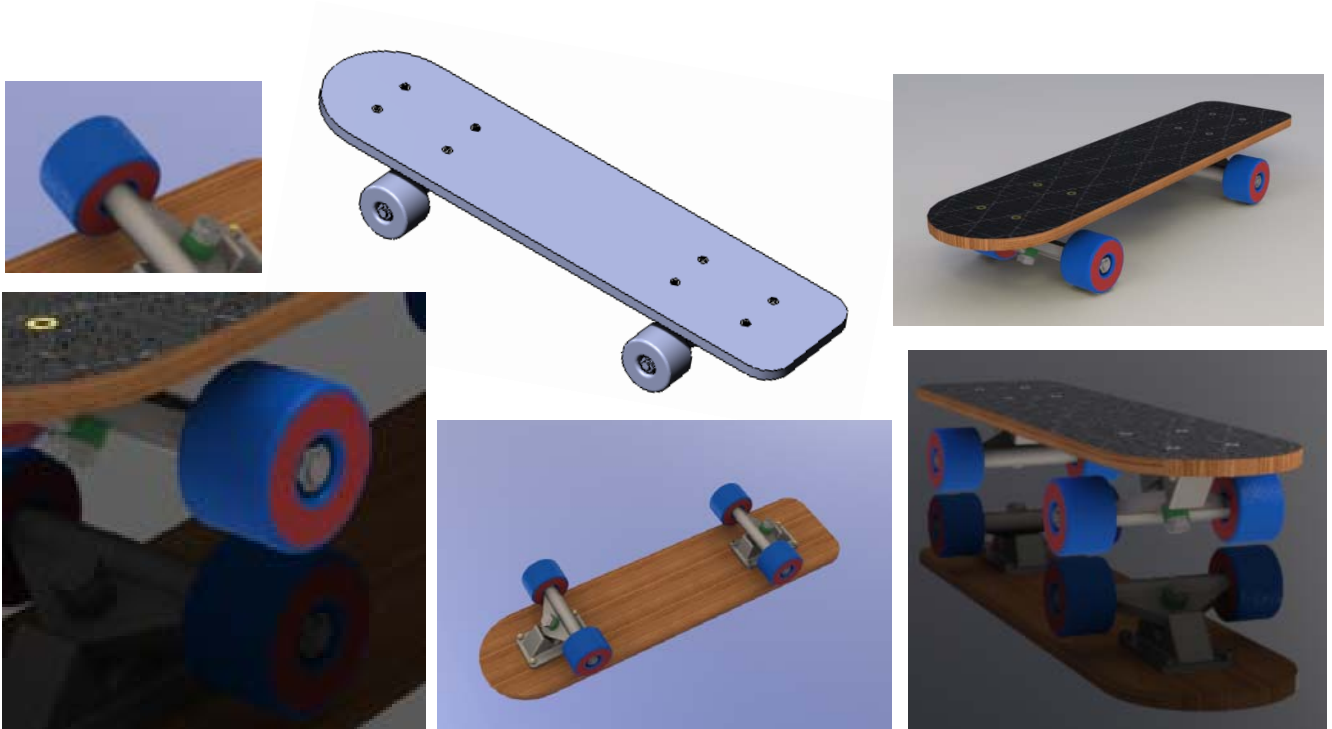


Photoview 360 – Creating Photorealistic Images



Prerequisite knowledge A basic knowledge of SolidWorks 2009 is required

Focus of Lesson This lesson will focus on using PhotoView 360 to create photorealistic images from SolidWorks models.

PhotoView 360 PhotoView 360 is a software package, separate to SolidWorks, which generates digital lifelike images (photorealistic images) from SolidWorks files. PhotoView 360 is an easy and quick way to produce high quality photorealistic images.

There are a wider range of appearances in **PhotoView 360** than in **SolidWorks**.

Getting Started **PhotoView 360** is a separate program which loads with SolidWorks 2009.

To launch the program; double click on the PhotoView 360 icon located on the desktop.



