



## Haydock High School Science Department – Learning Overview

<b>Year 7</b>	<u>1a</u>	<u>1b</u>	<u>2a</u>	<u>2b</u>	<u>3a</u>	<u>3b</u>
<b><u>Assessment Point tests</u></b>	<b><u>Week beginning 21<sup>st</sup> October</u></b> Biology - Living Systems Chemistry – Particle Model		<b><u>Week beginning 3<sup>rd</sup> February</u></b> Physics – Forces and Motion Biology – Reproduction Chemistry – Nature of Matter		<b><u>Week beginning 8th June</u></b> Physics – Space Chemistry Acids and Alkalis Biology – Healthy Living	
<b><u>Assessment point revision</u></b>	Biology <ul style="list-style-type: none"> <li>• Label a diagram of a microscope.</li> <li>• Explain the importance of microscopes.</li> <li>• Describe how to use a microscope</li> <li>• I can label an animal cell.</li> <li>• Describe the functions of different parts of an animal cell.</li> <li>• Label a plant cell</li> <li>• Describe the functions of different parts of a plant cell.</li> <li>• Compare plant and animal cells.</li> <li>• State what diffusion is.</li> <li>• describe the link between surface area and rate of diffusion.</li> <li>• explain the importance of diffusion in cells.</li> <li>• state what a unicellular organism is.</li> <li>• link cell structures to their functions in life processes.</li> <li>• apply my knowledge to explain how some unicellular organisms can live in extreme environments.</li> <li>• identify structures as cell, tissues, organs or organ systems.</li> </ul>		Physics <ul style="list-style-type: none"> <li>• calculate the speed of an object using the equation.</li> <li>• rearrange the speed equation to find distance or time.</li> <li>• I can describe the motion of an object from a simple distance-time graph.</li> <li>• compare the motions of 2 different objects that are represented graphically.</li> <li>• calculate speed from a distance time graph.</li> <li>• represent forces as single arrows.</li> <li>• recognise the difference between contact forces and forces acting at a distance.</li> <li>• describe situations where several forces act at once.</li> <li>• state what weight and mass are.</li> <li>• calculate weight.</li> <li>• describe situations where friction occurs</li> <li>• explain ways to reduce friction</li> <li>• describe density.</li> <li>• calculate density.</li> <li>• compare densities of materials.</li> <li>• describe elastic and inelastic materials</li> <li>• use key terms such as inelastically deformed, and limit of proportionality</li> <li>• state what resistance is.</li> </ul>		<ul style="list-style-type: none"> <li>• identify what the Solar System is.</li> <li>• describe planets in terms of size and conditions.</li> <li>• describe and explain trends in data about the conditions of different planets.</li> <li>• define orbit and elliptical orbit.</li> <li>• I can describe what causes one object to orbit another.</li> <li>• describe the orbit of a comet and explain how it's different to the orbit of a planet.</li> <li>• state how long a day, a lunar month and a year is on Earth</li> <li>• describe what a day, a lunar month and a year are</li> <li>• explain the existence of a leap year and apply my knowledge to other planets</li> <li>• describe the surface of the moon.</li> <li>• explain how we can see the surface of the Moon in terms of a light source and reflection</li> <li>• explain why the shape of the Moon appears to change over time.</li> <li>• state what the Sun is</li> <li>• describe how the sun releases energy</li> </ul>	



## Haydock High School Science Department – Learning Overview

- order structures into a hierarchy.
- state the names of blood vessels
- describe features of arteries, veins and capillaries
- explain how blood vessels are suited to fit their function
- define the term nerve, neurone and Central nervous system
- describe how the human body responds to stimuli
- explain why the human body may react at different speeds
- name hormones
- link hormones and glands
- explain the role of hormones in the body
- describe the movement of muscles
- explain the purpose of ligaments and tendons
- explain how muscles acquire the energy for contraction
- Define the terms stem cell and differentiate
- Describe the role of stem cells in the body
- Explain how humans can exploit stem cells for medicine

### Chemistry

- identify the differences between the particle models of a solid, liquid and a gas.
- construct a model of the particle models
- describe the arrangement and movement of particles in each model.
- recall the difference between the particles in a solid, liquid and a gas.

