

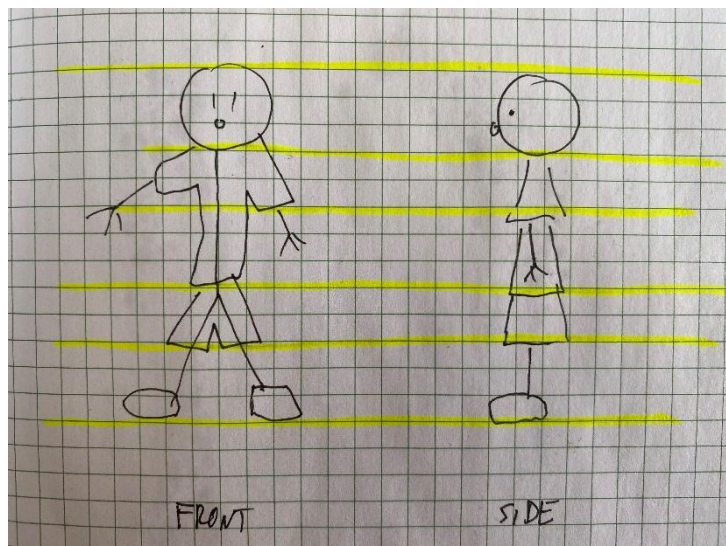
## Images in Blender: References, Environment & PureRef

This document summarises the different use of images in Blender. It mainly focuses on references. First being the background references you will use to model objects correctly and proportionally, 2 ways of having general references to look at while modelling: one directly in Blender and one using several images in PureRef, and finally how to add an HDR background. The last one is not for referencing; it is to make a nice environment for your models.

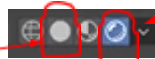
### Reference Background Images to model to in Blender

These are images that you bring into Blender and trace around. This is important for accuracy of the object and is used in the 'blocking out' stage. These reference images can be photographs of real objects, or drawings of your character.

- 1) Make sure your photos align; you can use Photoshop or any other software to check that your side and front view match: head and legs- by adding straight horizontal lines.



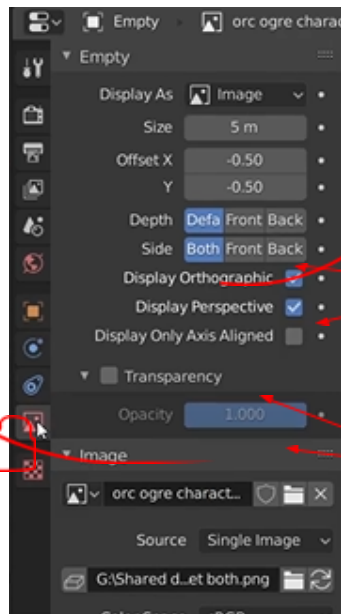
- 2) Go to 'Files' in the top ribbon menu all the way on the left. You can bring in an image by clicking and dragging it into your Blender viewport.
- 3) Your image will be brought in as an 'Empty' in your Scene Collection. This is great because they don't render. To test this, click on your 'Render-view' (top right in your viewport) and you will see it's not there.



- 4) Go back to 'Solid' mode
- 5) When you drag and drop a reference image into Blender, it will be rotated in all the different directions. You need to have it perpendicular. You set it up by pressing **Alt + G** to get it into the world origin. At this point your image moved but is still rotated weirdly.
- 6) Then you press **Alt + R** to lay it flat and to 'undo' any rotation.

**Tip:** In Blender, **pressing Alt + some other key** usually **undoes action** made by whatever the key after makes. So, pressing **Alt + G** previously undid the grabbing action (dropped image wasn't in the centre). In the same way, **Alt+ S** removes scale changes...

- 7) To rotate your flat lying image perpendicularly to the floor, click on the image, press **R** (to rotate) + **X** (on the x-axis) + **90** (how many degrees you want it to rotate). Then press enter.
- 8) In your Edit Menu (bottom right) chose the Object Data Properties tab, don't confuse it with the 'Object Properties' tab.
- 9) You can choose whether you want to see your reference image from both sides. By default you can but this can get confusing, so you can change it by clicking 'Front' in the Side window:



10) If you untick 'Display Perspective' you will see your reference image only in Orthographic mode (**press 1 on your number pad**).

