

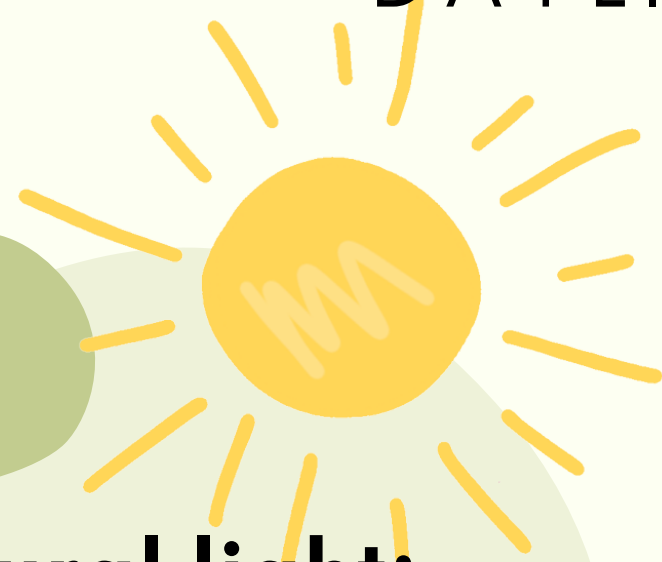
# Week 2 Notes



## DAYLIGHT + SUNLIGHT

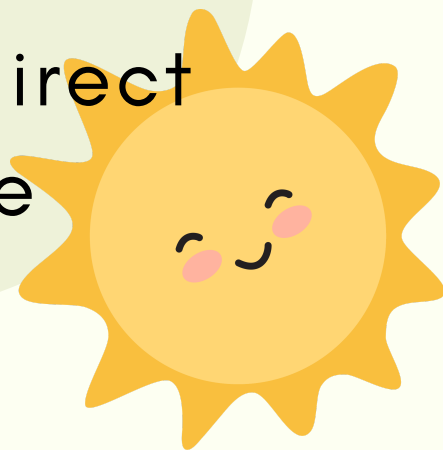
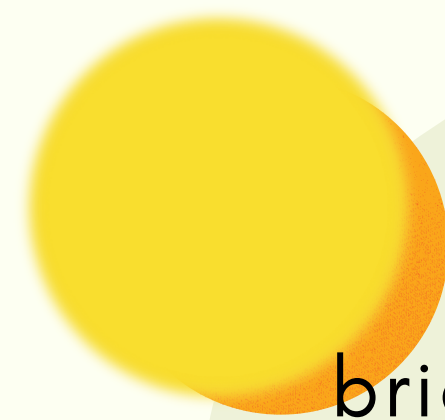
1

