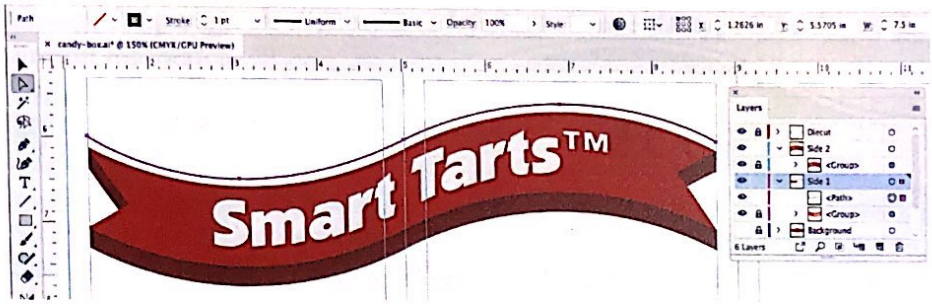
You can create unique typographic effects by flowing text onto a path. A text path can be any shape you can create in Illustrator, whether it's a simple shape created with one of the basic shape tools, a straight line drawn with the Line Segment tool, or a complex graphic drawn with the Pen tool.

1. **With candy-box.ai open, lock the groups on the Side 1 and Side 2 layers.**

   You can use the Lock icon for individual sublayers to lock those objects without locking entire layers.

2. **With the Side 1 layer active, choose the Pen tool. Change the fill to None and the stroke to 1-pt black.**

3. **Draw a curve above the banner shape, extending across both panels (as shown in the following image).**

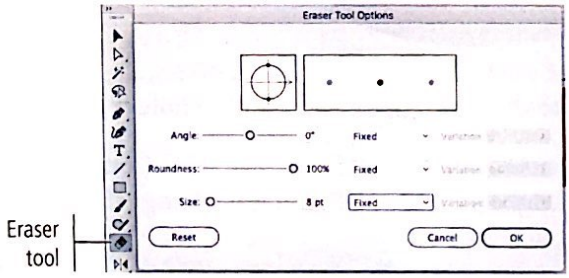


4. **Double-click the Eraser tool in the Tools panel.**

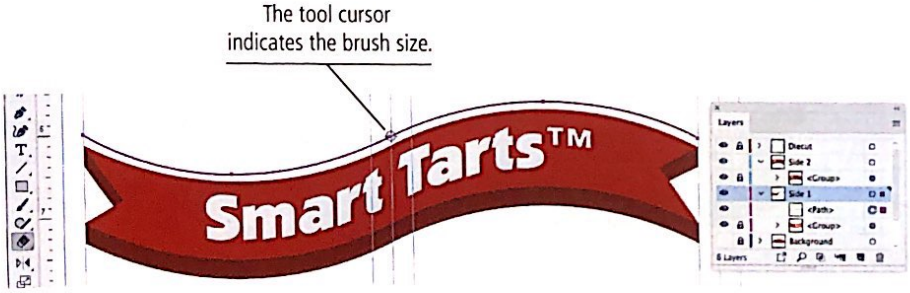
   The Eraser tool erases parts of a shape, whether from an open or closed path. When you use this tool, Illustrator automatically adds anchor points as necessary based on what you erase.

5. **In the resulting dialog box, change the Size field to 8 pt, then click OK.**

   You can also use this dialog box to change the angle and roundness (shape) of the Eraser tool cursor.



6. **Place the cursor over the panel fold line between the first and second panels.**



Note:

The Eraser tool erases from the fill and stroke of the object. The Path Eraser tool only erases from the selected path; an object's fill is not affected.

7. **Click to erase 8 points of space from the path you created in Step 3.**

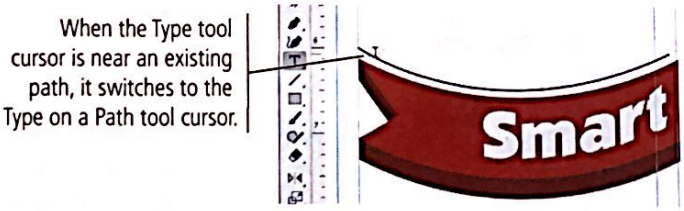
Anchor points are added to the now-open ends of the path where you erased the previous line segment. The Layers panel shows that the result is two separate paths, each of which ends before the fold guide that separates the two panels.

8. **Using the Selection tool, click away from the selected objects to deselect them, then select only the right path (in the second panel).**

9. **In the Layers panel, drag the Selected Art icon from the Side 1 layer to the Side 2 layer.**

10. **Select the Type tool in the Tools panel, and then click near the left side of the path on the left panel.**

Clicking an existing path with the Type tool converts the path to a type path. You could select the Type on a Path tool (nested under the Type tool), but it's not necessary because when the Type tool cursor is near an existing path, it automatically switches to the Type on a Path tool cursor.



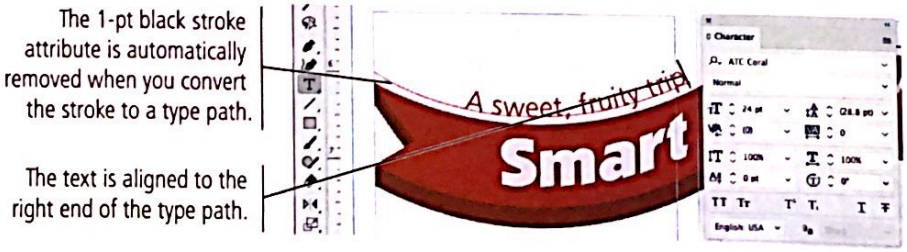
Note:

If you choose Panel Options in the Layers panel Options menu, you can change the size of thumbnails so you can better see the contents of each layer and sublayer.

11. **Type `A sweet, fruity trip` to replace the highlighted default placeholder text.**

12. **Select all the text on the path (Select>All) and format it as 24-pt ATC Coral Normal with 0 pt baseline shift and right paragraph alignment. Change the text color to the dark red swatch.**

Depending on where you clicked, some of the message might not be visible after you change the formatting; the location where you clicked defined the starting point for text along the path. You will adjust the text position on the path in the next two steps.



Note:

If you continued directly from the previous exercises, the adjusted baseline shift from the trademark character is still applied. You need to reset the baseline shift to 0 for the type on these paths.

13. **With the Type tool still active, press Command/Control and click away from the active object to deselect it.**

14. **Using the Type tool, click anywhere on the right path to convert it to a type path. Type with a sour zip!.**

The Type tool remembers the last-used settings, so the second path also uses 24-pt ATC Coral Normal with right paragraph alignment. For some reason, however, the new type is filled with black instead of the custom red swatch.

15. **Change the paragraph alignment to left, and change the type fill color to the custom red swatch.**

Type on a Path Options

ILLUSTRATOR FOUNDATIONS

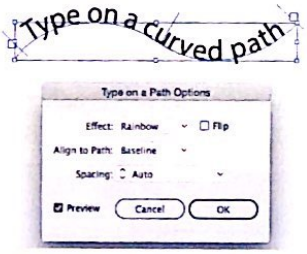
You can control the appearance of type on a path by choosing Type>Type on a Path>Type on a Path Options. You can apply one of five effects, change the alignment of the text to the path, flip the text to the other side of the path, and adjust the character spacing around curves (higher Spacing values remove more space around sharp curves).

The **Align options** determine which part of the text (baseline, ascender, descender, or center) aligns to which part of the path (top, bottom, or center).

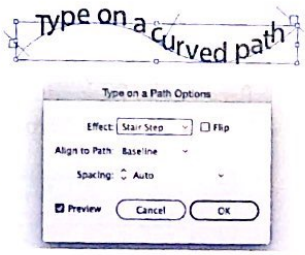
The **Flip** check box turns type onto the other side of the path; this option is useful for putting text inside shapes.

The **3D Ribbon** effect maintains horizontal edges of type while rotating vertical edges to be perpendicular to the path.

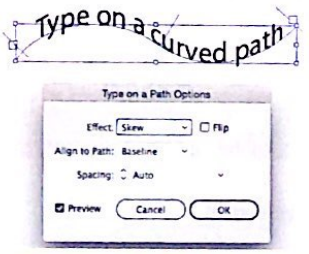
The **Rainbow** (default) effect keeps each character's baseline parallel to the path.



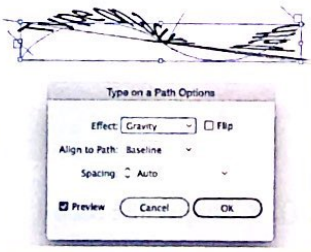
The **Stair Step** effect aligns the left edge of each character's baseline to the path without rotating any characters.



The **Skew** effect maintains the vertical edges of type while skewing the horizontal edges around the path.

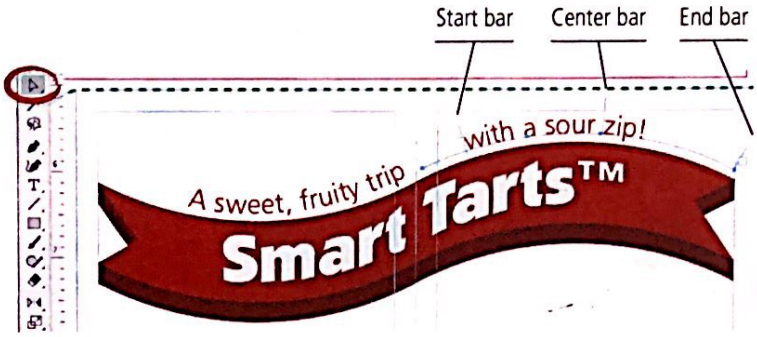


The **Gravity** effect aligns the center of each character's baseline to the path, keeping vertical edges in line with the path's center.



16. **Choose the Direct Selection tool in the Tools panel.**

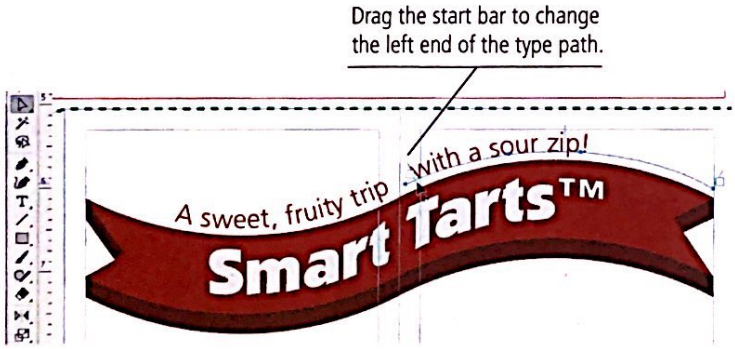
When the insertion point is placed in type on a path (or type on a path is selected), switching to the Direct Selection tool reveals the start and end points of the type path. Modifying those points is the same basic concept as changing the left and right indents for text in a regular type area.



You can also click a type path with the Selection tool, or click the type on the path with the Direct Selection tool, to reveal the start and end points of the type.

17. **Click the start bar and drag near the left end of the path, until the "w" is approximately 1/8" from the left panel edge.**

The start bar automatically appears at the point where you first click to create the type path (Step 14). Dragging the start bar repositions the starting point for text on the path.



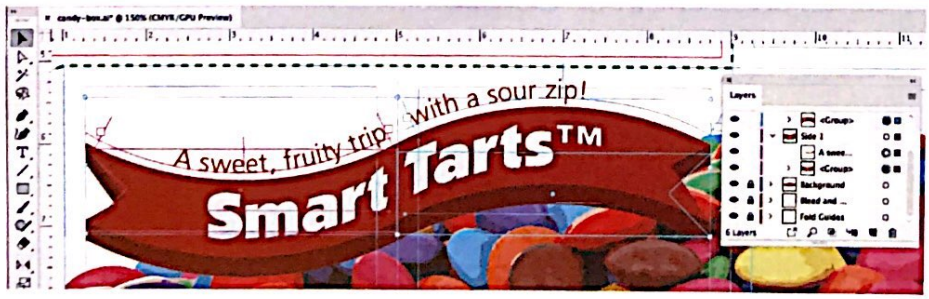
> *Note:*
>
> *The start bar's original location is based on where you click to convert the path to a type path.*

> *Note:*
>
> *Make sure you click the start bar and not the white square that represents the in port of the text path.*

18. **Unlock the groups on both Side layers, then show the Background layer.**

19. **Choose Select>All, then move all the selected objects up until the text is not obscured by any object on the Background layer.**

Because the Background layer is still locked, the Select>All command selects only the banner groups and type paths.



