

Nickelodeon CG Texture Department Fanboy Texturing Procedures

Please follow these guidelines to ensure your textures fit in the pipeline at Nickelodeon.

Contents

Texturing Standards

- 1 Responsibilities
- 2 Models
- 3 UV's
- 4 Scene Files
- 5 Sourceimages
- 6 Shaders
- 7 Light Rigs
- 8 Rendering
- 9 Common Pitfalls / Tips

Show Style Guide: Fanboy and Chum Chum

Texturing Standards

Responsibilities

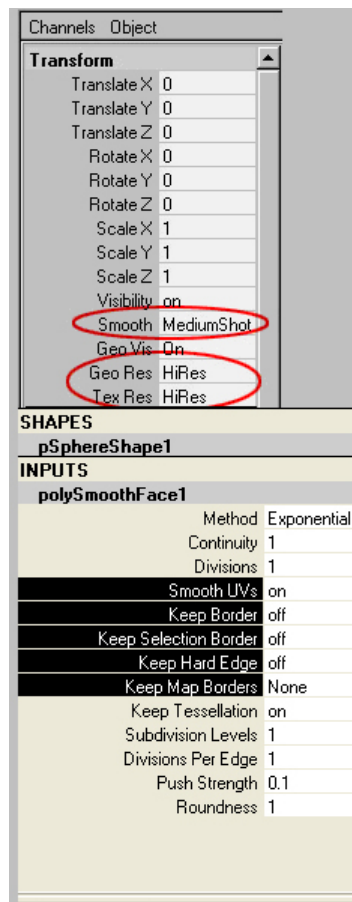
- Texture assigned models as designated by the concept art in the model pack – match style and aesthetic as closely as possible.
- Set up the shader networks for the model you're texturing.
- Be diligent and careful on:
 - Shader naming conventions
 - Texture file naming conventions
 - Texture folder naming conventions

Maya Version

Fanboy uses **Maya 2008** ONLY.

Models

- Use the latest versioned model from the model's scene location in the Texture Folder.
 - Example: Z:\FBY\Maya_FBY\Scenes\Characters\F\Fanboy\Old\TextureWIP
- Always save your working Maya files here.
- Smooth Settings
 - Each model that is ready for texturing should have a smooth node attached (blue NURBS ring at base of model).
 - Before texturing begins, select the NURBS ring and make sure the Channel Box settings match as follows:



- If smoothing does not work when you select the NURBS ring, then check the World Node notes to see if the model is **not** intended to be smoothed, in this case do not smooth it. If the World Node notes say it should be smoothed,

then you will have to **manually smooth the model based on the smooth settings in the image above.**

- After you manually smooth the model, please put this note in the World Node.

- If the model is intended to be smoothed, the model should be painted at either a MediumShot level (Divisions =1) or a CloseupShot level (Divisions = 2) But be advised that the CloseupShot level is not advisable when doing most of your painting as it will slow down your computer significantly.

UV's

Texture Artists are NOT permitted to change UV's, unless specifically told to do so.

For texturing purposes, this is how the UV's should be laid out. (Please check with Nickelodeon Asset Team representatives for more information as they will be supervising UV layout. The texture artists should check UVs to make sure they meet these standards but should not change them.)

- Parallel and perpendicular UV's.
 - This is especially true for round/wrap objects – perfect circles are preferred.
 - Avoid rotating them in UV space if possible.
- Separate shaders based on material.
 - Ex: Metal, paper, and glass each would have their own shader.
- Temporary textures files (UV grid) used for UV'ing deleted from file.
 - When using the UV grid, please tile it 8x in the placement node so that you can see detail to detect smearing / stretching.
- Shaders assigned as Blinn (not Lambert).
- Shaders given proper naming convention.
 - No prefix on shaders/shading group nodes (Ex: no PN_, TK_, or FB_)
- When "wonking" or distorting a breakout, UV's are also adjusted.
- Latest UV'd Maya file put in Texture folder.
 - Subsequent UV fixes need to be copied over into the latest Texture file too.
- UV's sewn together.
- Mirrored UV's (left side matches right as close as possible).
- Eyelids should be UV'd in the closed position (not open position).
- Seams should be at natural edges of objects.
- Anisotropic shaders need to be UV'd with as few seams as possible. For hair, UV's need to be as straight up and down as possible.
- For Glass objects and Eye Corneas:
 - Turn cast shadows off the geometry
 - Single sided geometry only (no double sided geometry)
 - * Works only on geometric objects (cylinders, etc). Does not work on spheres (like snowglobes).

Scene Files

Before beginning work on a model, set your Maya Project to whichever show the asset belongs to:

- Example: For Fanboy, set the project to **Z:/Maya_FBY**
 - This will insure that all sourceimages that go into the shaders have a **relative** path.
- Ex: Sourceimages\Characters\F\Fanboy\FB_Fanboy_Body_C_hi.tif
 - *Notice there is no path information in front of sourceimages – this means it's relative.
 - *Notice there is no "old" or "Texture" folder in the directory structure for sourceimages. The "old" and "Texture" folders only exist for the scenes directory structure.

Within the scenes folder, save out the model's working Maya texture scene files in the /old/Texture folder:

- Example: **Z:/FBY/Maya_FBY/Scenes/Characters/F/Fanboy/Old/Texture/WIP**
- It's important to save each version of your Maya scene in the WIP folder **only**.

Sourceimages

Save all the textures in the model's sourceimage folder. The sourceimage directory and the scene directory are mirrored in name and structure and must remain so – with the exception of the scenes directory structure having an "old" and a "Texture" folder and the sourceimages directory structure NOT having an "old" or a "Texture" folder.

Example:

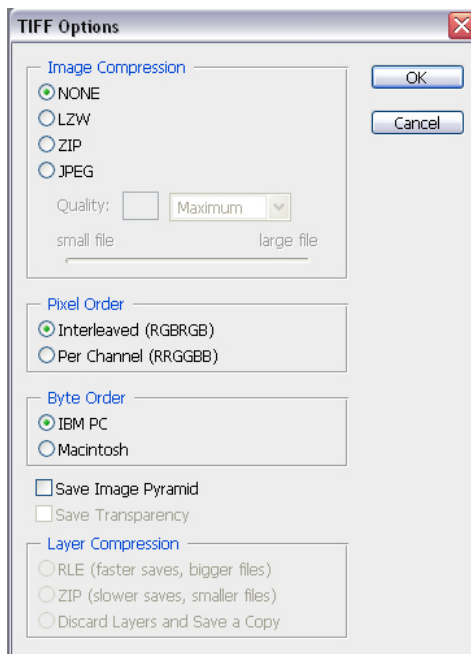
scenes

Z:\FBY\Maya_FBY\Scenes\Characters\F\Fanboy\Old\Texture\WIP

sourceimages

Z:\FBY\Maya_FBY\Sourceimages\Characters\F\Fanboy

- All sourceimage files must have the following extensions at the end:
 - _C = Color
 - _B = Bump
 - _S = Specular
 - _N = Normal (*only use if specifically asked to in modelpack*)
 - _D = Displacement (*only use if specifically asked to in modelpack*)
 - _T = Transparency
 - _I = Incandescence (*only use if specifically asked to in modelpack*)
- Each sourceimage file must have 2 maps for each:
 - _hi (high resolution files used for closeup shots)
 - _lo (low resolution files used for distance shots)
- Resolution Guide:
 - _hi files
 - Characters: hair, head, body, each article of clothing = 2k
 - Sets: large pieces in set = 4k, smaller pieces in set = 2k
 - Props = 2k, smaller pieces of prop = 1k
 - _lo files (usually ½ the resolution of the hi files)
 - Characters: hair, head, body, each article of clothing = 1k
 - Sets: large pieces in set = 2k, smaller pieces in set = 1k
 - Props = 1k, smaller pieces of prop = 512
- For **Fanboy** sourceimages
 - Use **.tif** file format only
 - Make sure there are **no alphas channels** in the .tifs.
 - No image compression when saving (see image here)



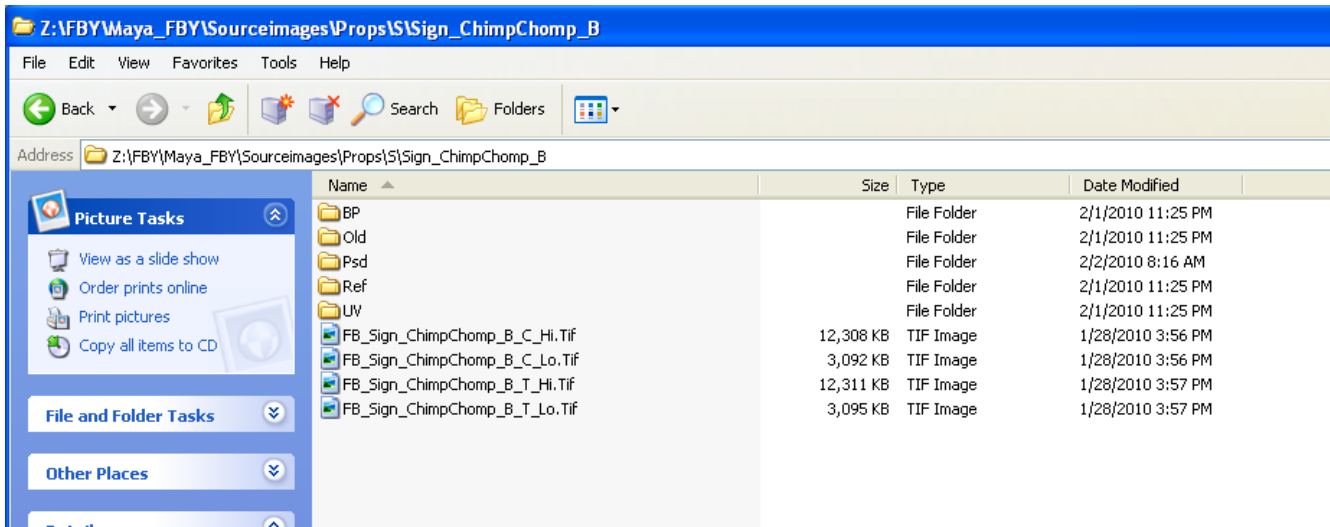
- The _hi resolution tif files in the sourceimages folder are the files that get plugged into the Maya shaders.

- The _lo files do NOT get plugged into the shaders. They just need to be in the sourceimage folder so that certain scripts will work correctly.
- File naming convention

_hi
FB_[shader name]_[map type]_hi.tif
Example: FB_Sign_ChimpChomp_B_C_hi.tif

_lo
PN_[shader name]_[map type]_lo.tif
Example: FB_Sign_ChimpChomp_B_C_lo.tif

*Note: “Shader name” in these examples refers to the name before the “_Shader” tag. Ex: “Nail_Shader” in the examples above would use “Nail” as the shader name; “Coat_Arms_Shader” would use “Coat_Arms” as the shader name.



- Master Photoshop files
 - The sourceimage files (tif) are built with the master Photoshop file and should be filed in the “PSD” folder (see image above).
 - Each master Photoshop file must be at least 4k in size (4096 x 4096). You can paint higher if desire, but 4k is the **minimum**.
 - This allows us to upRes the tif files at any time should we need more resolution.
 - The master Photoshop file must be **current at all times**.
 - If you make a change to a tif file, that change must then be copied over to the master Photoshop file.
 - If you are texturing a **breakout**, make sure all the sourceimages, PSDs, and shaders are renamed to match the new asset.

Sourceimages with text

- For sourceimages you paint that have text in them, please paint 2 versions of the textures
 - o one version with the text as indicated in the model pack concept art
 - o and another version without the text
- Only the version **with text** should be plugged into the shader.
- The version **without text** should just exist in the sourceimage folder.
- The files should be named as follows:

Original sourceimage files with text

FB_TrashCan_A_C_hi.tif
FB_TrashCan_A_C_lo.tif

Original sourceimage files without text

FB_TrashCan_A_Without_Text_C_hi.tif

FB_TrashCan_A_Without_Text_C_lo.tif

Illegal RGB Color Space (see images below)

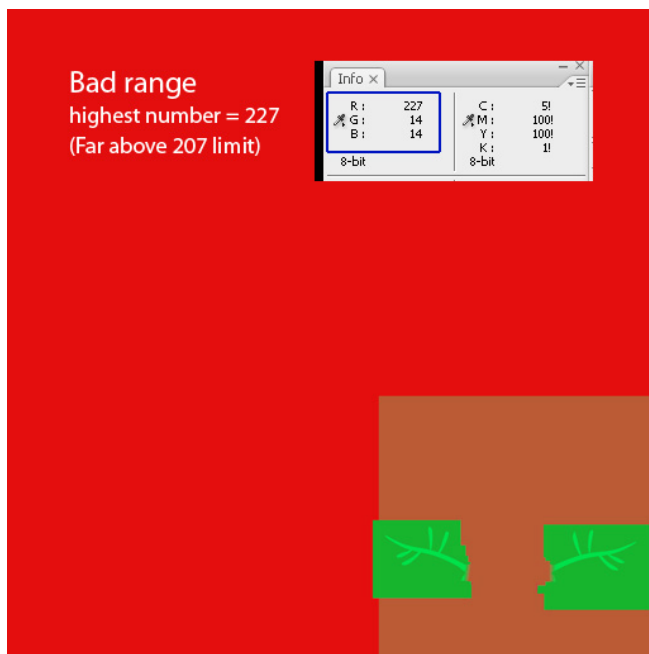
- Because of the way textures react when they are lit in CG, you must paint color maps with these color specifications in mind:
 - o Whites (and any bright colors, like yellow, red, etc) should not go above 207 in RGB space.
 - o Blacks (and any dark colors) should not go below 10 in RGB space.