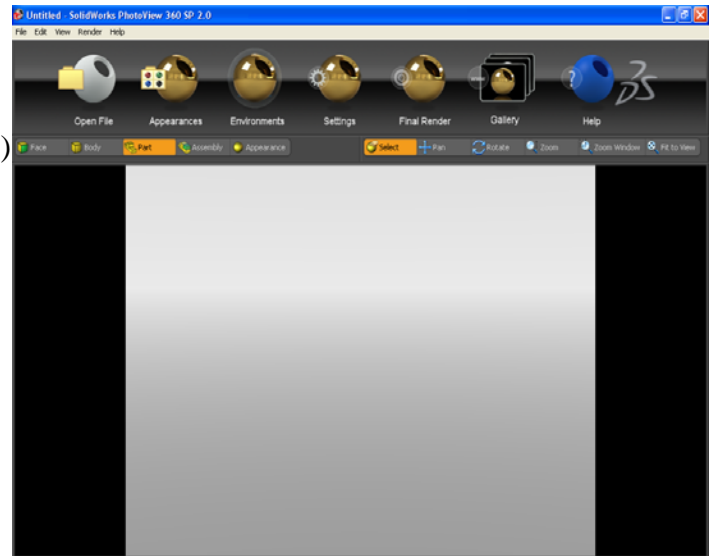
PhotoView 360

PhotoView 360 allows you to import a SolidWorks part or assembly and apply particular appearances and scenes to that file.

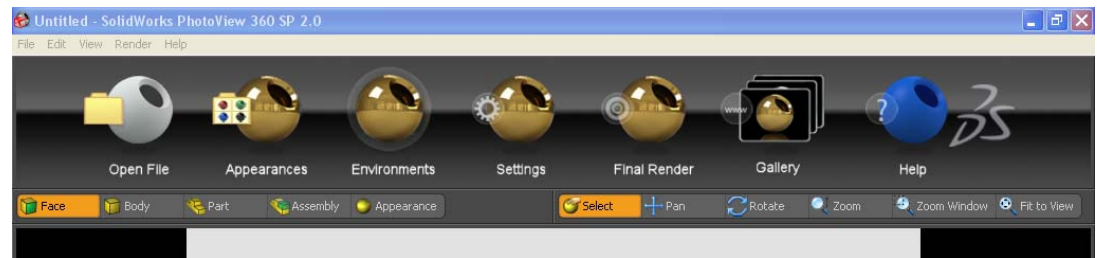
The Interface

When using PhotoView 360 we work from left to right on the main menu.

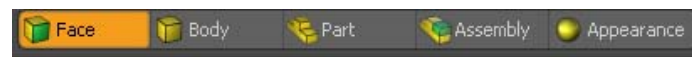
1. Open file
(Import SolidWorks File)
2. Apply appearances
3. Apply Environment
4. Edit settings
5. Final render, save file



The main menu is shown below;



Toolbars



There are four options when applying an appearance – you may choose to apply an appearance to an **entire assembly**, **single part**, **body of a part** or an individual **face**.

The appearance will be applied based on whichever option is pre-selected.

There is a second toolbar under the main toolbar. Its function is to move and rotate the model to enable the user to choose particular faces, features or parts as well as positioning the model to capture the photorealistic image.



The **roller ball** of the mouse can be used to maneuver a solid in **Photoview 360** window in the same way as **SolidWorks**.

The **select** icon must be highlighted in order to apply appearances to any aspect of the SolidWorks model.

Transfer Folder

Copy the folder named **Photoview 360** from the **CD** onto your computer

Open File

Open the assembly named **Skateboard** located in the folder **Photoview 360**
The parts and assembly were created in SolidWorks using the default material appearance.

When you open a SolidWorks file in PhotoView 360, any appearances applied in SolidWorks will be displayed. However, there are enhanced appearances available in PhotoView 360 and it is recommended that these are applied to achieve better results.

Use the **open file** button  and open the **skateboard** assembly

Rotate and Pan

Practice moving and rotating the model using the various tools in the navigation toolbar.



Highlight the command, move to the graphics area, manipulate the positioning of the model.

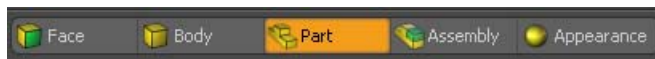
Applying appearances

We are going to apply appearances to each individual part of the model.

Appearances

A wooden finish is to be applied to the board of the skateboard

Highlight the **part** icon in the selection toolbar.



Ensure that **select** is highlighted in the navigation toolbar.