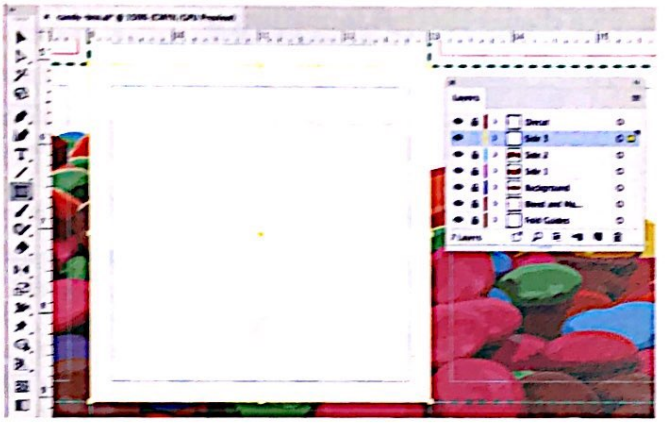
20. **Collapse the Side 1 and Side 2 layers in the Layers panel.**

21. **Save the file and continue to the next exercise.**

Place a Native Photoshop File

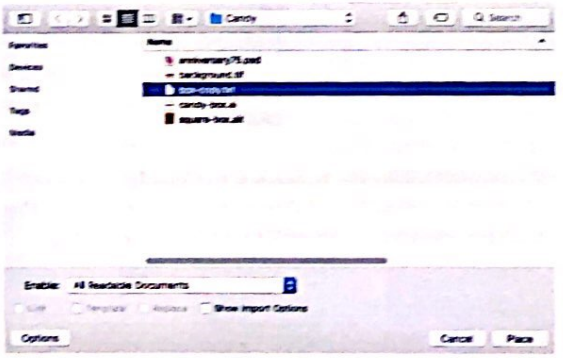
Native Photoshop files offer a number of advantages over other formats, including the ability to store multiple layers and even, in some cases, maintain editability directly on the Illustrator artboard.

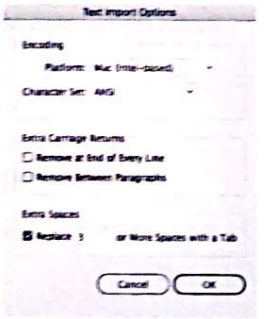
1. **With `candy-box.ai` open, create a new layer named `Side 3` immediately above the Side 2 layer.**
2. **Lock all but the Side 3 layer, and make sure Side 3 is the active layer.**
3. **Make the third side panel prominent in the document window.**
4. **Using the Rectangle tool, create a white-filled rectangle that fills the third side panel area.**



5. **Choose File>Place. Select `box-copy.txt` and click Place. In the resulting dialog box, click OK to accept the default text import options.**

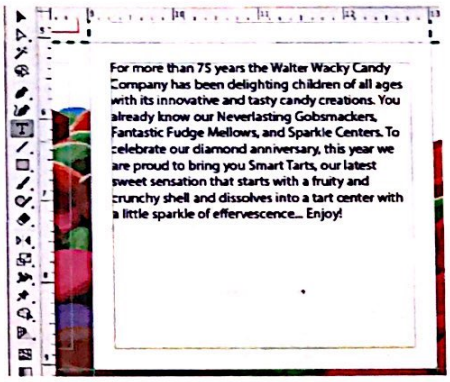
   The TXT extension identifies a text-only file, which is a text file that has been saved without any formatting. These files can be generated in any text-editing software, from full word-processing suites to basic text apps on mobile devices.



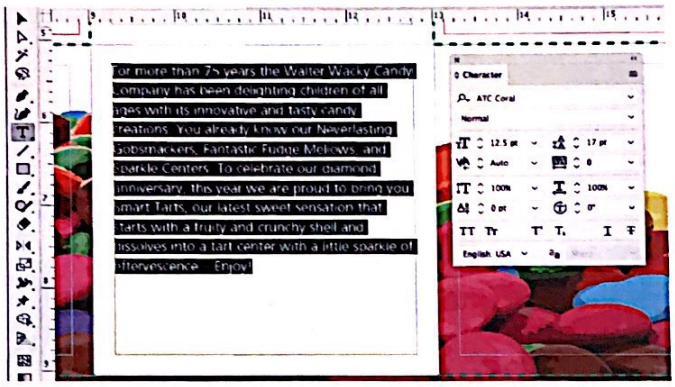


> *Note:*
>
> *The Text Import Options dialog box appears even if Show Import Options is not checked in the Place dialog box.*

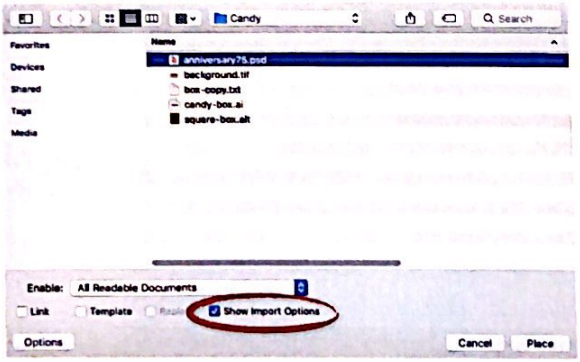
6. **Click and drag to create an area-type object that fills the margin guides on the Side 3 panel (as shown in the following image).**



7. **Select all the text in the type area, then change the type formatting to 12.5-pt ATC Coral Normal with 17 pt leading.**



8. **Choose File>Place and select anniversary75.psd (in your WIP>Candy folder). Make sure Link is not checked and Show Import Options is checked, then click Place.**

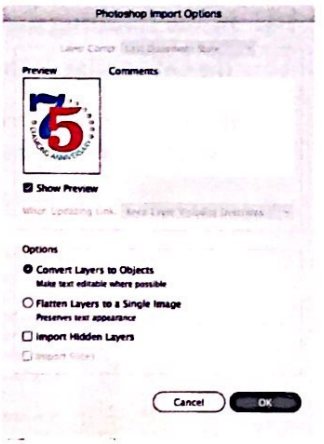


Note:

Learn more about Adobe Photoshop in the companion book of this series, ***Adobe Photoshop CC: The Professional Portfolio.***

9. **In the resulting dialog box, make sure the Show Preview option is checked.**

The Photoshop Import Options dialog box allows you to control how Photoshop elements are translated into Illustrator:

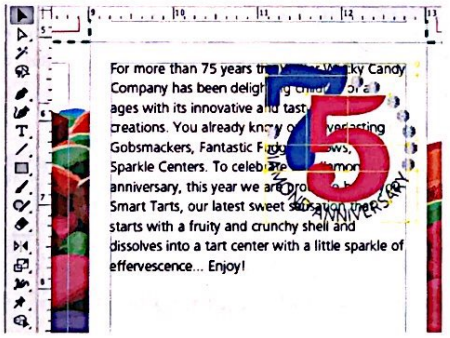


- Use the **Layer Comp** menu to import a specific layer comp saved in the Photoshop file.
- If you link to the file instead of placing it (in the Place dialog box), you can use the **When Updating Link** menu to control what happens if you update the linked image.
- **Convert Layers to Objects** converts Photoshop layers to Illustrator objects. This option preserves type layers as editable type objects in Illustrator; it also preserves masks, blending modes, transparency, and slice information. (Adjustment layers and layer effects are flattened into the placed objects.)
- **Flatten Layers to a Single Image** combines all Photoshop layers into a single layer. The appearance of the image is preserved, but you can't edit the layers.
- **Import Hidden Layers** can be checked to include layers that are not visible in the Photoshop file.
- **Import Slices** is only available if the Photoshop file includes slices for web layouts. If this option is checked, the slices will be maintained in the imported file.

10. **Choose the Convert Layers to Objects option (if necessary) and click OK.**

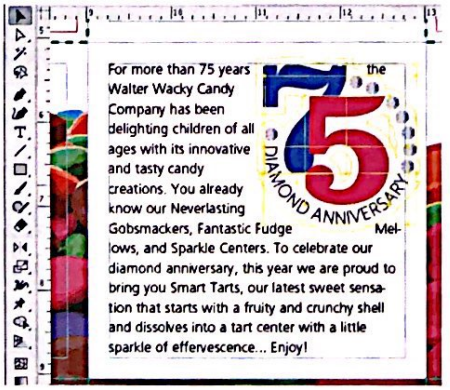
This image has only one layer, which you will not edit, so this option has the same result as converting Photoshop layers to Illustrator objects.

11. **Click to place the loaded image on the artboard. Using the Selection tool, move the placed file to the top-right corner of the third side panel. Leave approximately 1/8″ between the placed art and the panel edges.**



12. **With the placed object selected, choose Object>Text Wrap>Make.**

Applying a **text wrap** to an object forces surrounding text to flow around that object instead of directly in front of or behind it.

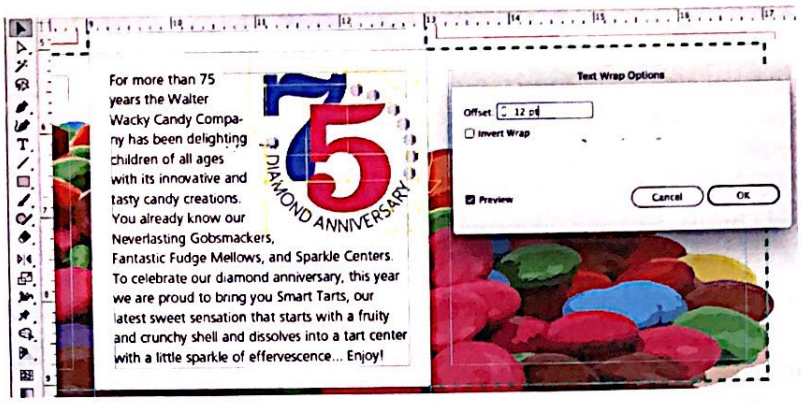


13. **Choose Object>Text Wrap>Text Wrap Options.**

14. **In the resulting dialog box, change the Offset field to 12 pt and click OK.**

    The **Offset** value defines the distance at which text will wrap from the object.

    If you check the Invert Wrap option, the surrounding text will flow into the wrap shape instead of flowing around it.



15. **If you see an Overset Text icon for the type object on the panel, use the Arrow keys to nudge the selected object (the anniversary logo) closer to the top and the right edges of the panel area.**

16. **Save the file and continue to the next exercise.**

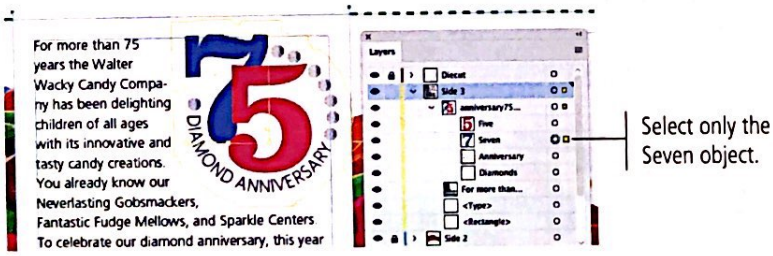
Apply Transparent Effects

Many Illustrator options allow you to add dimension and depth to virtually any design element. You can apply creative effects (such as drop shadows) that incorporate transparency, apply different blending modes so objects blend smoothly into underlying objects, and change the transparency of any object.

1. **With candy-box.ai open, expand the Side 3 layer in the Layers panel and then expand the anniversary75.psd sublayer.**

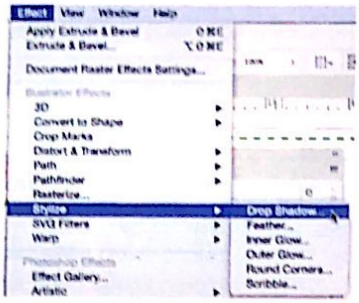
   Because you chose to convert layers to objects when you placed the native Photoshop file, the resulting object is a group; each layer in the original file becomes a separate sublayer within the group.

2. **Click the Selected Art icon to select only the Seven object in the sublayer.**



3. **Choose Effect>[Illustrator Effects] Stylize>Drop Shadow.**

Make sure you choose the option in the Illustrator Effects section and not the Photoshop Effects section.