Highest White
RGB range
= 207
(do not go above this)

Lowest Black
RGB range
= 10
(do not go below this)

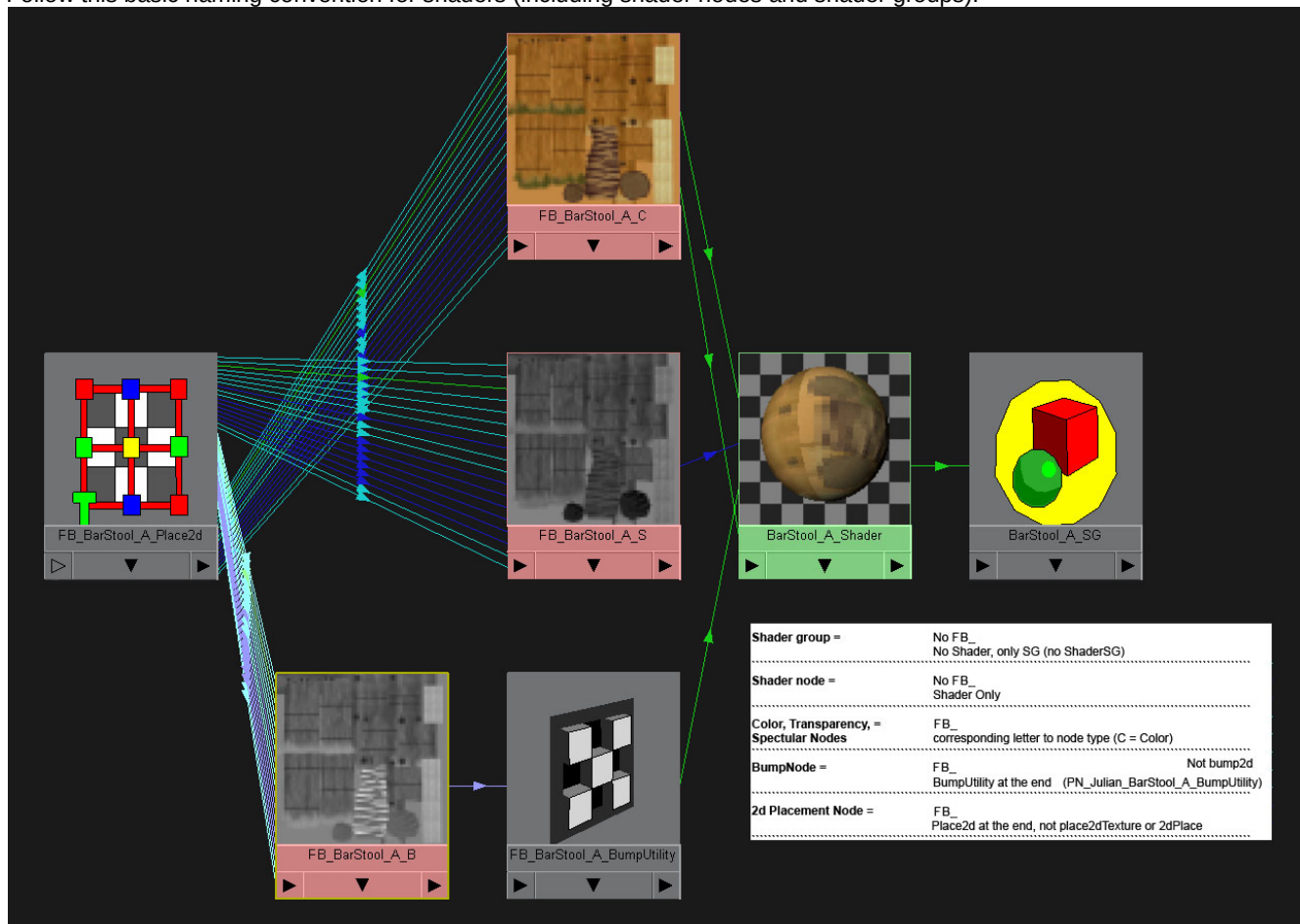
Illegal White
RGB range
= 255
(unacceptable)

Illegal Black
RGB range
= 0
(unacceptable)



Shaders

Follow this basic naming convention for shaders (including shader nodes and shader groups).



For Fanboy, most of the props and sets will use a Fake Specular Shader or a matte (no specular) blinn, which is detailed in the style guide section. The above network should be referenced for naming conventions, and in the event that a modelpack requests “real” or “3D” specular, or calls for specific utilities like a bump texture, the above network works as an example.

Shader Naming – The Shaders and SG Nodes will be named by the UV artist at the UV stage. It is very important that the shader names in the texture file match the approved UV file. The only time when the name may not match exactly is if a layered shader is used instead of a non-layered (ex: blinn) shader; in which case the “Shader” tag at the end will be changed to “LayeredShader.”

Ex: “Nail_Shader” may be changed to “Nail_LayeredShader” if using a layered shader, such as our metal shader.

Material Info Nodes – Material Info nodes, like Shader Group nodes and Shaders, are named by the asset team at the UV stage. However, when a shader is reassigned to geometry, the Material Info and Shader Group nodes are automatically renamed by Maya. Make sure to double check their naming before exporting shaders and turning in the file.

Material Info Naming:

[Shader name]_MaterialInfo

Ex: Sign_ChimpChomp_B_MaterialInfo

Shading Group Naming:

[Shader name]_SG

Ex: Sign_ChimpChomp_B_SG

*Note: “Shader name” in these examples refers to the name before the “_Shader” tag. Ex: “Nail_Shader” in the examples above would use “Nail” as the shader name; “Coat_Arms_Shader” would use “Coat_Arms” as the shader name.

Layered Shaders – While Fanboy does on occasion use layered shaders, these are reserved for specific shader effects and looks. As a general rule, **do not use layered shaders unless specifically asked to do so in the modelpack** either in the notes or by being asked to use a specific, pre-built shader. In addition to the shader naming convention mentioned in the Shader Naming note above, make sure the shaders that are part of the layered shader are named as follows:

Shader as part of layered shader naming:

FB_[Shader name]_[Main Function Type]_Shader

Ex: FB_Nail_C_Shader

In the example above, “Main Function Type” refers to the main use of that shader. For example, in our metal shader there is one shader that is primarily functioning as the color, and the second shader is primarily functioning as the specular. So the other shader would be named “FB_Nail_S_Shader.” Note that this is one of the only time FB_ will be in front of a shader; this helps the finalers determine whether the shader is the topmost shader and need to be assigned to geometry, or whether that shader is part of a larger layered shader network; only the topmost shader/node in a network is named without the FB_ prefix.

