

Clinton County High School Topical Map						Science & Agriculture						
Courses	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Biology A	Cell Structure and Function		Cellular Processes		Cellular Energy		Cell Cycle and Division		Heredity and DNA			
	Prokaryotic/Eukaryotic cells (distinguish and identify)	Organelles and their functions	Plasma membrane and homeostasis	Diffusion, osmosis, active transport	ATP-energy compounds	Photosynthesis, respiration, and fermentation	Cell Cycle, interphase	Mitosis	Meiosis and Mendelian genetics	Complex patterns of inheritance	DNA structure	Replication, transcription, translation
Integrated Science A	Weather/Climate				Motion		Electricity & Magnetism		Space Science			
	Characteristics of the Atmosphere, Solar Energy in the Atmosphere, Atmospheric Circulation	Atmospheric Moisture, Clouds/Fogs, Precipitation	Air Masses, Fronts, Instruments, Weather Forecasting	Factors that Affect Climate, Climate Zone	Distance, Displacement, Speed/Velocity, Acceleration	Forces, Newton's Laws, Universal Forces	Electrical Charges, Ohm's Law, Electrical Circuits/Devices	Magnets/Magnetic Fields, Electromagnetism	Universe, Movements of Earth	Formation of Solar System, Models of Solar System, Planets	Moon's Movement, Satellites of Planets, Asteroids, Comets, Meteoroids, Sun	Stars, Stellar Evolution, Star Groups, Big Bang Theory
Chemistry I A	Safety / Scientific Thinking	Matter & Measurement	Structure of the Atom & Isotopes			Periodic Properties			Compounds, Bonding, & Types			
	Symbols, Techniques, Measurement, Dimensional Analysis	Properties of Matter, State of Matter, Chemical/Physical Changes	Subatomic particles-Mass, Location, Charge, significance & nuclear force	Calculating-# Protons, Electrons, Neutrons, Mass	Determining Subatomic Particles-Specific Isotopes Atomic Mass Significance	Calculating Average Atomic Mass of Specific Isotopes	Periodizing-Groups Valence's, Periods, Metals, & Nonmetals, Metalloids	Trends-Electro negativity, Ionic radii, Ionization Energy	e 'configuration Sublevels, Rules for e 'configuration orbital notations	Naming, Counting Atoms, Identifying polyatomic ions, subscripts, Coefficients	Chemical formulas, illustrate mathematical appropriate proportions for formulas	Ionize, illustration of bonding, Properties of Lewis structures, determine shape
Animal Science	The Business of the Livestock Industry	Current Industry Issues /Concerns	Global/Nat'l Livestock Perspectives	Classification of Livestock	Breeding/ Genetics	Reproduction	Nutrition	Health and Development	Meat/Dairy Products	Poultry & Horse Industry	Beef Industry	Sheep & Swine Industry
	Definition, Components, Importance	Areas of Concern, Animal Rights	Where and how/Nomadic Herding vs. Commercial Grazing	Taxonomy, Market Classes, Sex Classes	Genetics Terminology, Calculating Phenotypes/Genotypes, Breeding and Selection	Anatomical Structures- Male/Female, Reproductive Hormones, Reproductive Statistics	Nutrition Terms, Nutrient groups and function within the body, Ruminant vs. Monogastric	Symptoms and diagnosis, Active and Passive Immunity, Vaccinations Medications	Meat, Consumption Patterns, Role of Dairy Cattle	Modern Poultry Industry/Vertical Integration, Modern Horse Industry	Structure, Economic Impact, Geographic Consideration	Role of Sheep Role of Swine
Ag Science & Technology A	All About FFA			The SAE Program			Plant Science					
	History and Organization	FFA Degrees Awards	Duties and Responsibilities	Planning	Implementing	Keeping and Using Records	Taxonomy	Structures and Functions	Types and Uses	Sexual Propagation	Asexual Propagation	Careers in Plant Science
Ag Construction	Surveying				Electricity				Construction			
	Land Measurement and Legal Descriptions	Using Surveying Equipment	Taking and Revising Field Notes	Applying Profiling and Differential leveling	Electricity and Electrical Safety	Science of Electricity	Calculating and Measuring	Identifying Tools Wiring Circuits	Planning and Designing	Hand Tools	Power Tools	Building Projects
Landscaping	Classification	Business of Landscaping		Design				Pricing & Producing the Design				
	Taxonomy	Managing	Marketing	Applying Principles of Art	Beginning the Design Process	Putting the Plan on Paper	Designing different areas	Annuals/Perennials in the Landscape	Pricing the Plan	Selling Design & Construction Work	Preparing the Landscape	Installing Landscape Plants
