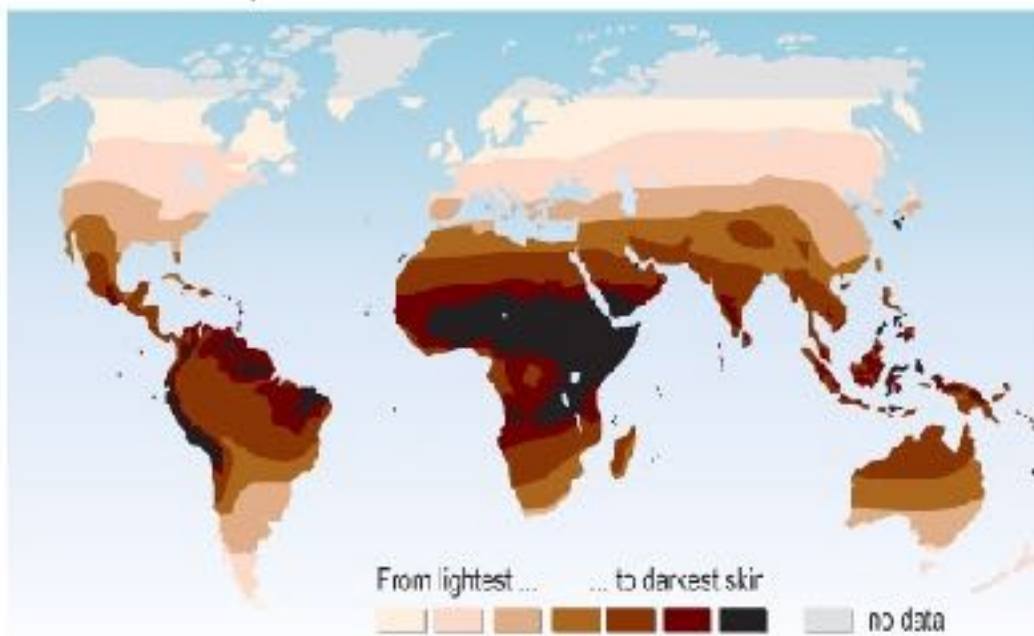


Ultraviolet Radiation

Interdisciplinary Bilingual Project

TYPES OF SKIN	CHARACTERISTICS	BURNS IN THE SUN	TANS
I. PALE SKIN	Very pale skin, red hair, freckles	ALWAYS	SELDOM
II. FAIR SKIN	Pale skin, fair hair, some freckles	USUALLY	SOMETIMES
III. LIGHT, INTERMEDIATE OR DARK SKIN	Brown hair, no freckles	SOMETIMES	USUALLY
IV. OLIVE / MEDITERRANEAN SKIN	Brown skin, dark hair, dark eyes	SELDOM	ALWAYS
V. NATURALLY BROWN	Dark brown skin, dark hair	SELDOM	ALWAYS (dark tan)
VI. VERY DARK BROWN / BLACK	Black skin, black hair	NEVER	ALWAYS (very dark tan)

Skin colour map (indigenous people)
Predicted from multiple environmental factors



EXPOSURE CATEGORY	UVI RANGE
LOW	< 2
MODERATE	3 TO 5
HIGH	6 TO 7
VERY HIGH	8 TO 10
EXTREME	11+

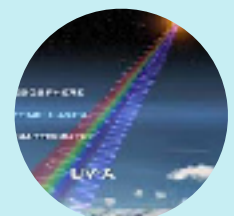
Table 1: UV radiation exposure categories



