Working with Styles and Shadows

IN THIS CHAPTER

- **Giving your model some styles**
- **Editing, saving, and sharing styles**
- **Finding out about the Shadows panel**
- **Using shadows to make models look better**
- **Displaying and studying accurate shadows**

SketchUp is a very capable tool for presenting the stuff you build. Deciding how your models should look — loose and sketchy, quasi-photorealistic, or anything in between — can be lots of fun, and making the right decisions can help your models communicate what they're supposed to.

The first half of this chapter is about styles. If you're the sort of person who likes to draw, you're in for a treat. If you can't draw a straight line with a ruler, you're in for an even bigger treat. SketchUp styles are all about deciding how your geometry — all your faces and edges — will actually *look*.

SketchUp's Shadows feature is another awesome tool for presenting models. Displaying shadows is also an easy operation; it's a matter of clicking a button. When you add shadows to your model views, they look more realistic, more accurate, and more readable. And, well, more *delicious*. You'll see what we mean.

Styling Your Model's Appearance

In SketchUp, a *style* is a collection of settings that control how your model's edges, faces, and background appear. To change a model's whole look, all you need to do is apply a different style. For example, Figure 10-1 shows four different styles applied to the same model of a house. Even cooler, changing a model's style is a one-click operation. Styles also enable you to watermark a model and control how on-screen modeling cues appear.

FIGURE 10-1: Use styles to make your model look any way you want.

You can also customize styles, which is a little more work than simply applying a style to a model, but arguably more gratifying. This section offers guidelines for using styles and explains how to apply, edit, create, and share styles.

Choosing how and where to apply styles

Styles are endless. With a million permutations of dozens of settings, you can spend all day fiddling with the way your model looks. But you don't have all day, so keep one question in mind: Does this setting help your model say what you want it to say? Focus on what's important. Styles are cool, no doubt, but making them *useful* is the key to keeping them under control.

REMEMBER To help you make smart decisions about using SketchUp styles, consider at least two factors when you're styling your model:

- **The subject of your model's level of completeness:** Reserve sketchy styles for models that are still evolving. The message that a sketchy style sends is "this isn't permanent/I'm open to suggestions/all this can change if it has to." As a design gets closer to its final form, styles can make your model appear less rough and more polished. In this way, styles can communicate how much input an audience can have and what decisions still need to be made.
- **How much your audience knows about design:** An architecture-school jury and a nondesigner client who's building a house for the first time perceive styles differently. Design professionals are more experienced at understanding 3D objects from 2D representations, so they don't need as many visual clues to help them along. Styles' essential purpose is to provide these clues, so here's a guideline: The more your audience knows about design, the simpler you should keep your styles.

Before you dive into styles, remember also that a little style goes a long way. No matter how tempting it is to go hog-wild with the styles settings, please resist the urge. Remember that the purpose of styles is to help your model communicate, *not* to make it look "pretty" or "cool." If the *style* of your work overpowers its content, tone down the styles.

Applying styles to your models

The easiest way to start applying styles is by using the premade styles that come with SketchUp. You find scads of them, which is great because seeing what's been done is the best way to see what's possible. As you go through this section, you'll no doubt get ideas for your own styles, and that's where the fun begins.

Applying a SketchUp style to your model is a three-step process that goes like this:

1. **Open the styles panel by clicking its right-pointing arrow in the Default Tray (Windows) or choosing Window ⇒ Styles (Mac).**
2. **On the Select tab (which is open by default), choose a styles collection from the Styles Collections drop-down list.**

   We introduce you to the collections that come preinstalled with SketchUp in a moment.
3. **Click a style in the Styles window to apply it to your model.**

TIP This may come as a surprise, but it's not possible to view your model without any style at all because styles are really just combinations of display settings. Some styles are fancier than

others, but no matter what you do, you always have to have a style applied. If you want a relatively neutral view of your model, choose a style in the Default Styles collection.

Wonderfully, SketchUp doesn't leave you out in the cold when it comes to content. SketchUp comes with plenty of examples to get you started. Figure 10-2 shows the Styles Collections drop-down list.

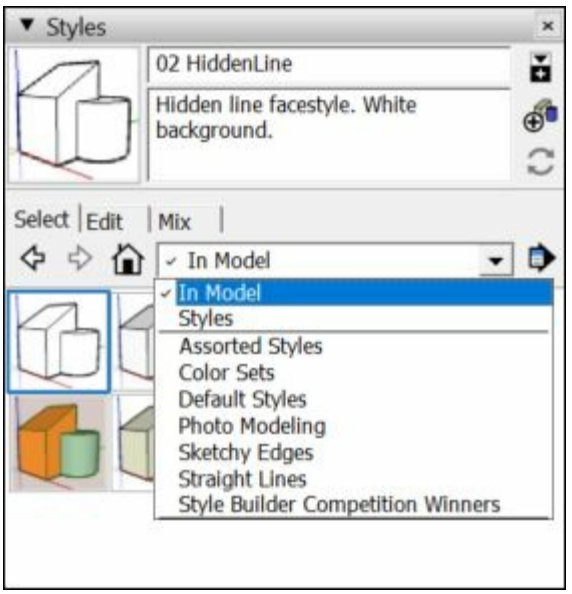

FIGURE 10-2: The Styles Collections drop-down list is where you find all your styles.

Here's a quick introduction to the most interesting options in the Styles Collections drop-down list:

- **In Model:** The In Model collection shows you all the styles you've applied to your model. The collection keeps track of every style you've *ever* applied to your model, whether or not that style is still applied. To see a current list of styles in your SketchUp file:
    1. *Choose the In Model styles collection to show a list of styles you've applied to your model.*
    2. *Click the Details flyout menu and choose Purge Unused to get rid of any styles you aren't currently using.*
- **Default Styles:** Think basic. These styles are as minimal as it gets: white background, black edges, white-and-gray front-and-back faces, and no fancy edge effects. Use these styles to get a clean starting point so that you can start simple and build from there.
- **Photo Modeling:** These styles make it easier to work when you're building models that are *photo-textured* — completely covered in photographs. Chapter 8 covers modeling with photos in detail.
- **Sketchy Edges:** These styles use real hand-drawn lines (also called nonphotorealistic, or NPR, styles) instead of digital ones to render edges, making your models look more like manual sketches than ever before. You can safely use the Sketchy Edges styles to convey any of the following:

- That your design is in process
- That your model is a proposal and not a finished product
- That you welcome feedback in any and all forms

RUNNING FROM REALISM: NPR STYLES

In the world of 3D modeling software, the trend has been toward *photorealism*. Rays of digital light are bounced around a billion times inside your computer until you can see every glint of sunlight in every dewdrop on every blade of grass on the lawn. The standard of perfection is how close the model comes to looking like a photograph, and in a lot of cases, that standard has been met — we've seen computer renderings that look more lifelike than life itself.

