



# Year 1

## Key Stage 1

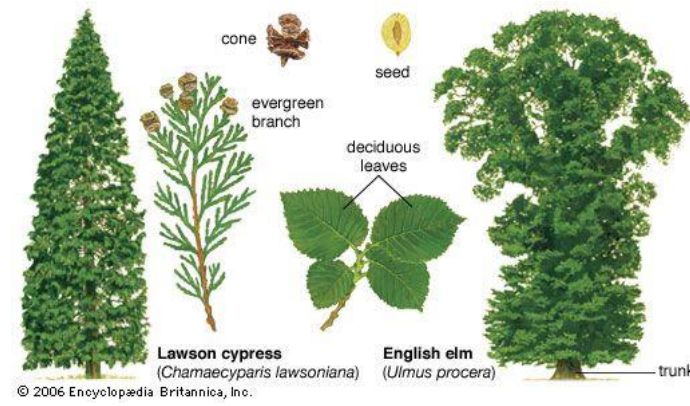
### Learning Journey

# Science

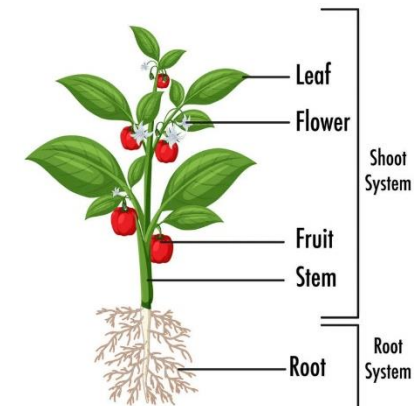
Year 2



Wild in Garden



Deciduous / Evergreen



Drawing Parts of Plants



Observe Growth of Flowers and Vegetables

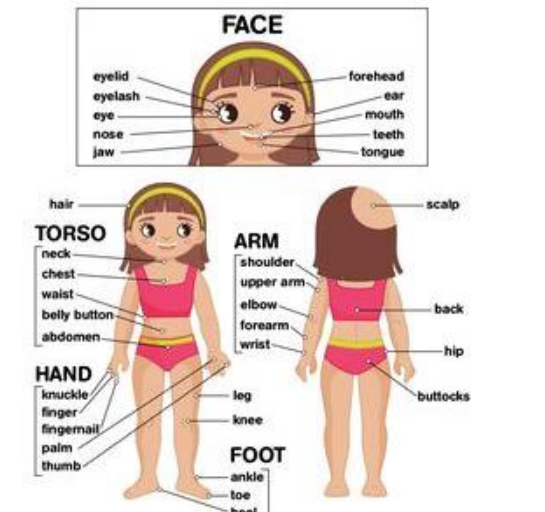
## Summer – Plants and Seasonal Change



Carnivore / Herbivore / Omnivore

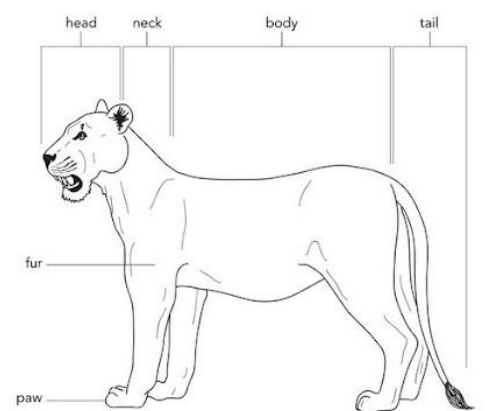


Common Animals



Basic Parts of the Human Body

Structure of Common Animals



## Spring - Animals including Humans



Object vs. Material



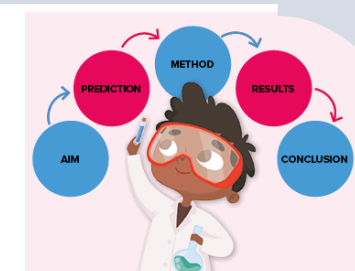
Variety of Materials



Physical Properties



Compare and Groups



Working Scientifically

Pre-School

## Autumn – Everyday Materials





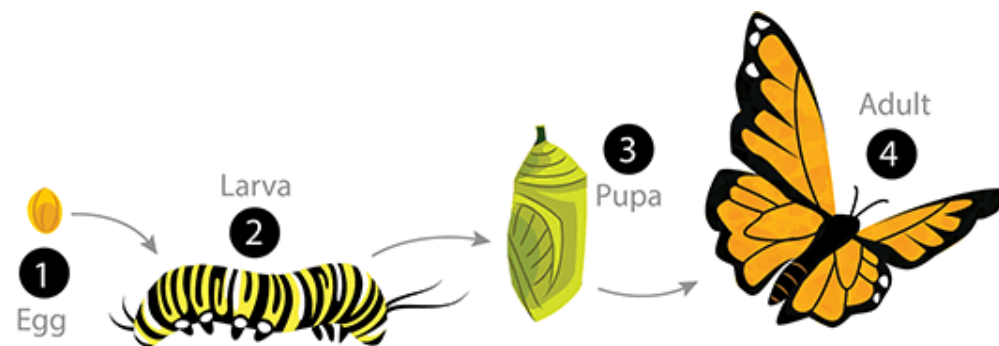
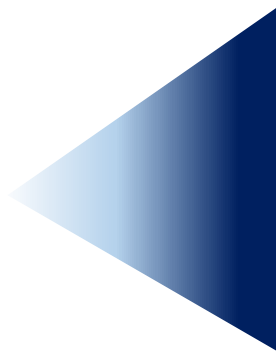
# Year 2

## Key Stage 1

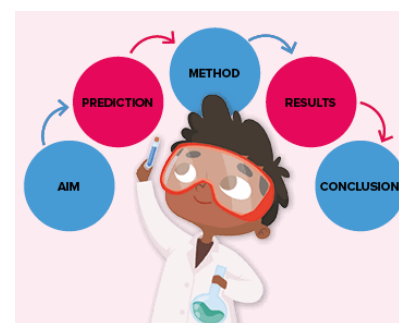
### Learning Journey

# Science

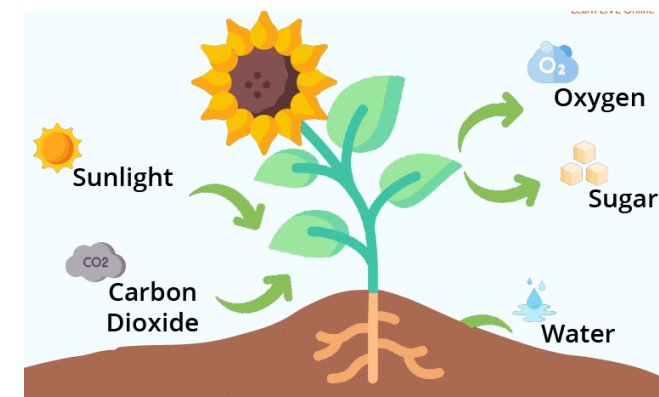
**Year 3**



Animals Including Humans –  
Embryo to further development,  
e.g. egg, pupa / baby, toddler



Working Scientifically



Plants – Essential Needs

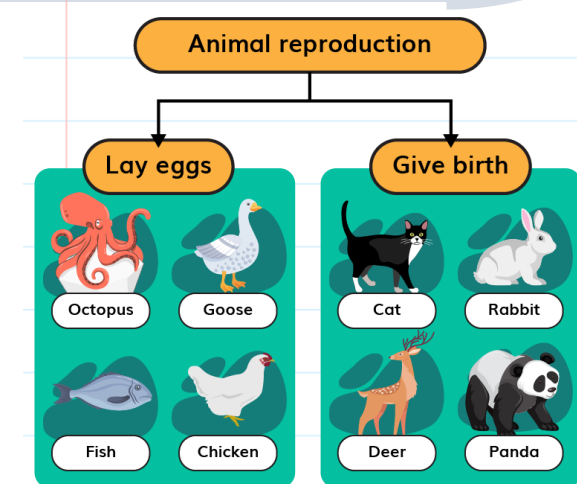
## Summer - Plants – Observe and Describe Growth



Living Things and Their Habitats



Animals and Humans –  
Basic Needs



Animals and Humans –  
Reproduction

## Spring - Animals and Humans – Exercise, Diet, Hygiene



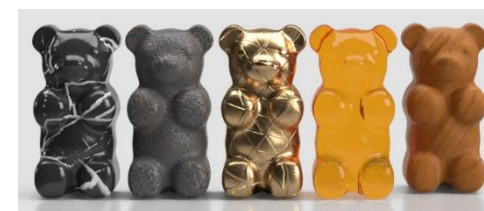
More Materials



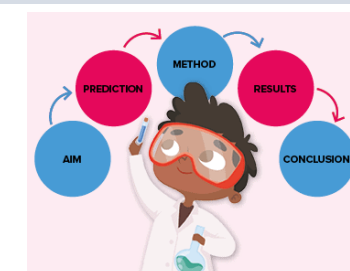
Change in Shape of Solids



Same Material for Different  
Objects



Different Material for Same  
Objects



Working Scientifically

**Year 1**

## Autumn - Uses of Everyday Materials

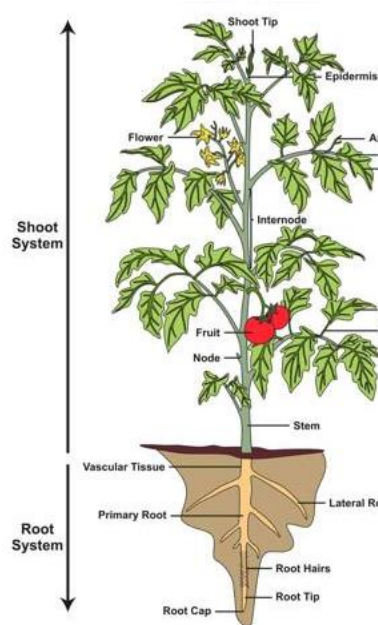
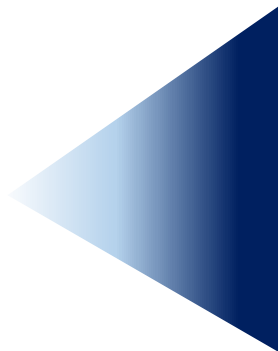




# Year 3 Lower Key Stage 2 Learning Journey

## Science

Year 4



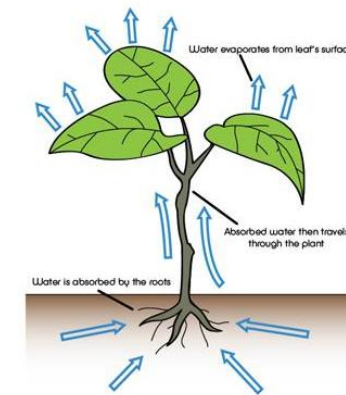
Plants - Relationship Between structure and Function