Placement Nodes – Placement nodes should be shared by all nodes within a given shader network. The one exception is if the values of the placement nodes are different. For example, if there is a 1 to1 map painted and a tiling texture within the same shading network, they will need separate placement nodes. Special utilities such as sampler info nodes and surface luminance nodes should also be shader when possible.

Shader Settings to be Aware of (see image below)

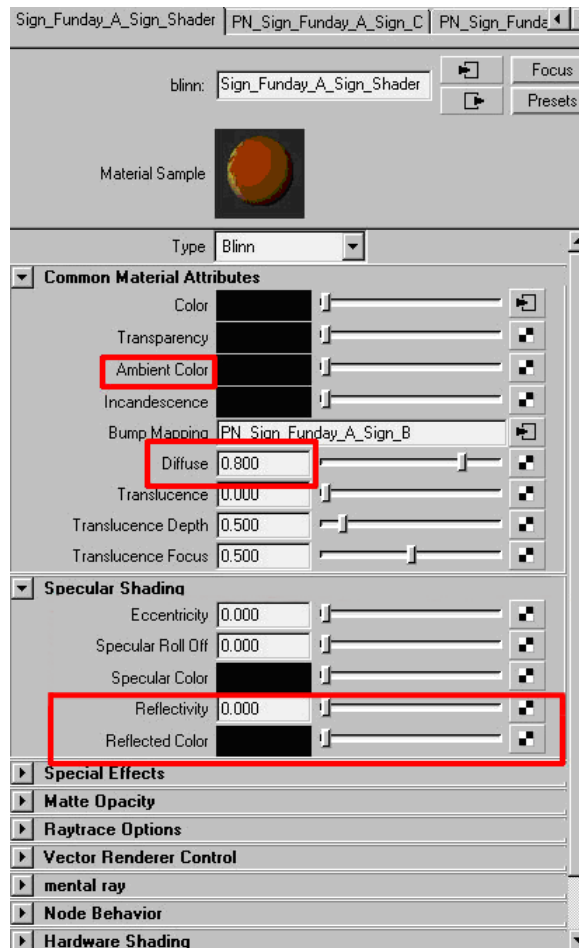
- Make sure to dial the **Reflectivity** and **Reflected Color** settings down on all shaders to avoid problems during the final shot rendering. The exception to this is if you have a color in the Reflectivity channel (other than pure black).

- Reflectivity = 0.000

- Reflected Color = 100% Black

- Always keep **Diffuse** at the default of 0.800. This should never be changed.

- Do not use color in the **Specular color**; this affects the lighting team’s ability to effectively use colored lights. Please use shades of black, white, and gray.



Light Rigs

Each show has its own unique light rig. Please make sure to use the correct ones (you **must** use each show's specific light rigs):

FanBoy: Z:\FBY\Maya_FBY\Scenes\Light_Rigs

Props /sets: **FB_LightRig_Texture_Setsprops.ma**

Reference the light rig into your Maya scene using the Reference Editor.

**NOTE – do NOT import Light Rig into your scene.*

Make sure not to change the settings on the light rig other than scale or rotating to match a render camera move. This ensures that when the prop is placed in the scene, it has the same look as the approved renders. Camera rig should be scaled to fit the object (Ex: Rig is scaled to 10 by default. If you have a small object like a nail, it should be scaled to fit, which in the case of a nail will be close to a scale value of one).

Rendering for Model Packs

Final renders to be placed in model packs should be rendered with the following settings in Maya:

- Maya Software Renderer **ONLY**
- 50% gray background
- 2k
- Production Quality
- Perspective Camera (persp)

- Perspective Camera focal length: 85 (to prevent distortion)
- Default light checked off (use light rig instead)

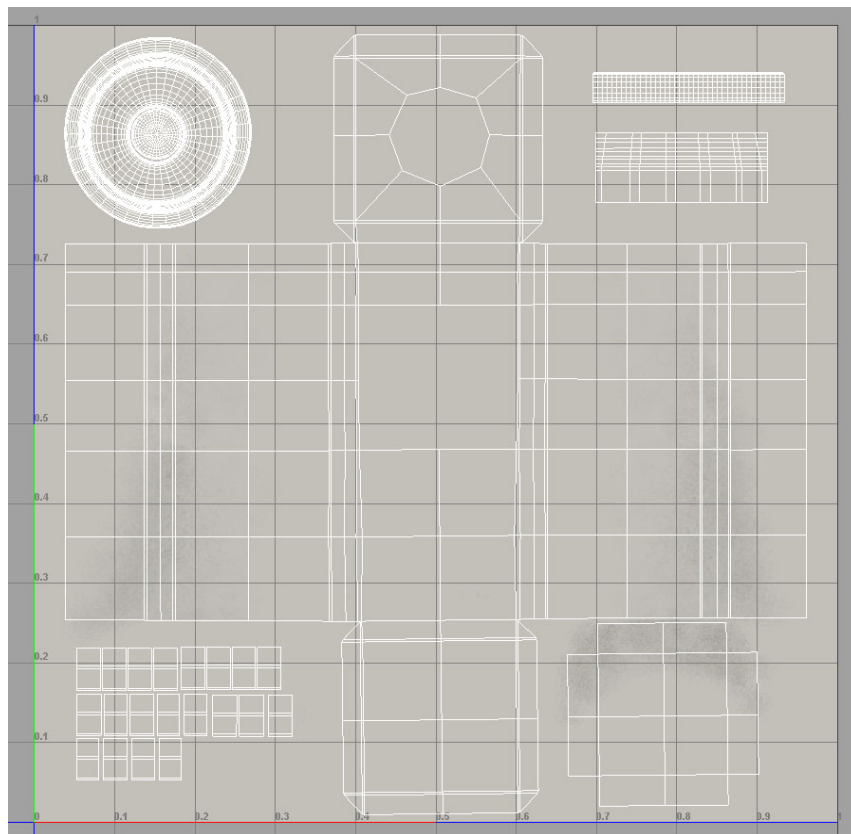
It is mandatory to do multiple render views of the asset to include in the model pack:

- front, side, three-quarter, back, top, bottom (these are the **minimum** required views, more are always welcome).
- If there is an inside to the asset, a render of the inside must be included.