But what about models of buildings or other things that aren't completely finished? Perhaps you're an architect who's designing a house for a client. If you aren't sure what kind of tile you'll use on your roof, how are you supposed to make a photorealistic rendering of it? You *could* just go ahead and throw any old tile up there as a placeholder, but that could backfire. Your client could hate the tile and decide not to hire you without ever telling you why, and all because of something you didn't even choose.

What you need is a way to show only the decisions you've made so far, and *that* is exactly why architects and other designers make sketches instead of photorealistic renderings. When you're designing, decisions don't all happen at once. You need to be able to add detail as your design evolves. Sketching allows you to do that because it offers a *continuum* from "cartoony" to photographic, with everything in between. The following figure is an illustration of this.

Programs like SketchUp offer *NPR*, or *nonphotorealistic rendering*, as a way to solve this problem for people who design in 3D. Instead of spending processor power on making representations that look like photographs, the people who make SketchUp went in the opposite direction; they've made a tool that lets you make drawings that are useful throughout the design process. And because SketchUp's NPR engine works in real time, you can make changes on the fly, in front of your audience.

Editing your styles

If you're handy in the kitchen, you've probably heard that cooking is an art and baking is a science. Cooking allows you to experiment — while you're making a sauce, adding a little of this and a dash of that won't wreck anything. Taking liberties with a cake recipe, however, can easily turn the cake into a doorstop. Aidan found this out when he made a lovely chocolate doorstop for his wife's birthday not so long ago… .

Luckily, making your own styles has a lot more in common with cooking than it does with baking. Go ahead and fiddle around; you can't do any irreversible harm. Playing with styles doesn't affect a model's geometry. Because styles are just combinations of settings, you can always go back to the way things were before you started.

Of the three tabs in the Styles panel, Edit is definitely the blue whale of the group. Because you find so many controls and settings here, SketchUp's designers broke the Edit tab into the following five sections: Edge, Face, Background, Watermark, and Modeling (for on-screen modeling cues).

REMEMBER To access each section, first open the Styles panel by clicking the right-pointing arrow in the Default Tray (Windows) or choosing Window ⇒ Styles (Mac). Then click the Edit tab, and select the icon that corresponds to the section whose settings you want to edit.

The following sections explain each part of the Edit tab in detail; we also provide suggestions for using some of the settings.

INTRODUCING STYLE BUILDER

If you're using the Pro version of SketchUp, you have access to Style Builder. It's a completely separate application (just like LayOut) that's put on your computer when you install SketchUp.

Style Builder lets you create NPR styles based on edges *you* draw. Yep, that's right — you can make your SketchUp models look like you drew them by hand with *your* medium of choice (finger paint, Sharpie, bloody knife …). All you need is a scanner and a piece of software like Photoshop, and you're good to go. The best thing about the styles you create with Style Builder is that they're completely unique. Unless you share them with someone else, no one can ever make SketchUp models that look like yours.

Because Style Builder is a whole other program and because it's only included in the Pro version of SketchUp, we don't cover Style Builder in depth in this book.

Tweaking edge settings

The Edge section is tricky because it changes a little bit depending on what kind of style you currently have applied to your model. NPR styles have different settings than regular, non-NPR styles. Figure 10-3 shows both versions of the Edge section.

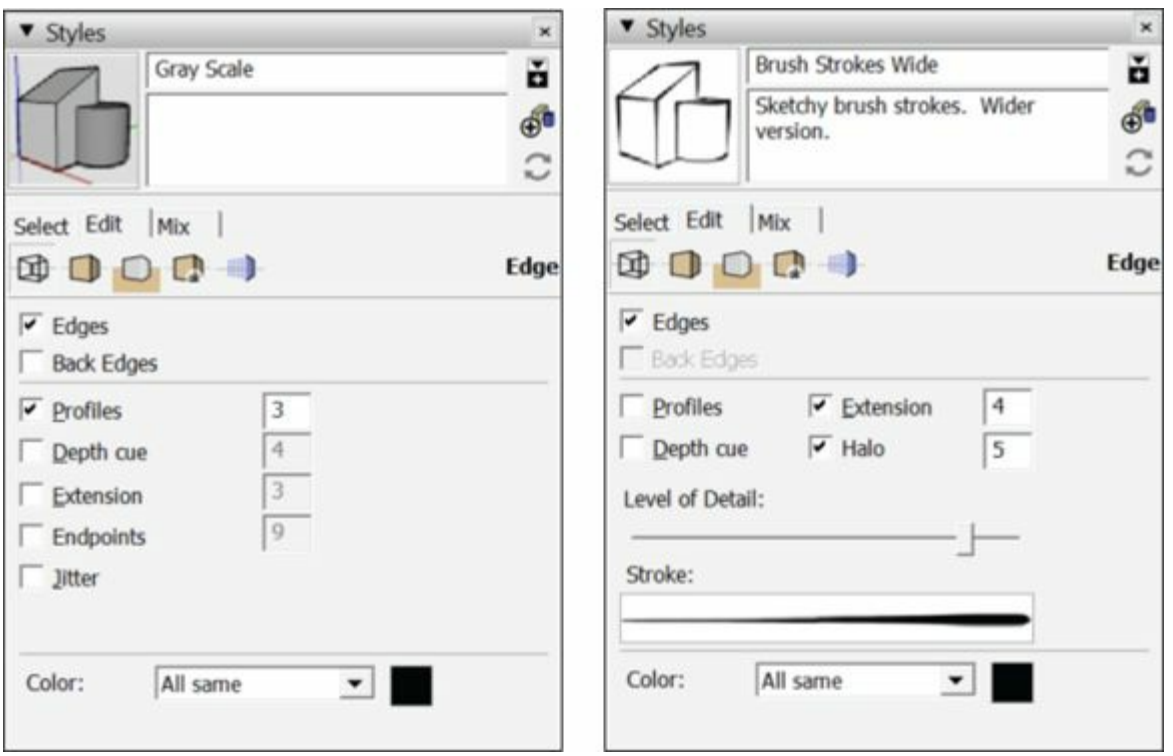

FIGURE 10-3: The Edge section comes in two flavors: regular (left) and NPR (right).