Plants - Compare Affect of Different Factors on Growth



Working Scientifically

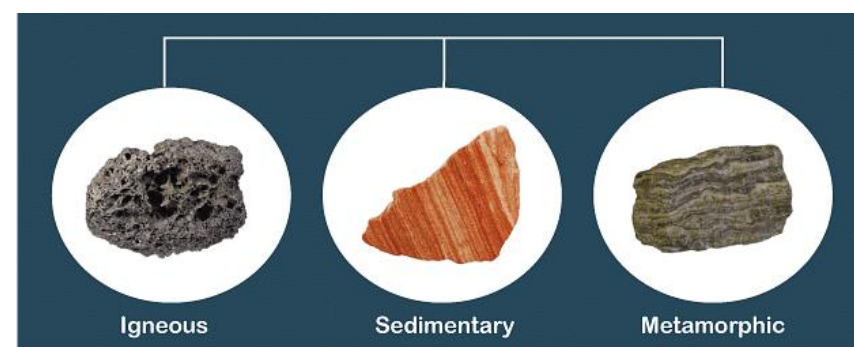


Plants - Observe how Water is Transported

Summer



Rocks - Fossils and Soil



Rocks - Compare and Group



Animals and Humans - Body Parts Linked to Skeleton and Muscles

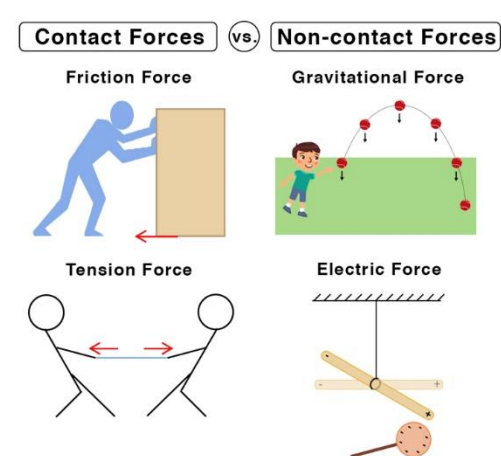


Working Scientifically

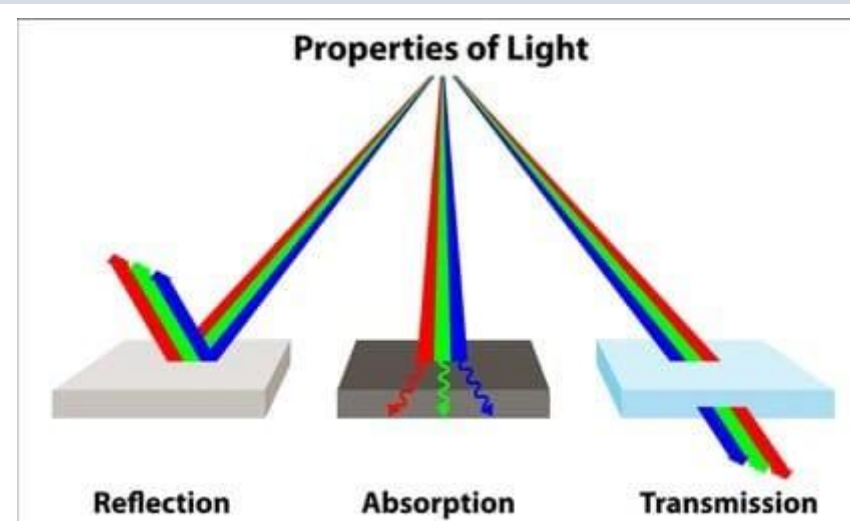


Animals and Humans - Nutrition

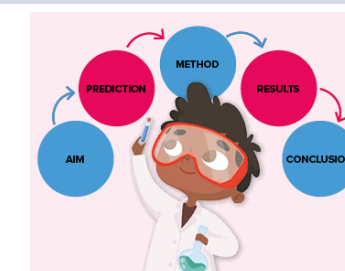
Spring



Contact and Non-Contact Forces



Light - Reflection, Absorption



Working Scientifically

Autumn

Year 2





# Year 4 Lower Key Stage 2 Learning Journey

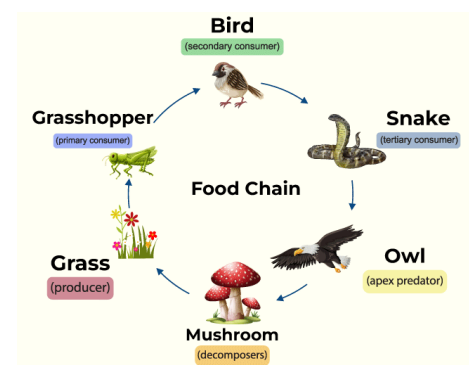
# Science

Year 5

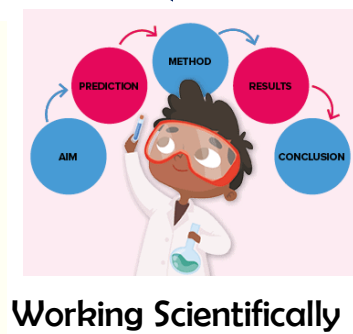


| Carnivores |  |  |  | Herbivores |  |  |  |
|------------|--|--|--|------------|--|--|--|
|            |  |  |  |            |  |  |  |
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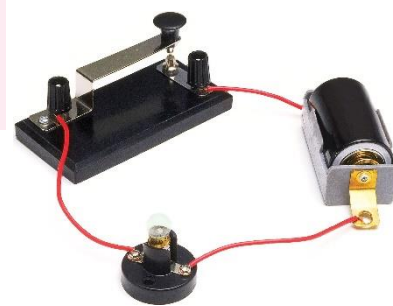
Animals and Humans – Carnivores vs. Herbivores



Animals and Humans – Food Chains



Working Scientifically



Electricity – Set up Circuits

Electricity – Insulator and Conductors

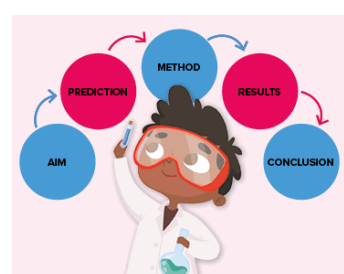


Electricity – Current and Voltage

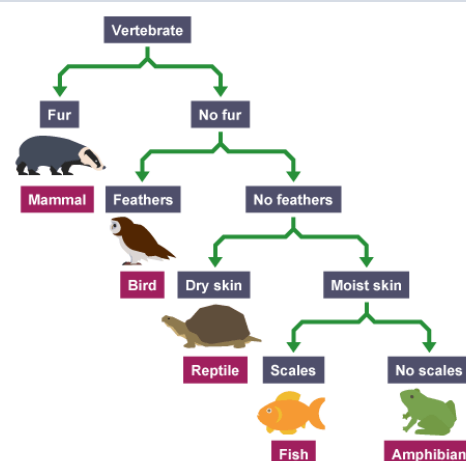
Summer



Living Things and Habitats – Vertebrates and Invertebrates



Working Scientifically

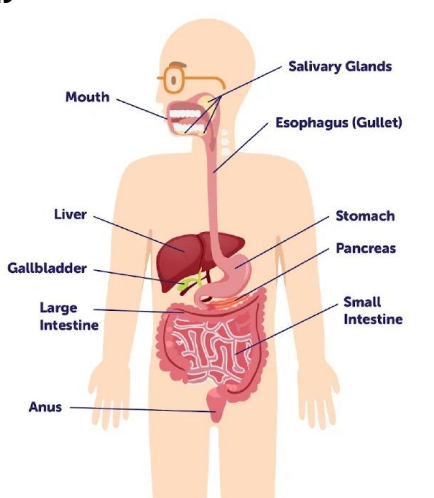


Living Things and Habitats – Classification Keys

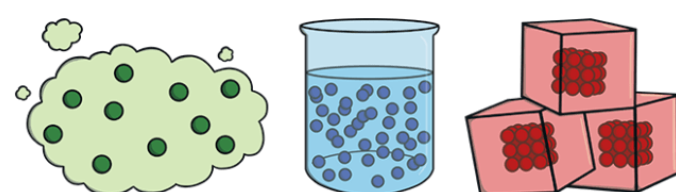


Animals and Humans – Teeth and Function

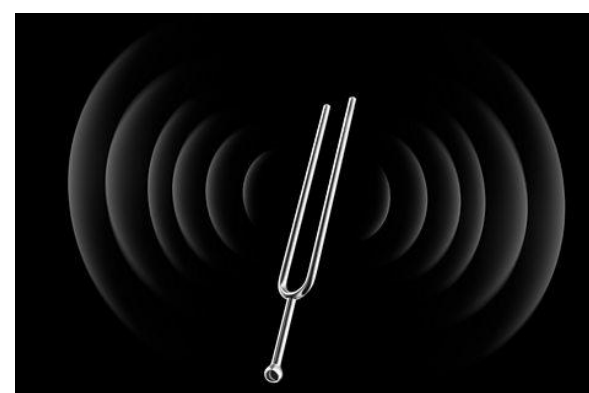
Animals and Humans – Digestive System



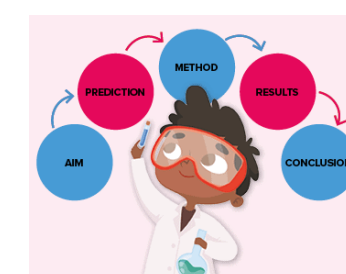
Spring



States of Matter – Solid, Liquid and Gas



Sound – Vibrations, Pitch, Volume



Working Scientifically

Year 3

Autumn

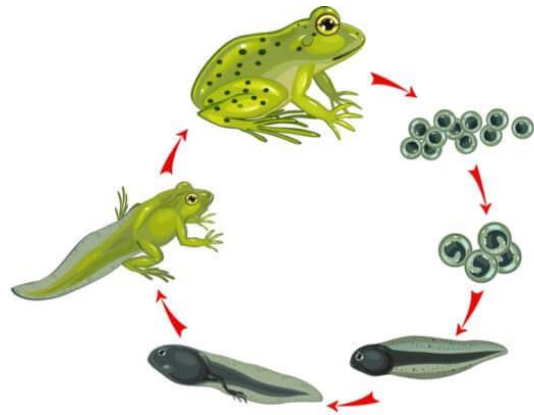




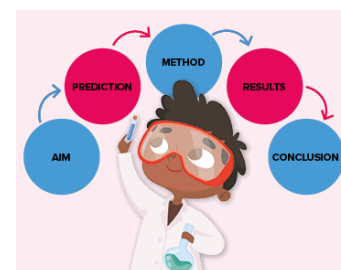
# Year 5 Upper Key Stage 2 Learning Journey

