



**The World of Languages**  
and Languages of the World

# **The Language of Science**

Today, let's investigate scientific words

# Objectives

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Today we will:

- Investigate prefixes in science
- Look at words from biology
- Look at words from physics
- Look at words from chemistry
- Explore the etymology of scientific words



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WoLLoW the HiPPo

# Let's go!

WHAT'S A PREFIX?

WHAT'S A ROOT?

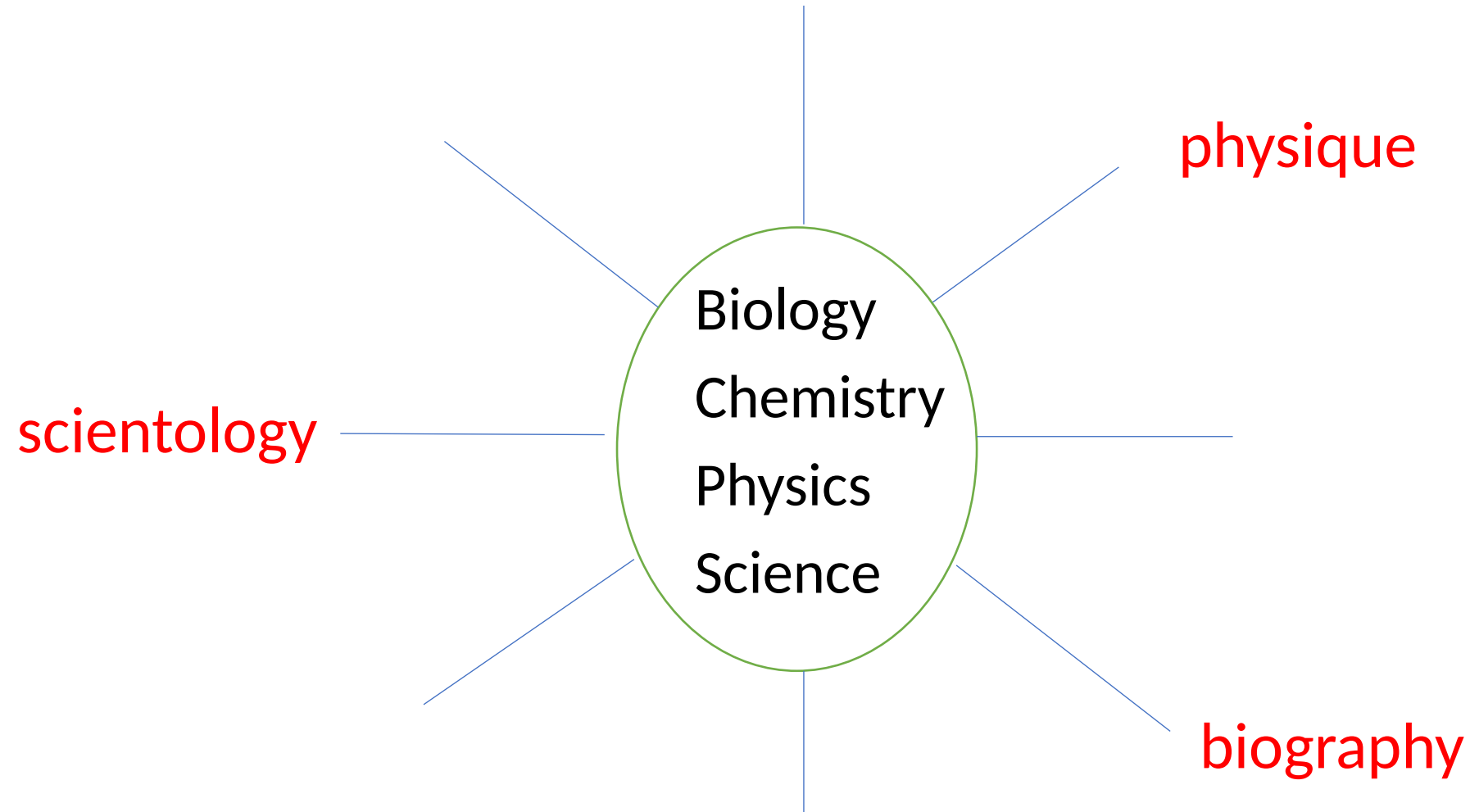
WHAT'S A SUFFIX?

WHAT DOES ETYMOLOGY MEAN?