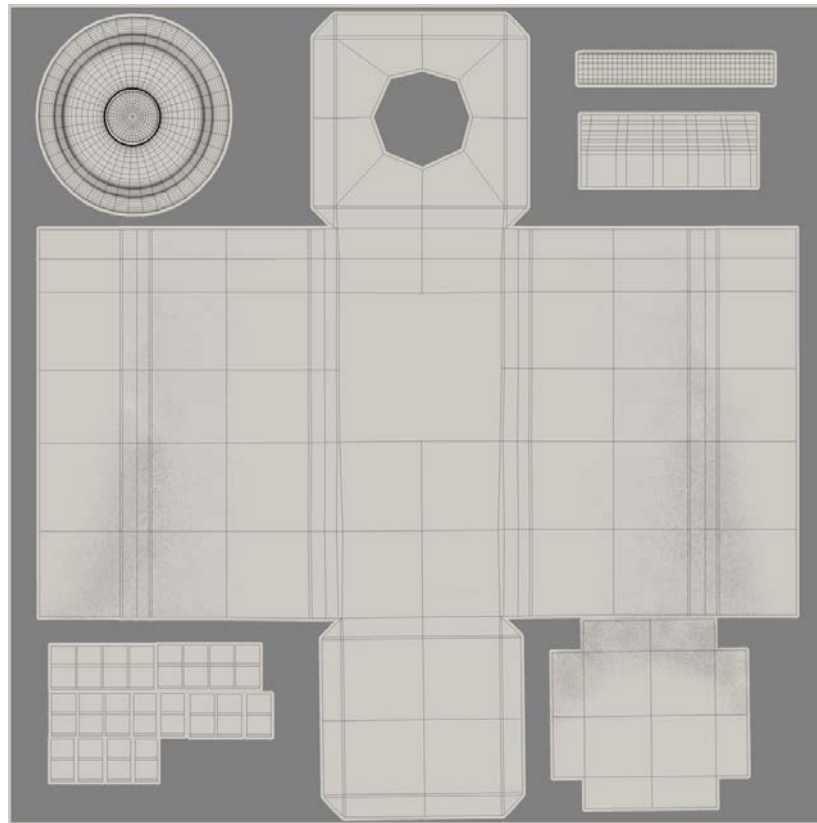
Common Pitfalls / Tips

Please be aware of the following pitfalls and tips while texturing:

- If you have to assign shaders, make sure that you assign them when you select the geometry and not the faces. The UV's should already be broken up this way, but just keep it in mind.
- There should be a 15-20 pixel bleed (or space) around each UV shell. Make sure to texture beyond the shell within this allotted space (see below).



UV layout



UV Layout with pixel bleed

- Be careful when using layered textures. Sometimes when you do, some connections to the shader itself will add an extra texture to your layered texture. If you do something and your shader turns black, there is a change it added a layer to your texture. Check your layered texture and delete the blank black rectangle on the left of all your textures. This is for layered textures, not shaders.
- Do not convert .tif files to Grayscale. Keep them in RGB mode. Maya will make a wrong gamma adjustment to the file. It will also mess up the alpha channel.
- When connecting a .tif file node to a shader's Transparency, be careful. When you connect it and select "default" or connect it right to the Transparency, it takes the transparency out from the .tif not the color as it should most of the time. Also, most of the time the .tif's built in alpha is white which will make it transparent.