## Science

Year 6



Living Things and Habitats –  
Life Cycles and Processes

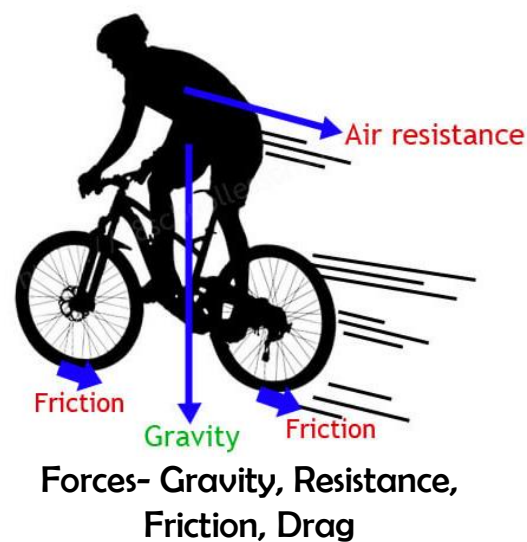


Working Scientifically

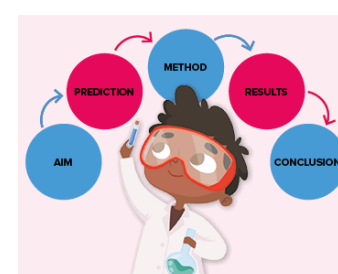


Animals and Humans –  
Aging, Puberty, Growth

Summer



Forces- Gravity, Resistance,  
Friction, Drag

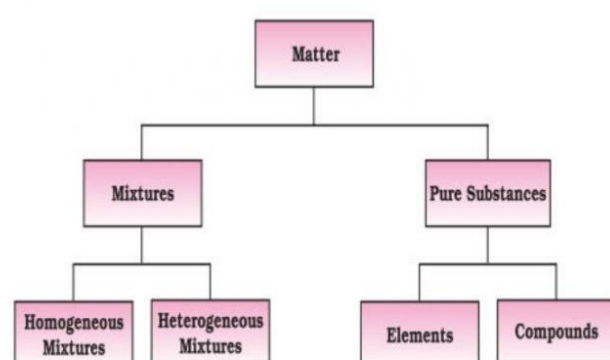


Working Scientifically  
(fair testing)

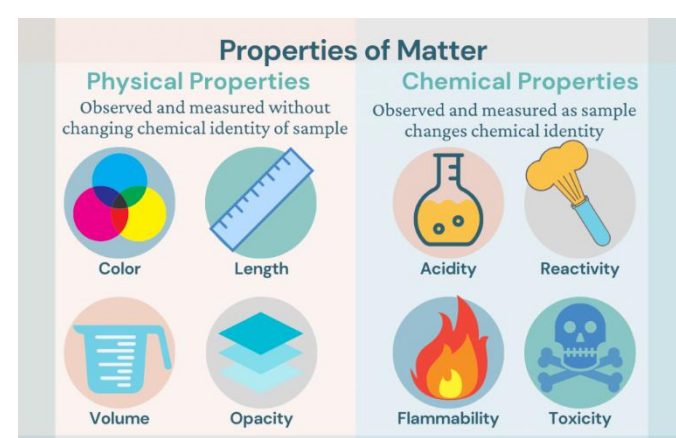


Earth and Space – Scientific Models  
to explain complex systems

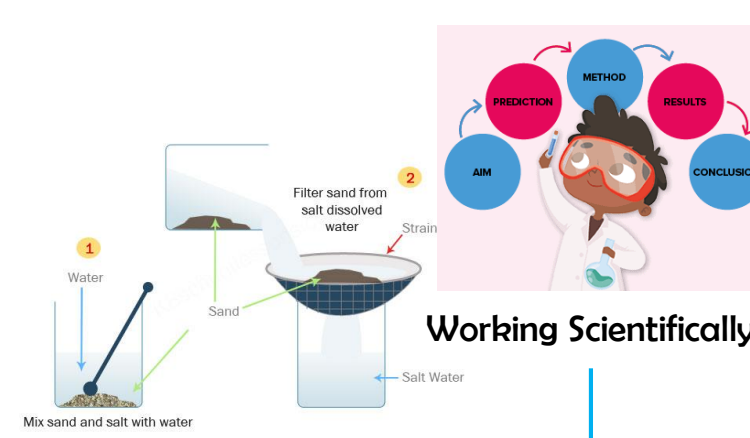
Spring



Properties of Materials -  
Basic Chemistry Terminology



Properties of Materials -  
Characteristics



Properties of Materials –  
Dissolving, Mixing, Filtering



Chemical Reactions

Year 4

Autumn

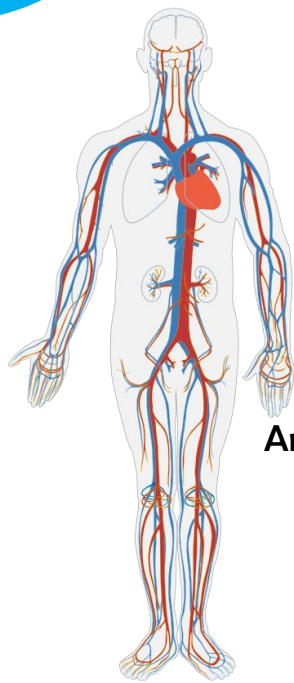




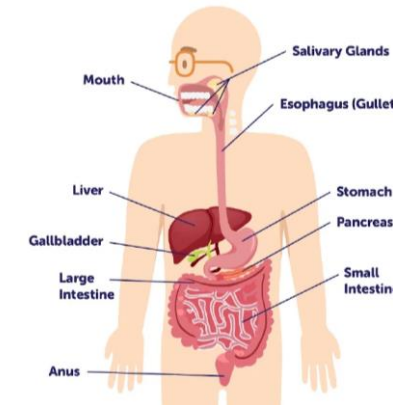
# Year 6 Upper Key Stage 2 Learning Journey

## Science

Year 7



Animals and Humans –  
Circulatory System

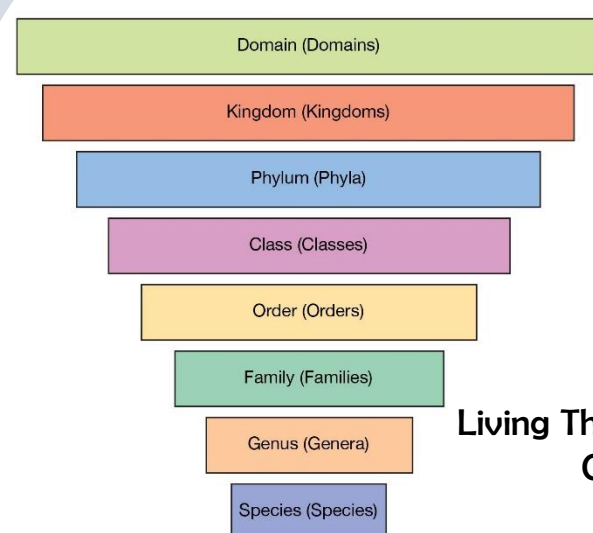


Animals and Humans –  
Link to Digestive System

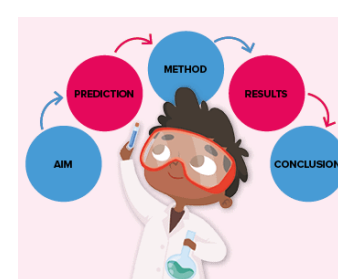


Working Scientifically –  
Explore Work of Scientists

Summer



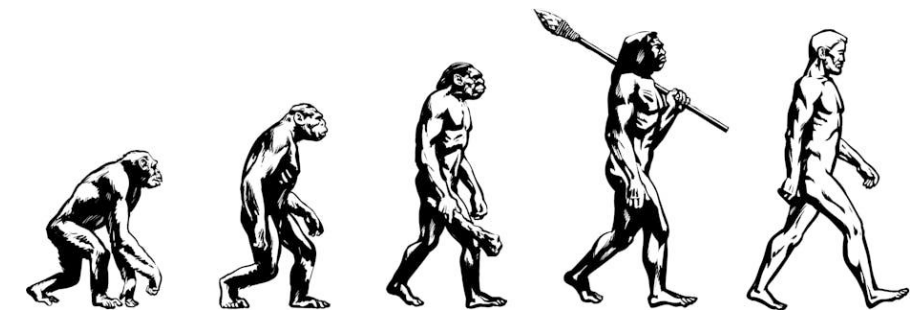
Living Things and Habitats –  
Classification



Working Scientifically

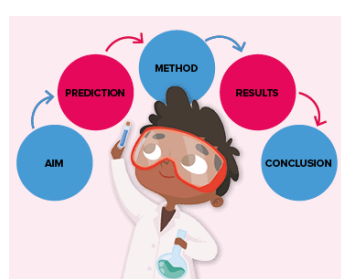


Living Things and Habitats –  
Vertebrates and Invertebrates

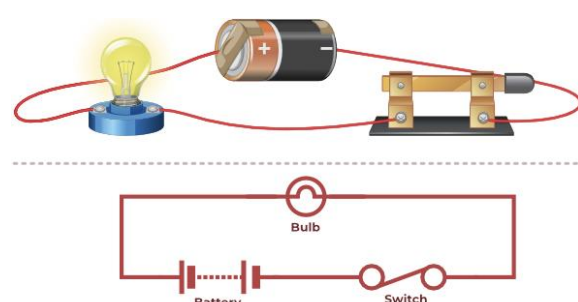


Evolution and Inheritance –  
Key Terminology

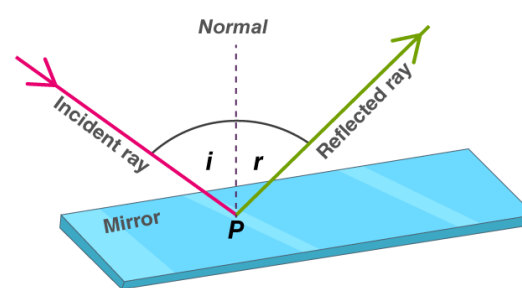
Spring



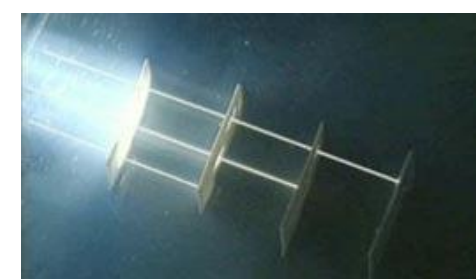
Working Scientifically



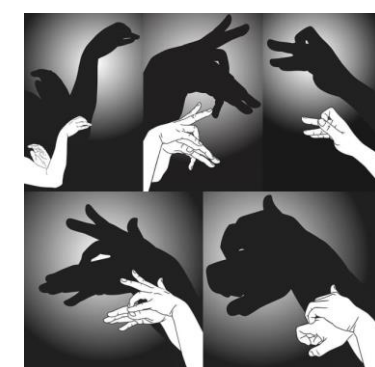
Electricity – Simple Circuit Theory



Light – Basic Ideas and Reflection  
(why we see things)



Light – Travels in Straight Lines



Light - Shadows

Year 5

Autumn

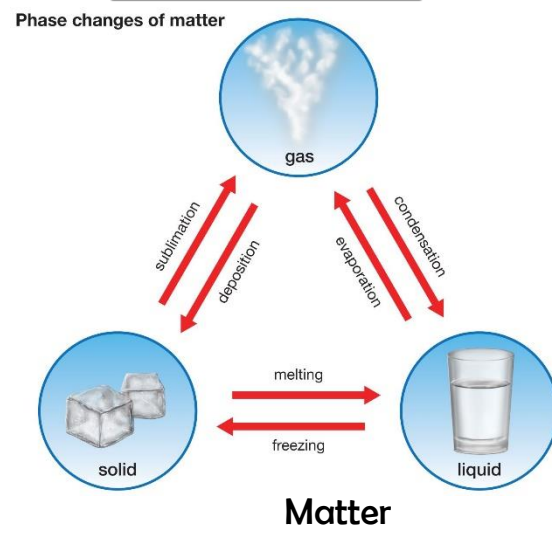
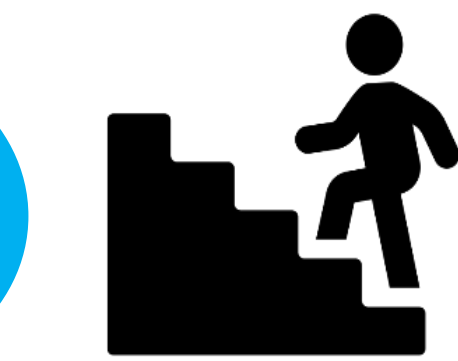