**Natural light:**  
connect humans w/  
environment,  
associated w/  
memories



2

**Daylight:**  
bright clear light in  
the day  
**Sunlight:** direct  
sunshine



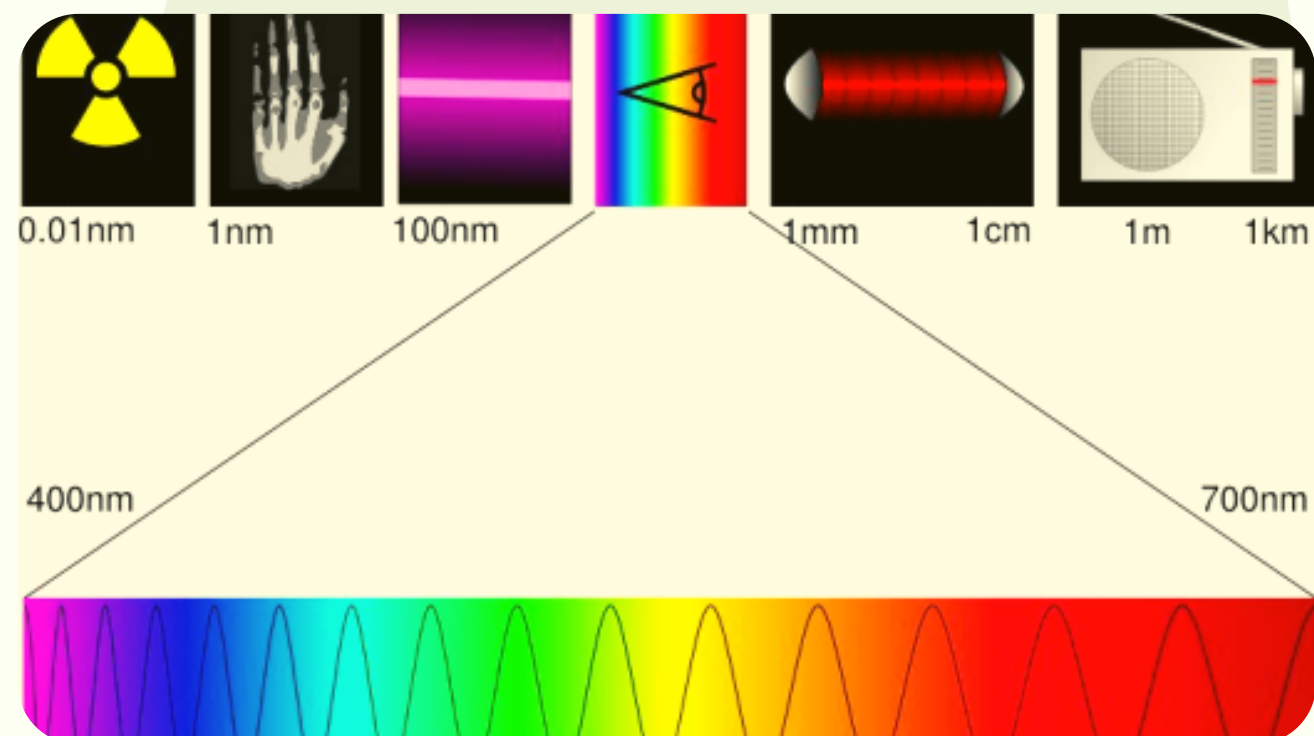
3

**Light Importance:**  
Essential human health  
support, positive  
energy



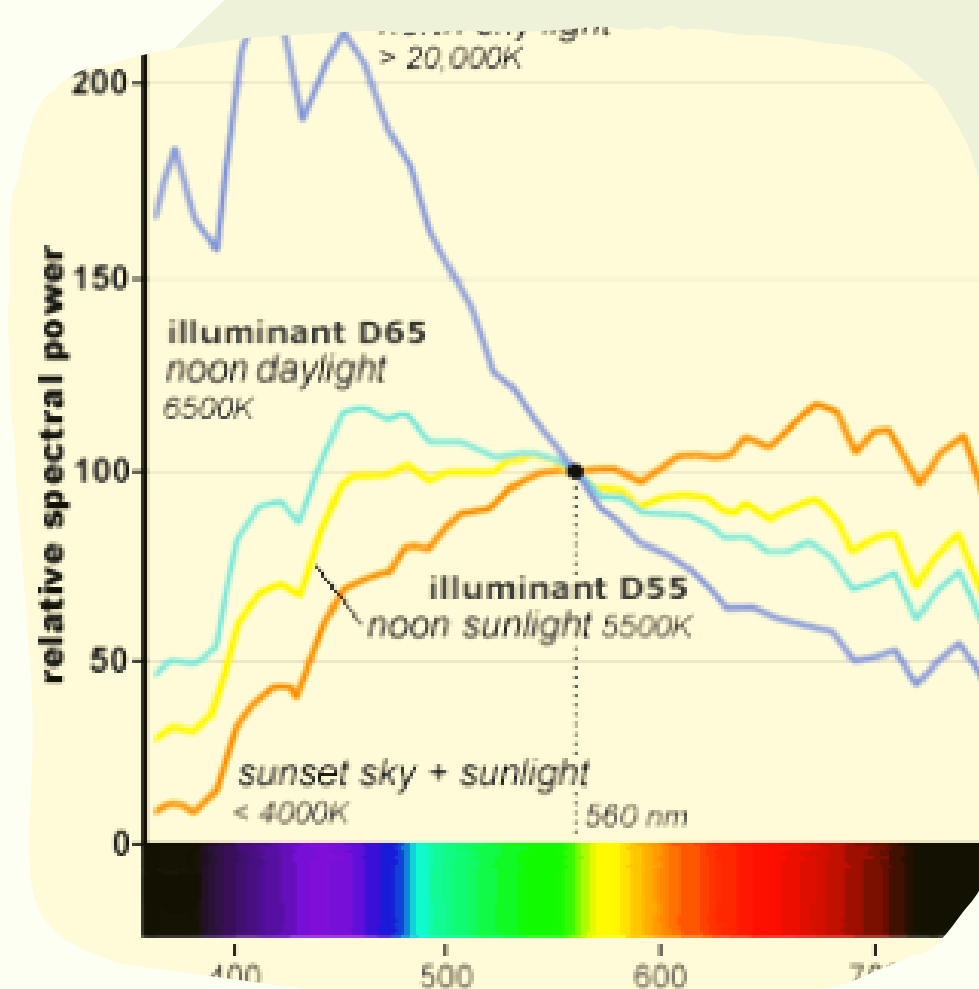
4

**Light Knowledge:**



5

**Light Quality:**



# Week 2 Notes Cont.

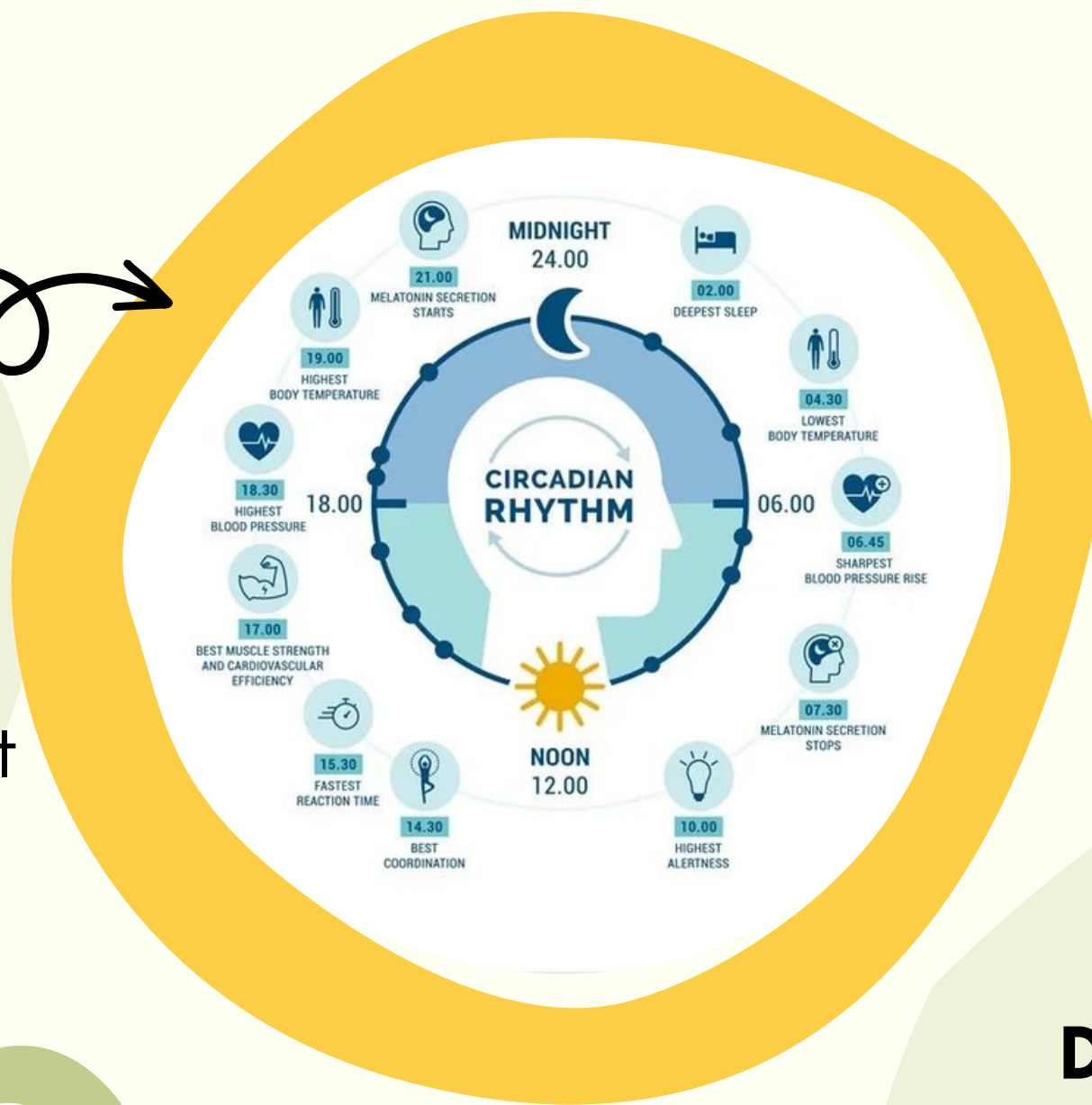


## DAYLIGHT + SUNLIGHT

6