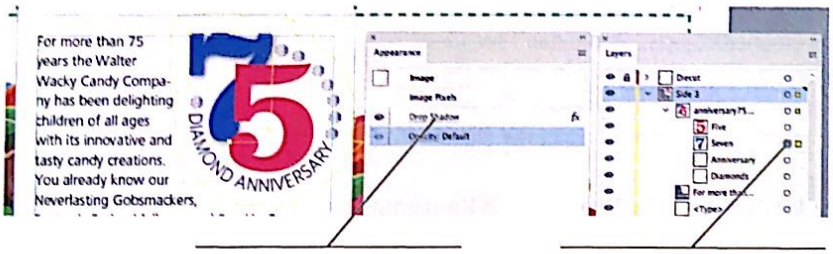
4. **Activate the Preview check box, then change the drop shadow settings to the following:**

Mode:	**Multiply**
Opacity:	**50%**
X Offset:	**0.02″**
Y Offset:	**0.02″**
Blur:	**0.03″**
Color:	**Black**

5. **Click OK to apply the drop shadow.**

6. **Open the Appearance panel (Window>Appearance).**

The drop shadow is treated as an appearance attribute. You can edit the applied settings by clicking the effect hot text in the Appearance panel. You can remove the effect by dragging it to the Appearance panel's Delete button.



7. **In the Layers panel, click the target icon to select the Five sublayer in the anniversary75.psd object.**

8. **Choose Effect>Apply Drop Shadow.**

This command reapplies the listed effect with the last-used settings.

Understanding Transparency Panel Options

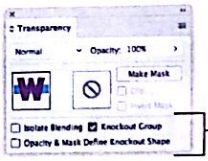
Blending Modes

Blending modes control how colors in an object interact with colors in underlying objects. Objects are set to Normal by default, which simply overlays the top object's color onto underlying objects (i.e., the "base").

- **Darken** returns the darker of the blend or base color. Base pixels that are lighter than the blend color are replaced; base pixels that are darker remain unchanged.
- **Multiply** multiplies (hence the name) the base color by the blend color, resulting in a darker color. Multiplying any color with black produces black; multiplying any color with white leaves the color unchanged.
- **Color Burn** darkens the base color by increasing the contrast. Blend colors darker than 50% significantly darken the base color by increasing saturation and reducing brightness; blending with white has no effect.
- **Lighten** returns the lighter color (base or blend). Base pixels that are darker than the blend color are replaced; base pixels that are lighter remain unchanged.
- **Screen** is basically the inverse of Multiply, always returning a lighter color. Screening with black has no effect; screening with white produces white.
- **Color Dodge** brightens the base color. Blend colors lighter than 50% significantly increase brightness; blending with black has no effect.
- **Overlay** multiplies or screens the blend color to preserve the original lightness or darkness of the base color.
- **Soft Light** darkens or lightens base colors, depending on the blend color. Blend colors lighter than 50% lighten the base color (as if dodged); blend colors darker than 50% darken the base color (as if burned).
- **Hard Light** combines the Multiply and Screen modes. Blend colors darker than 50% are multiplied, and blend colors lighter than 50% are screened.
- **Difference*** inverts base color values according to the brightness value in the blend layer. Lower brightness values in the blend layer have less effect on the result; blending with black has no effect.
- **Exclusion*** is similar to Difference, except mid-tone values in the base color are completely desaturated.
- **Hue*** results in a color with the luminance and saturation of the base color and the hue of the blend color.
- **Saturation*** results in a color with the luminance and hue of the base color and saturation of the blend color.
- **Color*** results in a color with the luminance of the base color and the hue and saturation of the blend color.
- **Luminosity*** results in a color with the hue and saturation of the base color and the luminance of the blend color (basically the opposite of the Color mode).

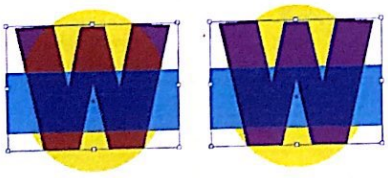
**To prevent problems in the output process, avoid applying these blending modes to objects with spot colors.*

Options at the bottom of the Transparency panel allow you to control transparency settings relative to grouped objects. (If you don't see these check boxes, choose Show Options in the panel Options menu.) In the examples shown here, the letter and blue shape are grouped; the yellow shape at the back of the object stacking order is not part of the group.



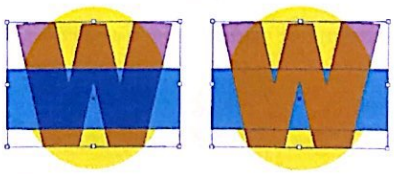
Choose Show Options in the panek Options menu to show these check boxes.

If **Isolate Blending** is checked for the group, blending changes only apply to other objects in the same group. The group effectively knocks out the underlying shapes. In the images here, the Multiply blending mode has been applied to the purple letter. When Isolate Blending is checked for the group, the blending mode does not affect the underlying yellow shape (right).



If **Opacity and Mask Define Knockout Shape** is checked, the mask object's opacity creates a knockout effect. Where the mask is 100% opaque, the knockout effect is strong; in areas of lower opacity, the knockout is weaker.

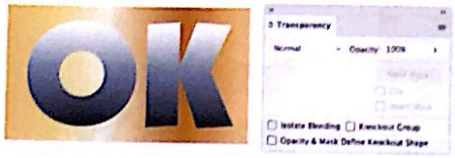
If **Knockout Group** is checked, transparency settings for elements within the group do not apply to other elements in the same group. The transparent effects are only applied to objects under the entire group. In this case, elements within the group knock out other objects in the same group. In the images here, the opacity of the purple letter has been reduced to 50%. When Knockout Group is checked, the opacity only affects underlying objects that are not part of the group (right).



Creating an Opacity Mask

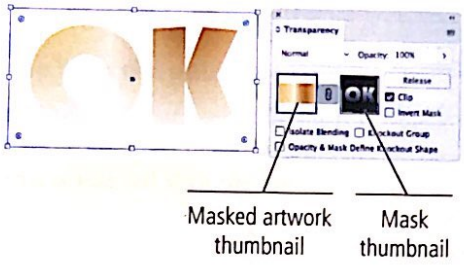
An opacity mask defines the transparency of selected artwork. In Illustrator, you can create an opacity mask by selecting two or more shapes and clicking the Make Mask button in the Transparency panel. The topmost selected object (or group) becomes the masking object; underlying objects in the selection are the masked artwork.

The best way to explain the concept of opacity masks is through example. The first image shows two separate objects: the top object (the word "OK" converted to outlines) and the gradient-filled rectangle.

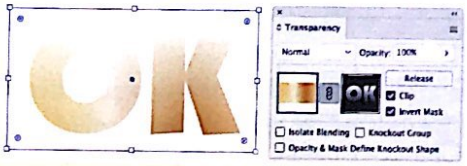


When you define an opacity mask, shades in the masking (top) object determine the degree of transparency in the masked (underlying) artwork.

- Where the mask is white, the masked object is 100% visible;
- Shades of gray in the mask allow some of the underlying object to be visible; and
- Black areas of the mask completely obscure underlying areas.

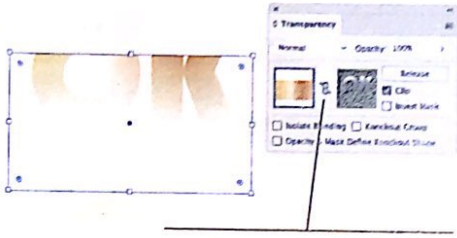


When the **Invert Mask** option is checked, tones in the masking object are reversed (black becomes white and white becomes black). Transparency of the masked artwork is also effectively reversed.



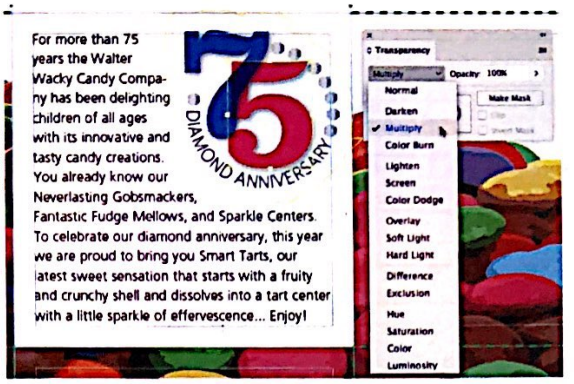
When the **Clip** option is checked, the masking object also determines which parts of the masked artwork are visible; any areas outside the mask object are not visible. In this image, we turned off the Clip option to allow the gradient-filled rectangle to be visible beyond the edges of the masking lettershapes.

By default, the masking object and masked artwork are linked, which means you can't move one without the other. If you click the Link icon between the masked artwork and the mask thumbnails, you can move the two elements independently.



9. **With the Five object still selected, open the Blending Mode menu in the Transparency panel (Window>Transparency) and choose Multiply.**

After changing the blending mode, the text is a blend of the original black text color and the blue gradient color of the badge object.



10. **Select the white-filled rectangle at the bottom of the Side 3 layer stack.**

11. **In the Transparency panel, change the Opacity field to 80%.**

The Opacity value determines how much of the underlying colors show through the affected object. If an object is 80% opaque, 20% of the underlying colors are visible.

12. **Collapse the Side 3 layer in the Layers panel.**

13. **Save the file and continue to the next exercise.**

Use the Touch Type Tool

If you have completed the previous projects in this book, you've already learned a number of ways for manipulating type in an Illustrator file. As you know, you can highlight any characters and change their formatting using the Character panel options. You can also convert type to outlines and then transform it as you would any other drawing object (using the Selection tool, Free Transform tool, etc.).

In this exercise, you learn how to use the Touch Type tool, which allows you to dynamically transform a selected character using transformation handles — all while maintaining the character as live text. This means you can simply drag in the artboard to experiment with character size and position, but still maintain the ability to edit the actual text in the type object.

1. **With `candy-box.ai` open, create a new layer named `Box Top` above the Side 3 layer. Lock all other layers, and make the Box Top layer active.**

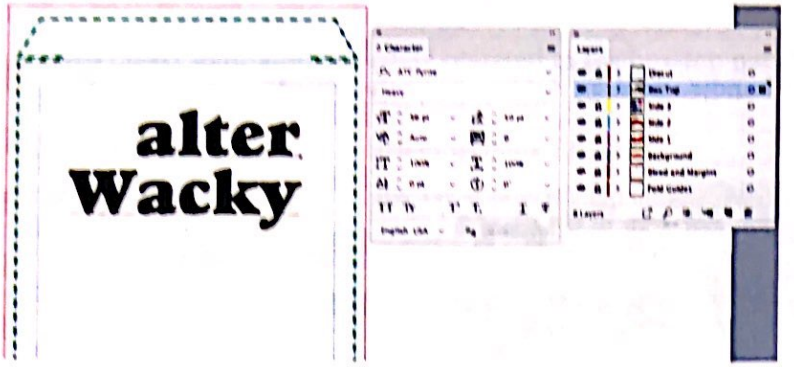
2. **Make the Box Top area of the artboard prominent in the document window.**

3. **Using the Type tool, create a new point-type object with the following text:**

   alter [Return/Enter]
   Wacky

4. **Format the type as 56-pt ATC Pyrite Heavy with 50-pt leading, with right paragraph alignment.**

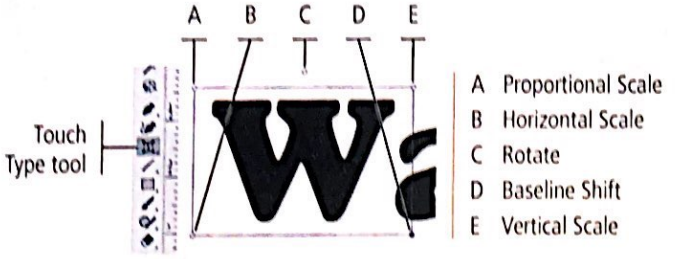
5. **Position the type object so it is centered near the top of the Box Top panel area.**



6. **Choose the Touch Type tool (nested below the regular Type tool).**

7. **Click the W in the point-type object to select it.**

   When you select a character with the Touch Type tool, you can use the resulting handles to modify the selected character in much the same way as you would transform an object that is selected with the Free Transform tool.



8. **Click inside the character's bounding box and drag down until the bottom is slightly below the baseline of the second line.**

   We aligned the top of the upper-case W with the top of the lower-case a.

Note:

This tool is called the "Touch Type" tool because its options work on a touch-enabled screen.

