Materials Tutorial

Materials display on the surfaces of objects in 3D views and can make a 3D view appear highly realistic. When applied to most objects, material quantities will also be calculated in the Materials List.

This tutorial continues from where the Interior Design Tutorial ended. You may want to save this tutorial using a new name to archive your previous work. In this tutorial you will learn about:

- Setting Materials Defaults
- Using the Materials Tab
- Using the Material Painter
- Using the Material Eyedropper

- Blending Colors with Materials
- Using the Material Eyedropper
- Generating a Materials List

Setting Materials Defaults

Material default settings determine the materials used by different objects when they are initially created. Setting the correct material defaults before beginning a project may help you save time. For more information, see "Preferences & Default Settings" on page 41 of the Reference Manual.

To set material defaults

1.   Select **Edit> Default Settings** ⚙ to open the **Default Settings** dialog.

2.   There are a two options. You can do either or both:
   - Select an item in the tree list and click the **Edit** button to open the defaults dialog for that type of object. The default dialogs for architectural objects such as doors and windows have a Materials tab that allows you to set the material defaults for object components. See "Using the Materials Tab" on page 78.
   - Select **Materials** and click the **Edit** button to open the **Material Defaults** dialog. Here you can set the material defaults for many different objects, including some that do not have default dialogs. See "Material Defaults" on page 303 of the Reference Manual.

3.   When you are finished, click **OK** to close the defaults dialog, then click **Done** to close the **Default Settings** dialog.

Once an object has been placed in a plan, the materials applied to it can be changed in a number of ways.

Using the Materials Tab

Most objects' materials can be assigned in their specification dialog in both 2D and 3D views. The materials used by a door, for example, can be edited on the Materials tab of the **Door Specification** dialog. For more information, see "Materials Tab" on page 298 of the Reference Manual.

To change material on an object using the Materials tab

1.   Click the **Select Objects** ⬚ button, then click on a double door leading to the deck on Floor 2 to select it.

2.   Click the **Open Object** ▮ edit button to open the **Door Specification** dialog.

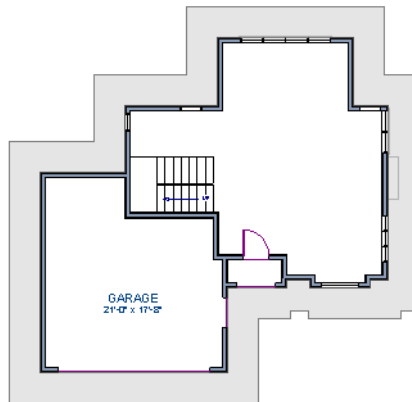3. Select one of the door's components from the list on the left.
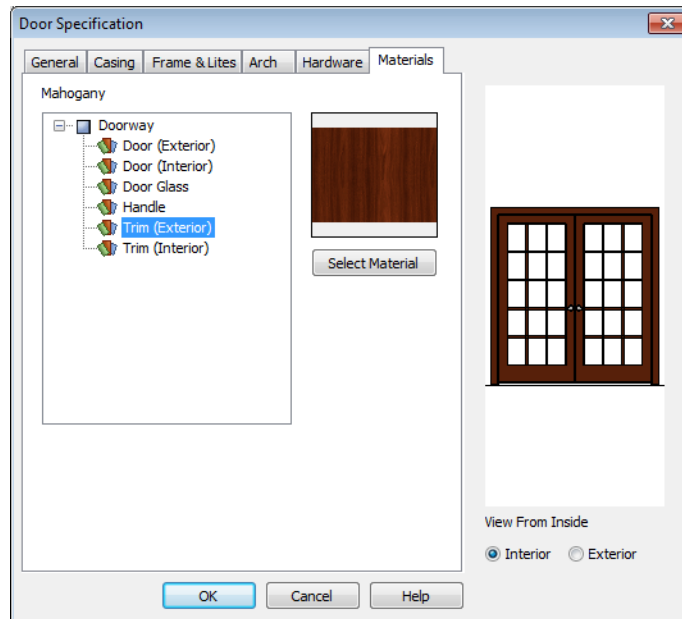
• Click the **Select Material** button to open the **Select Library Object** dialog.