REMEMBER SketchUp comes with two kinds of styles: regular and NPR. In NPR, SketchUp uses digitized, hand-drawn lines to render the edges in your model. All the styles in the Sketchy Edges collection, as well as all the ones in the Assorted Styles collection, are NPR styles. Because you can create your own styles based on existing ones, all the styles you create using edge settings from one of these NPR styles is an NPR style, too.

Here's the lowdown on some of the less-obvious settings in the Edge section; check out Figure 10-4 for a visual reference:

- **Back Edges:** Switching on this setting tells SketchUp to draw all your model's *obscured* (hidden behind a face) edges as dashed lines. When you display back edges, you can more easily infer edges and points than you can when back edges aren't displayed. Also, there's nothing like a bunch of dashed lines to make a technical drawing look impressive and complex.
- **Profiles:** Selecting the Profiles check box tells SketchUp to use a thicker line for edges that outline shapes in your model. Using profile lines is a pretty standard drawing convention that's been around for a long time. Although models often look better with Profiles on, displaying Profiles comes at a price: drawing Profiles takes more computer horsepower, which can diminish your model's performance. If you're working with a large file, think twice before you turn on Profiles.
- **Depth Cue:** Using different line thicknesses to convey depth is another popular drawing convention. Objects closest to the viewer are drawn with the thickest lines, whereas the most distant things in the scene are drawn with the thinnest lines.

  Depth Cue automatically applies this effect to your models. When its check box is selected, Depth Cue dynamically assigns line thicknesses (draftspeople call them *line weights*) according to how far away from you things are in your model. The number you type is both your desired number of line weights *and* the thickness in pixels of the fattest line SketchUp will use. We recommend a maximum line weight of 5 or 6 pixels.

TIP One more thing: Using Depth Cue and Profiles is overkill. Choose only one.

- **Halo:** Aidan *really* wishes Halo was available for non-NPR styles because it's just that great. Halo simply ends certain lines before they run into other ones, creating a halo of empty space around objects in the foreground. This keeps your model looking neat and easy to read. In fact, this is a drawing trick that pencil-and-paper users have been using forever to convey depth. Read your favorite comic strips, and you'll likely find this effect. (If you don't have one, Rebecca is a fan of `http://xkcd.com`.)

  The number you type into the Halo box represents the amount of breathing room SketchUp gives your edges. The unit of measure is pixels, but there's no real science to it; just play with the number until things look right to you. For what it's worth, Aidan likes to crank it up.

- **Level of Detail:** When you slide the Level of Detail controller (which appears only when you've applied an NPR style) back and forth, you're effectively telling SketchUp how *busy* you want your model to look. The farther to the right you slide it, the more of your edges SketchUp displays. Experiment with this setting to see what looks best for your model. The last two images in Figure 10-4 show the Level of Detail slider positioned to the left and right.
- **Color:** Use the Color drop-down list to tell SketchUp what color to use for all the edges in your model. Here's what each option does:
    - *All Same:* This option tells SketchUp to use the same color for all the edges in your model. Select a color by clicking the color well on the right and choosing a color.
    - *By Material:* This option turns your model's edges the color of whatever material they're painted with. Because most people don't know that you can paint edges different colors, this setting doesn't get used very often.

TIP

    - *By Axis:* Now *here's* a useful, but hidden, gem. This option tells SketchUp to make everything that's parallel to one of the colored axes the color of that axis. Edges that aren't parallel to any axis stay black. Why is this so important? When something is screwy with your model — faces won't extrude or lines won't sink in — switching your edge colors to By Axis is the first thing you should do. You'll be surprised how many of your edges aren't what they seem. Have a look at Chapter 15 for more about this problem.

