

Give Me The Light!

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Course Description

This course was developed to help ophthalmic professionals better understand the importance of light and how various lens materials and treatments are designed to protect and preserve our patient's sight, both indoors and outdoors.

Let's Talk Light

- How important is light to you?
- Can you have sight with no light or vision with no light?
- Subjective vs. Objective Impressions of Light
- What happens if there is no light?



HOW COMFORTABLE ARE YOU IN THE DARK?

WHEN THE EYE ENCOUNTERS LIGHT

- IT CHANGES THE SPEED
- IT CHANGES THE DIRECTION
- IT CHANGES THE AMOUNT

Three Aspects of Vision

- Light must enter the eye and pass through four distinct parts*.
- The retina must react to the light.
- The brain must construct a subjective interpretation of sight.

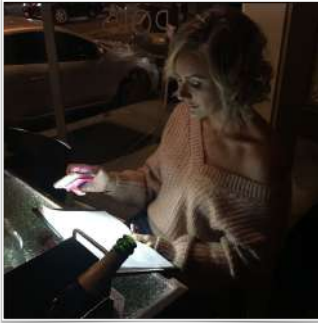
Subjective vs. Objective

There is a difference between the brain's subjective impressions and the physical properties of sight.

Have You Seen Her Before?

There is a difference between the brain's subjective impressions and the physical properties of sight.

- We don't see wavelengths, we see the brain's subjective impression
- Color only exist in our minds
- We all have seen this once or twice while out in a dimly lit space



What do we have here?

Cosmic rays

X-Rays

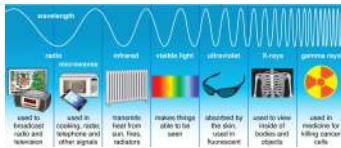
Ultraviolet

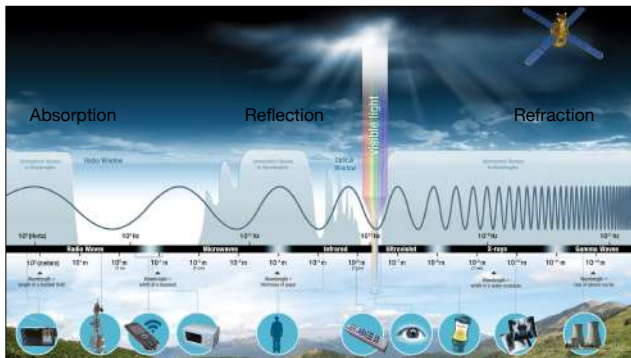
Visible light 380-760 nm

Infra-red

Radar

Radio/TV







WHAT'S UP WITH ALL THIS BLUE LIGHT



HOW DOES THE SUN MAKE YOU FEEL?



Blue Light

- ☒ Environment/Sun
- ☒ Electronic displays and devices
- ☒ Circadian Rhythm
- ☒ Health concerns
- ☒ Indoor lighting

Put your phone
down and enjoy
yourself!

“NO, I NEED
MORE
BLUE LIGHT!”



MATERIAL MATTERS!



LET'S TALK GLARE

DIRECT AND INDIRECT

TWO MAIN FORMS OF GLARE

DISABLING

DISCOMFORTING

Anti-Reflective Coating

- Reduce reflections
- Enhance clarity
- Improve light transmission
- Enhance contrast
- Better night vision
- Aesthetically appealing



POLARIZED LENSES

WHAT IS POLARIZATION AND HOW DOES IT WORK?

UV BLOCKING AND POLARIZED ARE NOT THE SAME THING.

WHEN DO YOU USE POLARIZED SUNGLASSES?

WHAT ARE SOME SPECIFIC SITUATIONS WHEN POLARIZED LENSES ARE MORE HELPFUL?



Tints, Mirrors & UV

I love tints!

- Do Not Stare at the SUN!
- Photokeratitis
- Fashion
- EYEidentity
- Mood
- Size matters, color, not so much



PHOTOCHROMIC TECHNOLOGY

Pros: Convenient, Continuous UV protection, Save money, Easy to keep up with your eyewear, Various styles and colors

Cons: All brands are not the same, lenses can take longer to adjust in cold weather, car windshield and roof



WHAT'S NEXT?

- Before going to sleep
- Middle of the night
- 5 minutes after waking up
- While at work
- Socialize
- Watching TV
- Pay for ride share
- Grocery store run



I think it's time for the 20-20-20 rule!



WHEN LIGHT AND VISION COME TOGETHER



THANK YOU

Q & A