4. Find and select a material and click **OK**.

5. You can continue to specify component materials. The preview in the dialog updates as changes are made. When finished, click **OK** to close the specification dialog.

6. Create a **Camera** [icon] view of the door's exterior.

A building's exterior wall material can also be specified on the Materials tab for the Exterior Room. The Exterior Room can be selected in both floor plan and 3D views. For more information, see "The Exterior Room" on page 119 of the Reference Manual.

• In floor plan view, click in an empty space within 12 inches of the outer surface of an exterior wall. When selected, a 12 inch wide path around the outside of the structure becomes highlighted. If you accidentally select an object other than the room, you can click the

Select Next Objects [next] edit button or press the Tab key on the keyboard until the room is selected.


• In camera views and overviews, click on an exterior wall surface to select the Exterior Room.

To edit the Exterior Room using the Materials tab

1. Select the Exterior Room and click the **Open Object** [icon] edit button to open the **Room Specification** dialog.

2. On the Materials tab, select Exterior Walls from the list on the left and click the **Select Material** button to open the **Select Library Object** dialog.
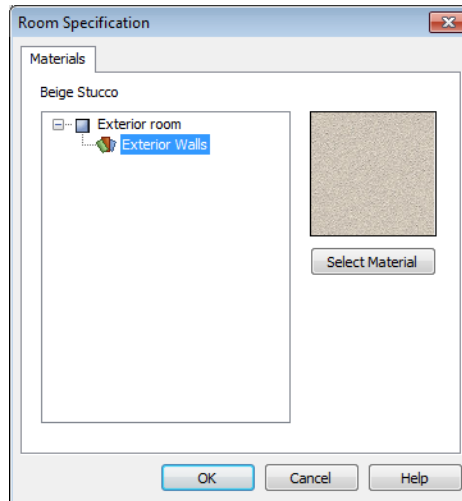
3. Browse and select a material, then click **OK** to close the dialog.

The selected material will now be applied to all walls on the selected floor. If the Exterior Room is edited in floor plan view, the currently active floor is affected.
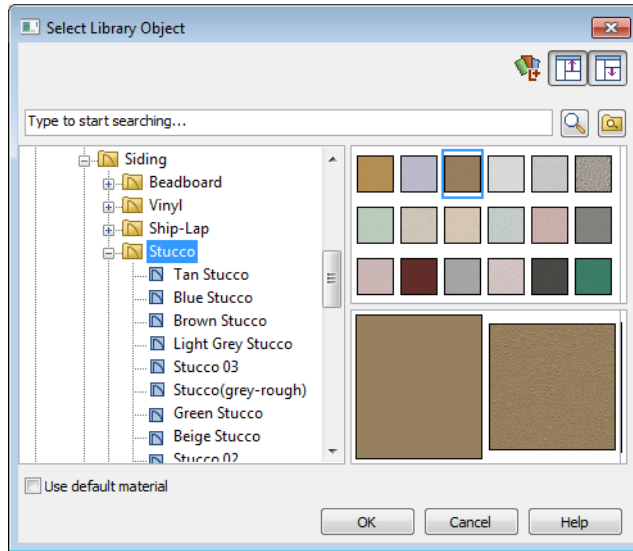
Using the Material Painter

The **Material Painter** ⬛ tool allows you to select a material and then apply it to an object in a 3D view.

There are five Material Painter Modes which specify how broadly or narrowly the selected material will be applied to surfaces in your plan. In this tutorial, the **Component Mode** is used. For more information, see "The Material Painter" on page 296 of the Reference Manual.

To apply a material using the Material Painter

1. While still in the 3D view of the door, select **3D> Material Painter** ⬛ and confirm that

    there is a checkmark next to **Material Painter Component Mode** ⬛.

2. Click the **Material Painter** button to open the **Select Library Object** dialog. Browse to Siding>Stucco, select a siding material, and click OK.

3. Move your cursor into the 3D view and notice that it displays a spray can icon .
4. Click on a wall surface in the view to apply the selected material to that surface, which is a component of the Exterior Room.