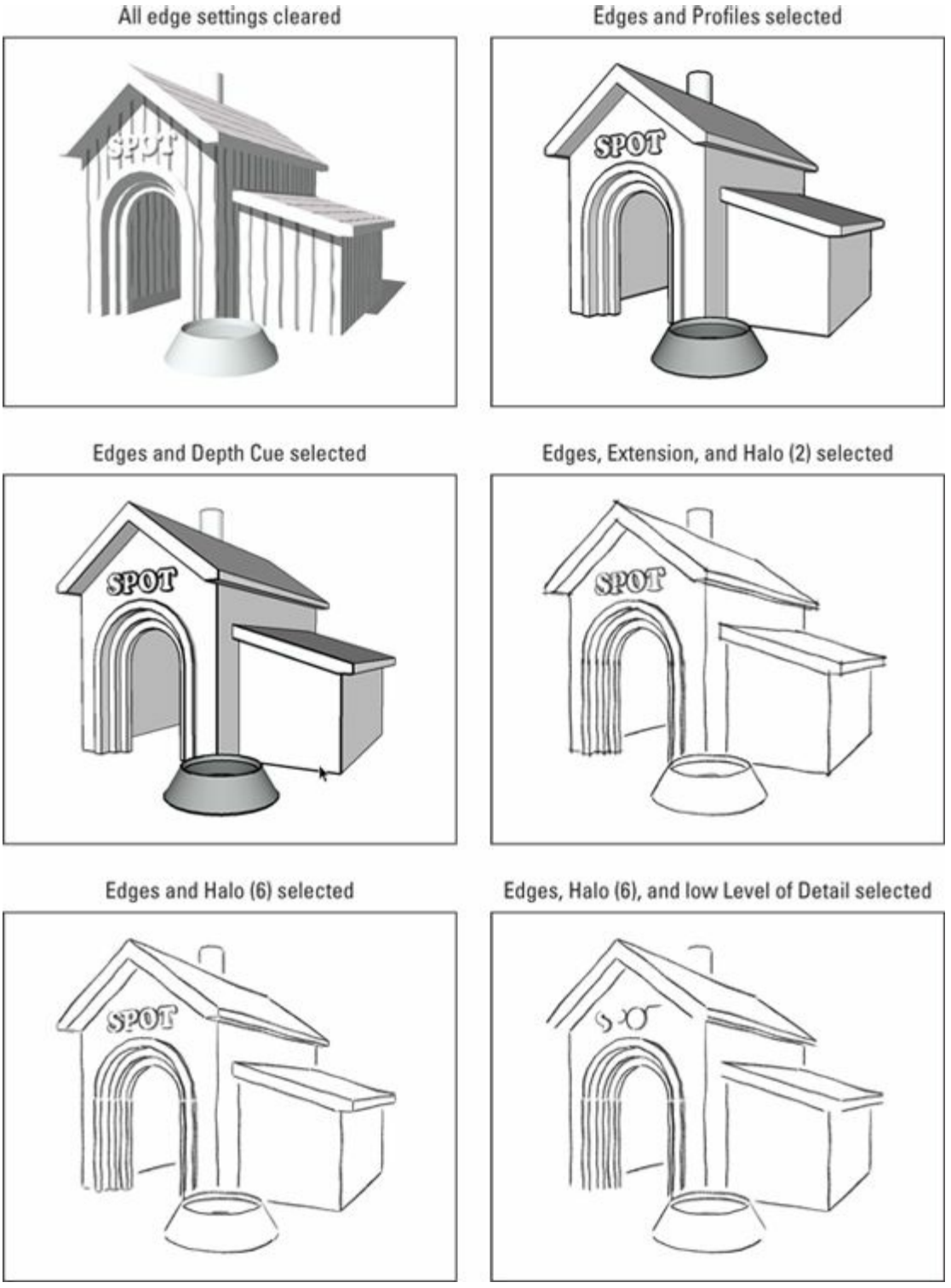

FIGURE 10-4: Choose among the edge settings to give your model the desired look, from realistic to sketchy.

IN A FOG?

If you're looking for something to provide a sense of depth in your model views, look no further than the Fog feature. Fog does exactly what it says — it makes your model look like it's enshrouded in fog (see the accompanying figure). You'd think that a feature this neat would be a little complicated, but it's the opposite. Follow these three steps to let the fog roll into your model:

1. **Open the Fog panel by choosing Window ⇒ Default Tray ⇒ Fog (Windows) or Window ⇒ Fog (Mac).**
2. **Select the Display Fog check box to turn on the fog effect.**
3. **Fool around with the controls until you like what you see.**

We wish the process of controlling how fog looks was more scientific, but it's not. You just play around with the sliders until you have the amount of fog you want. In case you absolutely need to know, here's what the sliders do:

- **Left-hand slider (100%):** This controls the point in space at which the fog is completely opaque. As you move the slider from left to right, you're moving the "completely invisible" point farther away.
- **Right-hand slider (0%):** This controls the point in space at which fog begins to appear in your model. When it's all the way to the right (toward infinity), you can't see any fog.

Changing the way faces look

The Face section of the Styles panel, shown in Figure 10-5, is very simple — at least compared with the Edge section (what isn't, really?). This area of the SketchUp user interface controls the appearance of faces, or surfaces, in your model. From here, you can change their color, visibility, and translucency. The following sections describe each element in detail.

FIGURE 10-5: The Face section controls the appearance of your model's faces.

FRONT COLOR/BACK COLOR

In SketchUp, every face you create has a back and a front. To choose the default colors for all new faces you create, click the Front and Back color wells, and then pick a color. We recommend sticking with neutral tones for your defaults; you can always paint individual faces later.

TIP Sometimes when you model in SketchUp, a face is turned inside out. Follow these steps to flip a face so that the right side shows:

1. **Select the face you want to flip.**
2. **Context-click and choose Reverse Faces.**

TECHNICAL STUFF Knowing which face is the front and which is the back is especially important if you plan to export your model to another program or create a 3D printable model. Some programs, such as

Autodesk 3ds Max, use the distinction between front and back to determine what to display. In these cases, showing the wrong side of a face can produce unexpected results. See Chapter 9 for details about 3D printing models.

STYLE

Face styles provide different modes for viewing the faces in your model. You can switch among them as much as you like without affecting your geometry. Each Face style has its purpose, and all are shown in Figure 10-6:

- **Wireframe:** In Wireframe mode, your faces are invisible. Because you can't see them, you can't affect them. Only your edges are visible, which makes this mode handy for doing two things:

  

  - TIP When you select edges, switch to Wireframe mode to make sure that you've selected what you meant to select. Because no faces block your view, Wireframe mode helps you select only what you want. The Back Edges setting is handy for this, too.
  - After you use Intersect Faces, you usually have stray edges lying around. Wireframe is the quickest way to erase them because you can see what you're doing. See Chapter 4 for details on Intersect Faces.

- **Hidden Line:** Hidden Line mode displays all your faces using whatever color you're using for the background; it's really as simple as that. If you're trying to make a clean, black-and-white line drawing that looks like a technical illustration, make your background white. (We talk about how later in this chapter.)

- **Shaded:** This Face mode displays colors on your faces. Faces painted with a solid color appear that color. Faces to which you've added textures are shown with a color that best approximates their *overall color*. If your texture has a lot of brown in it, SketchUp picks a brown and uses that.

  

  TIP For models with a lot of these textures, choosing the Shaded mode can really speed up orbiting, zooming, and otherwise navigating around. Unless you absolutely need to see textures applied to your model's faces, try staying in Shaded mode as you work on a model.

- **Shaded Using Textures:** Shaded Using Textures makes textures visible. Because this mode puts a lot of strain on your computer, it can also be the slowest mode to work in. Turn it on only when you work on a small model, or when you need to see the textures. Obviously, if you're going for a photorealistic effect, this is the mode to choose.