Greenhouse A	Horticulture Industry			Plant Reproduction				Greenhouse Environment				
	Understanding Horticulture and its Importance	Career Opportunity	Establishing the Horticulture Business	Sexual Reproduction	Propagating plants sexually	Propagating plants asexually	Performing Cuttings	Using Irrigation	Supplying Nutrients	Controlling Climate	Using Automated Systems	Growing Media
Small Power Equipment	Agriculture Mechanization			Internal Combustion Engines				Small Engines: Parts and Processes				
	Career Opportunities	Basic Areas of Ag. Mech	Physics in Ag. Mech	Principles of Operation	Systems and Components	Measuring Instruments	Single vs. Multi Cylinder	Engine Parts ID	Assembly	Disassembly and Reassembly	Maintenance	Rebuilding Worn Engines and Replacing Components
Floriculture	Horticulture and the Environment		Floral Design					The Floral Business: Pricing, Floral Care, Management				
	Environmental Impacts	Understanding Horticulture	Principles of Floral Design	Corsages and Boutonnieres	Basic Floral Work	Centerpieces and Holiday Arrangements	Wedding Pieces	Sympathy Arrangements	Care of Fresh Flowers and Foliage	Managing the Flower Shop	Pricing Design Work	Arrangements for all occasions

Courses	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	
Biology A	Cell Structure and Function		Cellular Processes			Cellular Energy		Cell Cycle & Division		Heredity and DNA			
	Prokaryotic / Eukaryotic cells (distinguish & identify)	Organelles & their functions	Plasma membrane and homeostasis	Diffusion, osmosis, active transport	ATP-energy compounds	Photosynthesis, respiration, and fermentation	Cell Cycle, interphase	Mitosis	Meiosis and Mendelian genetics	Complex patterns of inheritance	DNA structure	Replication, transcription, translation	
Biology B	Principles of Ecology			Communities and Biomes		Change Through Time			Plant Structure & Function		Animal Characteristics & Behavior		
	Biosphere	Food chains, food webs, energy pyramids	Biogeochemical Cycles	Range of tolerance, succession	Terrestrial and aquatic biomes	History of life and geologic time	Theories of evolution	Organizing life's diversity	Plant cells, tissues, organs	Gymnosperms/ angiosperms	Body plans & adaptations	Innate vs. learned behaviors	
Integrated Science A	Weather/Climate				Motion		Electricity & Magnetism		Space Science				
	Characteristics of the Atmosphere, Solar Energy in the Atmosphere, Atmospheric Circulation	Atmospheric Moisture, Clouds/Fogs, Precipitation	Air Masses, Fronts, Instruments, Weather Forecasting	Factors that Affect Climate, Climate Zone	Distance, Displacement, Speed/Velocity, Acceleration	Forces, Newton's Laws, Universal Forces	Electrical Charges, Ohm's Law, Electrical Circuits/Devices	Magnets/Magnetic Fields, Electromagnetism	Universe, Movements of Earth	Formation of Solar System, Models of Solar System, Planets	Moon's Movement, Satellites of Planets, Asteroids, Comets, Meteoroids, Sun	Stars, Stellar Evolution, Star Groups, Big Bang Theory	
Integrated Science B	Earth's Interior					Waves & Spectrum of Light		States of Matter		Energy			
	Relative Age, Absolute Age, Fossil Record, Geological Time	Continental Drift, Plate Tectonics, Changing Continents	Crust Deformation, Mountain Formation	Earthquake Formation, Locating & Measuring Earthquakes, Volcanoes & Eruptions, Predictions	Groundwater, Chemical & Mechanical Weathering	Mechanical Waves & their Behavior, Properties of Waves, Sound & Hearing	Electromagnetic Waves, Electromagnetic Spectrum, Behavior & Sources Light, Color	Classifying Matter, Physical & Chemical Properties	Solids, Liquids, Gases, Gas Laws, Phase Changes	Forms of Energy, Energy Conversion & Conservation, Energy Resources	Thermal Energy & Matter, Heat, Thermodynamic, Using Heat	Unique Planet Earth, Energy in the Earth System	
Chemistry I A	Safety / Scientific Thinking	Matter Measurement	Structure of the Atom/Isotopes				Periodic Properties			Compounds, Bonding, & Types			
	Symbols, Techniques, Measurement, Dimensional Analysis	Properties Matter, State of Matter, Chemical/Physical Changes	Subatomic particles- Mass, Location, Charge, significance & nuclear force	Calculating-# Protons, Electrons, Neutrons, Mass	Determining Subatomic Particles- Specific Isotopes- Atomic Mass Significance	Calculating Average Atomic Mass of Specific Isotopes	Periodizing-Groups Valence's, Periods, Metals, & Nonmetals, Metalloids	Trends-Electro negativity, Ionic radii, Ionization Energy	reconfiguration Sublevels, Rules for reconfiguration orbital notations	Naming, Counting Atoms, Identifying polyatomic ions, subscripts, Coefficients	Chemical formulas, illustrate mathematical appropriate proportions for formulas	Ionize, illustration of bonding, Properties of Lewis structures, determine shape	