Video: How the Sun Sees you
<https://www.youtube.com/watch?v=o9BqrSAHbTc&t=7s>



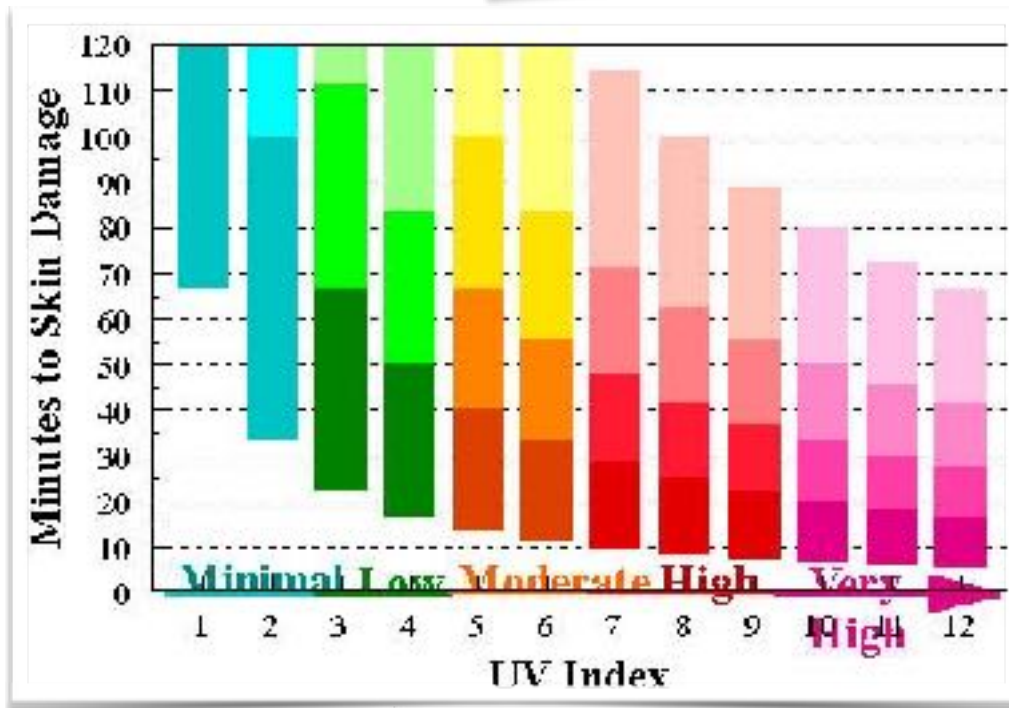
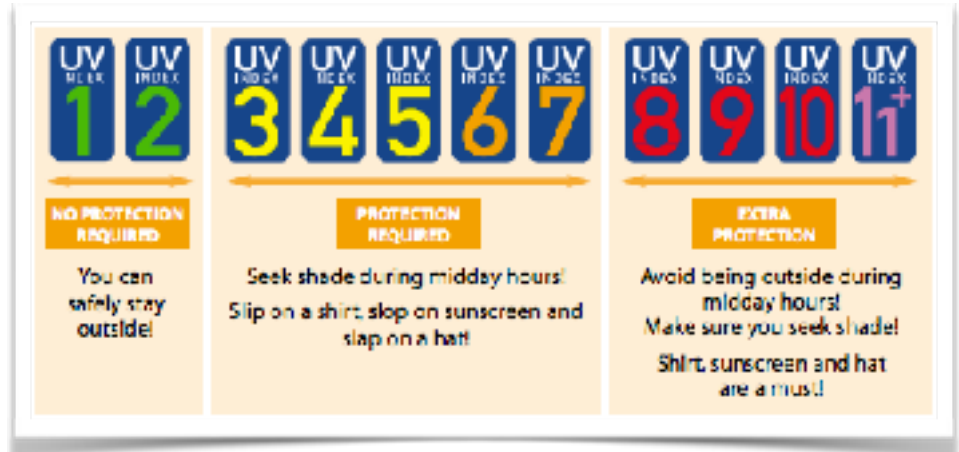
Video: UV Rays
<https://www.powtoon.com/my-powtoons/#/https://www.youtube.com/watch?v=OSTCpA1gDcY>



Tour of the Electromagnetic Spectrum
<https://www.youtube.com/watch?v=lwfJPC-rSXw>