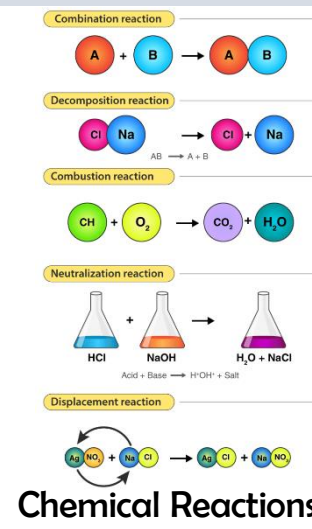
# Year 7 Key Stage 3 Learning Journey

## Science

Year 8

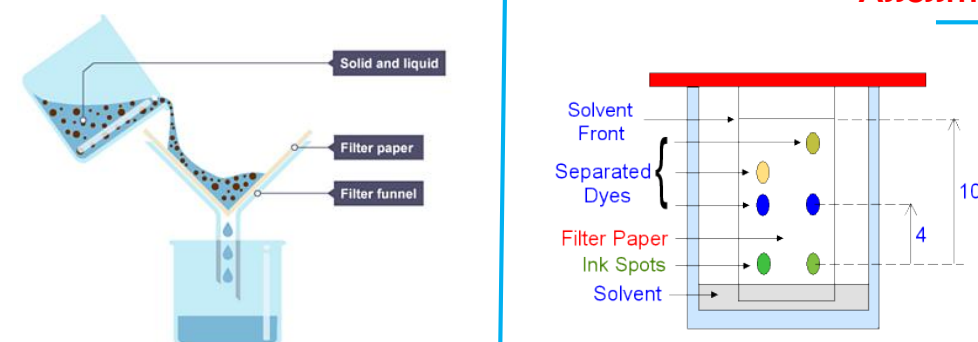


Assessments

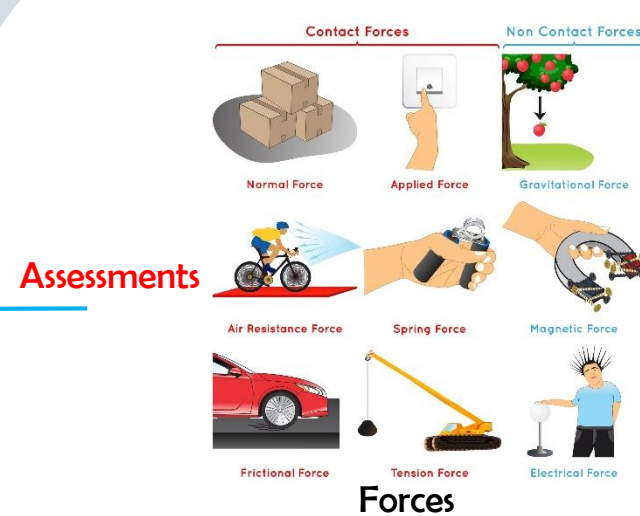


Practical –  
Filtration / Chromatography

Assessments

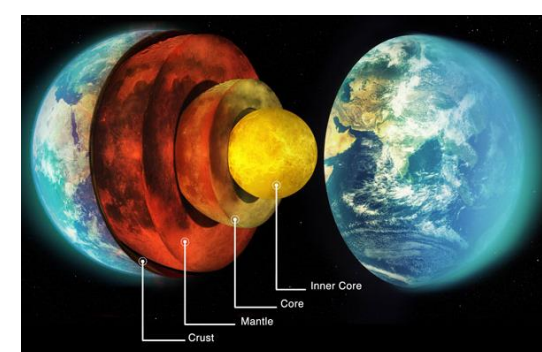


Summer



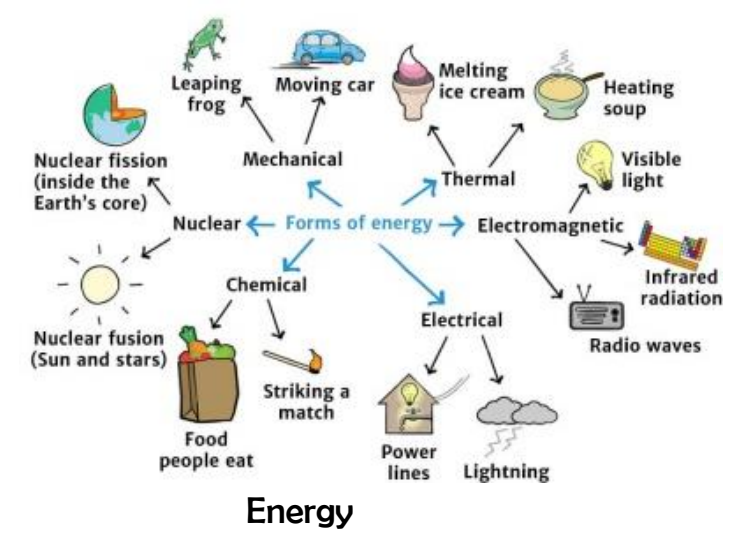
Practical –  
Forces

Assessments

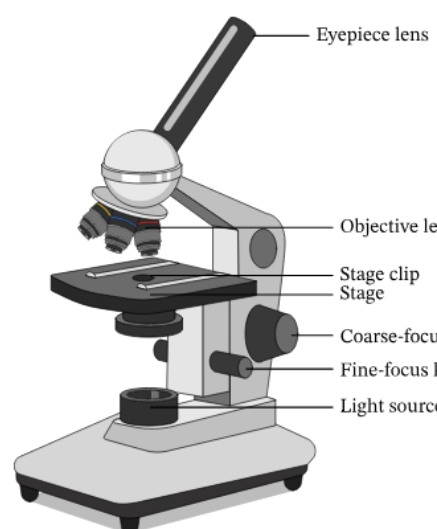


Earth Structure and Universe

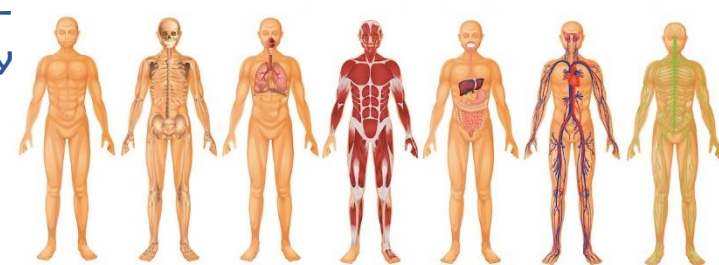
Assessments



Spring

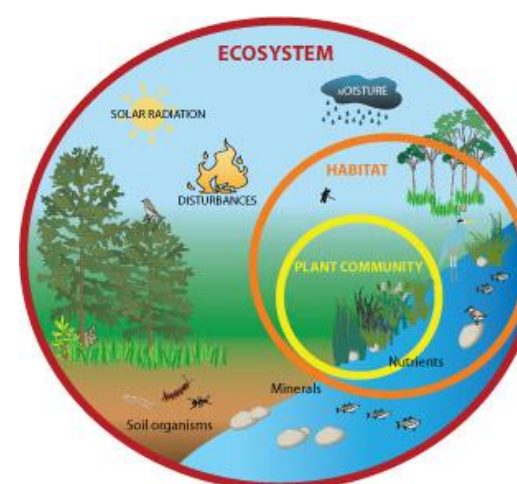


Practical –  
Microscopy



Humans as Organisms

Assessments



Eco-Systems

Assessments

Year 6

Autumn

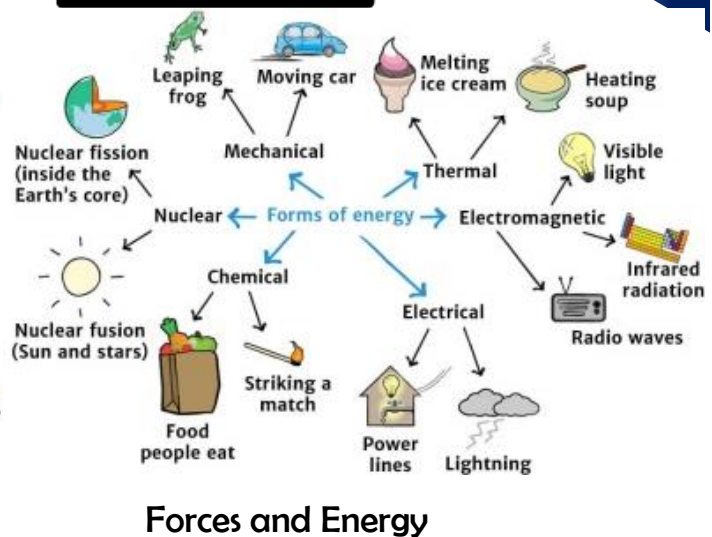
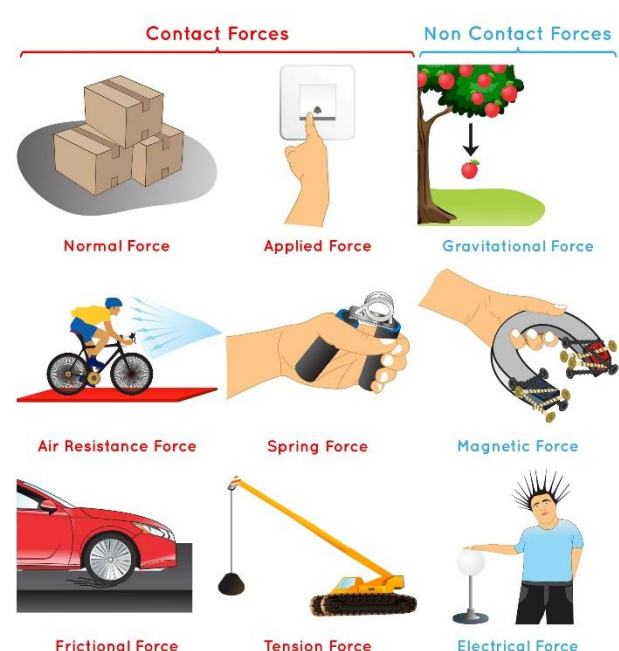




# Year 8 Key Stage 3 Learning Journey

## Science

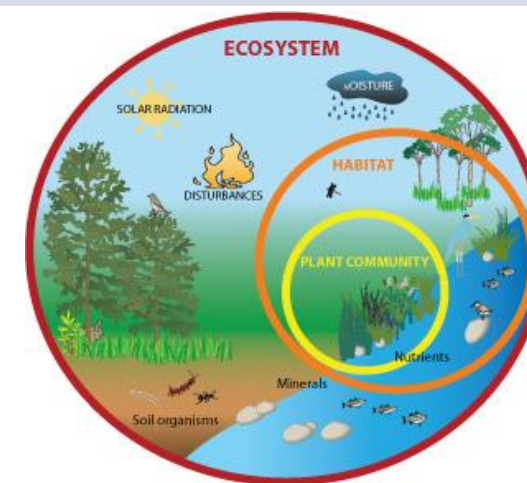
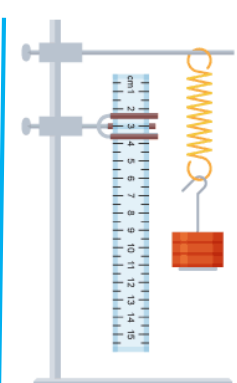
Year 9