Chemistry I B	Intermolecular Forces	Chemical Reactions			Gases and Gas Laws			Stoichiometry		Nuclear Reactions: Fission & Fusion			
	Von der Waal forces, Dipole Interactions, H-bonding, Polarity	Types of Chemical reactions, Exothermic, Endothermic, Reaction Indicators	Law conservation, matter, balance equations	Factors affecting reactions rates, Catalyst, Activation Energy	Kinetic Molecular Theory, Diffusion, effusion, Real Gas	Pressure Units/Conversions, Boyles Law, Charles Law, Lusaucs Law, Combined Gas Law	Daltons Law, Ideal Gas Law, Avagachros Law	Mole Conversions	Limiting Reactant, Excess Reactant, Amt. in excess, Theoretical yield, Actual Yield, % yield	Fission, Exchange Reactions	Fusion, Exchange Reactions	Radioactive Decay	
Ag Science & Technology B	Animal Science					Agriculture Mechanics							
	Animal Reproduction	Blood	Life Span	Animal Industry	Career Opportunities	Basic Skills	Basic Areas	Impact of Technology	Shop Safety	Basic Construction	Building Projects		
Greenhouse B	Plant Anatomy & Physiology							Greenhouse Crop Management					
	Root Anatomy	Stem Anatomy	Leaf Anatomy	Flower Anatomy	Physiology	Light, Water, Air, Temperature	Plant Growth Regulators	Greenhouse Crop Management	Identifying and Managing Pests	Managing the Greenhouse Business	Greenhouse Maintenance	Greenhouse Maintenance	

Courses	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36
<b>Biology B</b>	<b>Communities and Biomes</b>			<b>Change Through Time</b>					<b>Plant Structure &amp; Function</b>		<b>Animal Characteristics &amp; Behavior</b>	
	Biosphere	Food chains, food webs, energy pyramids	Biogeochemical Cycles	Range of tolerance, succession	Terrestrial and aquatic biomes	History of life and geologic time	Theories of evolution	Organizing life's diversity	Plant cells, tissues, organs	Gymnosperms/angiosperms	Body plans & adaptations	Innate vs. learned behaviors
<b>Integrated Science B</b>	<b>Earth's Interior</b>					<b>Waves &amp; Spectrum of Light</b>		<b>States of Matter</b>		<b>Energy</b>		
	Relative Age, Absolute Age, Fossil Record, Geological Time	Continental Drift, Plate Tectonics, Changing Continents	Crust Deformation, Mountain Formation	Earthquake Formation, Locating & Measuring Earthquakes, Volcanoes & Eruptions, Predictions	Groundwater, Chemical & Mechanical Weathering	Mechanical Waves & their Behavior, Properties of Waves, Sound & Hearing	Electromagnetic Waves, Electromagnetic Spectrum, Behavior & Sources Light, Color	Classifying Matter, Physical & Chemical Properties	Solids, Liquids, Gases, Gas Laws, Phase Changes	Forms of Energy, Energy Conversion & Conservation, Energy Resources	Thermal Energy & Matter, Heat, Thermodynamic, Using Heat	Unique Planet Earth, Energy in the Earth System
<b>Chemistry I B</b>	<b>Intermolecular Forces</b>	<b>Chemical Reactions</b>			<b>Gases and Gas Laws</b>			<b>Stoichiometry</b>		<b>Nuclear Reactions: Fission &amp; Fusion</b>		
	Von der Waal forces, Dipole Interactions, H-bonding, Polarity	Types of Chemical reactions, Exothermic, Endothermic, Reaction Indicators	Law conservation, matter, balance equations	Factors affecting reactions rates, Catalyst, Activation Energy	Kinetic Molecular Theory, Diffusion, effusion, Real Gas	Pressure Units/Conversions, Boyles Law, Charles Law, Lussacs Law, Combined Gas Law	Daltons Law, Ideal Gas Law, Avagachros Law	Mole Conversions	Limiting Reactant, Excess Reactant, Amt. in excess, Theoretical yield, Actual Yield, % yield	Fission, Exchange Reactions	Fusion, Exchange Reactions	Radioactive Decay
<b>Ag Science &amp; Technology B</b>	<b>Animal Science</b>					<b>Agriculture Mechanics</b>						
	Animal Reproduction	Blood	Life Span	Animal Industry	Career Opportunities	Basic Skills	Basic Areas	Impact of Technology	Shop Safety	Basic Construction	Building Projects	
<b>Greenhouse B</b>	<b>Plant Anatomy &amp; Physiology</b>							<b>Greenhouse Crop Management</b>				<b>Careers</b>
	Root Anatomy	Stem Anatomy	Leaf Anatomy	Flower Anatomy	Physiology	Light, Water, Air, Temperature	Plant Growth Regulators	Greenhouse Crop Management	Identifying and Managing Pests	Managing the Greenhouse Business	Greenhouse Maintenance	Career Options