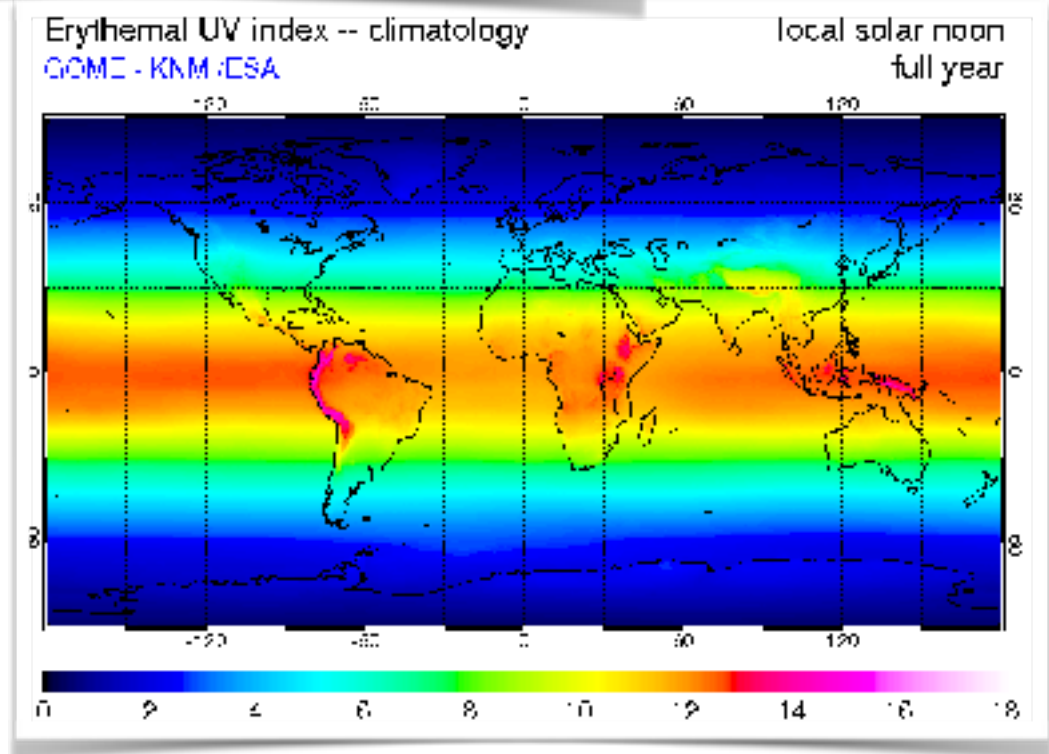
Graphic presentation of UVI Values

UVI Values are grouped into exposure categories



Minutes to skin damage according to UV Index

UV INDEX - CLIMATOLOGY



Sun Protection Messages

THE BASIC SUN PROTECTION MESSAGES

- **Limit exposure during midday hours.**
- **Seek shade.**
- **Wear protective clothing.**
- **Wear a broad-brimmed hat to protect the eyes, face and neck.**
- **Protect the eyes with wrap-around-design sunglasses or sunglasses with side panels.**
- **Use and reapply broad-spectrum sunscreen of sun protection factor (SPF) 15+ liberally**
- **Avoid tanning beds.**
- **Protect babies and young children: this is particularly important.**



Bibliography / Videos / Reference materials used:

Video: How the sun sees you

<https://www.youtube.com/watch?v=o9BqrSAHbTc&t=7s>

Video: UV Rays

<https://www.powtoon.com/my-powtoons/#/>

<https://www.youtube.com/watch?v=OSTCpA1gDcY>

Tour of the Electromagnetic Spectrum

<https://www.youtube.com/watch?v=lwfJPc-rSXw>

Sunscreen Reminder Hat with Flora UV Index Sensor

https://www.youtube.com/watch?time_continue=10&v=G8Bor4hgOR8

Flex Sensor Glove and Robotic Arm

https://www.youtube.com/watch?time_continue=12&v=Q1O_wVTt_VM

Global Solar UV Index - A Practical Guide

https://digital.library.unt.edu/ark:/67531/metadc226612/m2/1/high_res_d/UVIGuide.pdf

Kickstarter project: *Sunscreenr*

<https://www.kickstarter.com/projects/sunscreenr/sunscreenrtm-is-your-skin-protected?lang=es>