

REVIEW

WHAT IS A PRISM AND HOW DOES IT WORK?

Made of glass + refracts different wavelengths which makes a rainbow

Where can you find prisms in nature, and how do they act like prisms?

Water droplets--- they creat rainbows!!

Describe refraction and how it causes light to behave differently in different substances

When light waves bend, speed of light changes in different substances with different densities

What is the difference between translucent, transparent, and opaque materials? Give one example of each.

Translucent scatters

Transparent transmits

Opaque absorbs

Describe the pathway of light through the eye

Cornea -> pupil/iris -> convex lens -> retina -> optic nerve -> brain

Give a synonym for each of the following words

Reflect -> bounce

Refract -> bend

Diffuse Reflection -> Scatter

What is the electromagnetic spectrum?

Energy that can travel through space in the form of waves

How is the electromagnetic spectrum organized?

By wavelength!!! (smallest to largest)

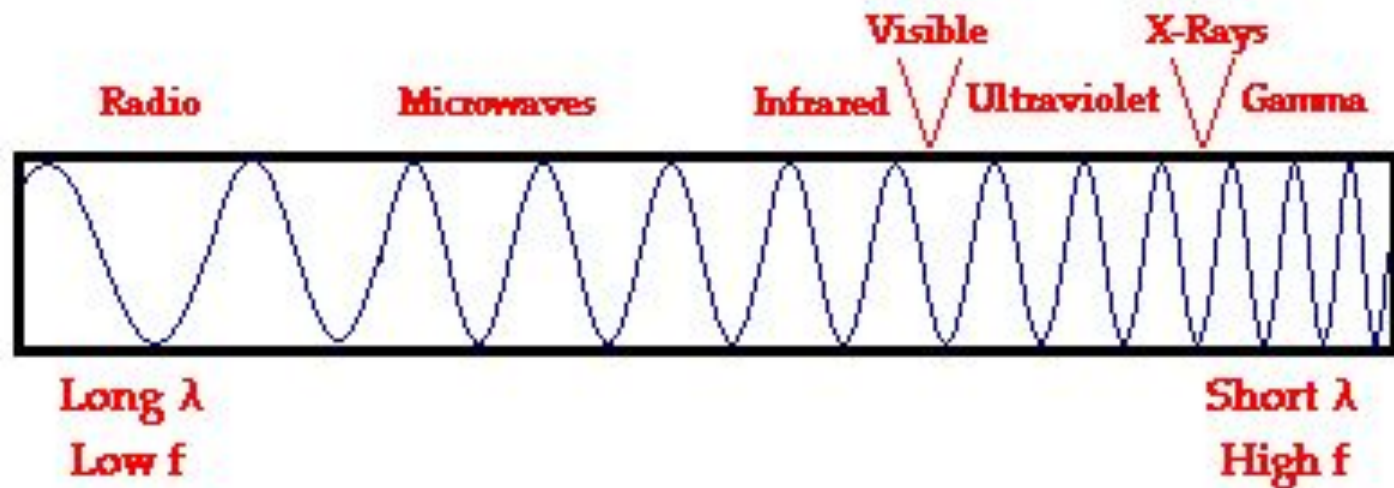
What is the type of light energy we can see called?

Visible light

Why do different colors of visible light exist?

Because they have different wavelengths

Draw and label a picture of the electromagnetic spectrum, ranging from greatest wavelength to least wavelength



Write the definition of sound

A disturbance that travels through a medium

Which 3 variables have an affect on the speed of sound? Explain HOW they change the speed of sound.

Elasticity- more elastic = faster

Density- more dense = slower

Temperature- high temperature = faster

Why are space explosions as portrayed in movies scientifically inaccurate?

Cant hear sound in space

When you're at a sporting event, you can often see fans on the opposite side of the field cheering before you hear the cheers. Why?

Light travels quicker than sound

What 2 factors determine density

1. Energy
2. Distance

Describe the difference between loudness and pitch

loudness= loud/soft

pitch= high/low

Where in the pathway of sound are vibrations translated into understandable noises or sounds?

Brain

What is the function of the pinna?

Acts like a funnel to collect sound waves

Describe the pathway of sound through the ear

Pinna -> ear canal -> eardrum -> hammer -> anvil -> stirrup -> cochlea -> auditory nerve -> brain