# The Basics

- BIOLOGY      Greek *bios* = *life* + *logy* = study
- PHYSICS      Greek *φυσικά* = natural things + *ics* = matters relevant to
- CHEMISTRY      Latin *alkimia*/ Arabic *al-kimiya*/ Greek *khemeioa* = *alchemy*
- SCIENCE      Latin *scientia* = knowledge

# Word Association Game – Ready, Steady, Go!



**Prefixes**  
**Categorise**  
**the**  
**following**  
**words.**

endocardial insoluble exoskeleton exodermis  
biohazard inaccurate antihistamine  
dehydration endothermic biodiesel  
antibacterial inorganic endodermis  
biochemistry antibiotic  
decongestant bioluminescence decontaminate  
endoskeleton deionize anticoagulant  
exotoxin inedible exothermic

# Language detectives - Fill in the gaps

	Prefix	Meaning	Language	Example	Your example
1	endo		Greek <i>ἐνδον</i>	endothermic	
2	in		Latin <i>in</i>	inaccurate	
3	exo		Greek <i>exō</i>	exoskeleton	
4	anti		Greek <i>anti</i>	antihistamine	
5	bio		Greek <i>bios</i>	biohazard	
6	de		Latin <i>de</i>	decongestant	

internal / within  
against / opposite  
the opposite meaning

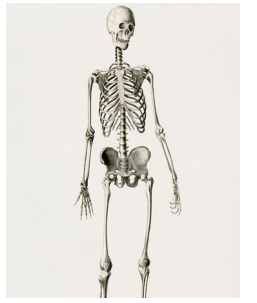
removal of something / off  
involving life / living organisms  
external/ outside/ beyond

# How did you get on? What examples did you come up with?

	Prefix	Meaning	Language	Example	Your example
1	endo	internal / within	Greek	endothermic	?
2	in	the opposite meaning	Latin <i>in</i>	inaccurate	?
3	exo	external/ outside/ beyond	Greek <i>exō</i>	exoskeleton	?
4	anti	against / opposite	Greek <i>anti</i>	antihistamine	?
5	bio	involving life / living organisms	Greek <i>bios</i>	biohazard	?
6	de	removal of something / off	Latin <i>de</i>	decongestant	?

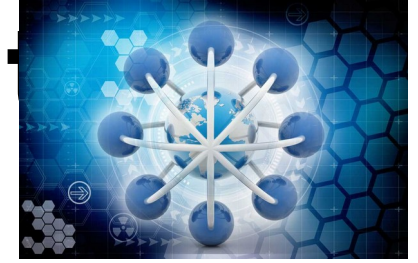


# Biology - The Body



- Ligament muscles? Latin *ligo* (tie/bind) What's this got to do with bones and
- Tendon Latin *tendo* (stretch) What do tendons do?
- Vertebrate Latin *verto* (turn) What's this got to do with a back bone?
- Arthritis Greek *άρθρον* (joint) + *ϊτις* (it is, inflammation) So, what's arthritis?
- Biceps attachment Latin *caput* (head) So, how many heads (or points of
- Triceps do these muscles have?
- Quadriceps
- Antagonistic muscles do? Greek *άντι* (opposite/against) So, what do a set of
- Antagonistic muscles do? + *αγων* (struggle) Do you know any antagonistic muscles?

# Physics – match the word to meaning



- |               |                                           |
|---------------|-------------------------------------------|
| 1. Vibration  | a) Latin <i>audio</i> (hear)              |
| 2. Audible    | b) Latin <i>lumen</i> (light)             |
| 3. Amplitude  | c) Latin <i>flecto</i> (bend)             |
| 4. Reflection | d) Latin <i>vibro</i> (shake)             |
| 5. Refraction | e) Latin <i>gravis</i> (heavy)            |
| 6. Luminous   | f) Greek θερμος ( <i>thermos</i> ) 'heat' |
| 7. Gravity    | g) Latin <i>frango, fract</i> (break)     |
| 8. Thermal    | h) Greek κινε- ( <i>cine-</i> ) 'move'    |
| 9. Kinetic    | i) Latin <i>amplus</i> (large, full)      |

# Chemistry – The Period

1. C\_l\_c\_\_m

Latin: calx = pebble, lime, goal

2. P\_t\_ss\_\_m

Pot + ash K is from a plant Kali

3. H\_l\_\_m

Greek: ἥλιος (helios) = sun

4. Hydr\_g\_n

Greek: ὕδωρ (hydro) = water + γιγνομαι= creating

5. \_xyg\_n

Greek: ὀξύς (oxus) = sharp, keen, pungent + γιγνομαι = creating

6. Chl\_r\_n\_

Greek: χλωρός (chloros) = green

7. C\_rb\_n

Latin: carbo = piece of charcoal,

Periodic Table of the Elements

# A final thought...

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- Why do you think so many of our scientific words have Greek or Latin origins?
- And why is it useful to learn about the etymology of scientific words?



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# Well....

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- Using Greek or Latin allowed scientists around the world, who all spoke different languages, to communicate and exchange ideas. Most scientists learned these languages. Issac Newton had a separate notebook in Greek.
- Understanding Greek and Latin roots, prefixes, and suffixes helps you to understand scientific terms.
- It helps you use and understand long, new and unfamiliar words.
- It helps you identify the Greek and Latin parts of scientific terminology and gives meaning.

**So next time you  
are in a science  
lesson....**

Think about the terms you are being taught, break the words down, work out what each part means – you will know what the word means and be able to remember it!



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