Forces and Energy

Practical –  
Force / Extension

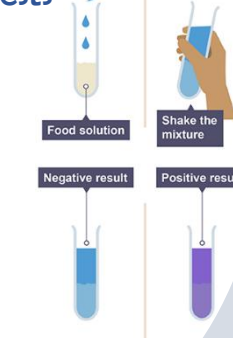
Assessments



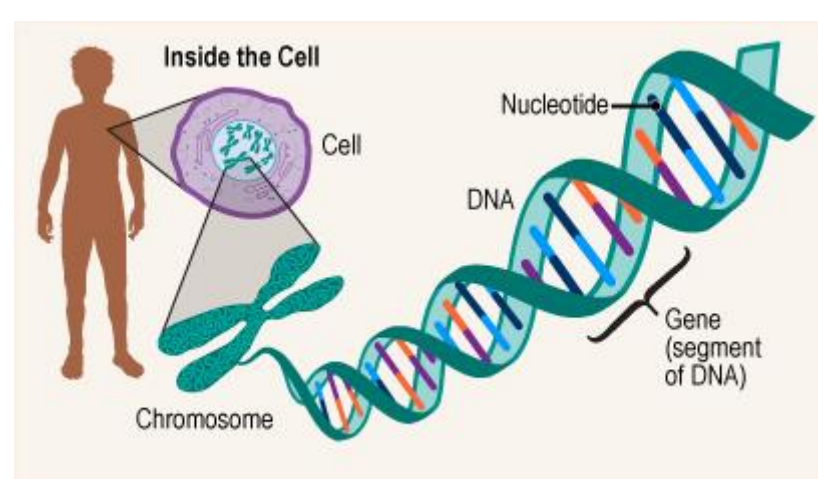
Organisms and Ecosystems

Assessments

Practical –  
Food Tests



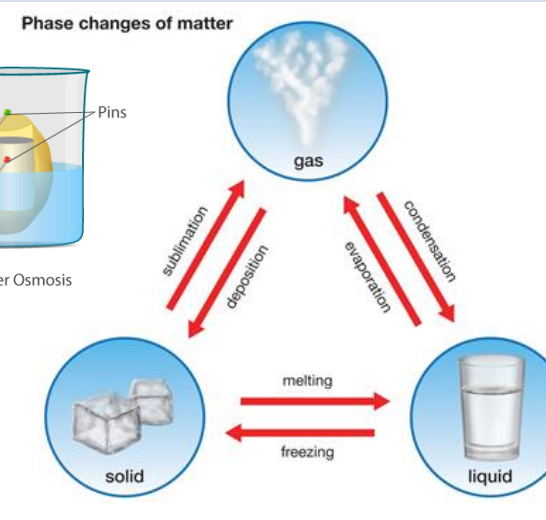
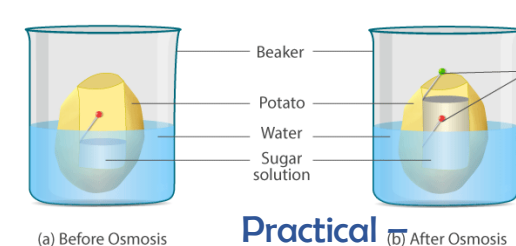
Summer



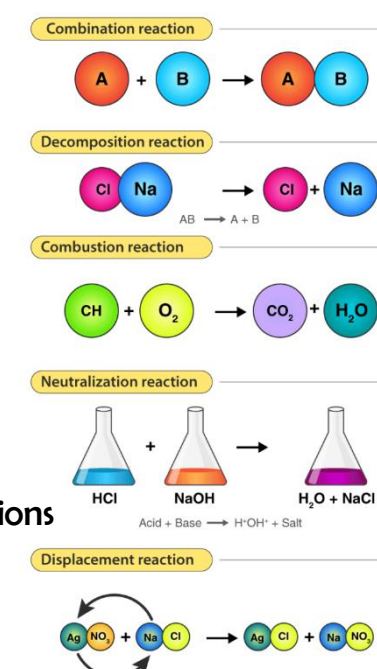
Genes

Assessments

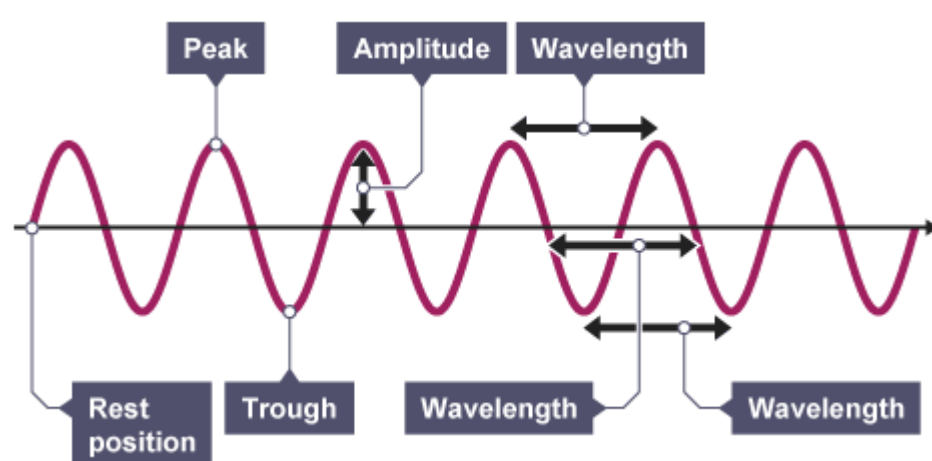
Practical  
Osmosis



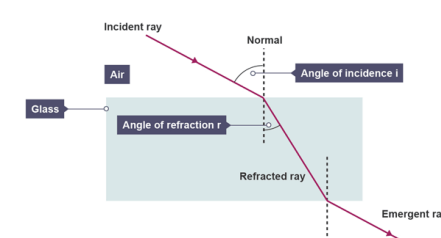
Matter and Chemical Reactions



Spring

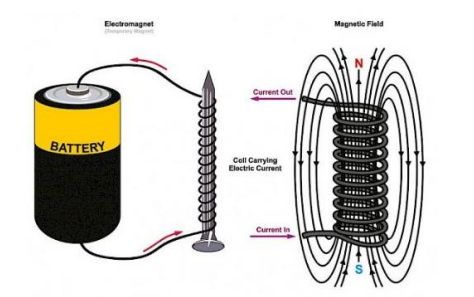


Waves

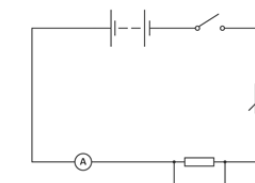


Practical –  
Refraction and dispersion

Assessments

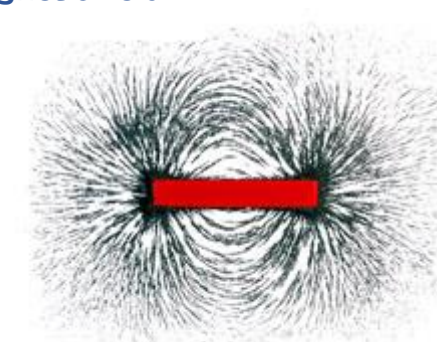


Electricity and Magnetism and  
Electromagnetism



Practical –  
Circuits / magnetic fields

Assessments



Autumn

Year 7

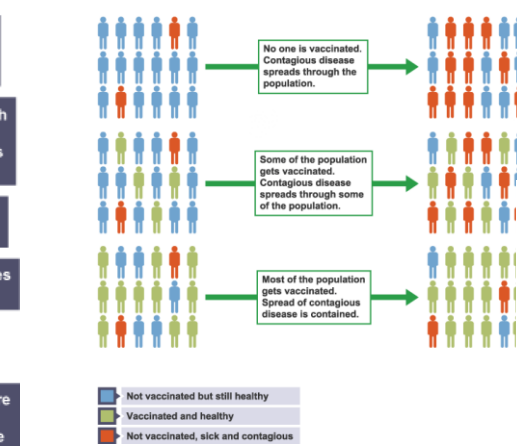
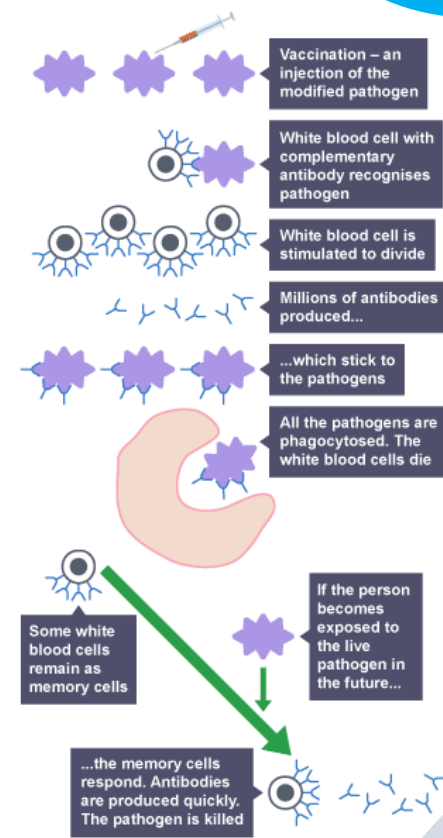