- **Display Shaded Using All Same:** This mode is a quick way to give your model a simplified color scheme. This mode uses your default front and back face colors to paint your model. You can also use this setting to check the orientation of your faces if you're exporting your model to

another 3D-modeling program.

- **X-Ray:** Unlike using translucent materials on only *some* of your faces (such as glass and water), flipping on X-Ray mode enables you to see through *all* your faces. Use X-Ray to see through a wall or a floor and show what's behind it. If you're in a plan (overhead) view, X-Ray mode is a great way to demonstrate how a floor level relates to the one below it.

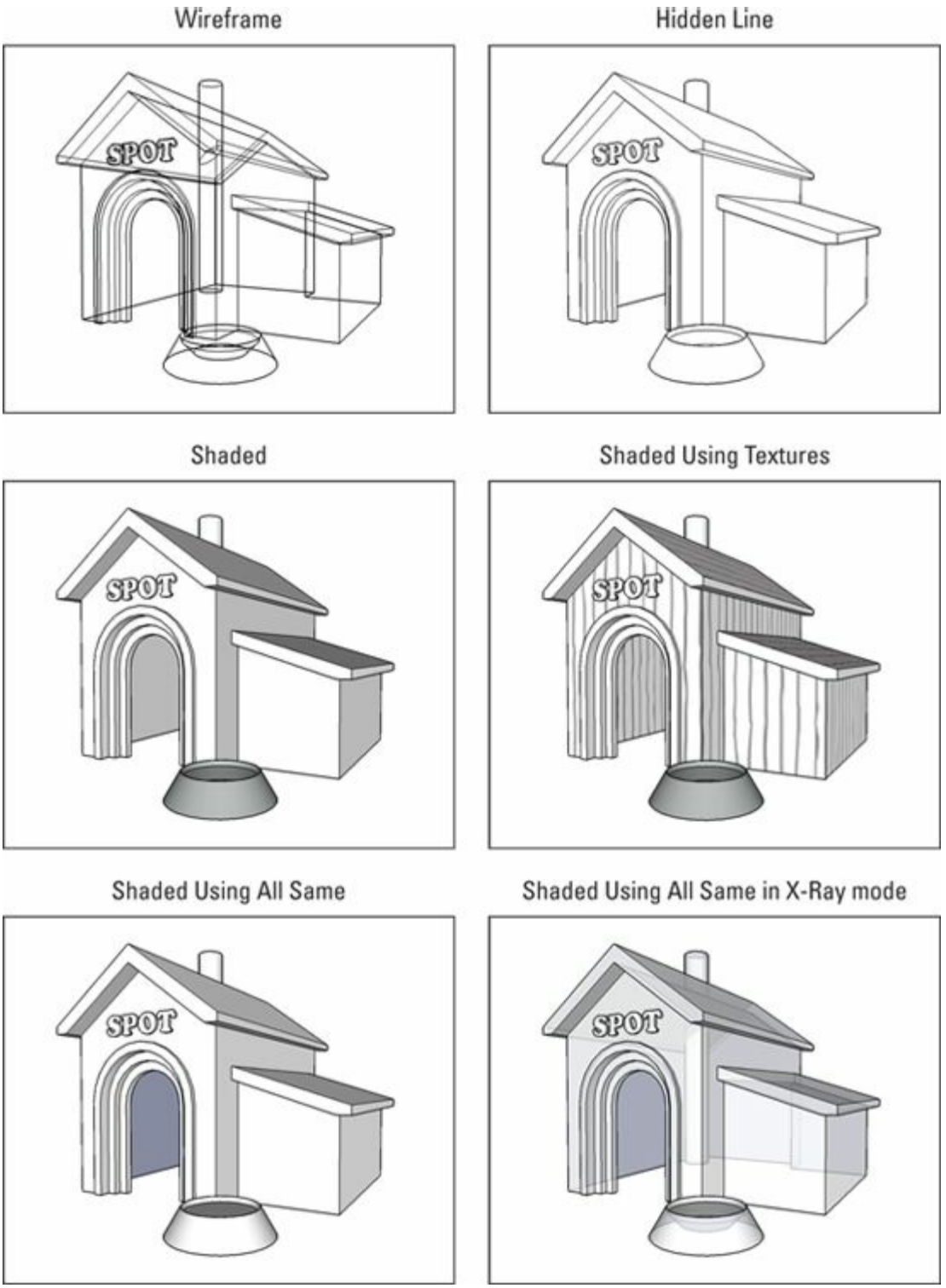

FIGURE 10-6: Use Face styles to change the way your faces appear.

TRANSPARENCY

Displaying *transparency* (as in translucent materials) is an especially taxing operation for SketchUp

and your computer to handle, so you can decide how to display translucent materials:

- **Enable transparency:** Clear this check box to display translucent materials as opaque. Turn off transparency to speed up SketchUp's performance if you find that it has slowed.
- **Transparency quality:** If you decide to display transparency, you can further fine-tune your system's performance by telling SketchUp how to render that transparency. In earlier versions of SketchUp, you have the choice of better performance, nicer graphics, or an average of the two. SketchUp 2017 streamlines these options to simply Faster or Nicer; when Nicer is selected, you can adjust the model's opacity with the X-Ray Opacity slider. The lower the opacity, the more see-through your model is.

Setting up the background

 In the Background section of the Styles panel, you choose colors and decide whether you want to see a sky and a ground plane. Check out Figure 10-7 to get a view of the Background section, along with an idea of how it works. You have the following options in the Background section:

- **Background:** For most models, Aidan sets the background to a traditional white.
- **Sky:** Displaying a sky in your modeling window makes things slightly more realistic, but the real purpose of this feature is to provide a point of reference for your model. In 3D views of big things like architecture, it's nice to be able to see the horizon. Another reason for turning on the sky is to set the mood — keep in mind that the sky isn't always blue. Some beautiful SketchUp renderings are sunset (or maybe nuclear winter) orange.
- **Ground:** We're not big fans of turning on the Ground feature, and here's why: It's *very* hard to find a ground color that looks halfway good, no matter what you're building. Also, you can't dig into the earth to make sunken spaces (such as courtyards) with Ground turned on. Instead of turning on this feature, try making your own ground planes with faces and edges. This method is more flexible, and we think it looks better.