- calculate the extension of a spring.

### Biology

- State the meaning of the terms sexual and asexual reproduction, and give examples of organisms that use each.
- Describe the differences between asexual and sexual reproduction.
- Explain the advantages and disadvantages of sexual and asexual reproduction.
- Name the parts of a flower and state what happens during pollination.
- Describe the adaptations of wind-pollinated and insect-pollinated flowers.
- Consider how the pollen from wind- and insect-pollinated flowers will be different.
- State what happens during fertilisation and recall what fruits and seeds are.
- Describe how pollen tube forms
- Explain the function of a pollen tube
- Understand the terms 'sperm', 'egg' and 'fertilisation'
- Describe how a sperm fertilises an egg and implants into the uterus wall
- Explain how the features of sperm and egg cells are adapted to this role.
- state what is meant by menstruation
- describe the events taking place during the menstrual cycle using graphical evidence
- interpret hormonal changes in the body using graphs describing the menstrual cycle
- Explain the role of the umbilical cord, placenta and amnion.

- describe the dangers of extreme solar activity
- state the milestones in a stars 'life'
- briefly describe nuclear fusion
- explain why not all stars have the same ending.
- state what a galaxy is and its size in relation to other objects in space.
- discuss theories about how the universe began
- evaluate evidence for each theory
- state the relationship between gravitational field strength, mass and weight.
- calculate weight on different planets.
- explain why an object's weight changes on different planets.
- state the purpose of satellites.
- describe the term geostationary
- differentiate between different types of satellites

### Biology

- name some key nutrients
- explain the importance of a balanced diet
- evaluate a meal and justify whether it is balanced or not
- state the seven different nutrients and their functions
- explain why some people need more energy in their diet than others



## Haydock High School Science Department – Learning Overview

<ul style="list-style-type: none"> <li>• compare and contrast pupil models and diagrams</li> <li>• evaluate the different particle models.</li> <li>• I can name and give examples of the three states of matter.</li> <li>• I can explain which properties are associated with each state.</li> <li>• I can classify a material based on its properties.</li> <li>• recall definitions of the state changes.</li> <li>• explain how the motion of particles changes as a substance changes state.</li> <li>• use particle theory to explain what happens during sublimation</li> <li>• draw a set of axis and use an appropriate scale.</li> <li>• plot points from results to within <math>\pm 1\text{mm}</math>.</li> <li>• describe the trends shown on my graph.</li> <li>• recall that materials expand when heated.</li> <li>• use the particle model to explain expansion and contraction.</li> <li>• explain my observations using the particle theory.</li> <li>• recall a definition of gas pressure.</li> <li>• use the particle model to describe what gas pressure is.</li> <li>• apply particle theory to suggest methods of increasing gas pressure.</li> <li>• recall a definition of diffusion.</li> <li>• use the particle model to describe how diffusion takes place.</li> <li>• use the particle model to explain the effects of temperature on diffusion.</li> <li>• recall that solids are usually denser than liquids.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain why it important not to drink or smoke during pregnancy</li> <li>• Use data to evaluate the health advice given to women</li> </ul> <p>Chemistry</p> <ul style="list-style-type: none"> <li>• recall the three main particles in an atom</li> <li>• describe the relative charges of these particles</li> <li>• describe the relative size of the nucleus.</li> <li>• explain in terms of sub-atomic particles the, the differences between elements.</li> <li>• define what an element is</li> <li>• use properties to group elements</li> <li>• analyse experimental observations and use them to determined reactivity within group 1 metals.</li> <li>• recall a definition of an element, atom and compound</li> <li>• determine number of atoms, types of elements and the formula of a compound from diagrams or chemical formula.</li> <li>• define an ion</li> <li>• explain how ions formed in terms of electron transfer</li> <li>• use the charges of ions to determine the formula of ionic compounds.</li> <li>• Recall the electron structure of the first 20 elements in the periodic table.</li> <li>• Explain why some atoms will not allow the transfer of electrons to take place and will only share electrons.</li> <li>• Draw the dot and cross diagram of some covalent molecules and determined how many electrons will need to be shared and why.</li> <li>• recall a definition of an element, atom and compound</li> <li>• use molecular models to represent these</li> </ul>	<ul style="list-style-type: none"> <li>• use information such as age and lifestyle to design balanced meals</li> <li>• identify the main parts of the digestive system</li> <li>• explain the functions of each part</li> <li>• explain adaptations of the small intestine</li> <li>• State that enzymes are proteins</li> <li>• Describe the lock and key hypothesis</li> <li>• Explain the term denatured, and describe conditions that may cause this.</li> <li>• describe the function of enzymes</li> <li>• write a suitable plan to test the action of enzymes</li> <li>• produce a conclusion of my results linked to scientific ideas</li> <li>• carry out simple food tests</li> <li>• write a simple conclusion</li> <li>• explain the importance of food testing in industry</li> <li>• state some problems caused by an imbalanced diet</li> <li>• explain some problems caused by malnutrition</li> <li>• evaluate possible solutions</li> <li>• I can list ways in which we use energy</li> <li>• calculate energy requirements</li> <li>• calculate total energy use and intake</li> <li>• Define the term obesity</li> </ul>
--	--	--