Note:

You can also click the Baseline Shift handle to reposition the selected character.

9. **Click the Proportional Scale handle and drag up and left until the top of the W is higher than the tops of the letters in the first line.**

10. **Click the Horizontal Scale handle and drag right to make the scaled character slightly narrower.**

11. **Choose the Type tool in the Tools panel, then click to place the insertion point before the "a" in the second line of the type object.**

When you place the insertion point in a type object where characters have been manipulated with the Touch Type tool, it can be very helpful to use the Arrow keys to move the insertion point to the location you need.

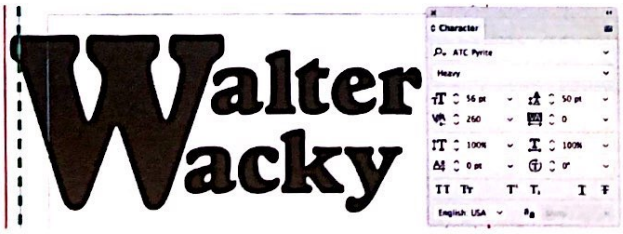
12. **Using the Character panel, reduce the kerning between the W and the a.**

Remember: Kerning adjusts the space in between two specific letters. Although you modified the W with the Touch Type tool, it is still a live character — which means you can still use kerning to adjust the spacing between the characters.

13. **Continue adjusting the kerning for all letter pairs in the type object until you are satisfied with the results.**

14. **Place the insertion point at the beginning of the first line. Increase the kerning until the entire letter "a" is visible past the modified character.**

When the insertion point is at the beginning of a line, kerning moves the first character left or right relative to the end of the type path; all other letters in the line also move.



15. **Save the file and continue to the next exercise.**

Apply a Built-In Graphic Style

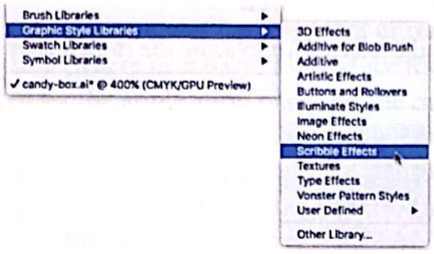
In addition to the numerous effects that you can apply, Illustrator includes a number of graphic style libraries, which are simply stored groups of appearance attributes that can be applied in a single click. In this exercise you will use a built-in style to create a custom logotype for the top and bottom of the box.

1. **With `candy-box.ai` open, select the logotype object (on the Box Top layer) with the Selection tool.**

2. **Move the type object to be approximately centered in the box-top panel area.**

3. **Choose Window>Graphic Style Libraries>Scribble Effects.**

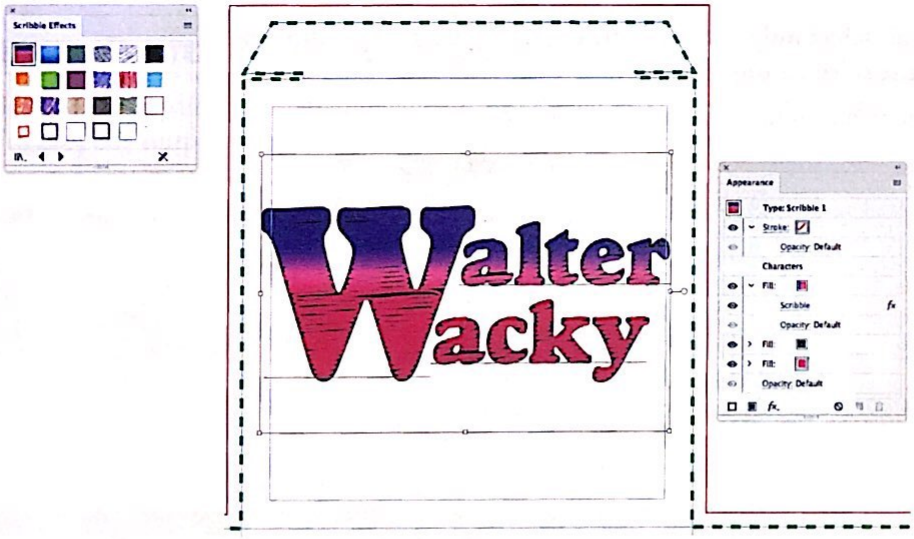
   Graphic styles are managed in much the same way as swatches and other libraries.



4. **With the logotype object selected, click the top-left style in the Scribble Effects panel.**

5. **Open the Appearance panel and review the options.**

   Built-in styles are basically a combination of attributes and effects that can be applied in Illustrator. They are all non-destructive, which means the logotype object is still live text.



6. **Create another point-type object with the words `Candy Company`. Format the type in this object as 15-pt ATC Coral Normal, and change the type fill color to the custom pink swatch.**

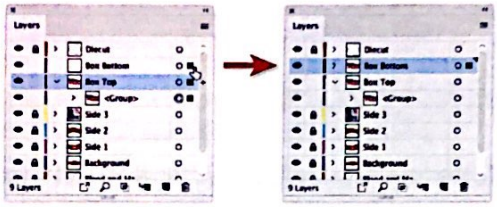
7. **Move the second type object until it appears as shown in the following image:**

8. **Select the two objects on the top panel and group them.**

9. **Create a new layer named Box Bottom above the Box Top layer.**

10. **Select the group on the Box Top layer. In the Layers panel, Option/Alt-click the Selected Art icon, then drag to the Box Bottom layer.**

    By this point you should realize that this clones the selected art, placing the cloned copy on the Box Bottom layer.

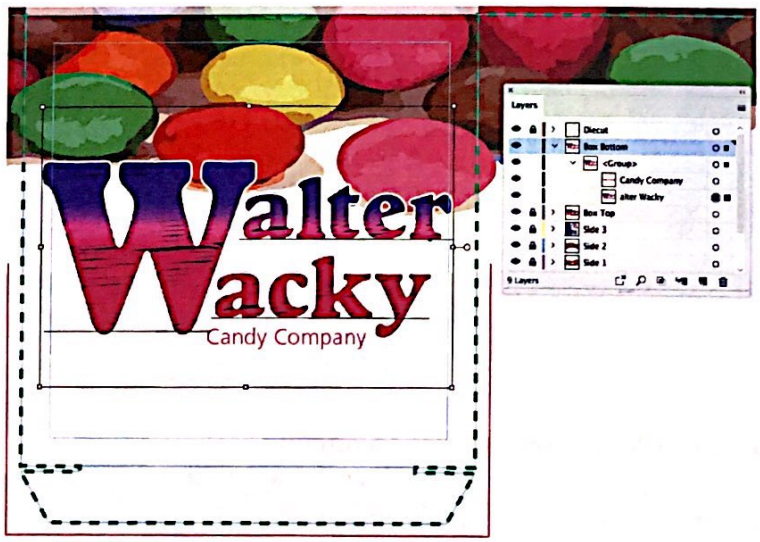


11. **Lock the Box Top layer.**

12. **On the artboard, drag the art on the Box Bottom layer so it is centered in the box-bottom panel area.**

13. **Using the Layers panel, select only the logotype object in the group. Apply a 1-pt white stroke to the selected object.**

    This helps the logotype to stand out from the background object.



14. **Save the file and continue to the next stage of the project.**

Stage 3 Preparing Artwork for Output

Because object opacity, blending modes, and some effects relate to transparency, you should understand what transparency is and how it affects your output. Transparency is the degree to which light passes through an object, so that objects in the background are visible. In terms of graphic design, transparency means being able to "see through" objects in front of the stacking order to objects in back of the stacking order.

Because of the way printing works, applying transparency in print graphic design is a bit of a contradiction. Commercial printing is, by definition, accomplished by overlapping a mixture of (usually) four semi-transparent inks in different percentages to reproduce a range of colors (the printable gamut). In that sense, all print graphic design requires transparency.

But *design* transparency refers to the objects on the page. The trouble is, when a halftone dot is printed, it's either there or it's not. There is no "50% opaque" setting on a printing press. This means that a transformation needs to take place behind the scenes, translating what we create on screen into what a printing press produces.

When transparent objects are output, overlapping areas of transparent elements are actually divided into individual elements (where necessary) to produce the best possible results. Ink values in the overlap areas are calculated by the application based on the capabilities of the mechanical printing process; the software converts our digital designs into the elements that are necessary to print.

Although some output devices can accurately translate transparent elements to printed elements, older equipment might have problems rendering transparency. Similarly, if the file you're creating will be placed into another layout — for example, an ad that is placed into a magazine or newspaper — you also need to consider the capabilities of the software being used to create the larger project. Older versions of software might not be able to interpret transparent elements correctly.

For transparent elements to output properly in these workflows, the transparent elements must be converted, or **flattened**, into information that can be rendered.

The following exercises explain the concept of flattening so you will understand what to do if your file needs to work with older equipment that does not support transparent design elements.

Define Raster Effect Settings

Flattening means dividing transparent elements into the necessary vector and raster objects to properly output the file. In some cases, flattening results in the creation of new rasterized objects (for example, where transparent text overlaps a raster image).

The white text has been set to 80% opacity.

Flattening creates raster images with the pixels altered to create the same apparent effect as the semi-transparent text. The vector outlines of the original type mask the new raster elements.

This text has a drop shadow applied.

Flattening the text object results in a separate raster object to create the drop shadow.

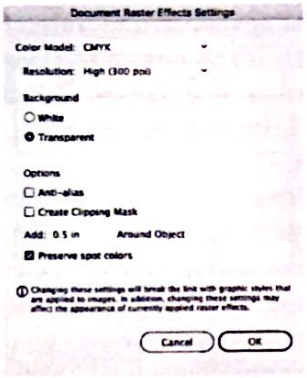
If you are going to create raster objects — either manually or allowing Illustrator to manage the process — you need to be able to control the resolution of those elements. For high-quality print jobs, you should use at least 300 pixels per inch.

Note:

Don't assume everyone has the most recent version of a software application or output device. For one reason or another, many professional environments still use older versions of software or older output device drivers.

1. **With candy-box.ai open, choose Effect>Document Raster Effects Settings.**

2. **Review the settings in the resulting dialog box.**



These settings, applied in the printer's original template, are already optimized for high-quality output. However, it's a good idea to check the settings when you work.

The **Color Model** menu determines the mode that will be used for new rasterized objects (CMYK, Grayscale, or Bitmap for a document in CMYK mode; an RGB option replaces CMYK if the file uses the RGB color mode).

The **Resolution** options include three basic settings (72 ppi for low-resolution screen display, 150 ppi for medium-resolution desktop printers, or 300 ppi for high-resolution print output). You can also assign a custom resolution in the Other field.

The **Background** options determine how unfilled areas of the file will be handled when placed into another file. If White is selected, underlying objects will not be visible through empty areas of the file.

In the **Options** area:

- **Anti-alias** helps to create smooth transitions, reducing stair-stepping around the edges of rasterized objects.
- **Create Clipping Mask** creates a vector mask that makes the background of the rasterized image appear transparent.
- **Add _ Around Object** creates a specific-sized border around a rasterized image. If you use the White Background option, this area will be filled with white.
- **Preserve Spot Colors** allows spot-color objects to be maintained as spot colors instead of being converted to CMYK.

Note:

Note the warning at the bottom of the dialog box that says, "Changing these settings may affect the appearance of currently applied raster effects."

3. **Click OK to close the dialog box.**

4. **Continue to the next exercise.**

Preview Transparency Flattening

If you are designing with transparency, it's a good idea to know exactly what elements will be affected when the file is flattened for output. Illustrator provides a Flattener Preview panel that you can use to review the file for potential problems.

1. **With candy-box.ai open, choose Window>Flattener Preview.**

2. **If nothing appears in the white space of the panel, click the Refresh button.**

Drag this corner to make the panel larger, and then click Refresh to enlarge the preview image.

3. **In the Highlight menu, choose All Affected Objects.**

The red areas in the preview show all objects that are affected by transparency in the file; all of these objects will somehow be affected by flattening. You can use the Flattener Preview to highlight different kinds of areas to determine which settings are best for the entire file or for a specific object.