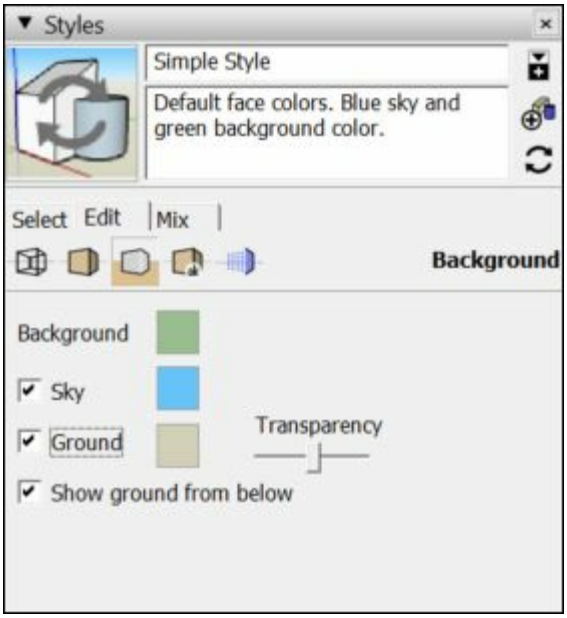

FIGURE 10-7: Use the Background section to turn on the sky and the ground and to choose colors.

Working with watermarks

Watermarks are much easier to understand if you don't think about them as actual watermarks that are used to brand a model. Instead, think of watermarks as graphics that you can apply either *behind* or *in front of* your model to produce certain effects. Here are a few of the things you can do with SketchUp watermarks:

- Simulate a paper texture, just like some of the styles in the Assorted Styles collection.
- Apply a logo or other graphic to your model view.
- Layer a translucent or cutout image in the foreground to simulate looking through a frosted window or binoculars.
- Add a photographic background like Outer Space or Inside My Ileum to create a unique model setting.

EYEING THE WATERMARK CONTROLS

Figure 10-8 shows the Watermark section of the Styles panel. Here's a brief introduction to what some of the less-obvious controls do:

- **Add, Remove, and Edit Watermark buttons:** The +, –, and gears icons allow you to add, remove, and edit (respectively) watermarks in the style you're editing.
- **Watermark list:** This list shows all your watermarks in relation to *model space*, which is the space your model occupies. All watermarks are either in front of or behind your model, making them overlays or underlays, respectively.
- **Move Up or Move Down arrows:** Use these buttons to change the stacking order of the watermarks in your model view. Select the watermark you want to move in the list and then click

one of these buttons to move it up or down in the order.

FIGURE 10-8: The Watermark section.

ADDING A WATERMARK

Watermarks are by no means simple, but working with them, miraculously enough, is. Follow these steps to add a watermark to your model view:

1. **Click the Add Watermark button.**

   The Choose Watermark dialog box appears.

2. **Find the image you want to use as a watermark and then click the Open button to open the first Create Watermark dialog box shown in Figure 10-9.**

   You can use any of these graphics file formats: TIFF, JPEG, PNG, and GIF.

   

   This point is *way* beyond the scope of this book but worth mentioning because you're bound to need this sooner or later: If you want to make a watermark out of an image that isn't a solid rectangle (such as a logo), you need to use a graphics file format that supports alpha channels (such as PNG). An *alpha channel* is an extra layer of information in a graphics file that describes which areas of your image are supposed to be transparent. It sounds complicated,

but it's really a straightforward concept. To make an image with an alpha channel, you need software like Photoshop or GIMP (GNU Image Manipulation Program). Try searching for *alpha channels* on Google for more information.

3. **Type a name for your watermark in the Name box.**
4. **Choose whether you want your new watermark to be in the background or in the foreground as an overlay and click the Next button.**
5. **Decide whether to use your watermark as a mask.**

   Selecting this check box tells SketchUp to make your watermark transparent, which kind of simulates a real watermark. *How* transparent each part becomes is based on how bright it is. White is the brightest color, so anything white in your watermark becomes completely transparent. Things that are black turn your background color, and everything in between turns a shade of your background color. The possibilities for this feature are interesting, but we haven't found any good uses for it yet.
6. **Adjust the amount that your watermark blends with what's behind it and then click the Next button.**

   In this case, Blend is really just a synonym for Transparency. By sliding the Blend slider back and forth, you can adjust the transparency of your watermark.

TIP Blend comes in handy for making paper textures because that process involves using the same watermark twice: once as an overlay and once as an underlay. The overlay version gets blended in so that your model appears to be drawn on top of it. To see how this works, apply one of the Paper Texture styles to your model and then edit each of the watermarks to check out its settings.

7. **Decide how you want your watermark to be displayed and then click the Finish button.**

   You have three choices for how SketchUp can display your watermark: stretched to fit the entire window, tiled across the window, and positioned in the window. If you select Stretched to Fit the Screen, be sure to select the Lock Aspect Ratio check box if your watermark is a logo that you don't want to appear distorted.

FIGURE 10-9: The Create Watermark series of dialog boxes.

EDITING A WATERMARK

You can edit any watermark in your SketchUp file at any time. Follow these simple steps to edit a watermark:

1. **Select the watermark you want to edit in the Watermark list.**

   You can find the Watermark list in the Watermark section of the Edit tab of the Styles panel.

2. **Click the Edit Watermark button (it looks like a couple of tiny gears) to open the Edit Watermark dialog box.**

3. **Use the controls in the Edit Watermark dialog box and then click OK when you're done.**

   For a complete description of the controls in this dialog box, see the description of the Create Watermark dialog box in "Adding a watermark," earlier in this chapter.

Tweaking modeling settings

In the Modeling section, shown in Figure 10-10, the controls adjust the color and visibility of all your model elements that aren't geometry. The controls are described as follows:

- **Controls with color wells:** Click the wells to change the color of that type of element.
- **Section Cut Width:** This refers to the thickness of the lines, in pixels, that make up the section cut when you use a section plane. For more about section cuts, see Chapter 11.
- **Controls with check boxes:** Use these to control the visibility of that type of element in your model. Three of them are a little confusing:
  - *Color by Layer:* Tells SketchUp to color your geometry according to the colors you've set up in the Layers panel. Check out Chapter 7 for more about layers and this setting.
  - *Section Planes:* This refers to the section plane objects that you use to cut sections.