## Haydock High School Science Department – Learning Overview

	<ul style="list-style-type: none"> <li>• describe why solids are usually denser than liquids using particle theory.</li> <li>• explain why ice is less dense than water.</li> <li>• recall definitions for a pure chemical, mixtures and formulations.</li> <li>• draw particle diagrams for pure substances and mixtures.</li> <li>• investigate the boiling points of pure and impure substances.</li> <li>• Define key terms: solute, solvent, solution and saturated.</li> <li>• explain how substances dissolve</li> <li>• explain how temperature of solvent affects the solubility.</li> <li>• carry out filtration and evaporation.</li> <li>• describe how to carry out filtration and evaporation and explain why they are used.</li> <li>• plan a method of separating a mixture using filtration.</li> <li>• recall definitions of the terms chromatography and chromatogram.</li> <li>• describe how to carry out paper chromatography and explain when it can be used.</li> <li>• apply the particle model to explain how chromatography works.</li> </ul>	<ul style="list-style-type: none"> <li>• draw particle models of atoms, elements and compounds.</li> <li>• name simple compounds</li> <li>• be able to name sulfates, nitrates and carbonates</li> <li>• suggest the elements contained in compounds that contain ammonium and hydroxide ions.</li> <li>• write the formula for simple compounds</li> <li>• identify the number of elements in a compound for sulfates, nitrates and carbonates</li> <li>• suggest the number of atoms of each element contained in formula that includes brackets.</li> <li>• recall a definition of a chemical reaction</li> <li>• describe signs that a chemical reaction has occurred</li> <li>• explain changes seen when a chemical reaction occurs</li> <li>• recall that atoms in reactants rearrange to make products</li> <li>• be able to write word equations</li> <li>• explain reactions in term of energy needed to make and break bonds</li> <li>• identify that the mass of reactants and products remains equal in a reaction</li> <li>• describe the principle of the conservation of mass</li> <li>• suggest situations where the principle of conservation of mass is not met</li> </ul>	<ul style="list-style-type: none"> <li>• Describe factors affecting obesity</li> <li>• Explain the consequences of obesity</li> <li>• recall what a drug is</li> <li>• describe the difference between medicinal and recreational drugs</li> <li>• evaluate the danger of different drugs</li> <li>• describe caffeine as a stimulant</li> <li>• state one behavioural and health effect of alcohol misuse</li> <li>• describe the effects of alcohol misuse in society</li> <li>• evaluate different ways to solve the problem of alcohol misuse</li> </ul> <p>Chemistry</p> <ul style="list-style-type: none"> <li>• explain why some acids and alkalis are more dangerous than others</li> <li>• classify acids and alkalis in terms of their risks and relate this to their uses</li> <li>• identify a substance's pH number and relate to its acidity</li> <li>• compare strong and weak acids and alkalis using data</li> <li>• demonstrate how the strength of an acid can be measured using this indicator</li> <li>• evaluate different methods of measuring pH</li> <li>• describe hazards associated with acids and alkalis</li> <li>• conduct a practical to test acids</li> </ul>
--	--	---	--