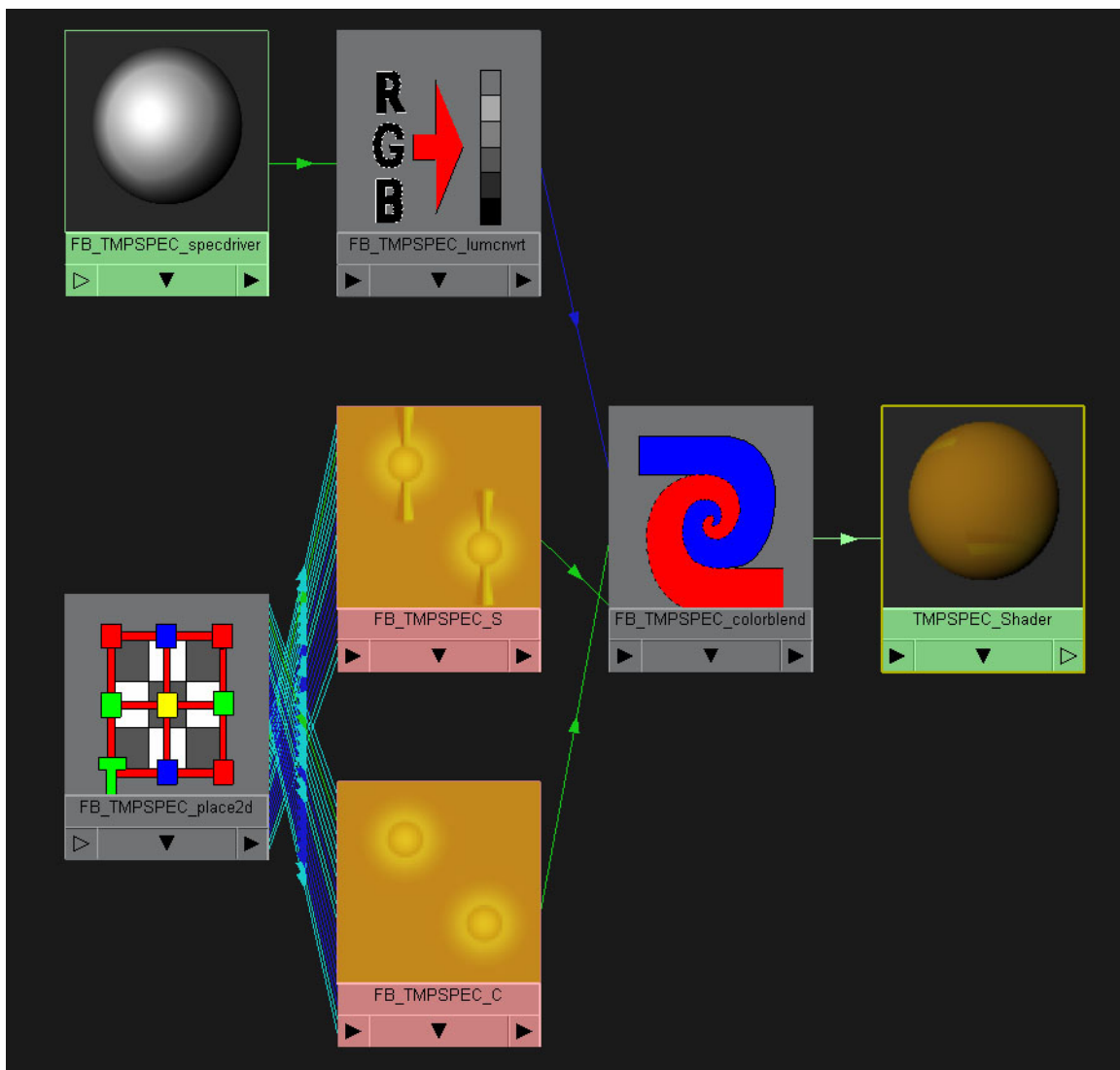
Show Style Guides

Fanboy Style Guide

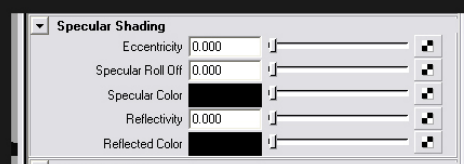
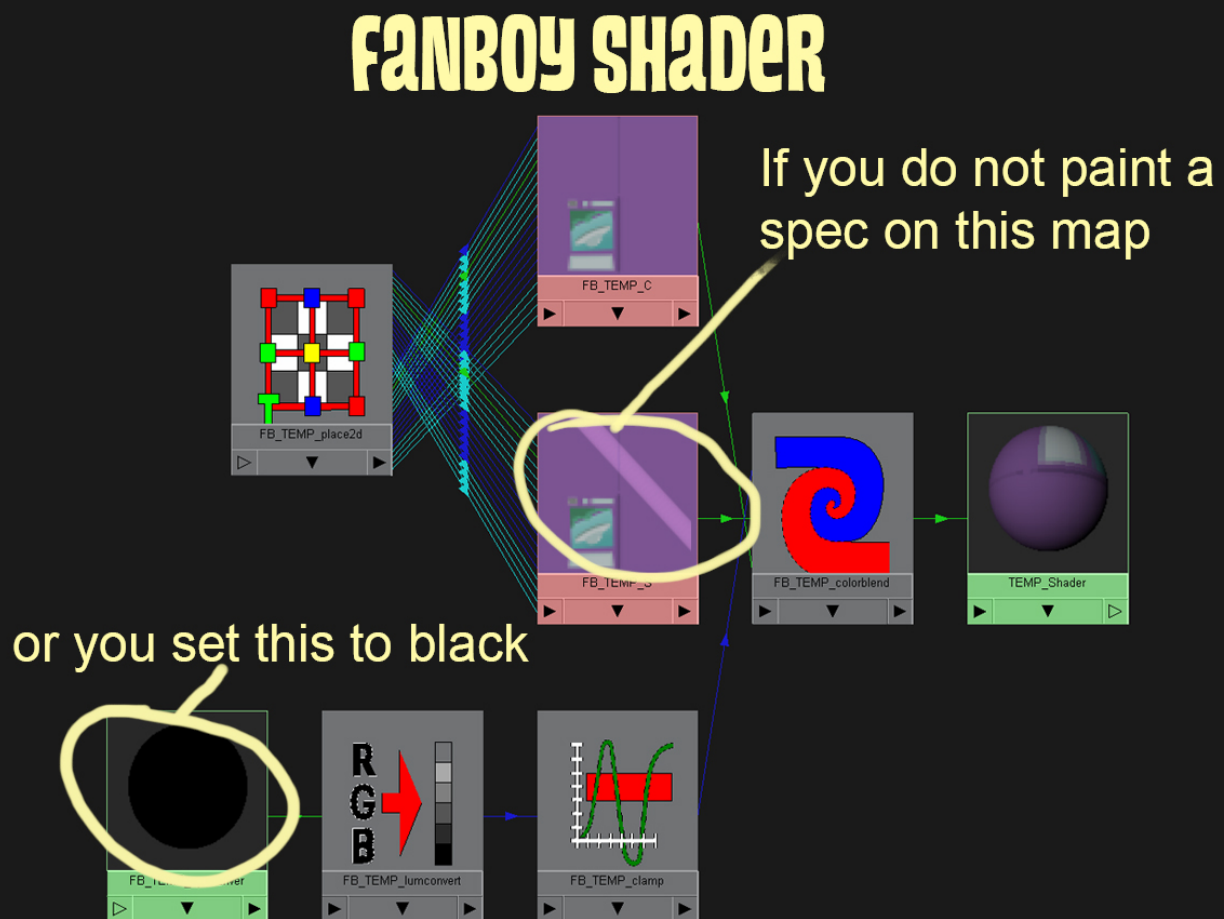
The texturing style of props for Fanboy is entirely different than Penguins. It is highly stylized and is intended to look like a 2D prop.

- It is very important to match the colors, detail, and look of the concept artwork as closely as possible. Anything less will need to be revised.
- Unlike Penguins, all of the props for Fanboy that have a fake painted spec in them must use the same basic shader. This default shader is called: ***specular_Fake.mb*** and can be found in the shader library.
 - Please do not use this shader if you do not have a fake painted spec in your prop. Just use a simple basic blinn (for “flat” spec shaders, use a blinn with the specular attributes turned down and set the specular color to black).

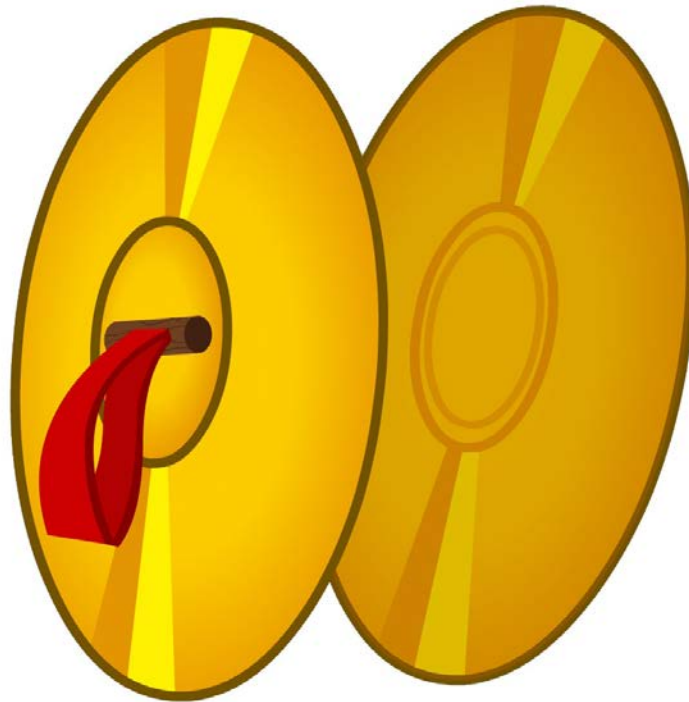
The *specular_Fake.mb* shader looks like this (keep in mind the naming convention needs to match the one outlined in the previous section titled “Shader Naming”):



- All the settings of the nodes should remain at default – except of course the Reflectivity and Reflected Color (as mentioned previously they should be dialed down all the way).

