

### Review of Previous Lesson

5/4/2018

- State as many Vocabulary words and Learning Objectives that you remember from the last lesson as you can.
- Now complete the content learning objectives.
- Remember to grade yourself from 0 – 3.

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## Electromagnetic & Mechanical Waves

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### Learning Objectives

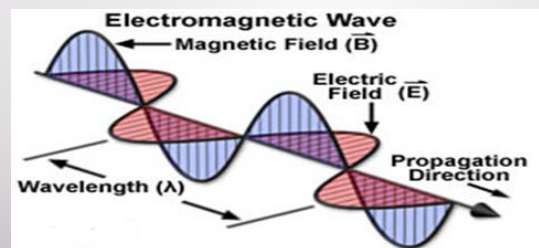
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Content:	Start	End
Identify and differentiate between the two classifications of waves: electromagnetic or mechanical		

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### Electromagnetic Wave

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### Difference Between Mechanical and Electromagnetic Waves

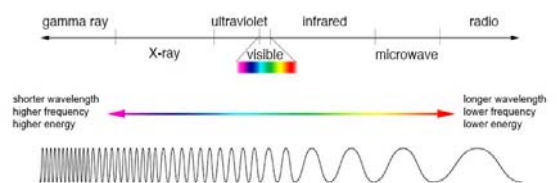
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- Electromagnetic Waves:
  - Can travel through a medium (e.g. air, water etc...) but they do not need to.
  - Can travel through a vacuum.
- Mechanical Waves:
  - Must have a medium to travel through.
  - Cannot travel through a vacuum.
  - e.g. Sound, water waves, etc...

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### Electromagnetic Spectrum

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[https://image.gsfc.nasa.gov/images/science/EM\\_spectrum\\_compare\\_levels\\_lg.jpg](https://image.gsfc.nasa.gov/images/science/EM_spectrum_compare_levels_lg.jpg)

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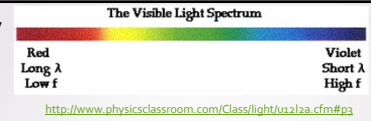
## Raging Martians Invaded Venus Using X-ray Guns

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- The electromagnetic spectrum, in terms of increasing frequency is:
  - Radio waves, Microwaves, Infrared, Visible light, Ultraviolet, X-Rays, Gamma Rays

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## ROY G BIV



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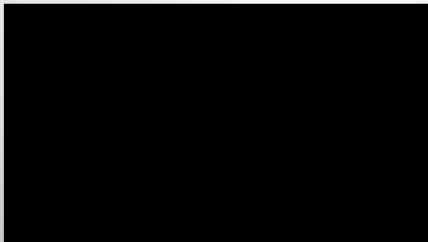
- Dispersion of visible light produces the colours red (R), orange (O), yellow (Y), green (G), blue (B), and violet (V).
- It is because of this that visible light is sometimes referred to as ROY G. BIV.
  - (Incidentally, the indigo is not actually observed in the spectrum but is traditionally added to the list so that there is a vowel in Roy's last name.)

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## Electromagnetic Waves

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(Bozeman Science)  
<https://www.youtube.com/watch?v=WNk88IY-ko4>



Dora noticed that the first time the electromagnetic spectrum is shown in the video, the order is incorrect. In decreasing frequency it should be: Gamma Rays, X-Rays, Ultraviolet, Visible light, Infrared, Microwaves, Radio waves.

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## Plenary:

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- Electromagnetic Waves:
  - <http://www.physicsclassroom.com/Class/light/u1212a.cfm>
  - [http://www.ducksters.com/science/quiz/types\\_of\\_electromagnetic\\_waves\\_questions.php](http://www.ducksters.com/science/quiz/types_of_electromagnetic_waves_questions.php)
  - <https://www.proprofs.com/quiz-school/story.php?title=electromagnetic-spectrum-quiz>
  - <https://quizizz.com/admin/quiz/5720e5caa1c4f029abdf5a6f>
  - <https://quizizz.com/admin/quiz/570bcef93469f3622b5b54fc>

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