## Haydock High School Science Department – Learning Overview

- |  |  |  |   |
|--|--|--|---|
|  |  |  | <ul style="list-style-type: none"><li>• use data to draw conclusions</li><li>• write the general equation for neutralisation</li><li>• write word equations for the formation of different salts</li><li>• write balanced symbol equations for neutralisation</li><li>• describe how acid rain is formed</li><li>• evaluate the impacts of natural and man-made acid rain</li><li>• describe how acid rain is formed</li><li>• evaluate the impacts of natural and man-made acid rain</li><li>• identify the products of acids reacting with metals</li><li>• write word equations for the reactions of metals and acids</li><li>• write symbol equations for the reactions of metals and acids</li></ul> |
|--|--|--|---|



## Haydock High School Science Department – Learning Overview

<b>Year 8</b>	<u>1a</u>	<u>1b</u>	<u>2a</u>	<u>2b</u>	<u>3a</u>	<u>3b</u>
<u>Assessment Point tests</u>	<u>Week beginning 7<sup>th</sup> October</u>		<u>Week beginning 20<sup>th</sup> January</u>		<u>Week beginning 18<sup>th</sup> May</u>	
<u>Assessment point revision</u>	<p><b><u>Health and Lifestyle</u></b></p> <ul style="list-style-type: none"> <li>• Explain what makes a food a healthy option</li> <li>• Explain how each nutrient contributes to a healthy, balanced diet</li> <li>• Interpret nutritional information to make health comparisons between foods</li> <li>• Explain why testing food for starch, lipids, sugar, and protein is important</li> <li>• Explain the meaning of positive or negative results in terms of the food tests</li> <li>• Use appropriate techniques to carry out a full range of food tests safely, interpreting the findings, and relating them to everyday situations</li> <li>• Explain how an unhealthy diet causes health issues</li> <li>• Explain that different people require different amounts of energy, using energy calculations and data to support explanations</li> </ul>		<p><b><u>The periodic table</u></b></p> <ul style="list-style-type: none"> <li>• Classify properties of metalloids into metallic and non-metallic properties</li> <li>• Predict the properties of an element, given its position on the Periodic Table</li> <li>• Identify anomalous properties exhibited by some materials</li> <li>• Explain how the position of an element can be used to suggest properties of elements</li> <li>• Apply patterns shown within groups or periods to unknown elements</li> <li>• Explain how missing values can be predicted using numerical trends, and compare similar trends between groups and periods</li> <li>• Describe patterns in the properties of Group 1 elements using data given</li> <li>• Compare predictions with evidence, and from reactions involving Group 1 elements</li> <li>• Use experimental observations to explain reactivity trends in Group 1, and write balanced equations to explain the reactions observed</li> </ul>		<p><b><u>All content from assessment points 1 and 2 will be tested as well as the following:</u></b></p> <p><b><u>Ecosystems</u></b></p> <ul style="list-style-type: none"> <li>• Explain the importance of photosynthesis in the food chain</li> <li>• Explain how the plant obtains the reactants for photosynthesis</li> <li>• Carry out and record observations for an experiment to test for the presence of starch in a leaf, explaining results obtained</li> <li>• Explain how the structures of the leaf make it well adapted for photosynthesis</li> <li>• Explain the role of chloroplasts in photosynthesis</li> <li>• Make observations of stomata from the underside of the leaf, and record as a labelled diagram with annotations</li> <li>• Explain deficiency symptoms in plants</li> <li>• Explain how proteins are made for plant growth</li> </ul>	