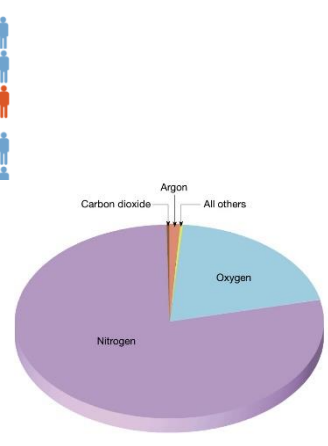
# Year 9 Key Stage 4 Learning Journey

# AQA Combined Science Synergy

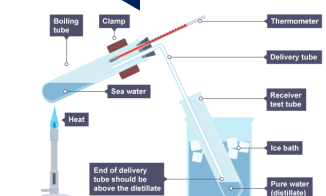
Year 10



Preventing and Curing Disease

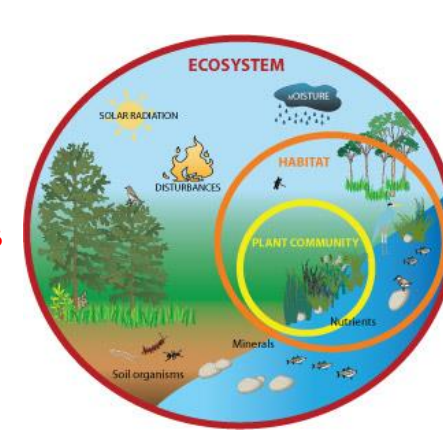


Earth's Atmosphere



Practical – Purification of Water

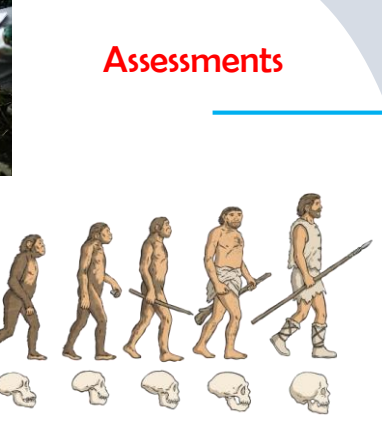
Assessments



Ecosystems and Biodiversity



Practical – Using a quadrat

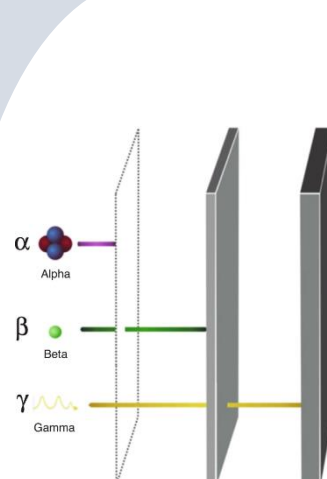


Inheritance, Variation and Evolution

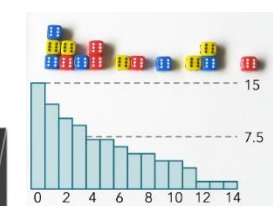
Assessments

Summer

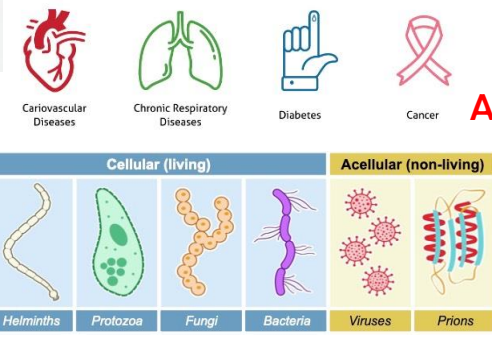
Assessments



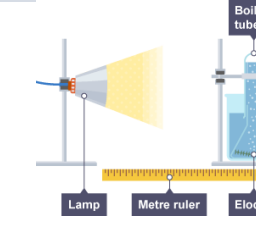
Radiation and Risk



Practical – Half-Life



Health and Disease

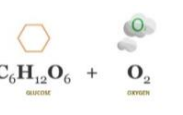


Practical – Rate of Photosynthesis

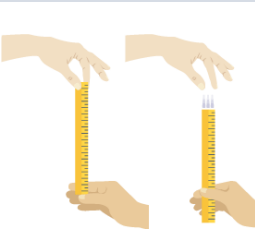
Assessments



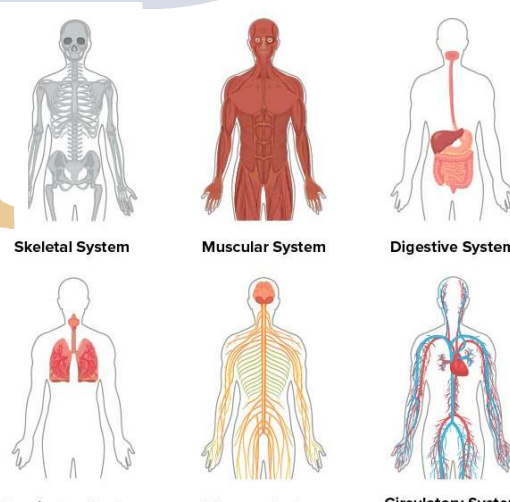
Practical – Chromatography



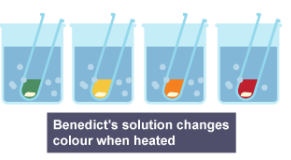
Plants and Photosynthesis



Practical – Reaction Time

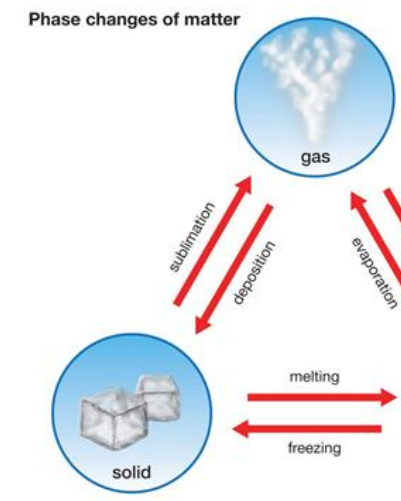


Systems in Human Body

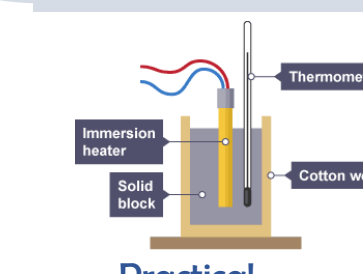


Practical – Food tests

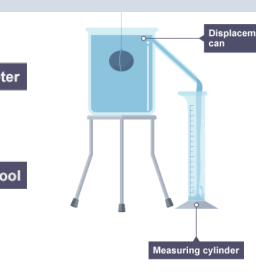
Spring



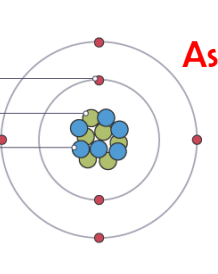
States of Matter



Practical – Specific Heat Capacity

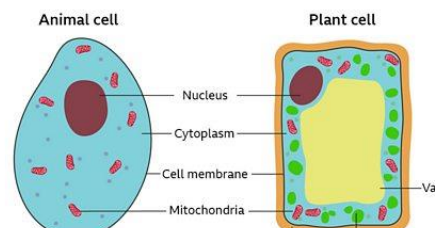


Practical – Density

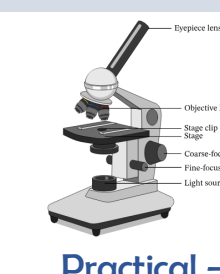


Atomic Structure

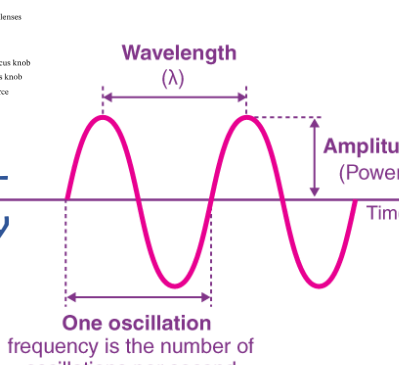
Assessments



Cells in Plants and Animals



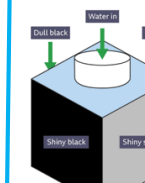
Practical – Microscopy



Waves

Assessments

Practical – Slinky / Absorption



Autumn

Year 8

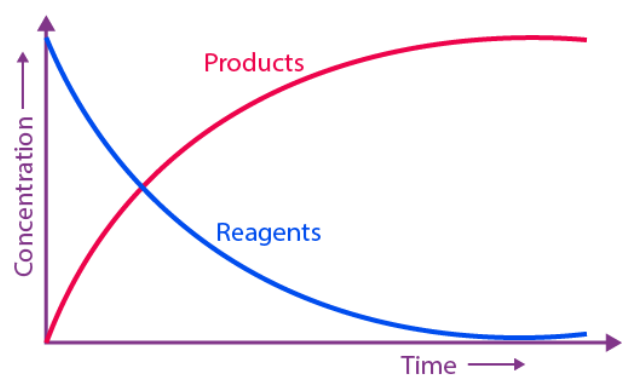
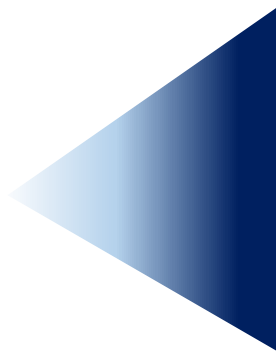




# Year 10 Key Stage 4 Learning Journey

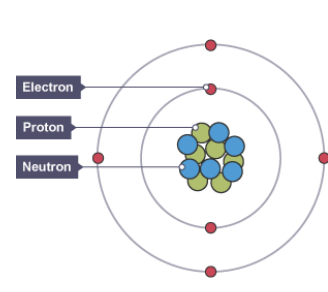
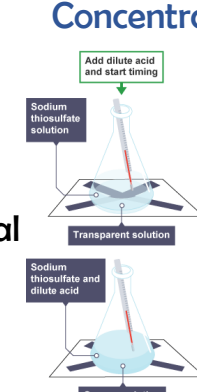
# AQA Combined Science Synergy

Year 11



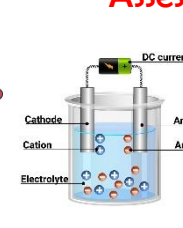
Rate and Extent of Chemical Change

## Practical – Concentration



Atoms and Ions

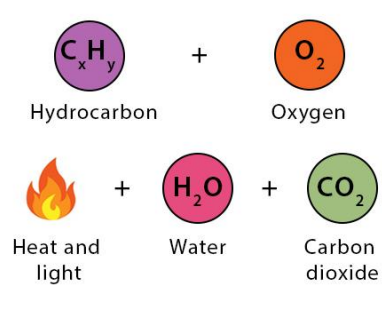
## Assessment:



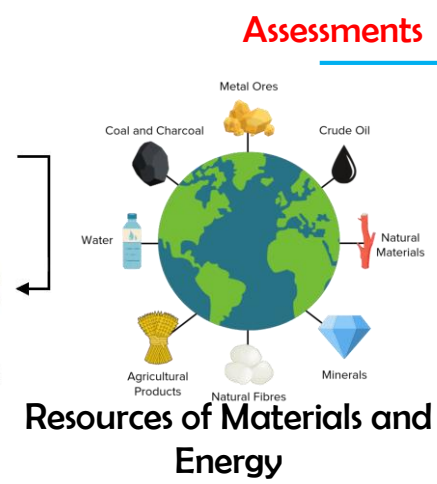
Electrolysis



Fossil Fuels



Carbon Chemistry



Resources of Materials and Energy

Summer

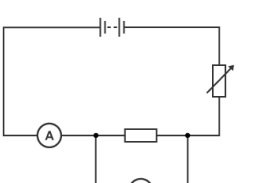
## Assessments

## Practical – Pure Samples

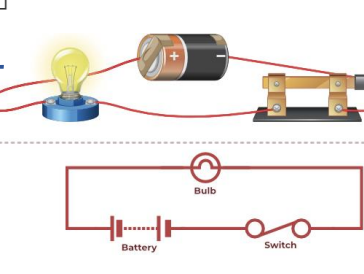


| pH Scale - Universal Indicator Colours |                  |  |
|----------------------------------------|------------------|--|
| pH                                     | Example          |  |
| 0                                      | Battery acid     |  |
| 1                                      | Gastric acid     |  |
| 2                                      | Lemon juice      |  |
| 3                                      | Apple juice      |  |
| 4                                      | Tomato juice     |  |
| 5                                      | Black Coffee     |  |
| 6                                      | Milk             |  |
| 7                                      | Water            |  |
| 8                                      | Egg              |  |
| 9                                      | Baking Soda      |  |
| 10                                     | Milk of Magnesia |  |
| 11                                     | Ammonia solution |  |
| 12                                     | Soap             |  |
| 13                                     | Bleach           |  |
| 14                                     | Drain cleaner    |  |