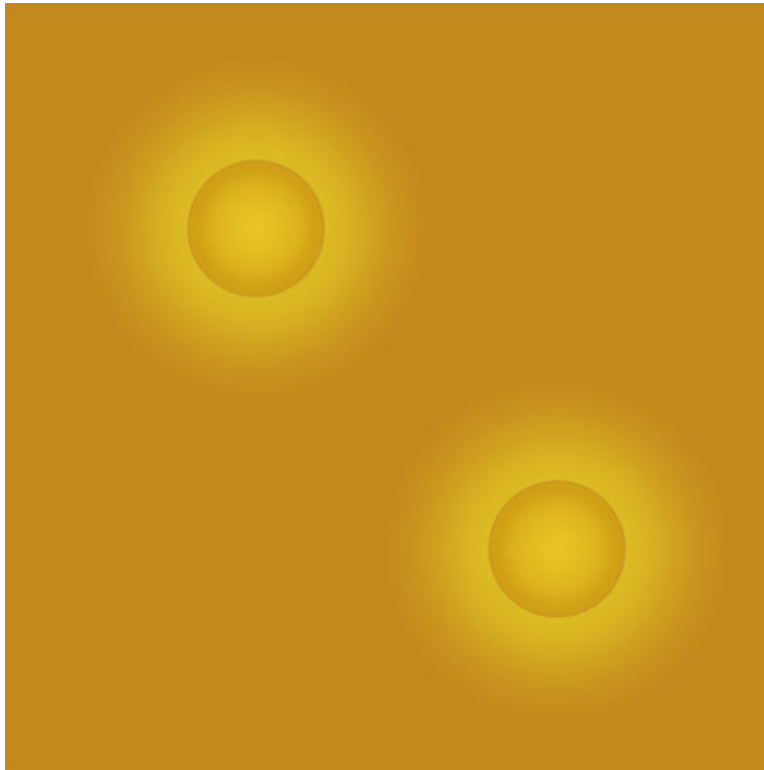


- The painted color map should have just the color information in it. No specular or bump. And do not paint in an outline on the object even though it has it on the concept art. The specular map should have the specular painted in as indicated in the concept art. See these examples:



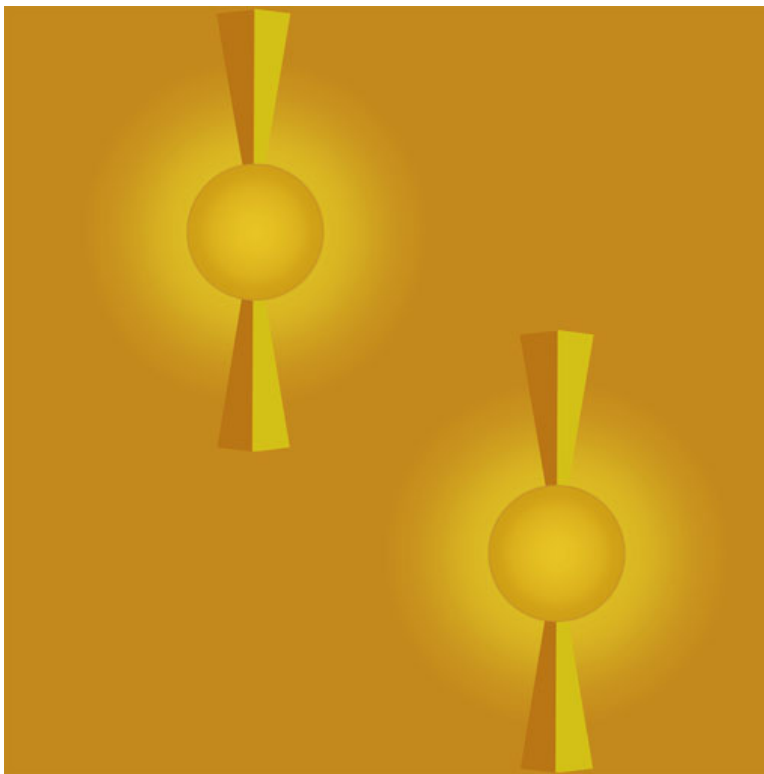
This is the 2D concept art.

Notice the dark brown outline around the outside of the cymbal. This should not be painted into the textures.



This is the **color** texture map (plug this into the FB_TMPSPEC_C).

Notice it does not have any specular painted in the map.



This is the **specular** texture map (plug this into the FB_TMPSPEC_S).

Notice it has the specular painted in the map.

Start with the color map and paint the specular detail into it. Save it out as the specular map.

- All props and sets have either the 2D spec (fake_specular.mb detailed above) or no spec (blinn with no specular) unless otherwise noted. If a prop or set element needs a special texturing effect, it will be specified in the model pack and have notes referencing the location of any shaders or documentation relevant to that technique. In the notes, “no spec” will be referred to as “flat” and “2D spec” as, well, “2D spec.”

- For the occasionally “realistic” spec on a prop, it will be referred to as “3D spec.” “3D spec” generally refers to the spec only, not the textures as a whole (ex: if an object needs a blinn highlight, it will be called out as “3D spec”). When there are “realistic” textures in Fanboy, they should still have a stylized look. Some of the specific ways we do with is by exaggerating texture and pattern sizes, and having the color and composition match the 2D style with real bump and spec. There will often be reference swatches for these textures.

- There is no bump or bump maps on the props unless specified.

- You can dial the amount of Eccentricity in the shader as needed. This simply controls how much of the painted specular map will show up when the light hits it.

- Do not paint shadows into the color or spec maps.

- The shape and color of the specular that you paint in the spec map must match exactly how the concept art indicates it.

- There is no dirt/grunge on Fanboy props unless specifically indicated in the concept art. And then when it is indicated, it is painted in a stylized way.

- Please consult the storyboard panels in the model packs before you start texturing to understand the context of the prop.