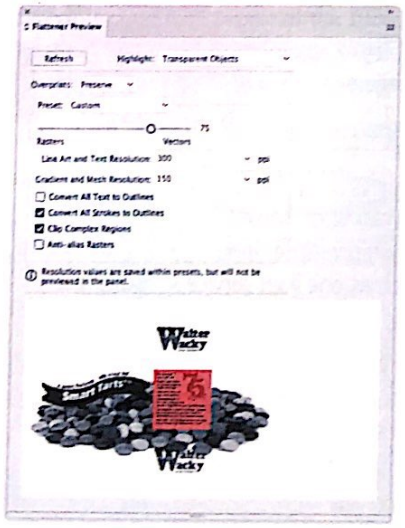
- **None (Color Preview)** displays the normal layout.
- **Rasterized Complex Regions** highlights areas that will be rasterized based on the Raster/Vector Balance defined in the applied preset.
- **Transparent Objects** highlights objects with opacity of less than 100%, blending modes, and/or transparency effects (such as drop shadows).
- **All Affected Objects** highlights all objects affected by transparency, including the transparent objects and the objects overlapped by transparent objects. All of these objects will be affected by flattening.
- **Affected Linked EPS Files** highlights all EPS files that are linked (not embedded) in the file.
- **Expanded Patterns** highlights patterns that will be expanded by flattening. (Pattern effects must be expanded if they are affected by transparency; this takes place automatically when you output the file.)
- **Outlined Strokes** highlights all strokes that will be converted to filled objects when flattened. (For example, a 5-pt stroke with the Screen blending mode will be converted to a 5-pt-high rectangle filled with the underlying object when the file is flattened.)

4. **In the Highlight menu, choose Transparent Objects.**

The highlighted areas reduce to only the objects where transparency is actually applied.

5. **Choose Show Options in the panel Options menu, and then click Refresh.**

The options show the specific settings that will be used to flatten the artwork, based by default on a flattener preset.



6. **Close the Flattener Preview panel, and then continue to the next exercise.**

More About Outputting Complex Files

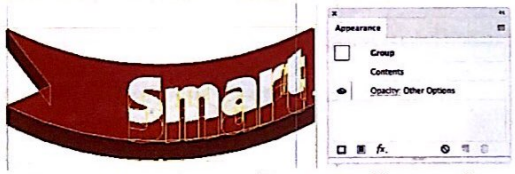
Expanding Appearance Attributes

When you print a file, the raster-image processor (RIP) processes the PostScript stream to create the print. Extremely complex designs can take a long time to output, depending on the processing capability of the output device, and can even "jam the RIP" — crash the device and cause an output error. To prevent output problems associated with overly complex designs, you might want to expand appearance attributes after the design has been finalized.

If you select an object and choose Object>Expand Appearance, the object is permanently altered to mimic the appearance of the previously applied effects. Applied raster effects are converted to the necessary raster objects, which are grouped with the converted vector objects.

After expanding effects, the file will output faster, but you won't be able to change the effect settings. We highly recommend saving the original and expanded versions as separate files so you can make changes if necessary.

Two effects have been applied to this object: Warp (Arch) and 3D Extrude & Bevel.

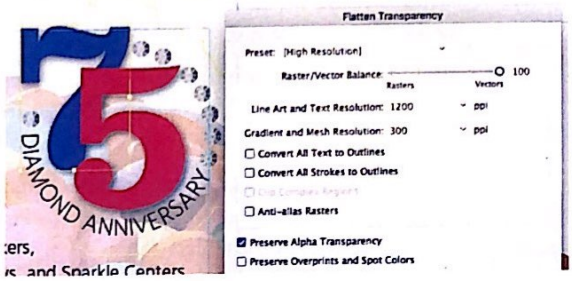


The paths show the new objects created by expanding the effects. The effects are no longer editable.

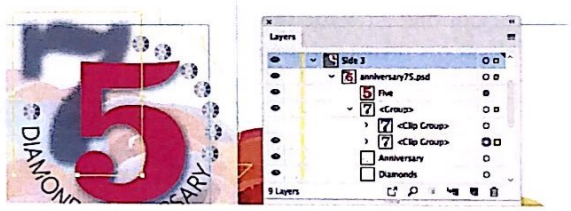
Flattening Individual Objects

Although flattening is typically managed for you when you output a file, you can also flatten selected objects manually. Like expanding an object's appearance, flattening is a permanent action — you can no longer edit any effect or setting that caused the transparency. This process should only be done at the very end of a project; again, we recommend maintaining your original file and saving a new version with the manually flattened artwork.

When a transparent object is selected, you can choose Object>Flatten Transparency to define settings that will be used to create the necessary raster object.

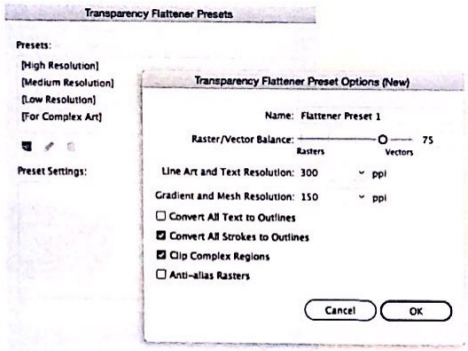


Flattening the object created a new raster object to reproduce the Drop Shadow effect. (If Preserve Alpha Transparency is not checked, the flattened artwork will have a white background; the effect will not blend into the background color.)



Understanding Flattener Presets

Illustrator includes four default flattener presets. You can also choose Edit>Transparency Flattener Presets to create your own presets or load presets that might be provided by other users — such as one your service provider created for their specific workflow.



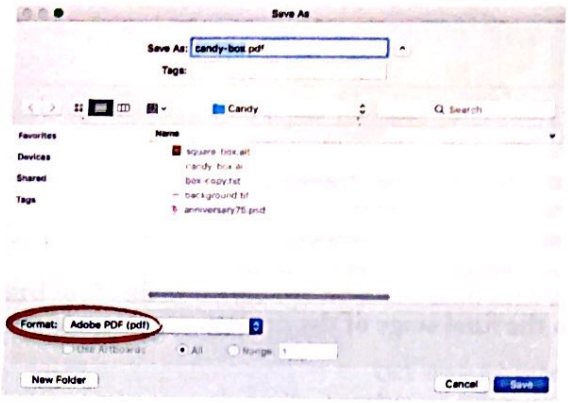
- **Raster/Vector Balance** determines how much vector information will be preserved when artwork is flattened, from 0 (all information will be flattened as rasters) to 100 (maintains all vector information).
- **Line Art and Text Resolution** defines the resulting resolution of vector elements that will be rasterized, up to 9600 ppi.
- **Gradient and Mesh Resolution** defines the resolution for gradients that will be rasterized, up to 1200 ppi.
- **Convert All Text to Outlines** converts all type to outlines; the text will not be editable or selectable in a PDF file.
- **Convert All Strokes to Outlines** converts all strokes to filled paths.
- **Clip Complex Regions** forces boundaries between vector objects and rasterized artwork to fall along object paths, reducing potential problems that can result when only part of an object is rasterized.
- **Anti-Alias Rasters** helps to create smoother edges in the raster images that are created from vector graphics.

Export a PDF File for Proofing

Although packaging such as this box is commonly printed directly from the Illustrator file, you should still create a proof that your client can review either on screen or printed. The PDF format is ideal for this use because the client doesn't need Illustrator to open or print the proof file.

1. **With candy-box.ai open, choose File>Save As.**

2. **Navigate to your WIP>Candy folder as the destination and choose Adobe PDF in the Format/Save As Type menu.**



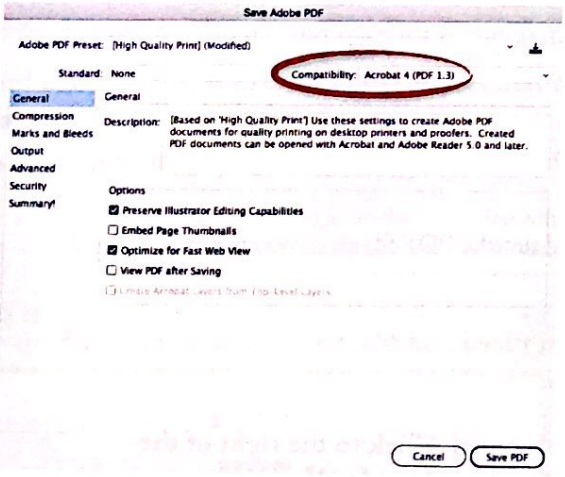
3. **Click Save.**

4. **Choose High Quality Print in the Adobe PDF Preset menu.**

   The Adobe PDF Preset menu includes six PDF presets that meet common industry output requirements.

5. **Choose Acrobat 4 (PDF 1.3) in the Compatibility menu.**

   The Compatibility menu determines which version of the PDF format you will create. Not all clients will have the latest versions of technology, so you should consider saving all proof-quality PDFs to be compatible with the earliest version of PDF possible.

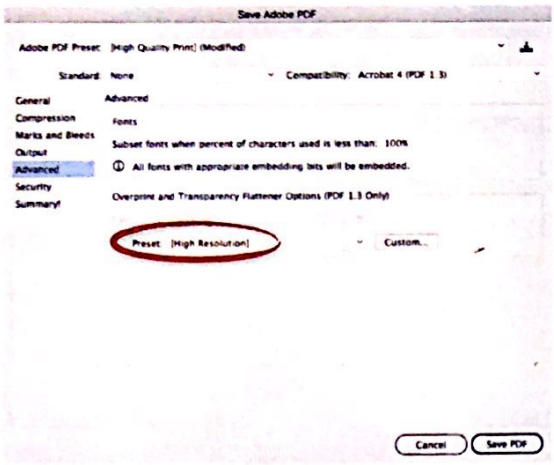


6. **Click Advanced in the list of options.**

   PDF 1.3 does not support transparency, so the file will require flattening. If you save the file to be compatible with PDF 1.4 or later, the transparency information will be maintained in the PDF file; it will have to be flattened later in the process.

7. **Choose High Resolution in the Preset menu.**

   Even though this PDF is for proofing purposes, high-resolution produces better results. If file size is not a concern, it's a good idea to use the high-resolution flattener even for proofs.



8. **Click Save PDF to output the file.**

9. **Close the PDF file, then continue to the final stage of the project.**

Stage 4 Previewing the Box in 3D

In Stage 2, you used the 3D Extrude & Bevel feature to add depth to the banners on the front of the box. This effect can also be used to create a box shape and preview your flat box artwork in three dimensions, which is especially useful for showing a client how the art will look when the final piece is printed and folded.

Export Artboards for Screens

As you know, the background image for the box artwork currently extends across multiple panels in the folding template. To map artwork to a 3D box mock-up, you need to cut that background image into separate pieces for each box panel. Although there are many ways to accomplish this goal, the easiest is to use artboards to define the different sides of the box.

1. **Open `candy-box.ai` from your WIP>Candy folder. Zoom out so you can see the entire artboard.**

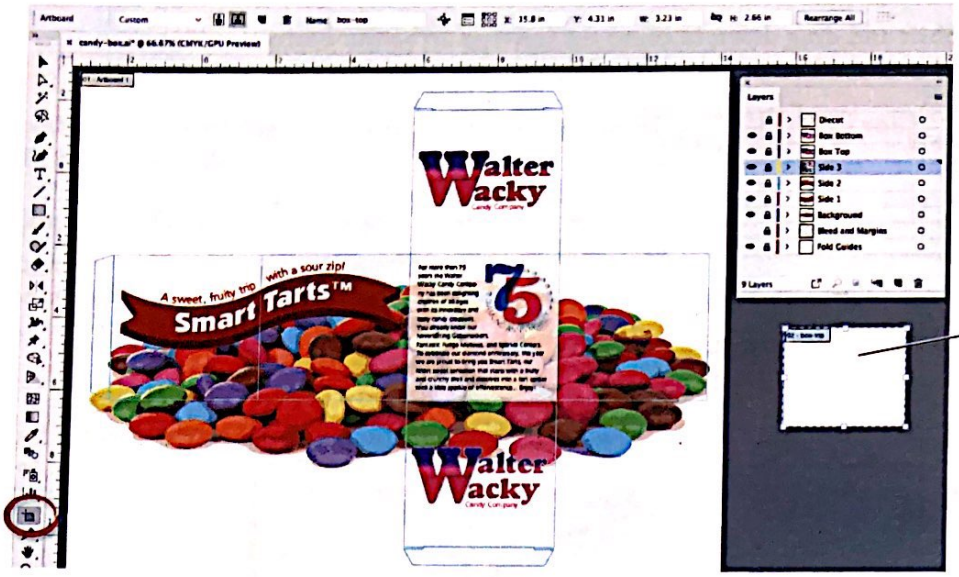
   Make sure you open the Illustrator file and not the PDF file that you created at the end of the last stage.