With the **Material Painter** tool you can apply a material to nearly any surface, including many that can't be individually selected like the base molding on a wall or the frame of a window. When either the **Component** or **Object** Modes is active, you can continue to apply the selected material to objects until a different tool is selected.

Blending Colors with Materials

Instead of using the **Material Painter** to replace a material with a new one, we can use it with the **Blend Colors With Materials** feature to blend a color with a textured material such as the house siding and create a new material. For more information, see "Blend Colors With Materials" on page 297 of the Reference Manual.

To blend a color with a texture

1. In a 3D view, select **3D> Material Painter> Material Painter** .
2. In the **Select Library Object** dialog, select a solid color for the siding from the Generic Colors library, then click OK.
3. When you move your cursor into the view, it displays a paint roller icon .

    • When **Blend Colors with Materials** is active and a solid color is loaded in the Material Painter, your cursor displays the paint roller icon .

    • If you see the spray can icon instead, select **3D> Material Painter> Blend Colors With Materials** to turn this feature on.

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4. Click on the siding to blend the selected color with the siding texture. The result is a new material with the textured appearance of the siding as well as the color you selected.

Using the Material Eyedropper

The **Material Eyedropper** ![icon] tool allows you to load a material that can be seen on a surface in a 3D view into the **Material Painter** ![icon] tool and then apply it to another surface. In our plan, the paint on the door trim is different from than on the windows. We can easily change this using the **Material Eyedropper** ![icon].

1. Activate the camera view (or any 3D view).

2. Select **3D> Material Painter> Material Painter** ![icon] from the menu. If there is a check beside **Blend Color With Material** ![icon], select this menu item to disable it; if not, simply click outside of the menu to close it again.

3.   Select **3D> Material Painter> Material Eyedropper** and notice that the pointer displays an eyedropper icon .

4.   Now just click to load that material. Notice that the pointer changes to a spray can , indicating that the loaded material is ready to apply to another object and replace the existing material.

5. Click on the casing to apply the loaded material.

Custom Materials, Images, and Backdrops

Home Designer Landscape and Deck allows you to customize your 3D views by importing your own materials, image objects, and backdrops that display in 3D views. For more information about images, see "Pictures, Images, & Walkthroughs" on page 361 of the Reference Manual.

> Note: The following steps make use of image files that are not included with the program. You can use image files that are already on your computer or you can create new ones. You can even use the same image file to create a material, an image, and a backdrop. Learning the tools and techniques described is more important than the appearance of the final product.

Creating Materials

Materials are special digital images that can be applied to the surfaces of objects. You can create your own custom materials and save them in the library. Bear in mind that materials typically cover a surface by tiling an image repeatedly and are specially edited so that they tile seamlessly: as a result, not all images will necessarily serve as effective materials.

Once a material is saved in the library, it can be applied to objects in any plan, either using the objects' specification dialogs or the **Material Painter** tool.

