

# Edexcel GCSE Physics

## Topic 5.7-5.14 - The Electromagnetic Spectrum

### Flashcards

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What types of waves are  
electromagnetic waves?



# What types of waves are electromagnetic waves?

## Transverse



# What do electromagnetic waves transfer?



What do electromagnetic waves transfer?

Energy (**not** matter).



What type of spectrum do  
electromagnetic waves form?



What type of spectrum do electromagnetic waves form?

A continuous spectrum.



List the order of the electromagnetic spectrum in order of increasing wavelength





List the order of the electromagnetic spectrum in order of increasing wavelength

Gamma, X Ray, UV, Visible, Infrared,  
Microwaves, Radio



What is the highest frequency  
electromagnetic wave?



What is the highest frequency electromagnetic wave?

Gamma waves



What is the highest energy  
electromagnetic wave?



What is the highest energy electromagnetic wave?

Gamma waves



What properties are shared by all electromagnetic waves?



What properties are shared by all electromagnetic waves?

- They are all transverse waves
- They all travel at the same speed  
( $3 \times 10^8$  m/s)
- They can travel through a vacuum



What range of frequencies of electromagnetic waves can be detected by the human eye?





What range of frequencies of electromagnetic waves can be detected by the human eye?

400-700 nanometres



How do the speeds of EM radiation differ  
in a vacuum and in air?



How do the speeds of EM radiation differ in a vacuum and in air?

Electromagnetic waves all travel at the same speed in a vacuum and in air.



# What can happen when radiation strikes an object?



# What can happen when radiation strikes an object?

It can be...

- transmitted
- reflected
- absorbed

