

Week 3 Notes

BY SHASHA



Natural vs artificial

Natural light: painting & moving

artificial light: static



facade design

summer: avoid too much sun to prevent thermal problems

winter: allow sunlight to come in

key: get the location of sun right!



solar control

- tree to balance the temperature control
- thermal techno suggest external shading device as far as away from glazing as possible as this allows shading device to cool in external air
- sustainability, operation and cost
- aesthetic and visual language

ex: glass house
Japanese grinding sliding door



sunlight specular/reflective surface

Ex: church color painting window
Shadow/color/specific shape

Facade definition

the principal front of a building, that faces on to a street or open space.



solar control to make shadow design

Using natural light or artificial light to do the design



key takeaway

Problem: when ceiling is too high, but you don't want to make intensive bright light for the whole space
bring the light lower to people so it can bright up the floor and make people a eye level light effect



- Case 1: ceiling is hard to choose the dramatic design solution: have sample and material to compare before you actually apply it if you don't know what material is better
- case 2: church has single artificial light can't light up the space Solution: have more artificial light

- Case 3: a school gym/theatre, how to use light for different events, Create different mood in one space through light solution: draw out different light plan/effect for every single event
- case 4: Murray filed church light design project, has beautiful chandelier wants to retain but still change the light solution: reclean the artificial light, repaint, add new elements on the chandelier

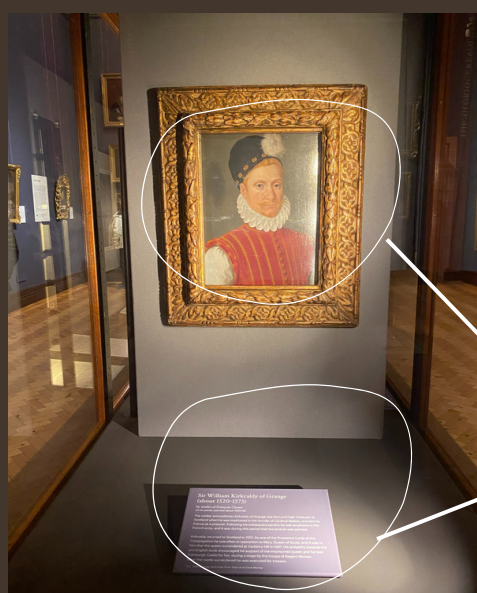
Workshop Exercise National Portrait Gallery

PART A:



artificial light: track lighting

natural light: only daylight for now



artificial light: focal lighting

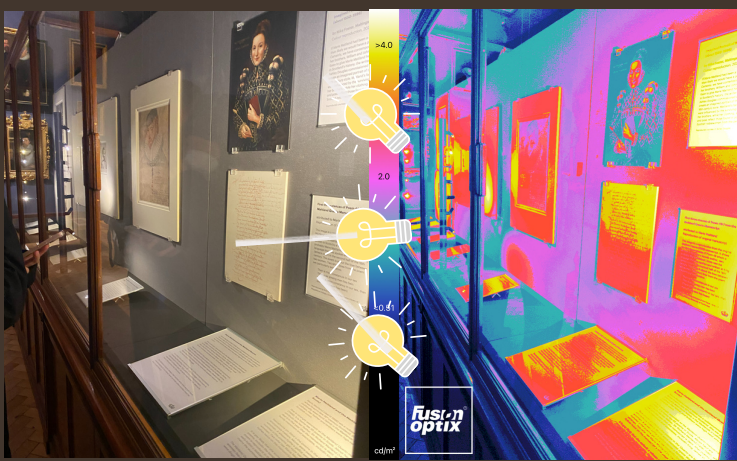
DAYLIGHT+ARTIFICIAL

- less impact of daylight on the artwork
- The absence of daylight does not affect this painting as it has less effect on the image.
- It mainly uses medium size track lighting fixture, estimated at 12-15cm.

ARTIFICIAL LIGHT

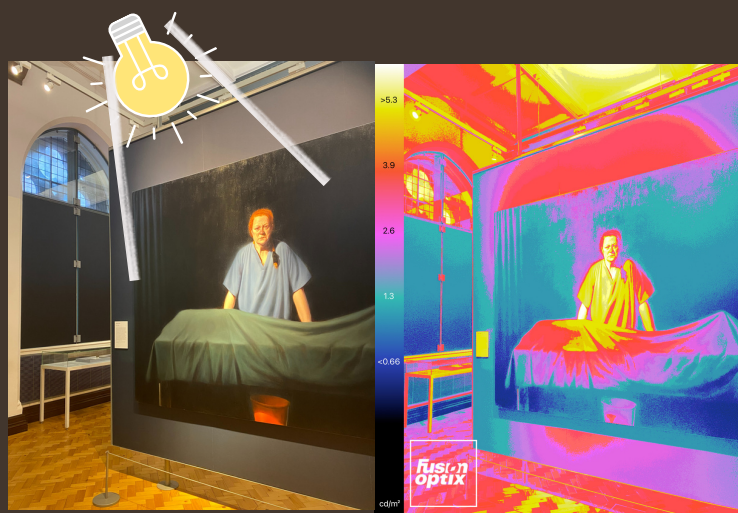
- Artificial light plays the importance role and the absence of daylight has no effect on this painting
- I think focal light makes the painting and its label emphasized and making the painting look better.
- the focal light is relative small size, 3-5cm

PART B:



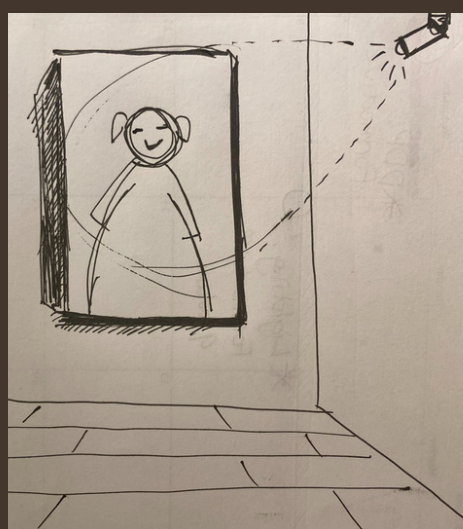
Space Analysis 1:

- my estimated of 10 lux on the work
- warm color
- I think it's LED
- this focal light only illuminates the specific piece of work, and will not affect the floor or the wall
- the lighting fixture is from the side, and is adequate for small piece of work



Space Analysis 2:

- my estimated of 30 lux on the artwork
- cold color
- I think it's LED
- the track lighting illuminates the top of the artwork, and some track lighting also bright up the floor and wall, making the space bright
- the track lighting is settled from the top with some angles, and is adequate



- will be better if it is warm light.
- fluorescent might have warmer light
- the wall should be painted dark so the focal light could light the painting and make contrast with the background.
- the flooring should be bright and neutral color. so people would not pay too much attention to the flooring.
- I think lighting color should be adequate to light this art piece.



3D artworks:

- they are lighted from the below; it should be a straight 90-degree angle. I think in the daylight galleries, the decor light should have higher luminance.