To add a new material to the library

1. Select **Library> Library Browser** 📙 (or press Ctrl + L) to open the Library Browser.
2. Right-click on the User Catalog 'folder and select **New> Material** from the contextual menu to open the **Define Material** dialog.
3. Give the new material a short, descriptive **Name**.
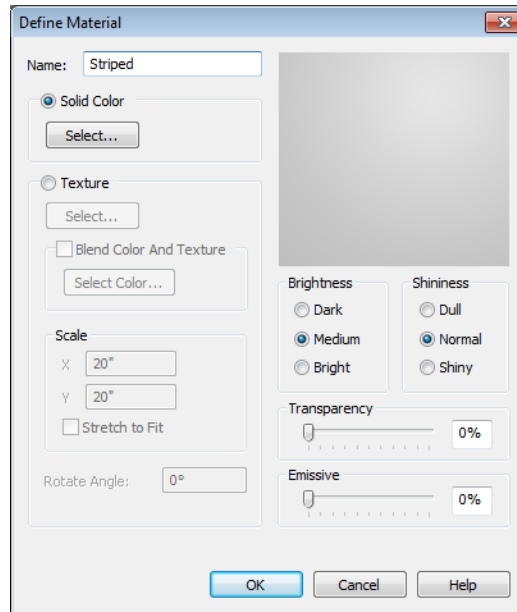
4. On the Texture tab, click the **Browse** button to display the **Select Texture File** dialog, where you can select an image file saved on your machine.
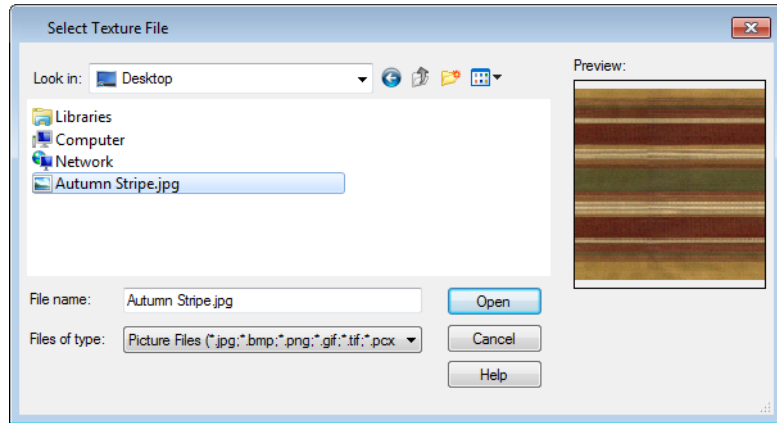
5. Select an image file and click the **Open** button to return to the **Define Material** dialog.
6. Specify the **Scale** of the texture, which controls how large the image will appear on the surfaces it is applied to.
7. Click **OK** to add the new material to the **User Catalog** folder.

For more information, see "Define Material Dialog" on page 301 of the Reference Manual.

Creating Images

In Home Designer Landscape and Deck, image objects are more than just 2D pictures. Images have size and height attributes and can contain transparency information. In floor plan view, they display only as 2D symbols; but in 3D views, the visual information that images contain can be seen.

Images can be placed in a plan just as plants, furnishings and fixtures are: by selecting the image and clicking any floor plan view, camera view or overview.

To create an image and save it to the library

1. Right-click on the User Catalog folder, then select **New> Image** from the contextual menu to open the **Image Specification** dialog. For more information, see "Image Specification Dialog" on page 364 of the Reference Manual.

2. On the Image tab, click the **Browse** button and browse to any image on your computer. In this tutorial we will use an image of a cat that has transparency data associated with it; however, you can use any image.
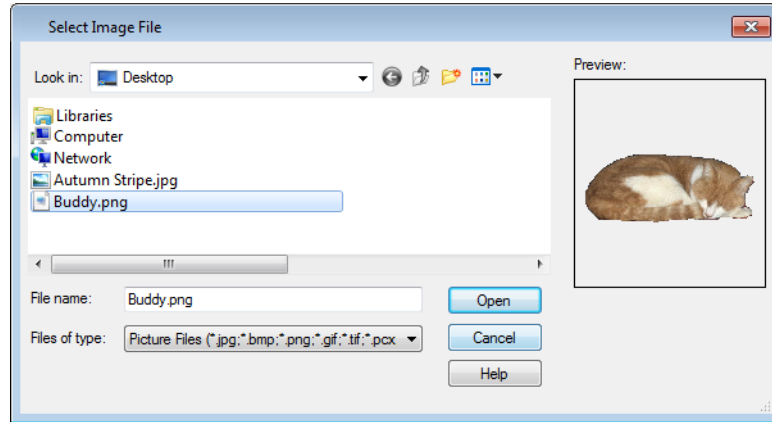

3. Click **Open** to return to the **Image Specification** dialog.
4. On the Image tab, enter the **Height** or **Width**, adjusting one will adjust the other, maintaining the correct proportion. Enter a **Height Above Ground** value to specify the elevation at which the image displays. A value of 24 inches works well in this case as we'll be placing the image on a piece of furniture.
5. Specify the transparency settings on the Transparency tab.
6. Click **OK** to close the **Image Specification** dialog and add the new image to the **My Images** category in the Images library.

Importing Backdrops

Backdrops are images that display behind 3D views. In Home Designer Landscape and Deck, you can take a photo of a site, save it to the library as a backdrop, and display it behind 3D views to create a realistic rendering of your model and its surrounding view.