## Haydock High School Science Department – Learning Overview

<ul style="list-style-type: none"> <li>• Interpret experimental data and suggest ways to improve the Experiment</li> <li>• Explain how each part of the digestive system works in sequence, including adaptations of the small intestine for its function</li> <li>• Explain why food needs to be digested</li> <li>• Give a detailed explanation of digestion in sequence using information gathered by research</li> <li>• Explain how enzymes affect the rate of digestion</li> <li>• Explain how some bacteria improve health</li> <li>• Record experimental data using a suitable results table, and evaluate the quality of the data obtained</li> <li>• Interpret experimental observations to draw simple conclusions</li> <li>• Explain how recreational drugs can have a negative effect on people’s lifestyles</li> <li>• Record accurate and detailed observations from an experiment to draw detailed conclusions, and evaluate methods</li> <li>• Explain in detail how alcohol affects health and behaviour, detailing its effect on life processes</li> <li>• Explain the importance of providing information about drinking to the general public, not just pregnant women</li> </ul>	<p>Explain any predictions made about the Group 7 elements</p> <ul style="list-style-type: none"> <li>• Write word equations to represent displacement reactions</li> <li>• Suggest where to find information about the risks of the Group 7 elements and how to control these</li> <li>• Link information about Group 0 elements to their properties</li> <li>• Compare the trends in Group 0 with those of Group 1 and Group 7 elements</li> <li>• Explain how missing data can be predicted by using data from other elements</li> </ul> <p><b><u>Electricity and magnetism</u></b></p> <ul style="list-style-type: none"> <li>• Explain, in terms of electrons, why something becomes charged</li> <li>• Predict how charged objects will interact</li> <li>• Compare a gravitational field and an electric field</li> <li>• Use observations to make predictions</li> <li>• Use a model to explain how current flows in a circuit</li> <li>• Predict the current in different circuits</li> <li>• Measure current accurately in a number of places in a series circuit</li> <li>• Explain the difference between potential difference and current</li> <li>• Explain why potential difference is measured in parallel</li> </ul>	<ul style="list-style-type: none"> <li>• Record measurements in a table, and calculate arithmetic means of results, giving answers to the correct number of significant figures</li> <li>• Explain how some chemosynthetic organisms form symbiotic relationships</li> <li>• Compare similarities and differences between photosynthesis and chemosynthesis</li> <li>• Explain why the view of chemosynthesis by the scientific community changed with time</li> <li>• Explain how the reactants for respiration get into the cells</li> <li>• Explain the process of aerobic respiration</li> <li>• Plan an investigation to explain the effect of exercise on respiration rates</li> <li>• Explain the uses of the products from anaerobic respiration</li> <li>• Explain the differences between the two types of respiration</li> <li>• Evaluate data collected, showing awareness of potential sources of random and systematic errors</li> <li>• Explain the link between food chains and energy</li> <li>• Explain why a food web gives a more accurate representation of feeding relationships than a food chain</li> <li>• Explain the interdependence of organisms</li> <li>• Explain why toxic materials have greater effect on top predators in a food chain</li> </ul>
--	---	---



## Haydock High School Science Department – Learning Overview

<ul style="list-style-type: none"> <li>• Record data in a well-organised table (with headings and units) and plot an appropriate graph to present results</li> <li>• Explain how smoking causes disease</li> <li>• Explain which chemicals in tobacco smoke affect the development of a foetus</li> <li>• Interpret and present secondary data in an appropriate manner, drawing conclusions, and extrapolating data from trends shown</li> </ul>	<ul style="list-style-type: none"> <li>• Predict the effect of changing the rating of a battery or bulb in a circuit</li> <li>• Set up and measure potential difference across various components in a circuit</li> <li>• Explain the most suitable type of circuit for the domestic ring main</li> <li>• Explain why current and potential difference vary in series and parallel circuits</li> <li>• Explain the pattern in current and potential difference readings for series and parallel circuits, drawing conclusions</li> <li>• Explain the causes of resistance</li> <li>• Explain what factors affect the resistance of a resistor</li> <li>• Compare the effect of resistance in different materials</li> <li>• Independently select and control all the variables in the investigation, considering accuracy and precision</li> <li>• Explain how magnets can be used</li> <li>• Compare magnetic field lines and a magnetic field</li> <li>• Explain how a compass works</li> <li>• Suggest improvements to an experiment to observe field lines around a magnet</li> <li>• Explain how an electromagnet works</li> <li>• Predict the effect of changes on the strength of different electromagnets</li> <li>• Predict the effect of changes made to an electromagnet, using scientific knowledge to justify the claim</li> </ul>	<ul style="list-style-type: none"> <li>• Present population data as a graph, explaining trends and drawing detailed conclusions from data provided</li> <li>• Explain why different organisms are needed in an ecosystem</li> <li>• Explain why different organisms within the same ecosystem have different niches</li> <li>• Use quadrats and transects to take unbiased measurements in an ecosystem, describing trends observed in data</li> </ul> <p><b><u>Separation</u></b></p> <ul style="list-style-type: none"> <li>• Use particle models to represent mixtures</li> <li>• Comment on a substance's purity by interpreting temperature change data</li> <li>• Explain why separation techniques are suitable, in terms of the properties of constituent substances</li> <li>• Explain the relationship between solutes, solvents, and solutions</li> <li>• Draw particle diagrams to represent solutions and pure substances</li> <li>• Explain the applications of solution chemistry to different contexts</li> <li>• Explain why temperature affects the amount of solute dissolved in a solution</li> <li>• Explain what a solubility graph shows</li> <li>• Justify the choice of method chosen to investigate solubility of salt in seawater</li> </ul>
---	---	---



