

VISION & OPTICAL INSTRUMENTS



CAN HUMAN EYES SEE MAGNETIC FIELDS?

PEOPLE ARE UNABLE TO DETECT MAGNETIC FIELDS. HOWEVER, ANIMALS SUCH AS BIRDS AND SHARKS ARE CAPABLE OF IT (YONG, 2011).

[HTTPS://WWW.NATIONALGEOGRAPHIC.COM/SCIENCE/ARTICLE/HUMANS-HAVE-A-MAGNETIC-SENSOR-IN-OUR-EYES-BUT-CAN-WE-SEE-MAGNETIC-FIELDS](https://www.nationalgeographic.com/science/article/humans-have-a-magnetic-sensor-in-our-eyes-but-can-we-see-magnetic-fields)

HUMAN EYES & PHYSICS

ONLY A FRACTION OF THE ELECTROMAGNETIC SPECTRUM IS MADE UP OF THE WHOLE RANGE OF LIGHT VISIBLE TO THE HUMAN EYE. WE REFER TO THIS SET OF WAVELENGTHS AS VISIBLE LIGHT (SOHN, 2007).

[HTTPS://WWW.SNEXPLORES.ORG/ARTICLE/LOOK-MY-EYES](https://www.snexplores.org/article/look-my-eyes)

THE EVOLUTION OF THE HUMAN EYE

WHAT ENERGY CAN THE HUMAN EYE SEE?

DEPENDING ON THEIR ENERGIES AND WAVELENGTHS, LIGHT WAVES TRAVEL ALONG AN ELECTROMAGNETIC SPECTRUM. ONLY VISIBLE LIGHT WAVES ARE VISIBLE TO THE HUMAN EYE (BROWN, 2022).

[HTTPS://EDUCATION.NATIONALGEOGRAPHIC.ORG/RESOURCE/INFRARED-VISION/](https://education.nationalgeographic.org/resource/infrared-vision/)

THE EVOLUTION OF THE HUMAN EYE

WHAT IS VISION IN PHYSICS?

VISION IS THE TERM USED TO DESCRIBE SIGHT. IT ALSO DEPENDS ON PARTICULAR REGIONS OF THE BRAIN, BECAUSE THE BRAIN AND EYES WORK TOGETHER TO ALLOW US TO SEE. VISIBLE LIGHT IS GATHERED AND FOCUSED BY THE EYES.

(GIBBS, 2023)

DO EYES REFLECT WHAT THEY SEE?

OUR EYES ARE LIKE TINY, SPHERICAL MIRRORS. THEIR SURFACES REFLECT LIGHT AND THEY ARE COVERED IN A LAYER OF SALTY FLUID (TEARS).

HUMANS HAVE EVOLVED THE CAPACITY TO RECOGNIZE THE LIGHT WAVELENGTHS THAT ARE MOST USEFUL FOR ASSISTING US IN SURVIVING AND PROCREATING IN OUR UNIQUE ENVIRONMENT. SIMILAR TO HUMANS, OTHER ANIMALS CAN SEE THE LIGHT WAVELENGTHS THAT ARE MOST BENEFICIAL TO THEM IN THEIR SURROUNDINGS (BOWMAKER, 2008).

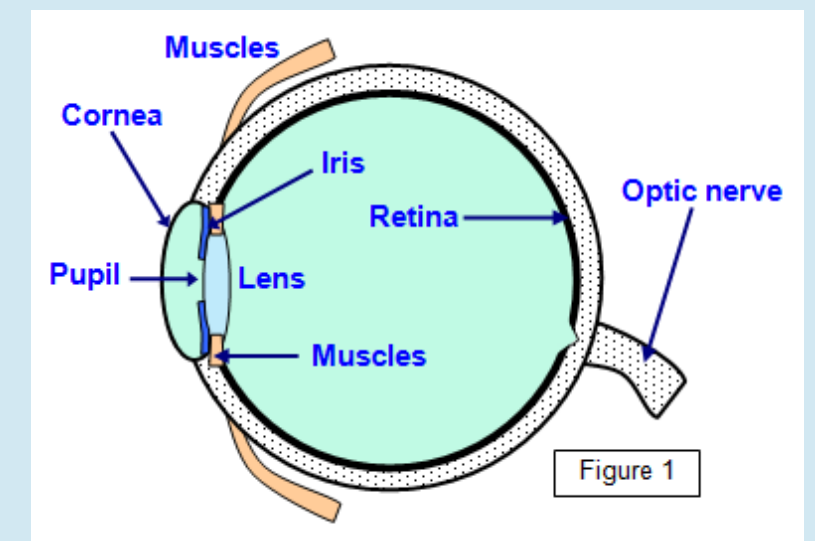


Figure 1

[HTTPS://WWW.SCHOOLPHYSICS.CO.UK/AGE16-19/MEDICAL%20PHYSICS/TEXT/EYE /INDEX.HTML](https://www.schoolphysics.co.uk/age16-19/medical%20physics/text/eye/index.html)