2. **Show all layers except the Diecut and Bleed and Margins layers, and lock all layers.**

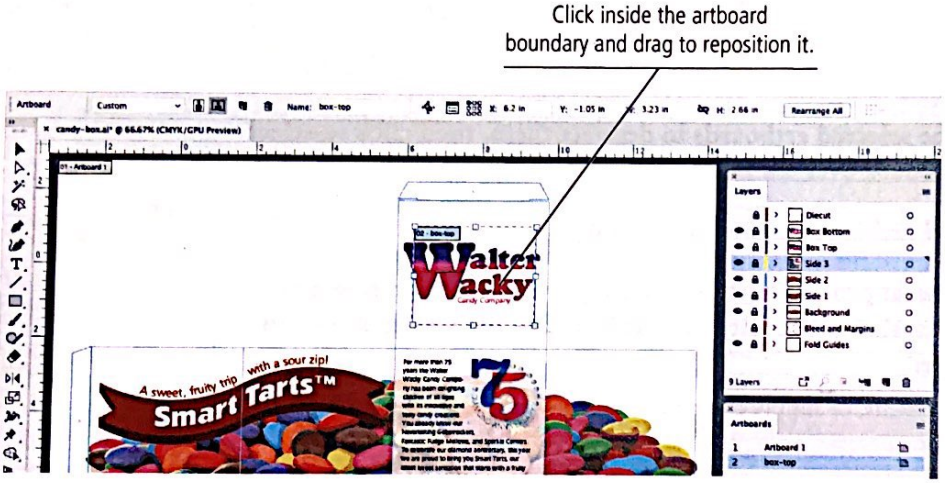
3. **Choose the Artboard tool in the Tools panel. Click to the right of the existing artboard and drag to create a new artboard.**

   If you click inside the existing artboard area, dragging will move the existing artboard instead of creating a new one. Instead, you are using the pasteboard to create the new artboard; you can then move it into the correct position overlapping the existing artboard.

4. **In the Control panel, change the new artboard name to box-top.**

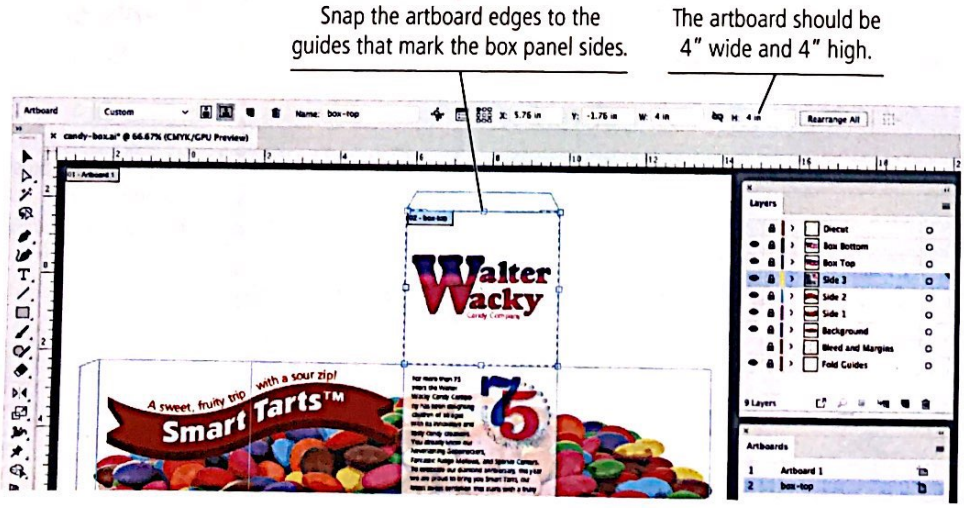


5. **Move the Artboard tool cursor inside the new artboard area and drag it to be on top of the box top area in the layout.**



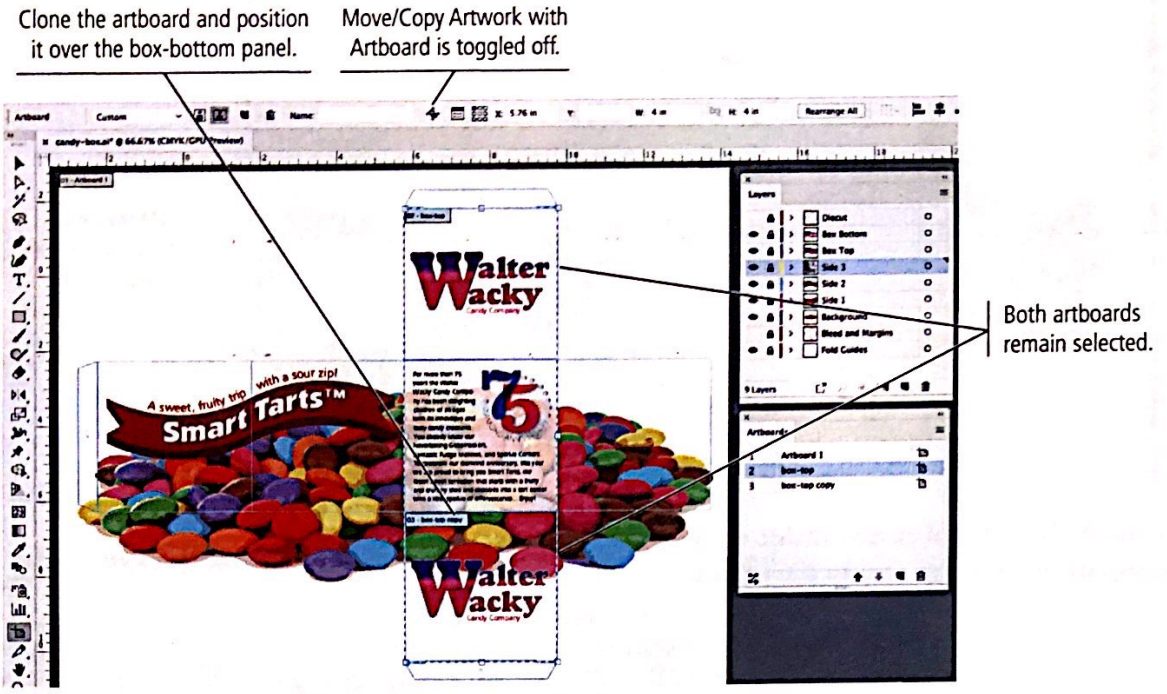
6. **Drag the artboard corner handles to snap to the guides that mark the box top area in the layout.**

After adjusting the handles, the box-top artboard should be 4″ wide × 4″ high.



7. **In the Control panel, turn off the Move/Copy Artwork with Artboard option.**

8. **Press Option/Alt-Shift and drag down to clone the box-top artboard. Place the cloned artboard over the box-bottom area of the layout.**

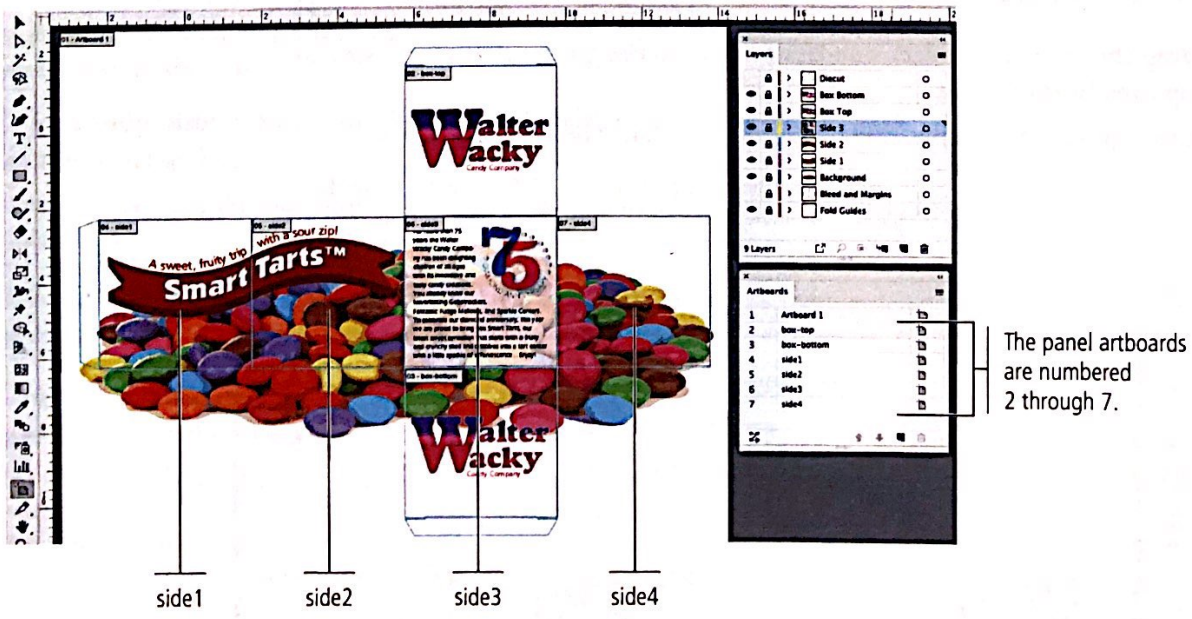


9. **Click away from the selected artboards to deselect them, then click to select only the cloned artboard over the box-bottom panel area.**

10. **Change the selected artboard's name to `box-bottom`.**

11. **Using the same general process outlined in the previous steps, create new artboards for the remaining four sides of the box. Use the names shown in the following image:**

    You can draw new artboards, or simply clone the existing ones and drag them into place for each side of the box.

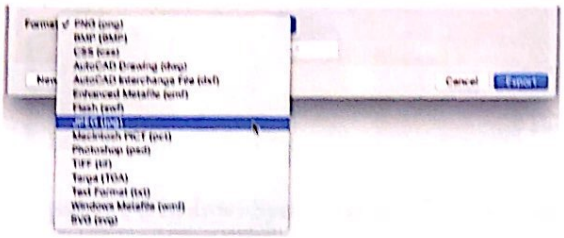


12. **Choose File>Export>Export As.**

13. **In the resulting dialog box, create a new folder named side-panels in your WIP>Candy folder.**

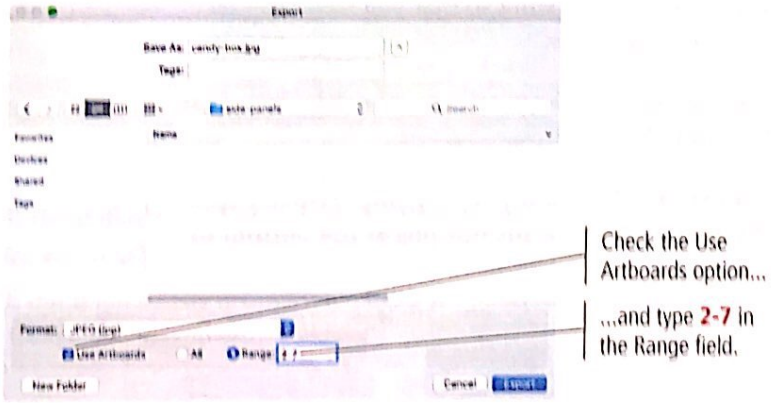
14. **Choose JPEG in the Format/Save As Type menu.**

Illustrator can export a number of different formats. The JPEG format creates a single flat file with a white background for each artboard you choose to export.



15. **At the bottom of the Export dialog box, choose the Use Artboards option. Choose the Range radio button, and type 2-7 in the attached field.**

You do not need to export the overall artboard with the diecut layout (Artboard 1). You need to export each of the artboards you just created as a separate file, which you will later use to create the 3D box preview.