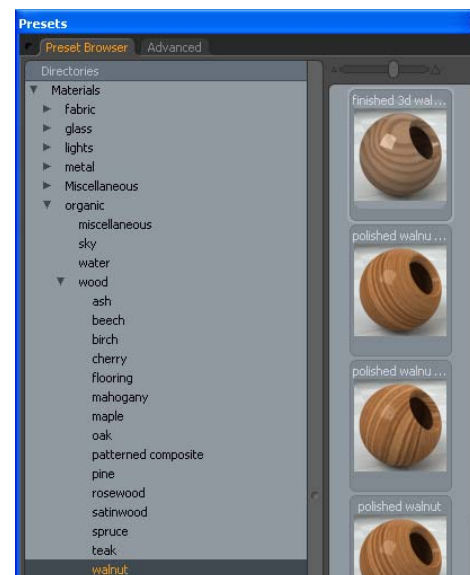
Adding Appearance

Click on **appearances** button  in the main toolbar

The **Presets** window will appear.
Click on the triangle next to the category name to expand or collapse the selection tree.

Navigate to **Organic, wood, walnut**

Drag and drop **polished walnut** onto the desired part in the graphics area



Note: Because **Part** was preselected, the appearance is applied to the entire part not just the face onto which it was dropped

Edit Appearance

If you wish to change an appearance; drag and drop the chosen appearance onto the part and it will replace the existing one.

Wheels

Employing the same procedure, apply a **blue low gloss plastic** appearance to any of the wheels of the skateboard.

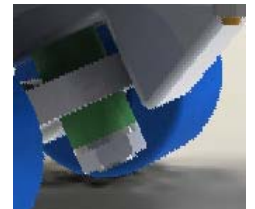


Note: The remaining three wheels will also display that same appearance. This is because these are four occurrences of the same SolidWorks part – **Wheel**.

Bush

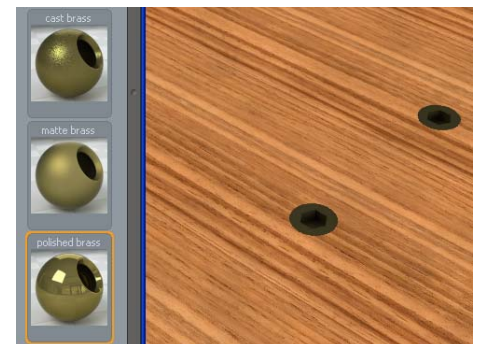
Apply a **green low gloss plastic** appearance to the bushes.

Note: You will have to rotate the model in order to access the bush to drop the appearance onto it.



Hex Bolt

Apply a **polished brass** appearance to the **Hex Bolts and nuts** (Bolts and nuts joining the board to the **bearing**)



Steel elements

All other parts are to have **machined steel** appearance applied.



Introduction to PhotoView 360
Photorealistic Imaging

Face appearance

All appearances applied thus far have been applied to entire parts. We can also constrain an appearance to be applied to a particular face of a part.

Just as in SolidWorks, a hierarchy exists when applying appearances within PhotoView 360. **A face appearance will override an appearance which has been applied to an entire part.**

Wheel face

We will apply an appearance to the face of the wheel to enhance the model.

Pre-select **face** on the selection toolbar.



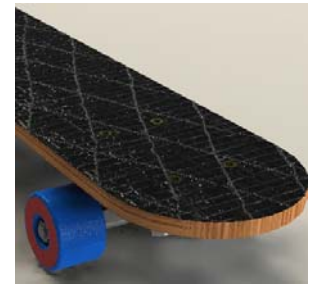
Navigate to **red high gloss plastic** in the Presets window.

Drag and drop the appearance onto the face of the wheel. Just as before this appearance will be applied to the faces of the four wheels

Top of skateboard

Choose an appropriate appearance for the **top face** of the skateboard

Plastic, Composite, Carbon Fiber Inlay Unidirectional



Environments

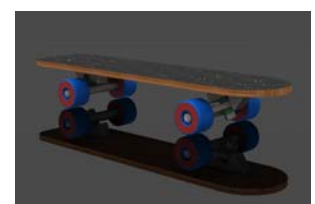
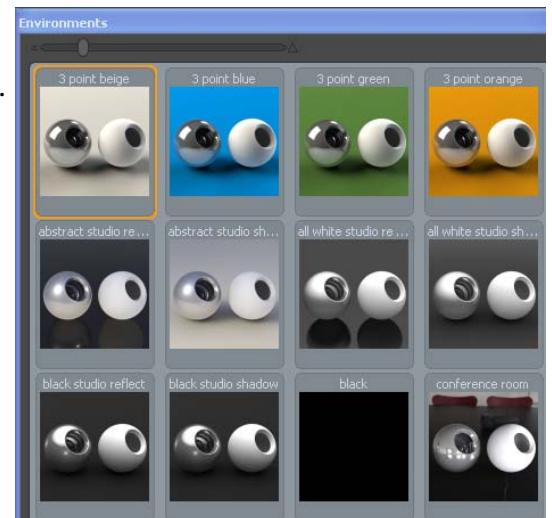
Environments can be looked upon as **backdrops** and can be applied in a similar manner as the appearances are applied to faces or parts

Select **environments** in the main menu. The **Environments** selection box appears.