## Haydock High School Science Department – Learning Overview

- Apply existing knowledge about electromagnets to design a circuit
- Suggest ways to make a motor turn faster
- Suggest investigations about electromagnets used in different applications

- Use particle diagrams to illustrate how filtering works
- Explain whether or not filtering can be used in given situations
- Explain in detail how filtration apparatus can be used to separate salt from a mixture of salt and sand
- Compare evaporation and distillation
- Discuss whether evaporation or distillation would be suitable for separating a mixture
- Consider the physical properties utilised during distillation when interpreting observations
- Explain how chromatography can be used in different scenarios
- Consider how chromatography can be used to monitor the progress of reactions
- Suggest possible issues with using chromatography

### Energy

- Calculate energy requirements for various situations, considering diet and exercise
- Suggest different foods needed in unusual situations, for example, training for the Olympics
- Explain why an athlete needs more energy from food using data provided
- Account for energy dissipation during transfers
- Compare energy transfers to energy conservation



## Haydock High School Science Department – Learning Overview

- |  |  |   |
|--|--|---|
|  |  | <ul style="list-style-type: none"><li>• Present detailed observations of energy transfers in a table, including useful and non-useful transfers</li><li>• Give an example to show that energy and temperature are different</li><li>• Explain, in terms of particles, how energy is transferred</li><li>• Give examples of equilibrium</li><li>• Describe sources of error as systemic or random, and suggest ways to minimise these</li><li>• Explain in detail the processes involved during heat transfers</li><li>• Explain why certain materials are good insulators</li><li>• Explain the pattern in conduction shown by experimental results</li><li>• Explain how thermal equilibrium can be established</li><li>• Explain why some objects radiate more energy</li><li>• Explain in detail how to reduce risks</li><li>• Compare the advantages and disadvantages of using renewable and non-renewable energy resources</li><li>• Explain how a range of resources generate electricity, drawing on scientific concepts</li><li>• Justify your choice of secondary information</li><li>• Compare the power consumption of different activities</li><li>• Calculate and compare energy costs in different scenarios</li></ul> |
|--|--|---|



## Haydock High School Science Department – Learning Overview

- |  |  |  |   |
|--|--|--|---|
|  |  |  | <ul style="list-style-type: none"><li>• Predict the effect on energy bills of changing the power of equipment</li><li>• Compare the work done in different scenarios and by different machines</li><li>• Explain how conservation of energy applies in one example</li><li>• Evaluate results (including random and systematic errors) and suggest how the experiment can be improved</li></ul> |
|--|--|--|---|