To import a backdrop and save it to the library

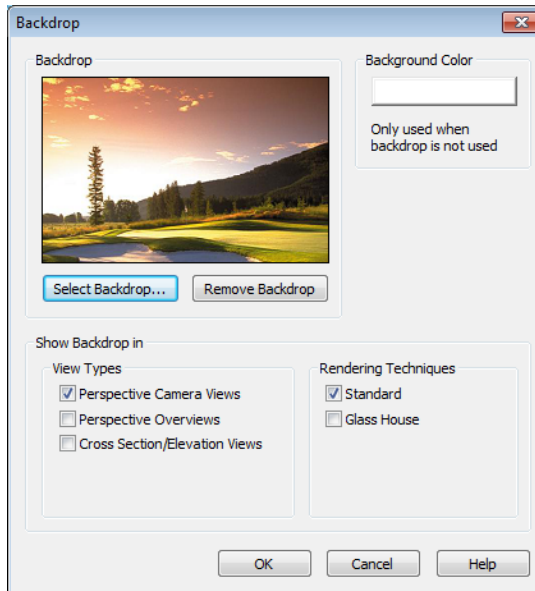1. Select **File> Import> Backdrop** and browse to an image on your computer.
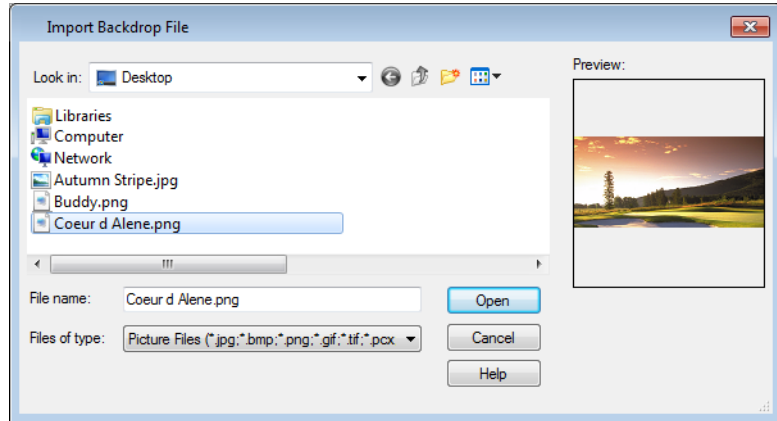
2. Select the image and click **Open** to add it to User Catalog.

To apply a backdrop to 3D views

1. Select **3D> 3D Backdrop** to open the **3D Backdrop** dialog.

2. Click on the **Select Backdrop** button, find and select your backdrop from User Catalog and click **OK**.

3. Click **OK** to close the **3D Backdrop** dialog.

You can see your custom material, image and backdrop by creating a **Full Camera** 📷 view.

Generating a Materials List

To conclude this tutorial, we'll generate a materials list for the house. You can generate a materials list for an area of the plan on one floor, or the whole plan. For more information, see "Materials Lists" on page 393 of the Reference Manual.

> Note: The Materials List is only a rough cost estimate and should be double checked before being relied on.

To generate a materials list for the whole plan

1. Select **Tools> Materials List> Calculate From All Floors**. A materials list is generated for all floors of the house.
2. Locate the an item, such as one under the Fixtures category.
3. Click in the "Price" column type in a value. Notice that the subtotal and Total both update to reflect the pricing change. You can specify prices for every material in your plan, allowing you to generate a cost estimate.
4. If you wish, you can select **File> Export Materials List** and save the list as a Tab-delimited **.txt** file, which can be opened in a spreadsheet application.
5. Close the materials list by selecting **File> Close Window** from the menu. When you have finished, you may want to **Save** your work.

You can generate a materials list to estimate the cost of an entire plan or just a portion of a plan. For more information, see "Materials Lists" on page 393 of the Reference Manual.

> Note: The Materials List is only a rough cost estimate and should always be double checked before being relied on.

To calculate a materials list for just the deck

1. In floor plan view, select **Tools> Materials List> Calculate from Area**.
2. Click and drag a rectangle surrounding the an area to display a materials list for the area within the rectangle. The resulting materials list only includes objects and materials located within the rectangle.