They're gray with four arrows on their corners. Chapter 11 explains how section planes and cuts work.

- *Section Cuts:* Unlike section planes, this setting controls the visibility of the section cut effect itself. With this deselected, your section planes don't appear to cut anything.

» **Match Photo settings:** When you photo-match (which you can read all about in Chapter 8), adjusting the visibility of your photograph is sometimes helpful. Use these controls to hide, show, and adjust the photo's opacity in both the background and the foreground.

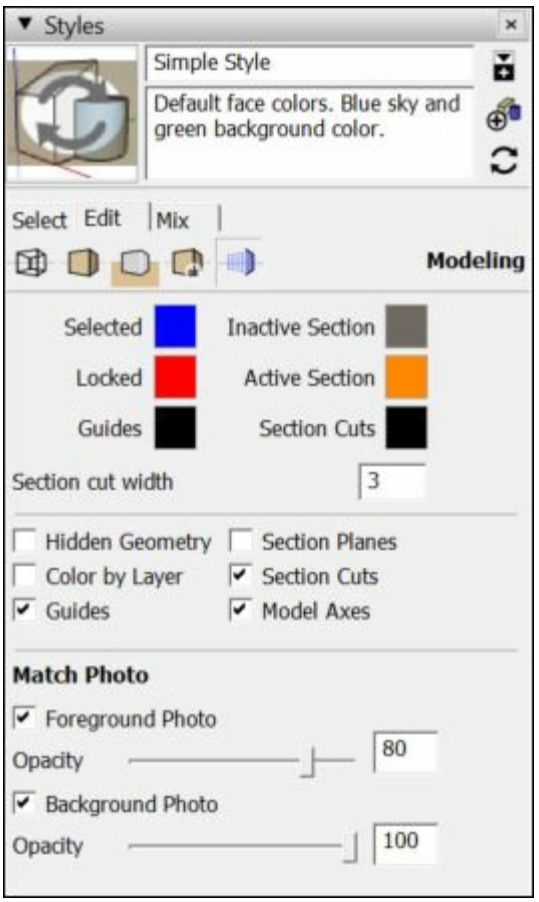

FIGURE 10-10: The controls in the Modeling section are every bit as simple as they look.

IMPROVING ACCESSIBILITY WITH STYLES

If you have some degree of color blindness, you may have trouble seeing the on-screen modeling cues. However, SketchUp styles enable you to change these colors and improve SketchUp's accessibility.

To start, check whether your version of SketchUp includes the Color Blind style, which you find in the Color Sets collection. The Color Blind style is new in SketchUp 2017.

If you don't have the Color Blind style, you can create your own by selecting a black background and changing the colors in the Modeling section to contrasting colors that are easy for you to see.

In SketchUp 2017, you can also change the axes colors and additional on-screen color cues in the Preferences dialog box. Choose Tools ⇒ Preferences (Windows) or SketchUp ⇒ Preferences (Mac), and select the Accessibility pane to find and adjust these options.

Mixing styles to create new ones

You can use the Mix tab to combine features of multiple styles to make new ones. Instead of working through the sections of the Edit tab, flipping controls on and off, sliding sliders, and picking colors, the Mix tab lets you build new styles by dropping existing ones onto special "category" wells. In addition to being a nifty way to work, mixing is the only way you can switch a style's edge settings between NPR and non-NPR lines.

REMEMBER NPR refers to the styles in the Assorted Styles, Sketchy Edges, and Competition Winners collections. These nonphotorealistic rendering styles use scanned, hand-drawn lines to draw the edges in your model. If you have SketchUp Pro, you can use Style Builder to make your own NPR styles from lines you draw and scan in. Take a look at the sidebar "Introducing Style Builder," earlier in this chapter, for more information.

Follow these steps to change a style using the Mix tab, as shown in Figure 10-11:

1. **On the Styles panel, select the Mix tab.**

   When you select the Mix tab, the secondary section opens at the bottom of the panel so that you can view your styles without switching back and forth from the Mix to Select tab.

2. **Find the style you want to sample *from* in the Select section.**

   You can call this your *source* style. Say that you're working on a new style and you want your edges to look just like those in the Marker Loose style that came with SketchUp. In this example, choose the Sketchy Edges collection from the Styles Collections drop-down list, where you'll find the Marker Loose style.

3a. **(Windows) Click the source style from the Styles list in the Select section to sample it and then click the category well that corresponds to the style setting you want to apply.**

3b. **(Mac) Drag your source style from the Styles list in the Select section to the category**

well that corresponds to the style setting you want to apply.
In this case, sample the Marker Loose style from the Select section and drop it on the Edge Settings Category well because you want the edge settings from that style to be applied to the style you're working on.

4. **To save your style after you're done adding all the bits and pieces, see the following section.**

FIGURE 10-11: Sample from different styles to update the style you're working on.

Creating a new style

Creating a new style adds it to your In Model collection of styles, so you can come back and apply it to your model anytime you like. Follow these steps to create a new style:

1. **Click the Create New Style button in the Styles panel.**

   This duplicates the style that was applied to your model before you clicked the Create New Style button. Your new style appears in your In Model collection as *[name of the original style]*1.

2. **Use the controls in the Edit tab to set up your style the way you want.**

TIP Frequently, you want to make a new style *after* you already make changes to an existing one. If you want to create a new style that reflects modifications you've made already, just switch Steps 1 and 2.

3. **In the Name box (at the top of the Styles panel), give your new style a name and press Enter.**

   If you want, you can also give your new style a description in the Description box, though you may want to wait until later.

4. **Click the Update button.**

   This updates your new style with all the changes you made in Steps 2 and 3.

5. **Check the In Model collection in the Select tab to make sure that your new style is there.**

6. **Click the In Model button (which looks like a little house) to see your In Model Styles collection.**

   Your new style appears alphabetically in the list.