Acids and Alkalis

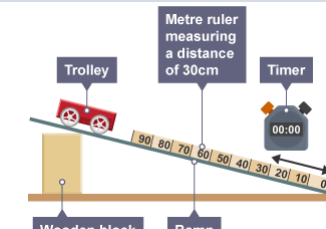


## Practical – Circuits

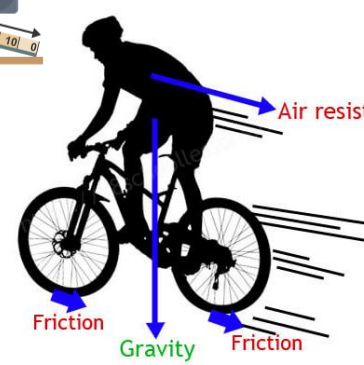


Electricity

## Assessments



## Practical – Acceleration



Forces and Motion



Magnetism and Electromagnetism

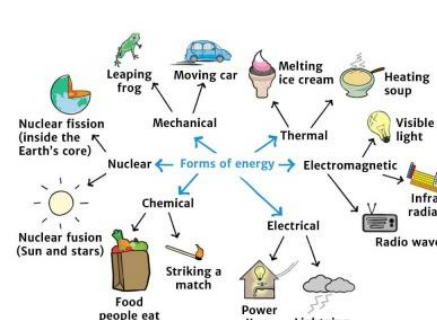
Spring

Periodic Table

$$n \text{ (mol)} = \text{conc (mol/dm}^3) \times \text{vol (dm}^3)$$

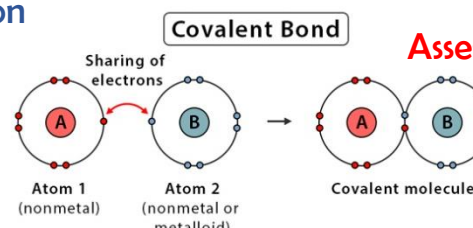
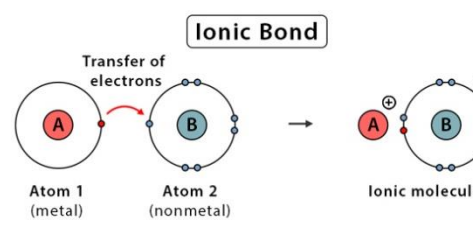
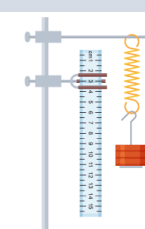
Chemical Quantities

## Assessments



Forces and Energy Changes

## Practical – Spring Extension



Chemical Structure and Bonding

## Assessments

Year 9

Autumn





# Year 11 Key Stage 4 Learning Journey

## AQA Combined Science Synergy



Two GCSE's in Science



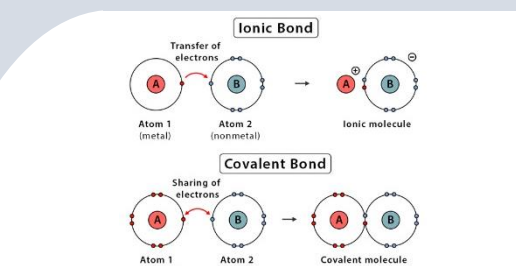
Individual Support



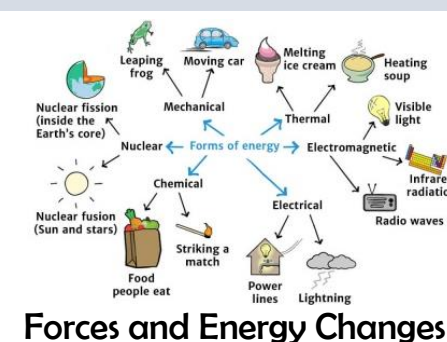
## GCSE Exams



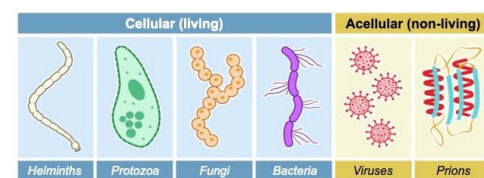
Summer



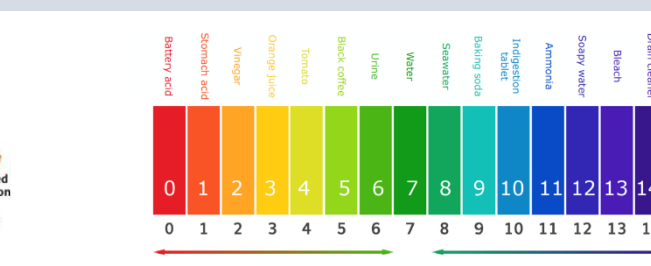
Chemical structure and Bonding



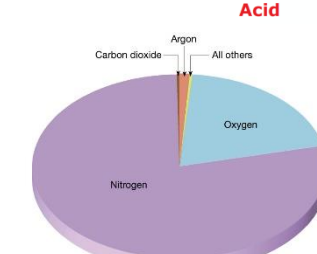
Forces and Energy Changes



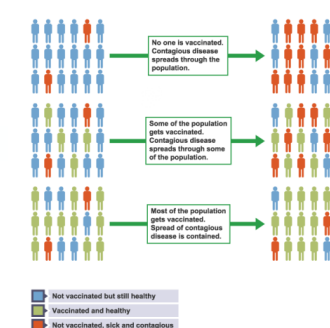
Health and Disease



Acids and Alkalis



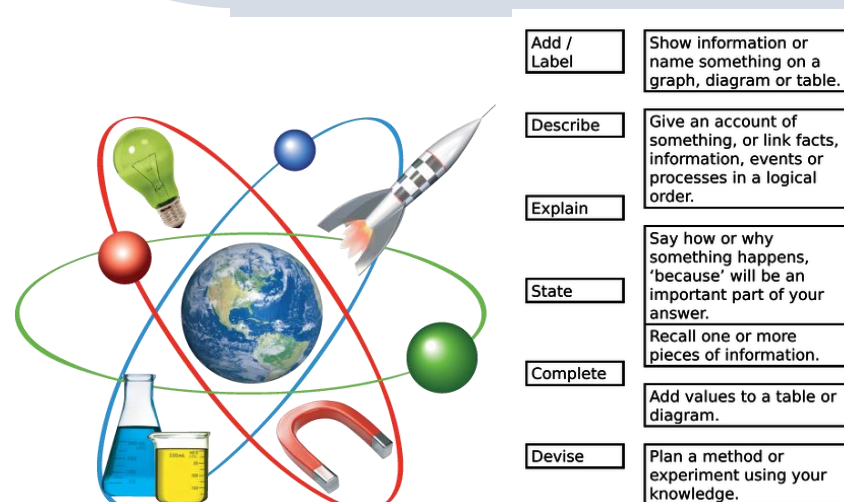
Earth's Atmosphere



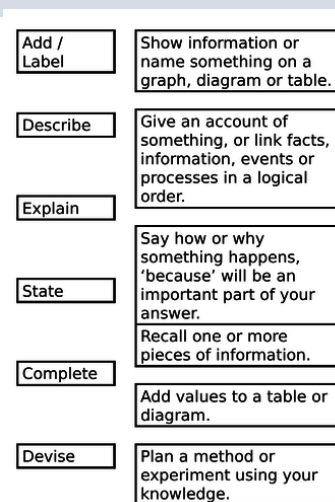
Mock Exams

Preventing, Treating and Curing Disease

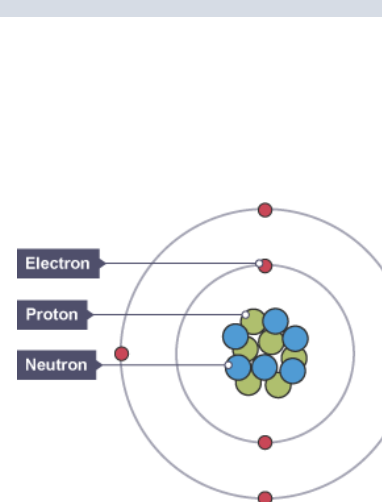
Spring



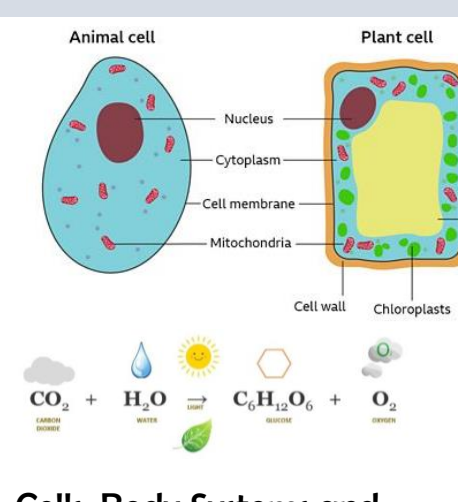
Catch Up Missed Topics



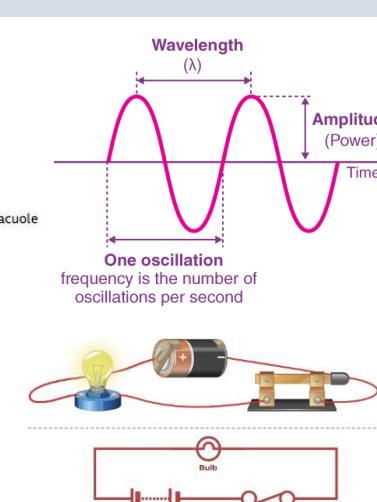
Exam Skills



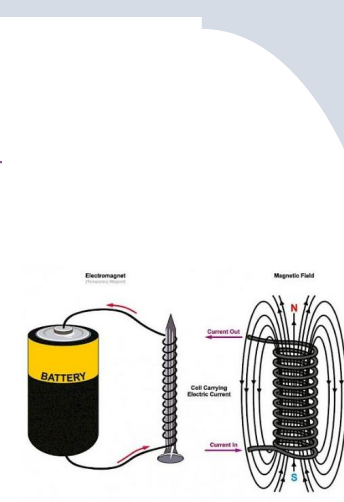
Atomic Structure



Cells, Body Systems and Photosynthesis



Waves and Electricity



Magnetism and Electromagnetism

Autumn

Year 10





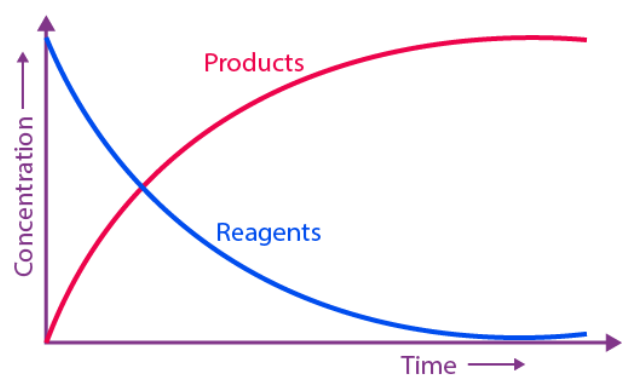
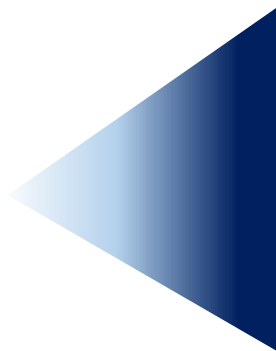
# Vocational Year 10 AQA Combined Science