11) If you tick transparency, you then can adjust how transparent your image is with the slider. 1 being 100% visible and 0 being completely transparent.

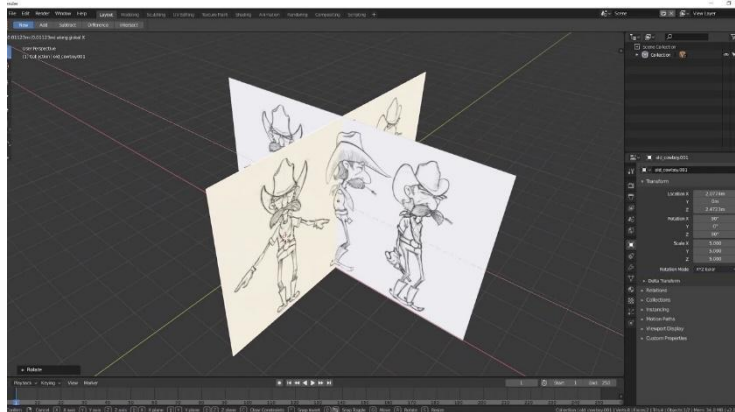
12) Set up your image in the viewport. Move it so the base of your object sits on the red x-Axis, and it's equally split down the middle with the blue Z-axis. This is done most effectively in the front Orthographic mode. Press 1 on your number pad a G to grab your image in the X and Z axis. If you hold down Shift while moving your image, it will move in smaller increments.

13) You can move your image backward by pressing G +y (constrain movement to y-axis) to have it behind where you will be modelling. From the orthographic view the size of the background image doesn't change.

14) You can set-up your side view the same way, except you rotate it 90 degrees on the Z-axis.

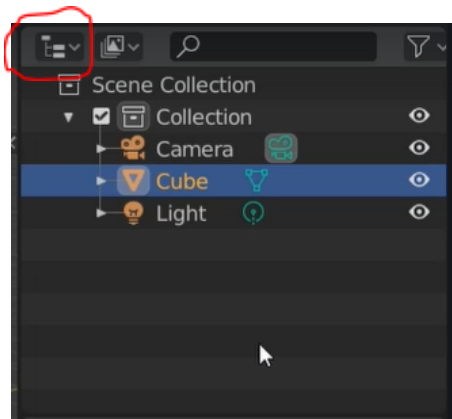
15) You can watch a video on how to do it on YouTube on the link below. The image shows the front and side images set up correctly, take from the following video.

<https://www.youtube.com/watch?v=IYBF5Tefpw>

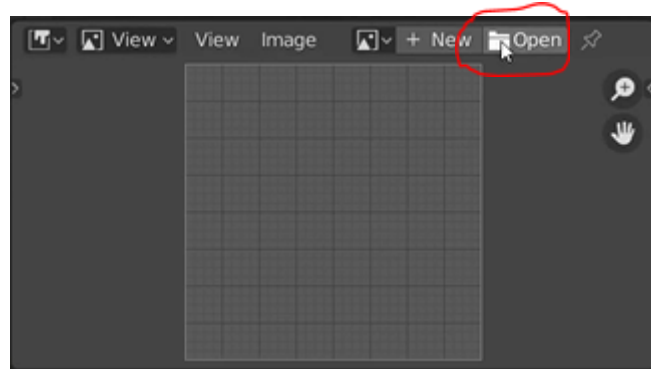


## General Reference Image in Blender

- 1) In your Scene Collection (top right corner of your screen), choose Scene collection type drop down menu.



- 2) In the General panel (first one on the left) Choose 'Image Editor'.
- 3) Once the Image Editor opens, load your saved picture by pressing the 'Open' button.