### Circadian Living:

Circadian rhythms are physical, mental, and behavioral changes that follow a 24-hour cycle



7

### Contemporary Design Challenge:

Design ideologies and aspirations

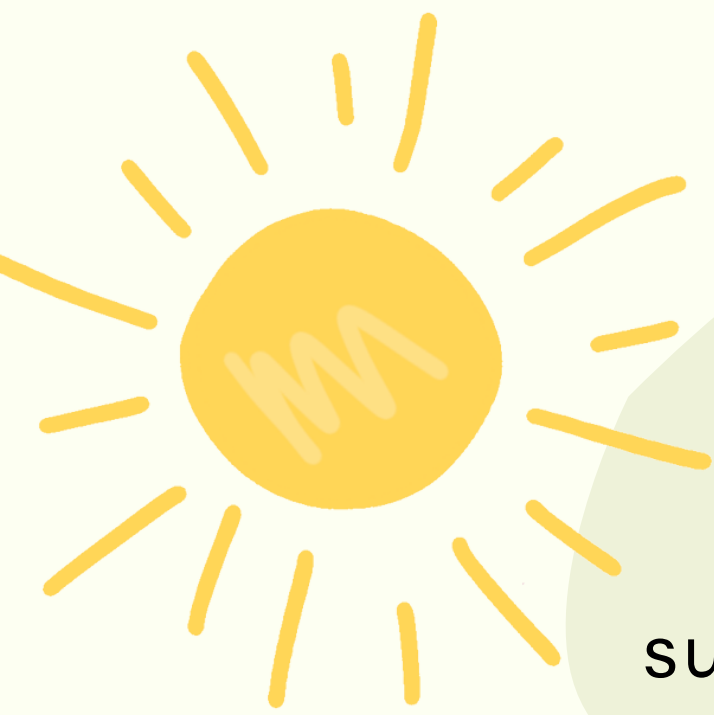
Enriching space

Sustainability Targets, Health and Wellbeing + Technical req.

8

### Sustainability:

Daylight is a free, sustainable source of light/energy saving.



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### Lighting Metrics:

Illuminance is measured in **Lux (E)**

### Daylight Factor:

$$\frac{EI(\text{Indoor daylight illuminance})}{EO(\text{Outdoor daylight illuminance})} \times 100\%$$

daylight factor	quality of lighting within space
less than 2%	room looks gloomy, need electric lighting
2%-5%	best balance between daylight & electric lighting
more than 5%	Strong daylight, thermal problems

Measure values in real situations; physical model or real space

$$\text{Dynamic DF} = \frac{E \text{ Inside (100 Lux)}}{E \text{ Outside overcast sky (5000 Lux)}} \times 100\% = 0.02 (x100) = 2\% \text{ DF}$$