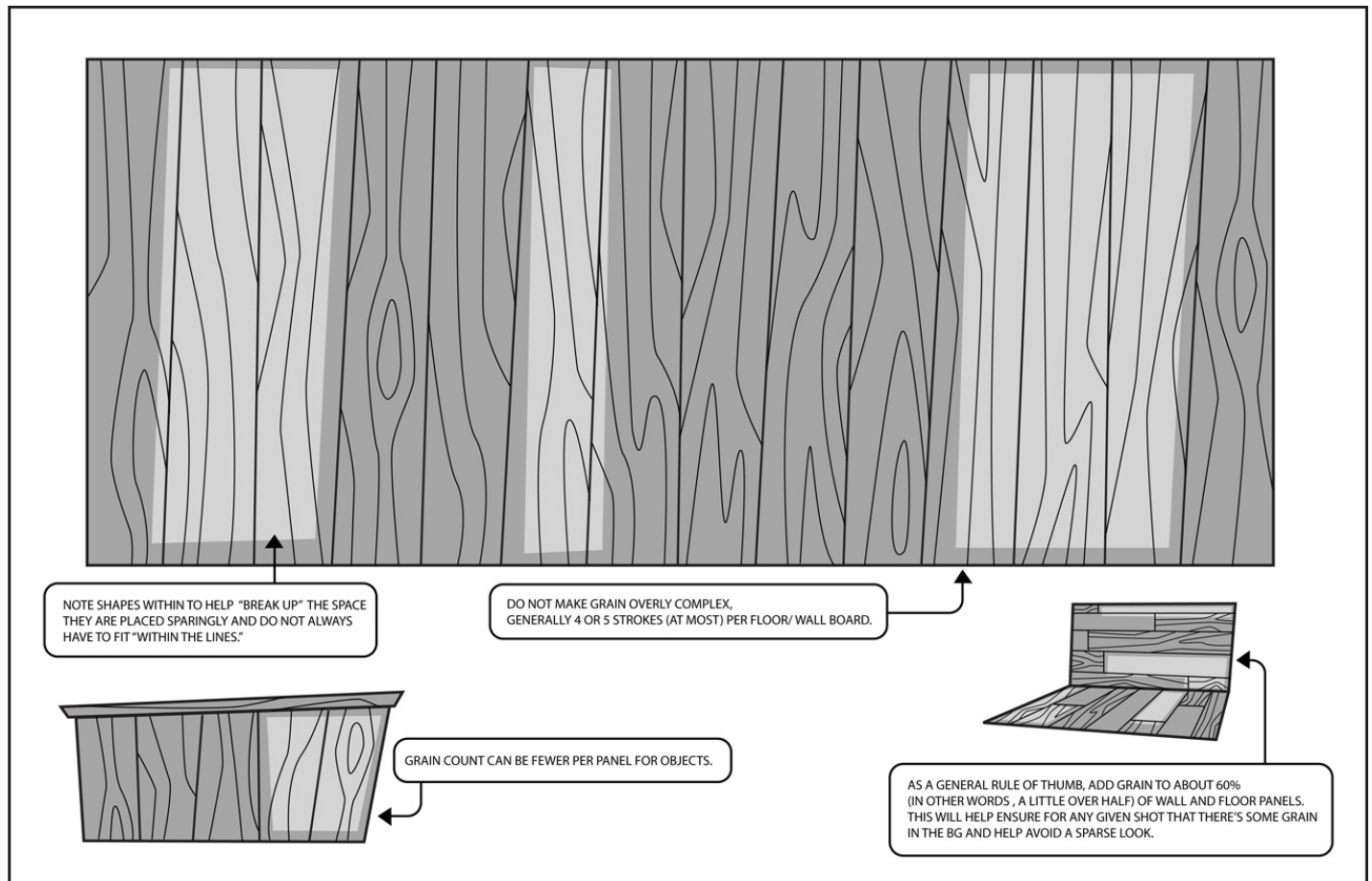
- Where does it live? How is it being used?

Fanboy Wood Grain Style

- Please follow these guidelines when painting **wood**: (see image below)

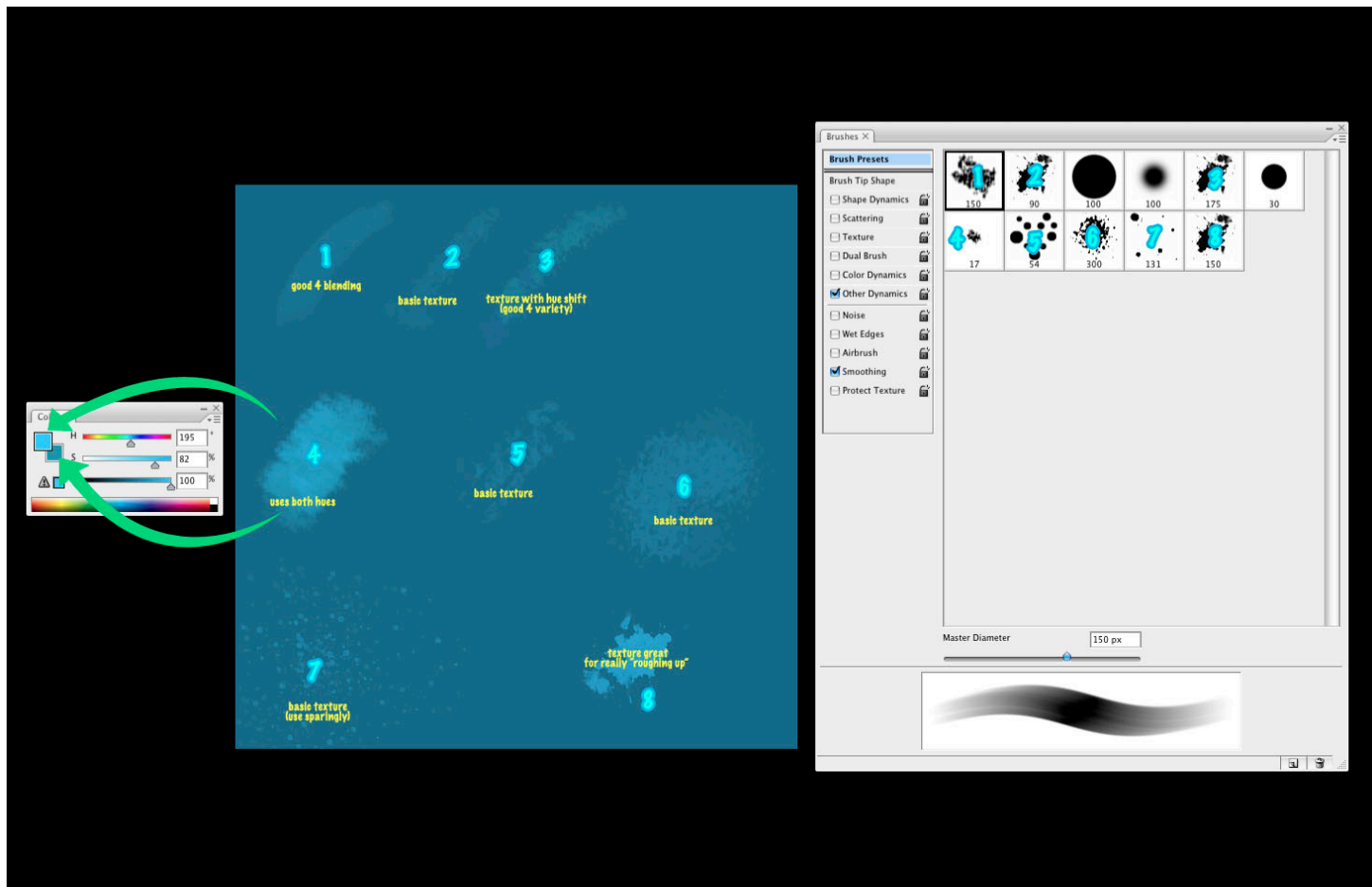
- No tangents of wood grain along sides of planks.

- No wonky/chunky lines in the grain. All the lines should have smooth curves to them.



Fanboy Brushes

Please use this brush style guide in conjunction with the Fanboy Brushes in the accompanying folder. (You'll need to load the brushes into your brush palette in Photoshop before you begin).



Examples of painted props