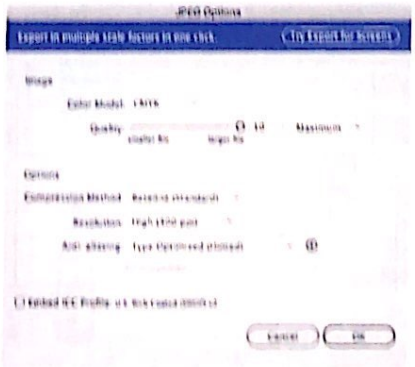


16. **Click Export. In the resulting dialog box, define the following settings:**

Color model: CMYK

Quality: 10 (Maximum)

Resolution: High (300 ppi)

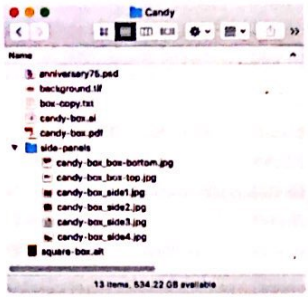


17. **Click OK to export the necessary files.**

18. **When the export process is complete, save and close the candy-box.ai file.**

19. **On your desktop, review the contents of your WIP>Candy folder.**

    Six new files, one for each side of the box, should appear in the side-panels folder. The file names are made up of the original file name (which appeared in the Save As field of the Export dialog box) and the artboard name (which you defined earlier).



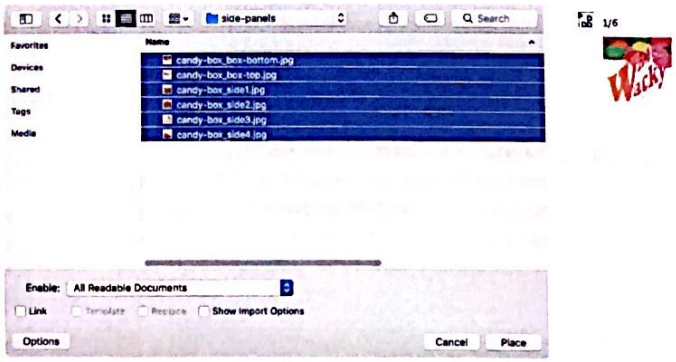
20. **Continue to the next exercise.**

Create Symbols for Box Panels

For this process to work, you first have to do a bit of set-up work. The artwork for each panel has to be saved as a symbol before it can be applied to the 3D box shape. This means you have to do some cutting and cleanup work so that you have the exact shapes you need before you create the 3D box preview.

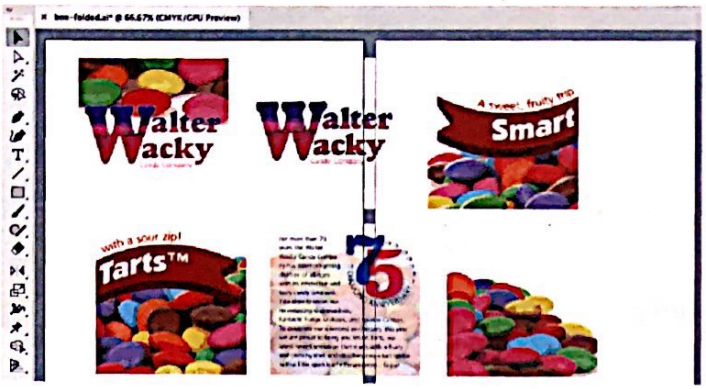
1. **Create a new file for print that contains two letter-sized artboards. Save it as box-folded.ai in your WIP>Candy folder.**

2. **Choose File>Place. Navigate to your WIP>Candy>side-panels folder. Select all six images in the folder. Make sure none of the options at the bottom of the box are checked, then click Place.**



3. **When the images are loaded into the Place cursor, click to place each loaded image onto the artboard.**

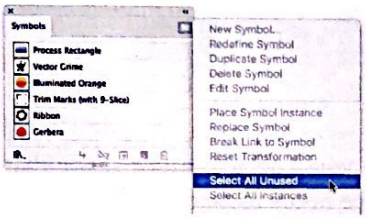
   Don't worry if all the files don't fit into the artboard. You are only using them to create symbols, after which you will delete the original images from the artboard.



4. **Open the Symbols panel (Window>Symbols) and float it away from the panel dock if necessary.**

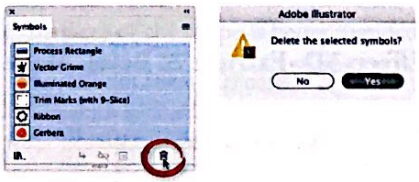
5. **Open the panel's Options menu and choose Small List View so you can see the symbol names.**

6. **Open the Symbols panel Options menu and choose Select All Unused.**

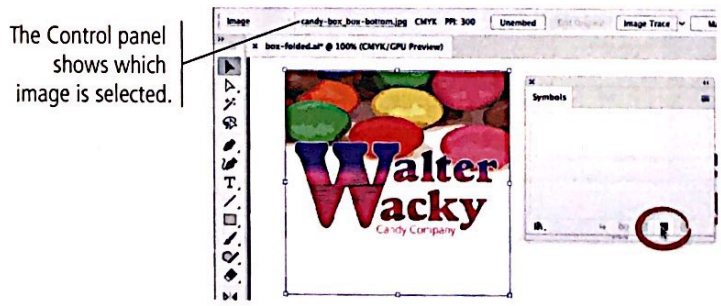


7. **With all the default symbols selected, click the panel's Delete button. Click Yes when asked to confirm the deletion.**

   Although this is not strictly necessary, removing the unnecessary pieces makes it easier to manage the remaining symbols.

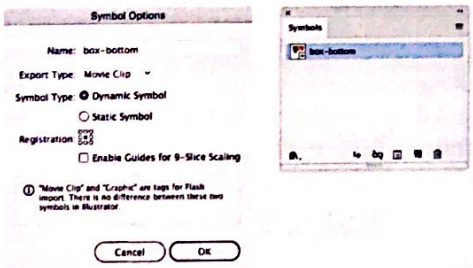


8. **Select the box-bottom image on the artboard, then click the New Symbol button in the Symbols panel.**

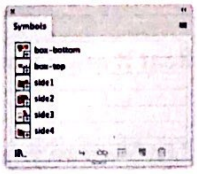


9. **In the resulting dialog box, name the symbol `box-bottom` and click OK.**

   The other options in this dialog box have no effect on this project, so you can leave them at the default settings.



10. **Repeat Steps 8–9 for the remaining five images on the artboard, naming each symbol appropriately.**



11. **Select all of the placed images on the artboard and delete them.**

12. **Save the file and continue to the next exercise.**

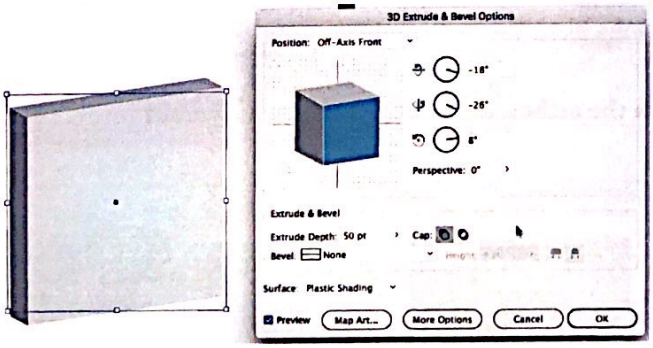
Map the Art to a 3D Box

Now that you have symbols for each side of the box, you have to create a shape that you can turn into a three-dimensional box. This shape needs to be the correct size for the existing artwork, so you will again use the panel folding guides to build the shape.

1. **With `box-folded.ai` open, use the Rectangle tool to create a shape that is 4″ wide by 4″ high with a white fill and no stroke.**

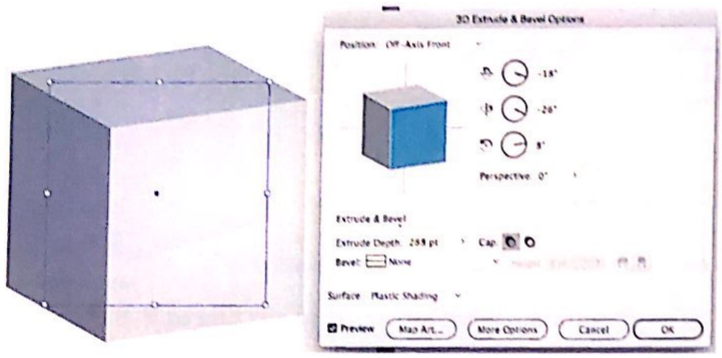
   Each panel on the box template is 4″ square. A shape of this size will be the basis for your three-dimensional box sample.

2. **With the new rectangle selected, choose Effect>3D>Extrude & Bevel. Make sure the Preview option is checked.**



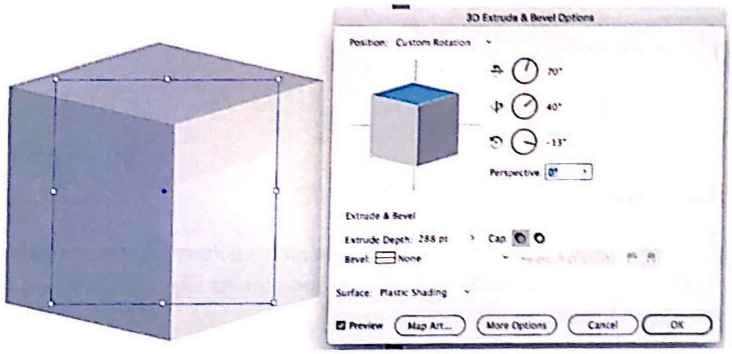
3. **In the Extrude Depth field, type 4" and press Tab to apply the change.**

Because the shape is 4" square, you are using this measurement as the depth to create a cube with equal height, width, and depth. (Illustrator automatically makes the necessary conversion to points.)



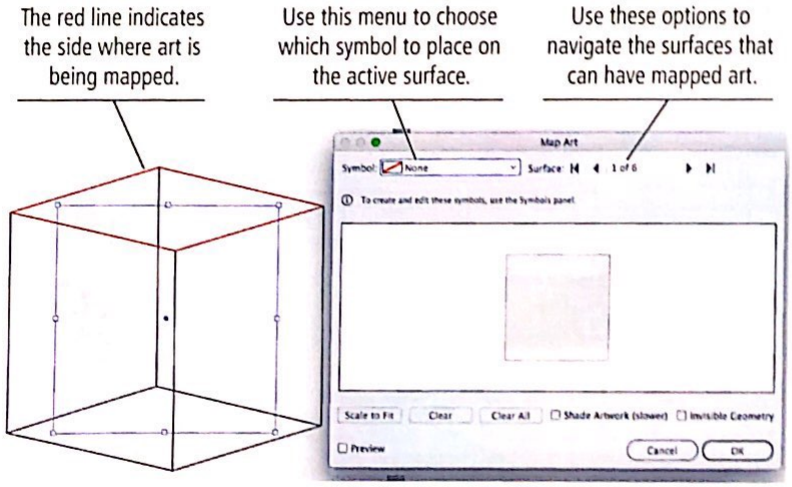
4. **Define the following parameters in the Position area:**

X axis	**70°**
Y axis	**40°**
Z axis	**–13°**



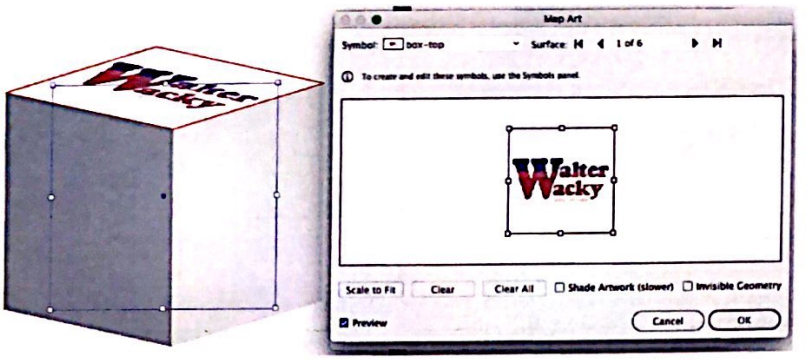
5. **Uncheck the Preview box, and then click the Map Art button.**

When the Map Art dialog box is open, the object in the layout displays as a 3D wireframe preview even when the Preview option is unchecked. The red line around the preview shows which side (surface) of the shape is being mapped.



6. **Choose box-top in the Symbol menu, then turn on the Preview option in the Map Art dialog box.**

Illustrator renders a preview of the symbol on the 3D box shape (this might take a few seconds to complete).