## Key Stage 4

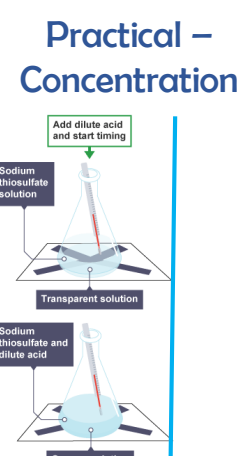
## Learning Journey

# Synergy

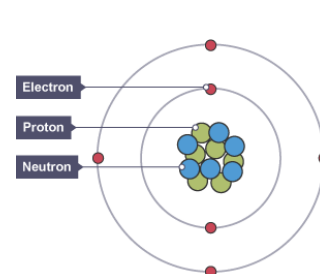
Year 11



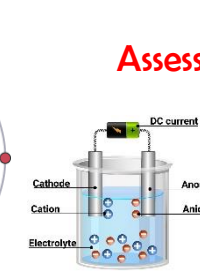
Rate and Extent of Chemical Change



Practical – Concentration



Atoms and Ions

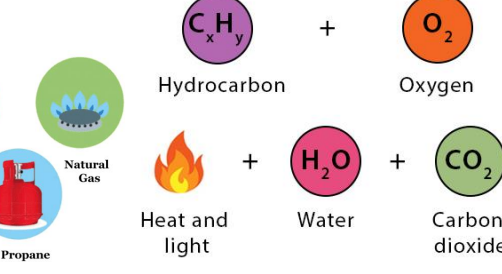


Electrolysis

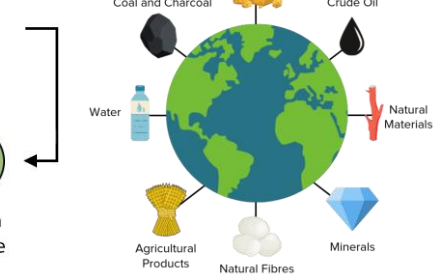
Assessment:



Fossil Fuels



Carbon Chemistry

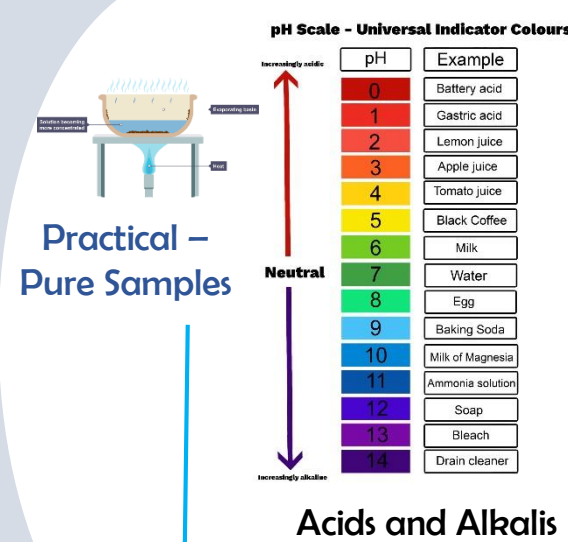


Resources of Materials and Energy

Assessments

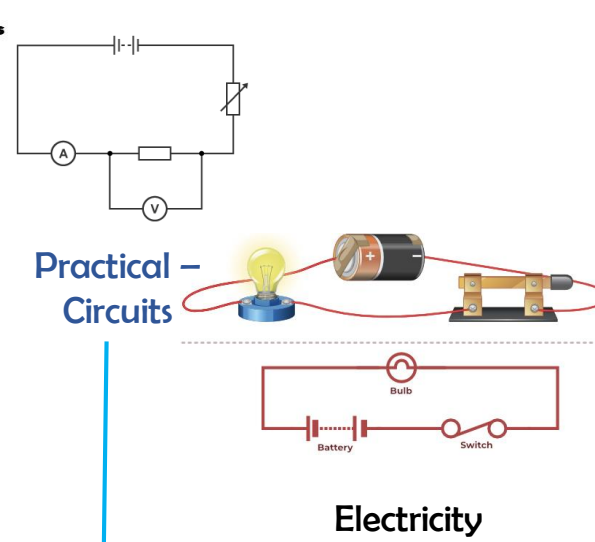
Summer

Assessments



Practical – Pure Samples

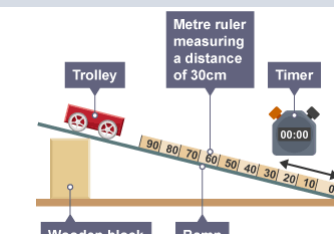
Acids and Alkalis



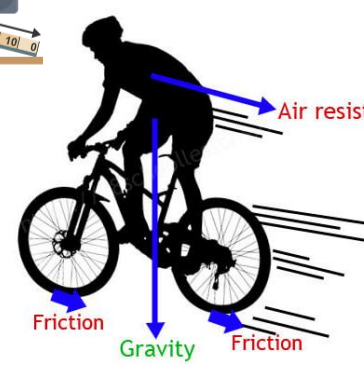
Practical – Circuits

Electricity

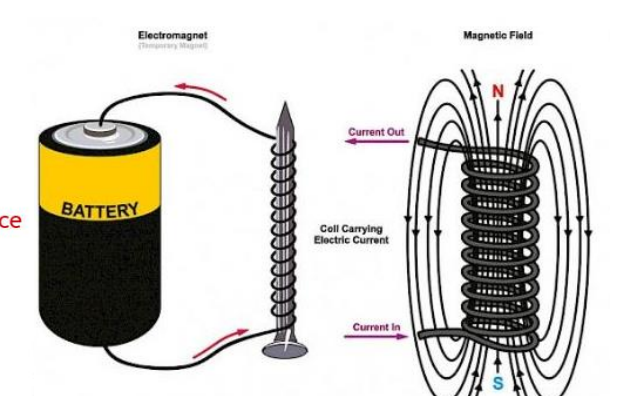
Assessments



Practical – Acceleration



Forces and Motion



Magnetism and Electromagnetism

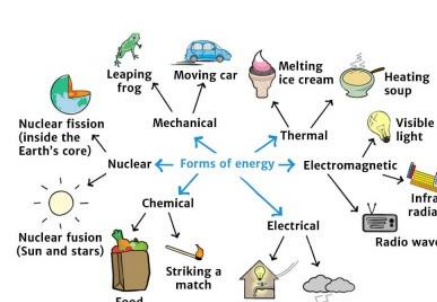
Spring

Periodic Table

$$n \text{ (mol)} = \frac{\text{conc (mol/dm}^3\text{)} \times \text{vol (dm}^3\text{)}}{1000}$$

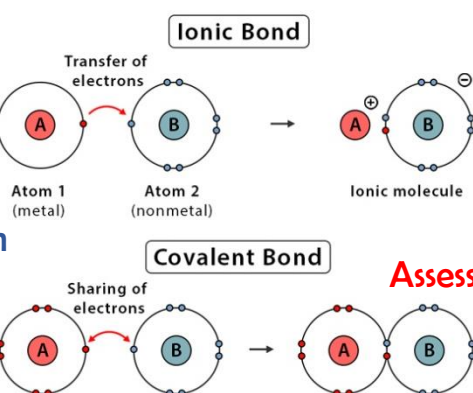
Chemical Quantities

Assessments



Forces and Energy Changes

Practical – Spring Extension



Chemical Structure and Bonding

Assessments

Year 9

Autumn





# Vocational Year 11 AQA Combined Science

## Key Stage 4 Learning Journey

# Synergy



Two GCSE's in Science



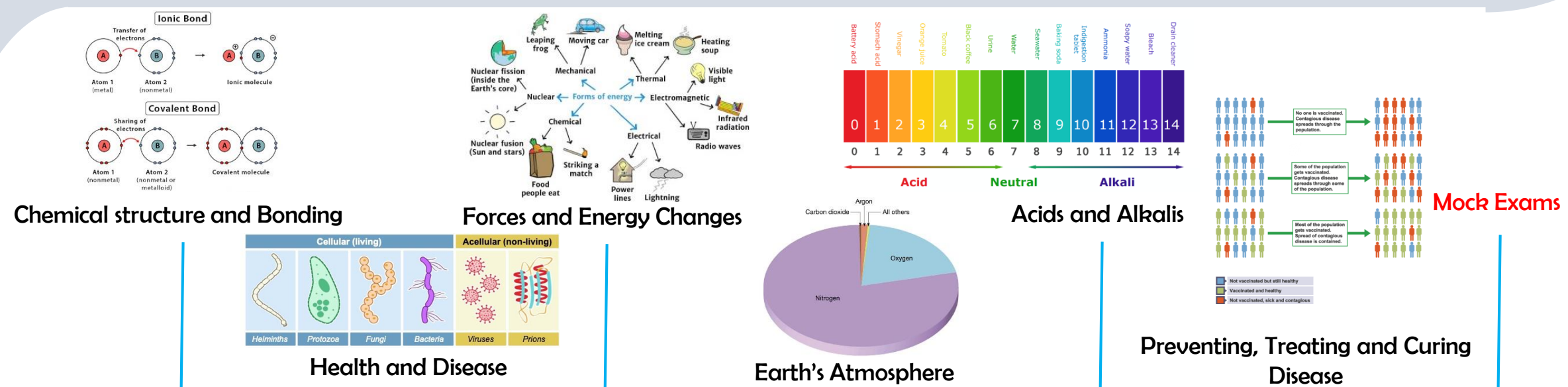
Individual Support



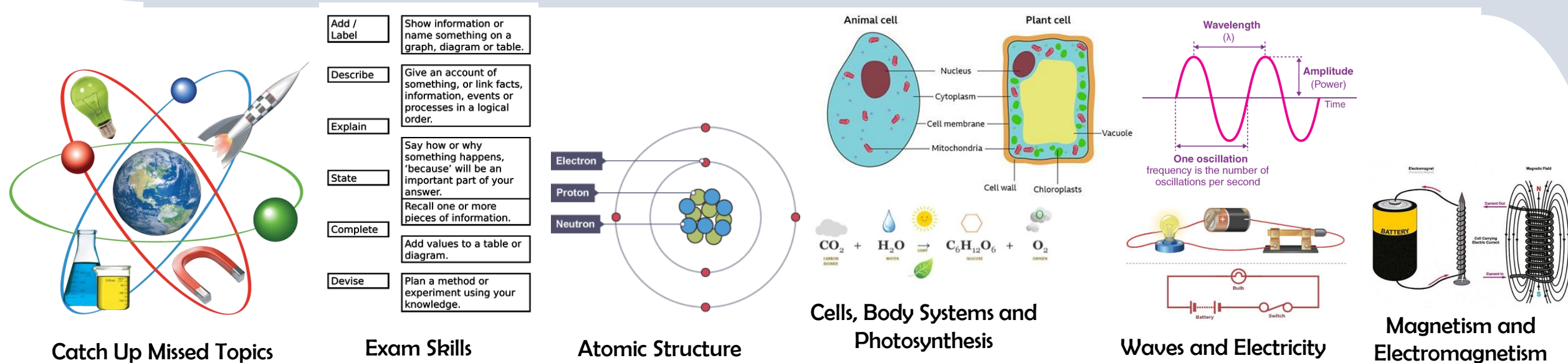
## GCSE Exams



Summer



Spring



Autumn

Year 10