Drag and drop the chosen environment into the graphics area.

Alternatively **double click** on the desired environment.

Dragging and dropping an alternative environment will override the previous selection.



The above are examples of environments that can be applied.

Apply a **daytime** environment.



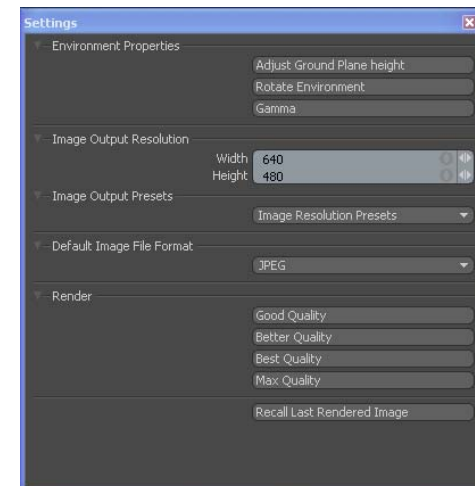
Positioning

Capturing a good photorealistic image can be compared to setting up a camera for taking a photo.

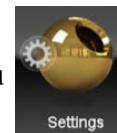
Use the navigation tools to orientate the model so that it fills the majority of the display window and shows good detail of the solid

Settings for rendering

Settings allows us to set the format in which our image will be saved along with the quality of the image.



Open **settings** option from **main menu**



Environment properties

Adjust Ground Plane height;

Sets the floor height of the environment in relation to the model.

Decreasing this number moves the floor down, increasing the number moves the floor up, closer to the model.

Rotate Environment:

Rotates the environment in relation to the model. This will affect lighting, shadow and shade etc.

Gamma: corrects the output to compensate for the output device ie a printer or monitor.

Image Output Resolution – changes the number of pixels in the final rendering. Increased number of pixels, increases files size and rendering time.

Image output Presets – height and width may be chosen or choose a preset value. 640 x 480 is suitable for an A3 size output.

Default Image File Format – JPEG, BMP, etc

Render – good, better, best, max

The higher the quality of the render, the longer the time it takes to complete the render

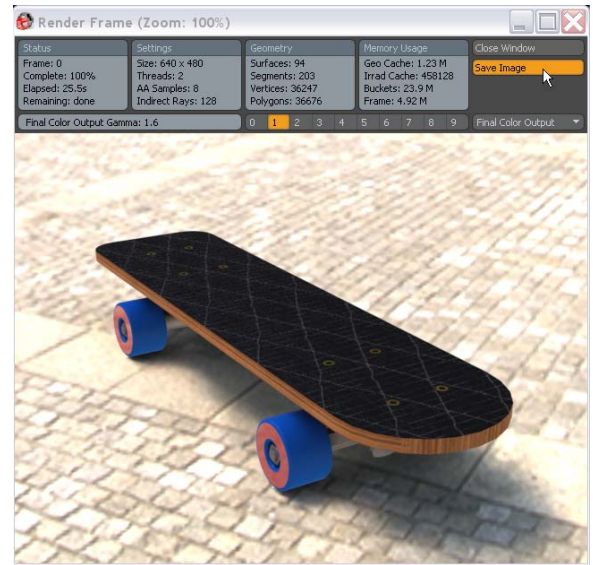
A **better quality** image is sufficient to complete this exercise but sample the other quality images also.

Once the type of render is selected a new window opens with the selected options applied

Render

The render is now complete and a JPEG file can be created from this window.

Save the image as **Skateboard** in the PhotoView 360 folder.



Once rendered, the image will be allocated a number 1 – 9 as indicated above. Selecting that number will allow you to retrieve the image at a later stage, if required.

Add different environments and manipulate the positioning of the model to capture various images of the model.

Zoom and span to specific areas of the model to take photorealistic images of different components