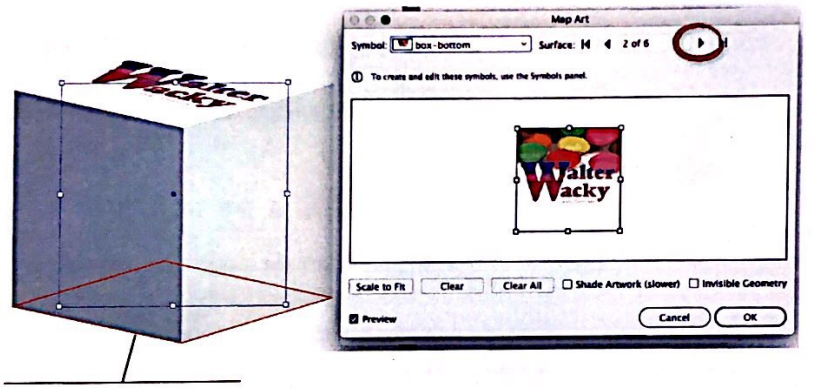


Note:

Rendering 3D artwork takes time and must be redone every time you make a change in the dialog box. If you prefer, you can turn off the Preview option while you're making changes, and then turn it on only when you want to review your progress.

7. **Click the right Next Surface arrow, then choose box-bottom in the Symbol menu.**

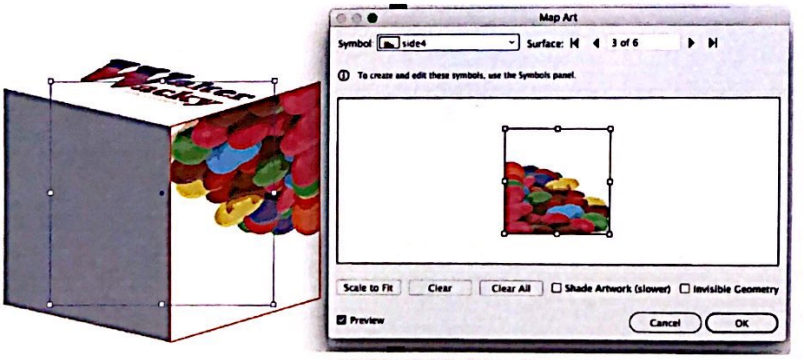
The preview shows the box-bottom panel is selected. No other change is apparent because the bottom of the box is not visible using the existing shape position.



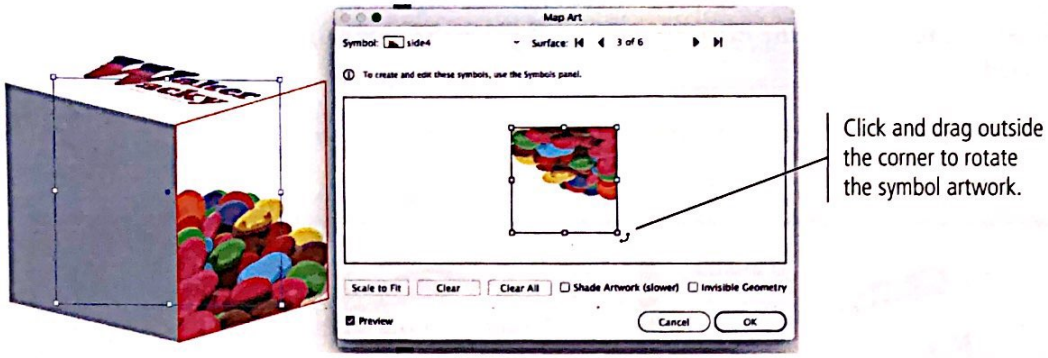
The box-bottom surface is not visible in this position.

8. **Click the right Surface arrow to select the next side, then choose side4 in the Symbol menu.**

The thumbnail is placed in the wrong orientation, so you need to rotate it. You can click an object in the Map Art preview and drag to move the symbol artwork, or you can use the bounding box handles to resize or rotate the symbol until it fits the gray surface shape.



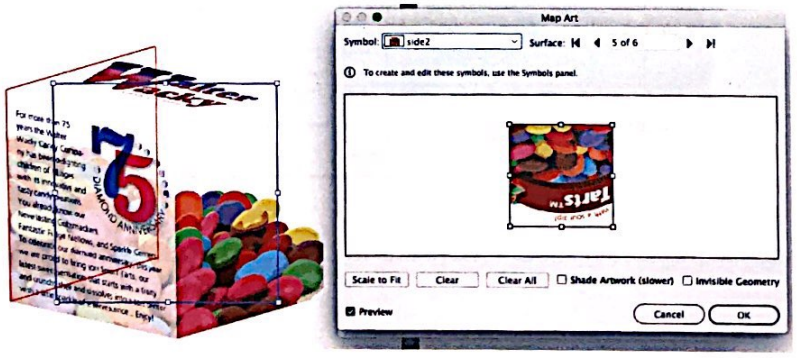
9. **Place the cursor near one of the top corner handles. Click when you see the rotate cursor, press Shift, and drag around to rotate the artwork 180°.**

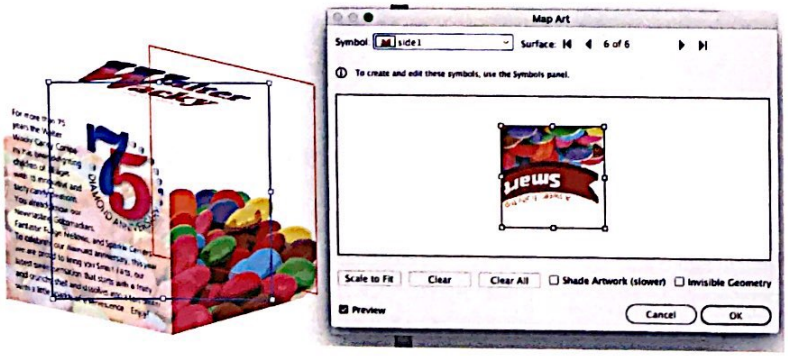


10. **Repeat Steps 8–9 to add the artwork for the remaining three sides.**

Make sure you place the symbols in the correct order. Because the side4 artwork is on the first side panel, you should place side3 on the next panel, then side2, then side1.

You won't see any difference in the artboard for surfaces 5 and 6 because they are not visible in this position. You will create another object to show those sides in the next few steps.

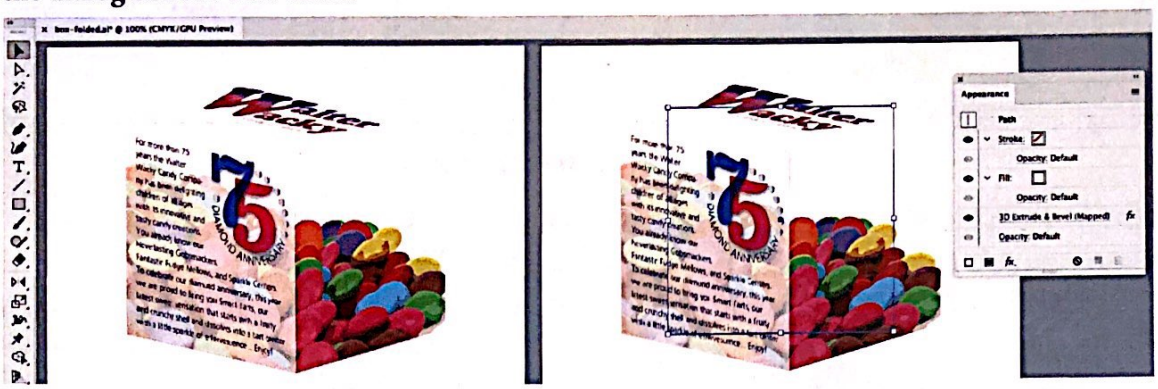




11. **Click OK to close the Map Art dialog box, and then click OK again to finalize the 3D box preview.**

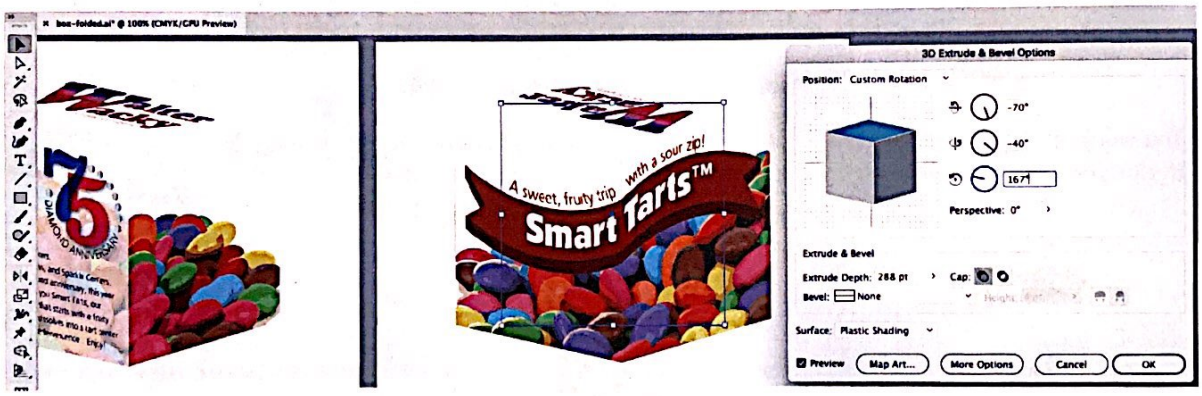
12. **Using the Selection tool, clone the existing shape and place the clone on the second artboard.**

13. **In the Appearance panel, click the 3D Extrude & Bevel hot-text link to open the dialog box for that effect.**



14. **Check the Preview option at the bottom of the dialog box. In the preview proxy, place the cursor over one of the vertical lines and drag until the other two sides of the box are visible.**

Dragging one of the vertical lines in the proxy changes only the Z rotation.



15. **Click OK to apply the change.**

16. **Save the file and close it.**

Project Review

fill in the blank

1. You can use the _____ tool to sample colors from placed images.
2. The _____ can be used to review all the available characters in a font.
3. Checking the _____ option when you place a native Photoshop file results in a single object on a single layer in the Illustrator file.
4. The _____ determines the left-indent position of type on a path.
5. You can use the _____ panel to review and edit applied effects.
6. Applying a _____ to an object forces surrounding text to flow around that object instead of directly in front of or behind it.
7. The _____ is the specific method used to blend the color of one object into the colors of underlying objects.
8. _____ refers to the degree to which light passes through an object.
9. A(n) _____ can be used to restrict opacity to selected objects; colors in the topmost object determine which areas of the underlying object are visible.
10. The _____ effect can be used to preview a box 3D shape.

short answer

1. Briefly explain how the concept of a diecut relates to package design in Illustrator.

2. Briefly explain the concept of sublayers, including at least one example of their potential benefit.

3. Briefly explain how transparency settings relate to Illustrator files created for commercial printing.

Portfolio Builder Project

Use what you learned in this project to complete the following freeform exercise.
Carefully read the art director and client comments, then create your own design to meet the needs of the project.
Use the space below to sketch ideas; when finished, write a brief explanation of your reasoning behind your final design.

art director comments

You have been hired to create a label design for a new energy water called triUMPH. It is going to be marketed throughout the United States, so it must incorporate the required elements for food packaging and retail sales.

- ❑ Use the label template that has been provided (in the **Triumph_AI18_PB.zip** archive on the Student Files web page).
- ❑ Create a compelling type treatment for the product name. Find or create other imagery as necessary to support the overall package design.
- ❑ Include the nutrition information and the barcode that have been provided by the client. Also include the package size (16.9 FL OZ/500 mL) somewhere in the label design.
- ❑ Include the "Recycle" logo in the design.
- ❑ Include the following text in the design: ME-HI-5¢ CA CRV

client comments

The energy drink market is huge in the United States, so we've decided to branch out from our traditional soda manufacturing. We need you to create an energetic logotype for the new product, as well as a complete label design for the bottles.

Our printing company has provided us with a template that is standard for this type of packaging. The pressroom manager wanted me to make sure to remind you to keep important design elements away from the glue area that is indicated on the template.

Because this is a consumable product, there are a lot of elements that must be incorporated in the package design. Make sure nothing important is left out, or we won't be able to meet our ship date.

project justification

Project Summary

The flexible artboard size and layer controls, coupled with the extensive set of creative tools, make Illustrator ideally suited to meet the complex needs of packaging design. You can design sophisticated artwork that can be wrapped or folded into virtually any shape to package virtually any product.

This project combined the technical requirements of packaging design — specifically using a custom diecut template supplied by the output provider — with the artistic capabilities necessary to create the final design for a custom candy package. You composited a number of existing elements and created others, then used a number of features to modify artwork — adding interest and depth to unify the different pieces into a single, cohesive design.