TIP If a bunch of styles exist in your In Model collection that you don't use anymore and that you want to clean up, click the Details flyout menu and choose Purge Unused. This gets rid of any styles that aren't currently applied to any scenes in your model. Chapter 11 has more about scenes.

REMEMBER Creating a new style *doesn't* automatically make it available for use in other SketchUp files. To find out how to save and share styles, see the next section.

Saving and sharing styles you make

As you work in SketchUp, you'll want to create your own styles and save them so that you can use them in other models. If you're part of a team, everyone will likely want to access the same styles so that all your models look consistent.

Saving the styles you make

When creating your own styles, you can approach things in two ways:

-  **Create New Style:** Clicking this button creates a new style with the currently active settings. When you create a new style, it appears in your In Model collection of styles and is saved with your model. The Create New Style button can be found in the upper-right corner of the Styles panel.

-  **Update Style with Changes:** This button updates the current style with any changes you've made in the Edit or Mix tabs. If you want to modify an existing style without creating a new one, this is the way to go. You can find the Update button right below the Create button in the upper-right corner of the Styles panel.

Updating an existing style

To make adjustments to a style in your model, you need to update it. Follow these steps to update a style:

1. **Apply the style you want to update to your model.**

   If you need help with this, follow the steps in the section, "Applying styles to your models," earlier in this chapter.

2. **Use the controls in the Edit tab to make changes to the style.**

3. **Click the Update Style with Changes button in the Styles panel to update the style with your changes.**

TIP Use the Update Style with Changes button to rename existing styles, too. Just type the new name into the Name box (at the top of the Styles panel), press Enter, and then click the Update Style with Changes button.

REMEMBER When you update a style, only the copy of the style that's saved with your model is updated. You aren't altering the copy of the style that appears in every new SketchUp file you create.

Using your styles in other models

TIP After you update or create a style, you probably want to make that style available in other SketchUp models. To make this happen, you need to create your own styles collections. *Collections* are folders on your computer that contain the styles that appear in the Styles panel. You can create your own collections to keep the styles you invent neat and tidy.

Follow these steps to create a collection to contain your styles:

1. **Open the Styles panel by clicking the right-pointing arrow in the Default Tray (Windows) or by choosing Window ⇒ Styles (Mac).**
2. **On the Select tab, click the Details menu, and choose Open or Create a Collection. (On a Mac, choose Create a Collection.)**

   A dialog box opens, where you select a location on your hard drive for the collection.
3. **Navigate to the folder on your computer or network where you want to create your collection.**
4. **Click the New Folder button.**

   The new folder you create becomes your new collection.
5. **Type a name for your new collection.**

   For example, you can call your new collection Josephine's Collection. You can call it something else if your name isn't Josephine.
6. **(Mac) Make sure that the Add to Favorites check box is selected.**
7. **Click the Select Folder button (Windows) or the Save button (Mac).**

   The dialog box closes, and your collection is added to the Favorites section of the Collections drop-down list. It will be there in every SketchUp model you open on this computer.

After you create a new collection, you can add styles to it to make them available from any model you work on.

Follow these steps to make a style available for use in other SketchUp files:

1. **Choose Window ⇒ Styles.**

   The Styles panel appears.
2. **Click the Select tab and then click the In Model button to display your In Model collection.**

   The In Model button looks like a little house. The In Model collection contains all the styles you've used in your model, including the ones you've created.

3.  **Click the Show Secondary Selection Pane button.**

   You find this button in the upper-right corner of the Styles panel. When you click it, a second copy of the Select section pops out of the bottom of the Styles panel, as shown in Figure 10-12. Use this section to drag and drop styles between folders on your computer, which makes it easier to keep them organized.

4. **In the Select section, choose the collection to which you want to add your style.**

   If you've created a collection specifically for the styles you make, choose that one; or you can pick any collection in the Collections drop-down list.

5. **Drag your style *from* the In Model styles list *to* the Styles list in the Select section.**

   By dragging and dropping your style from the upper list to the lower one, you make the style available to anyone who has access to that collection. This means that you can use the style in other SketchUp models you build on your computer. To share it with other members of your team, copy your style to a collection where other people can get to it, such as on a network.

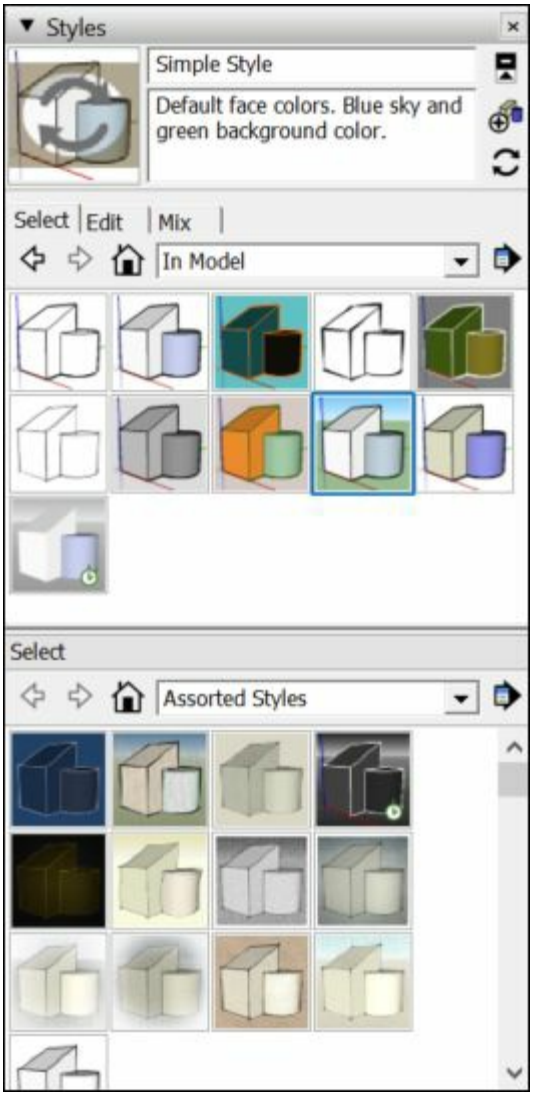

FIGURE 10-12: Use the Select section to manage your styles without leaving SketchUp.