## Haydock High School Science Department – Learning Overview

<b>Year 9</b>	<u>1a</u>	<u>1b</u>	<u>2a</u>	<u>2b</u>	<u>3a</u>	<u>3b</u>
<b><u>Assessment Point tests</u></b>	<b><u>Week beginning 18<sup>th</sup> November</u></b> Paper 1 topics		<b><u>Week beginning 16<sup>th</sup> March</u></b> Paper 1 topics		<b><u>Week beginning 22<sup>nd</sup> June</u></b> Paper 1 topics	
<b><u>Assessment point revision</u></b>	<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li>   <li>• Atomic structure</li> <li>• The periodic table</li> <li>• Structures and bonding</li>   <li>• Conservation and dissipation of energy</li> <li>• Energy transfer by heating</li> </ul>		<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Communicable diseases</li> <li>• Organising plants and animals</li>   <li>• Atomic structure</li> <li>• The periodic table</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li>   <li>• Conservation and dissipation of energy</li> <li>• Energy transfer by heating</li> <li>• Energy resources</li> <li>• Electrical circuits</li> </ul>		<ul style="list-style-type: none"> <li>• Communicable diseases</li> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li>   <li>• Atomic structure</li> <li>• The periodic table</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li>   <li>• Conservation and dissipation of energy</li> <li>• Energy transfer by heating</li> <li>• Energy resources</li> <li>• Electrical circuits</li> <li>• Energy in the home</li> <li>• Molecules and matter</li> </ul>	



## Haydock High School Science Department – Learning Overview

<b>Year 10</b>	<u>1a</u>	<u>1b</u>	<u>2a</u>	<u>2b</u>	<u>3a</u>	<u>3b</u>
<b><u>Assessment Point tests</u></b>	<b><u>Week beginning 11<sup>th</sup> November</u></b> Paper 1 topics		<b><u>Week beginning 10<sup>th</sup> February</u></b> Paper 1 topics		<b><u>Week beginning 22<sup>nd</sup> June</u></b> Paper 2 topics	
<b><u>Assessment point revision</u></b>	<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Communicable diseases</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li> <li>• Photosynthesis</li> <li>• Respiration</li>   <li>• Atomic structure</li> <li>• The periodic table</li> <li>• Structures and bonding</li> <li>• Energy resources</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li> <li>• Rates and equilibria</li>   <li>• Conservation and dissipation of energy</li> <li>• Energy transfer by heating</li> <li>• Electrical circuits</li> <li>• Energy in the home</li> <li>• Molecules and matter</li> <li>• Forces in balance</li> </ul>		<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Communicable diseases</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li> <li>• Photosynthesis</li> <li>• Respiration</li> <li>• Human nervous system</li> <li>• Hormonal coordination</li> <li>• Reproduction</li> <li>• Genetics and evolution</li> <li>• Adaptations, interdependence and competition</li>   <li>• Atomic structure</li> <li>• The periodic table</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li> <li>• Rates and equilibria</li> <li>• Crude oil and fuels</li> <li>• Chemical analysis</li> <li>• The Earth's Atmosphere</li> </ul>		<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Communicable diseases</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li> <li>• Photosynthesis</li> <li>• Respiration</li> <li>• Human nervous system</li> <li>• Hormonal coordination</li> <li>• Reproduction</li> <li>• Variation and evolution</li> <li>• Genetics and evolution</li> <li>• Adaptations, interdependence and competition</li> <li>• Biodiversity and ecosystems</li> <li>• Atomic structure</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li> <li>• Molecules and matter</li> <li>• Rates and equilibria</li> <li>• Crude oil and fuels</li> <li>• Chemical analysis</li> <li>• The Earth's Atmosphere</li> </ul>	



## Haydock High School Science Department – Learning Overview

- Motion
- Wave Properties
- EM spectrum

- Conservation and dissipation of energy
- Energy transfer by heating
- Energy resources
- Electrical circuits
- Energy in the home
- Molecules and matter
- Forces in balance
- Motion
- Wave Properties
- EM spectrum
  
- Electromagnetism

- The Earth's resources
  
- Conservation and dissipation of energy
- The periodic table
- Energy transfer by heating
- Energy resources
- Electrical circuits
- Energy in the home
- Forces in balance
- Motion
- Wave Properties
- EM spectrum
  