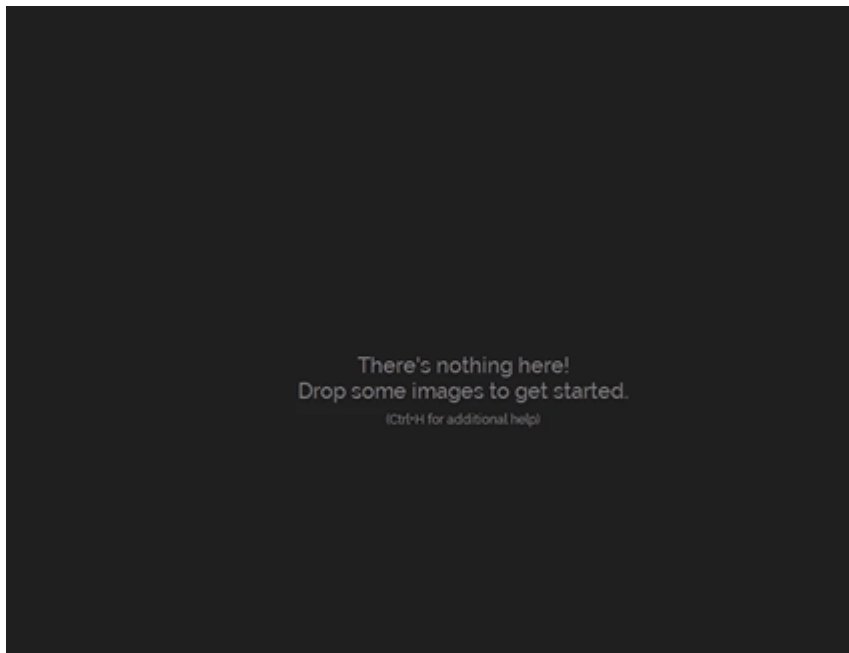
Tip: You don't need to open this in the Collection Scene, you can create a new viewport window, if you wish, by dragging it out from the side.

## Using Pure Ref

PureRef is a tool which allows you to look at reference images while you are creating a model. You can have several pictures on your 'canvas', which is very helpful while modelling not just the details,

but also the general shapes. If you have a second monitor, you can have Blender on one and reference images on the other.

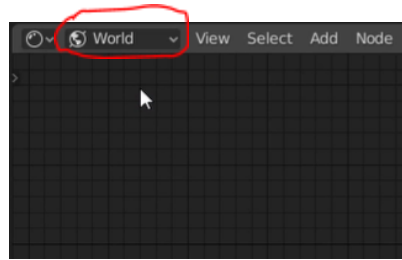
- 1) Go to the pureref.com website and go to 'Download'  
<https://www.pureref.com/download.php>
- 2) You choose Windows/ Linux, Mac and then you can donate money, or you can donate '0' to get it for free. Then you download it.
- 3) This will be your screen. You can click with the right mouse for a menu where you can change the size of the window in 'Window'. Or press Ctrl +F for a split screen.



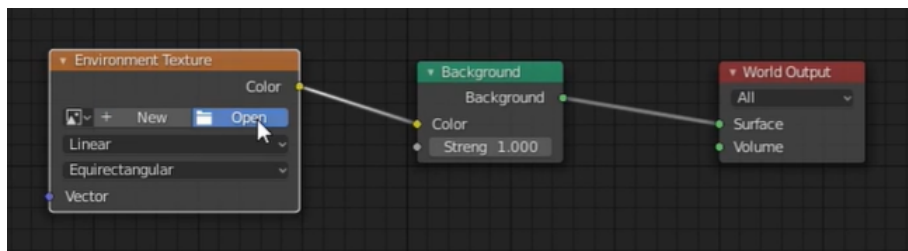
- 4) Find reference images that you will use as inspiration and reference, such as ArtStation, Pinterest, Sketchfab...  
**Tip:** ArtStation is one of the best places for online art portfolios
- 5) When you find a photo/ image you like, click on the image and drag it to the PureRef window. It will appear there.
- 6) You use your **mouse wheel** to zoom in and out in PureRef  
**Click and drag** the image around the canvas in PureRef  
Press **Alt+ Ctrl + left click** to change the size of the image on your canvas.

### Adding HDAR Background

- 1) Go to Shading View (top ribbon menu). In the node viewport (bottom), change from 'Object' to 'World' in the top left ribbon in your Node editor.



- 2) Add a new node **Shift +A** -> **Texture** -> **'Environment Texture'** node
- 3) Connect 'Colour' from the Environment texture node with 'Colour' in the Background node.
- 4) If you go to render mode, your background will be **purple = you didn't upload an image.** Click 'Open' in the 'Environment texture' node and upload your environment HDR.



- 5) These can be downloaded from, for example, [HDR Heaven website](https://hdrihaven.com/) or [textures.com](https://www.textures.com/) in the HDR Spheres option.

<https://hdrihaven.com/>

<https://www.textures.com/>

References: Grant Abbitt