

# Camera Obscura

Camera Obscura roughly translates to 'darkened room.' The basic principle is to let light into a dark room through a narrow opening, either through a pinhole or a simple lens. The outside light is projected onto an interior platform or a fresnel (semi-transparent surface) that allows one to see the outside three-dimensional world transferred onto an interior two-dimensional plane.





The Chinese are credited with working out the optics of the camera obscura several hundred years BCE, but there is no evidence of any physical structures being built to test the idea. In Europe, starting around the early 1500s, the camera obscura was used with a pinhole to study eclipses without the risk of damaging the eyes by looking directly into the sun. It was also employed as a drawing aid which da Vinci wrote about it in his Codex Atlanticus (1502). As simple lenses became commercially available, the camera obscura allowed in enough light to be used in a variety of settings. It allowed tracing the projected image to produce a highly accurate representation, and was especially appreciated as a simple way to achieve what was considered “proper” optical perspective.

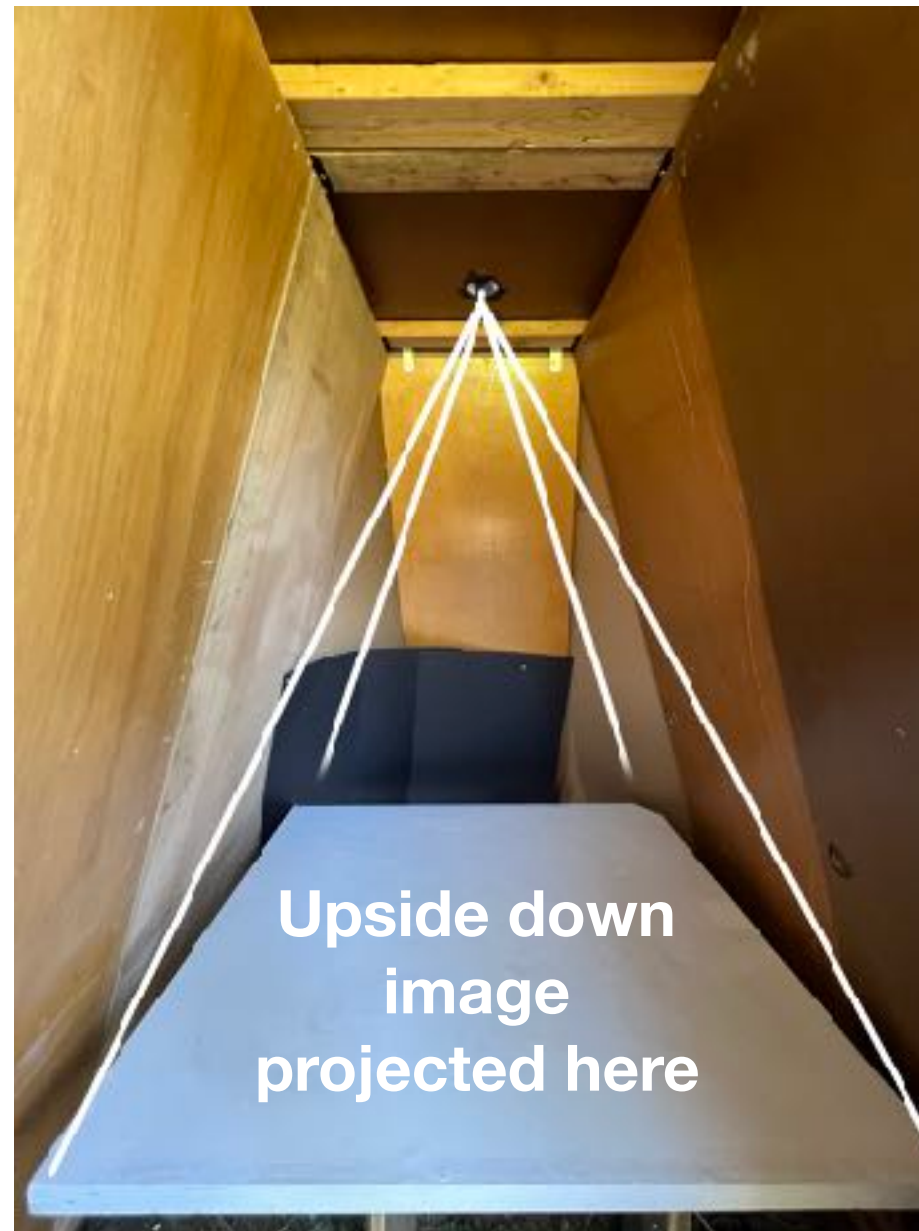


It is important to remind oneself that using the camera obscura to create paintings was not a mindless process and certainly it provided no shortcut to creating a quality work of art. The final result may have been optically derived but was essentially painterly in its finished product.

Although the concept of the camera obscura is simple, I found it time consuming to obtain a lens with the right characteristics. Almost all lenses commercially available are designed for cameras which are camera obscures many times smaller than my walk-in version. The lens employed here is convex (converging) on one face and concave (diverging) on the other, otherwise known as a positive meniscus lens.

I would like to thank Eyes on Broadway for assistance in providing me a lens from among their discards and Rob Sleator for assistance with assembly.

I made the camera Obscura pictured here for Blackfish Gallery's Land Art Show, August 2 - 27, 2022.











**Projected image rotated 180 degrees**





**iPhone image at a slightly different time of day**



See the video at —

[https://youtu.be/  
vsv42XopEiE](https://youtu.be/vsv42XopEiE)