- Electromagnetism



## Haydock High School Science Department – Learning Overview

<b>Year 11</b>	<u>1a</u>	<u>1b</u>	<u>2a</u>	<u>2b</u>	<u>3a</u>	<u>3b</u>
<b><u>Assessment Point tests</u></b>	<b><u>Week beginning 30<sup>th</sup> September</u></b> Paper 1 mock		<b><u>Week beginning 25<sup>th</sup> November</u></b> Paper 2 mock		<b><u>Week beginning 9<sup>th</sup> March</u></b> Paper 1 and paper 2 mock	
<b><u>Assessment point revision</u></b>	<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Communicable diseases</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li> <li>• Photosynthesis</li> <li>• Respiration</li> <li>• Human nervous system</li> <li>• Hormonal coordination</li> <li>• Reproduction</li> <li>• Variation and evolution</li> <li>• Genetics and evolution</li> <li>• Adaptations, interdependence and competition</li> <li>• Biodiversity and ecosystems</li> <li>• Atomic structure</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li> <li>• Molecules and matter</li> <li>• Rates and equilibria</li> <li>• Crude oil and fuels</li> </ul>		<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Communicable diseases</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li> <li>• Photosynthesis</li> <li>• Respiration</li> <li>• Human nervous system</li> <li>• Hormonal coordination</li> <li>• Reproduction</li> <li>• Variation and evolution</li> <li>• Genetics and evolution</li> <li>• Adaptations, interdependence and competition</li> <li>• Biodiversity and ecosystems</li> <li>• Atomic structure</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li> <li>• Molecules and matter</li> <li>• Rates and equilibria</li> <li>• Crude oil and fuels</li> </ul>		<ul style="list-style-type: none"> <li>• Cell structure and transport</li> <li>• Cell division</li> <li>• Organisation and the digestive system</li> <li>• Organising plants and animals</li> <li>• Communicable diseases</li> <li>• Preventing and treating diseases</li> <li>• Non communicable diseases</li> <li>• Photosynthesis</li> <li>• Respiration</li> <li>• Human nervous system</li> <li>• Hormonal coordination</li> <li>• Reproduction</li> <li>• Variation and evolution</li> <li>• Genetics and evolution</li> <li>• Adaptations, interdependence and competition</li> <li>• Biodiversity and ecosystems</li> <li>• Atomic structure</li> <li>• Structures and bonding</li> <li>• Chemical calculations</li> <li>• Chemical changes</li> <li>• Electrolysis</li> <li>• Energy changes</li> <li>• Molecules and matter</li> <li>• Rates and equilibria</li> <li>• Crude oil and fuels</li> </ul>	



## Haydock High School Science Department – Learning Overview

	<ul style="list-style-type: none"><li>• Chemical analysis</li><li>• The Earth's Atmosphere</li><li>• The Earth's resources</li></ul> <ul style="list-style-type: none"><li>• Conservation and dissipation of energy</li><li>• The periodic table</li><li>• Energy transfer by heating</li><li>• Energy resources</li><li>• Electrical circuits</li><li>• Energy in the home</li><li>• Forces in balance</li><li>• Motion</li><li>• Wave Properties</li><li>• EM spectrum</li></ul> <ul style="list-style-type: none"><li>• Electromagnetism</li></ul>	<ul style="list-style-type: none"><li>• Chemical analysis</li><li>• The Earth's Atmosphere</li><li>• The Earth's resources</li></ul> <ul style="list-style-type: none"><li>• Conservation and dissipation of energy</li><li>• The periodic table</li><li>• Energy transfer by heating</li><li>• Energy resources</li><li>• Electrical circuits</li><li>• Energy in the home</li><li>• Forces in balance</li><li>• Motion</li><li>• Wave Properties</li><li>• EM spectrum</li></ul> <ul style="list-style-type: none"><li>• Electromagnetism</li></ul>	<ul style="list-style-type: none"><li>• Chemical analysis</li><li>• The Earth's Atmosphere</li><li>• The Earth's resources</li></ul> <ul style="list-style-type: none"><li>• Conservation and dissipation of energy</li><li>• The periodic table</li><li>• Energy transfer by heating</li><li>• Energy resources</li><li>• Electrical circuits</li><li>• Energy in the home</li><li>• Forces in balance</li><li>• Motion</li><li>• Wave Properties</li><li>• EM spectrum</li></ul> <ul style="list-style-type: none"><li>• Electromagnetism</li></ul>
--	---	---	---