

# Electromagnetic waves essay



**ASSIGN  
BUSTER**

Electromagnetic waves are radiated energy of all different strengths. They're different from sound waves and water waves because they have the ability to travel through empty space.

A vacuum. These are the only types of waves that do not need any type of medium because of photons. Photons are tiny particles that don't get traveled through, but make up electromagnetic waves. Photons travel with the wave at about 300, 000 k/s. also known as the speed of light. The more energy the photons have, the brighter the light will appear.

The energy of electromagnetic waves are measured in the electromagnetic spectrum, a big graph showing the different wavelengths and frequencies of electromagnetic waves. It ranges from radio waves, which are the weakest, to gamma rays, the strongest -Only a very small part of the spectrum is visible to the human eye, called the visible light spectrum. These colors are the colors of the rainbow. ——— The colors of the rainbow are red, orange, yellow, green, blue, and violet.

ROY. G. BV.

The I in BIV, indigo, no longer exists. The reason that red is always on the top of the rainbow is because red light is weakest light, so it is dim. The different colors will get brighter until they get to the bottom, violet, which is the strongest of the colors.

The reason that these colors appear is because of wavelength of the light wave. The red light has a much longer wavelength than the violet, so it's

weaker. When scientists are looking at an object, and the gage shifts to red, scientists call it a red shift.

When this happens, it means that an object has moved further away. ——

There are seven different types of waves in the electromagnetic spectrum.

The weakest is the radio wave.

These are the waves that your radio and t. v. use. Radio's have the longest wavelength (the distance from crest to crest), and the lowest frequency (how many waves pass one point per second). Next are microwaves.

They are just slightly more powerful, and are of course used in your microwave.

The power continues to build through infra red light, the visible spectrum, UV rays and x-rays. Gamma rays, the most powerful, can shoot through anything. They can even cause cancer sometimes, but they are also used to cure it. Scientists use Gamma rays to find out the distance of an object.

They shoot the ray out to the stars, when it bounces back, the color of the light can be used to find out the distance away the star is. Red means it is further, and violet means it is closer.