

St. Mary's College

Integrated Science

Form 2

Course Outline

Term 1

Unit/Section	Topic	Modules
01	Diet and Health	<ul style="list-style-type: none">• Food groups• A Balanced diet• Diet, activity and age
		<ul style="list-style-type: none">• The digestive system 1• The digestive system 2• The process of digestion
		<ul style="list-style-type: none">• Food tests-starch and simple sugars• Food tests –proteins and fats• Energy values in food
		<ul style="list-style-type: none">• Body Mass index• Weight gain and loss• Health and diet
02	Human body systems: the circulatory system	<ul style="list-style-type: none">• Structure of the circulatory system• The heart
		<ul style="list-style-type: none">• Arteries, veins and capillaries• Components of blood
		<ul style="list-style-type: none">• Pulse rate• Effect of exercise on pulse rate
		<ul style="list-style-type: none">• Health and the circulatory system
03	Human body systems: The respiratory system	<ul style="list-style-type: none">• Structure of the respiratory system• Gas exchange in the lungs
		<ul style="list-style-type: none">• How you breathe• Respiration in cells

		<ul style="list-style-type: none"> Breathing rate Exercise and breathing rate The effects of smoking
		Revision

Term 2

Unit/Section	Topic	Modules
04	Physical and Chemical Processes	<ul style="list-style-type: none"> Physical properties of matter Chemical changes
		<ul style="list-style-type: none"> Comparing physical and chemical changes 1 Comparing physical and chemical changes 2
		<ul style="list-style-type: none"> Chemical reaction Types of chemical reaction
		<ul style="list-style-type: none"> Everyday chemical changes Solutions Dissolving
		<ul style="list-style-type: none"> Saturated solutions Supersaturated solutions
04 05	Separating mixtures	<ul style="list-style-type: none"> Mixtures Separating mixtures
		<ul style="list-style-type: none"> Evaporation and distillation
		<ul style="list-style-type: none"> Distillation of liquid mixtures
		<ul style="list-style-type: none"> Fractional distillation
		<ul style="list-style-type: none"> Chromatography
		<ul style="list-style-type: none"> Separating liquids
		<ul style="list-style-type: none"> Other methods of separating mixtures
		Revision

Term 3

Unit/Section	Topic	Modules
07	Thermal Energy	<ul style="list-style-type: none">• Heat and temperature• Thermometers
		<ul style="list-style-type: none">• Cooling graphs• Heat transfer-conduction
		<ul style="list-style-type: none">• Metals as conductors of heat• Heat transfer-convection• Convection in gases
		<ul style="list-style-type: none">• Heat transfer-radiation• Radiation and absorption of different surfaces
		<ul style="list-style-type: none">• Thermal insulators and conductors• Air as a heat insulator• Total heat transfer
		<ul style="list-style-type: none">• What is an ecosystem?• Creating an ecosystem
08	Energy in ecosystems	<ul style="list-style-type: none">• Photosynthesis• Producers, consumers and decomposers
		<ul style="list-style-type: none">• Food chains• Food webs
		Revision