

## Sciences

Unit	Key Concepts	Related Concepts	Global Contexts	Statement of Inquiry	Objectives & Strands	ATL Skills	Content	Summative Assessment(s)	Learner Profile	International-mindedness	Service Learning
<b>MYP Year 1 (6th Grade) Science 6</b>											
<b>September to October</b>											
Astronomy	Change	Models, Interactions	Orientation in time and space: Scale, duration, frequency and variability	Understanding of our universe has changed over time through innovation, discovery, and the development of models to represent phenomena.	A: i., ii., iii. C: i., ii., iii., iv., v. D: i., ii., iii., iv.	Communication, Social, Self-Management, and Research Skills	SOL Science 6 objectives: 6.2 and 6.3	Astronomy unit Test Scale Models of the solar system Tide Graphing Task Daylight Graphing Task Planet Paragraph	Inquirers		
<b>November</b>											
Energy Resources	Relationships	Consequences, Energy	Globalization and Sustainability: Human impact on the environment	Humans must consider environmental and economic consequences when making energy choices.	A: i., ii., iii. D: i., ii., iii., iv.	Communication, Social, Self-Management, and Thinking Skills	SOL Science 6 objectives: 6.4 and 6.9	Task 1: Energy Resources Paragraph/Poster/Video Task 2: IB Energy Unit Test	Communicators	Examination of global energy use	
<b>December</b>											
Scientific Method	Systems	Evidence, Interactions	Scientific and technical innovation: Systems, models, methods; products, processes, and solutions	Students will understand that collecting evidence and observing patterns can help us construct systems to explain how the world works.	A: i., ii., iii. B: i., ii., iii., iv. C: i., ii., iii., iv., v.	Communication and Thinking Skills	SOL Science 6 objectives: 6.1	Task 1: IB Scientific Method Unit Test (A) Task 2: The Candy Experiment (Criteria B and C) Task 3: Metric measurement lab (C)	Principled		
<b>January</b>											
Matter (Chemistry)	Systems	Models, Forms	Scientific and technical innovation: Systems, models, methods; products, processes, and solutions	Technical models represent natural phenomena to allow for scientific study.	A: i., ii., iii.	Communication, Self-Management and Thinking Skills	SOL Science 6 objectives: 6.5	Task 1: IB Chemistry (Matter) Unit Test	Knowledgeable		
<b>February to March</b>											
Weather and Climate	Systems	Models, Patterns	Scientific and technical innovation: Systems, models, methods; products, processes, and solutions	Scientists observe weather patterns and use them to create models to inform local, national, and global choices.	A: i., ii., iii. D: i., ii., iii., iv.	Communication, Self-Management and Thinking Skills	SOL Science 6 objectives: 6.7 and 6.9	Task 1: IB Weather Unit Test	Thinkers		
<b>April to May</b>											
Science Fair	Systems	Evidence, Interaction	Scientific and technical innovation: Systems, models, methods; products, processes, and solutions	Collecting evidence and observing patterns can help us construct systems to explain how the world works.	B: i., ii., iii., iv. C: i., ii., iii., iv., v.	Communication, Social, Self-Management and Research Skills	SOL Science 6 objectives: 6.1 and 6.9	IB Science Project	Inquirers		
<b>June</b>											
Watersheds	Relationships	Balance, Environment	Globalization and sustainability: Human impact on the environment and Consumption, conservation, natural resources and public goods	Human practices have the power to help and to harm our local watershed.	D: i., ii., iii., iv.	Communication, Research and Thinking Skills	SOL Science 6 objectives: 6.6, 6.8, and 6.9	Task 1: Report of Stream Health	Reflective		
<b>MYP Year 2 (7th Grade) Science 7</b>											
<b>September to October</b>											

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Ecology	Relationships	Energy, Connections, Environment	Fairness and development: Ecology and disparate impact	Energy and balanced interdependent relationships determine sustainability and health within a system.	A: i., ii., iii.	Self-Management skills	LS.5 (a-c), LS.6 (a-d), LS 7 (a-b), LS.8 (a-c), LS.9 (a-c)	Deer Population Project	Knowledgeable		
<b>November</b>											
Cells	Systems	Structure, Function	Personal Cultural Expression	Scientific models demonstrate how cells exhibit forms and specialized functions	A: i., ii., iii.	Communication, Social, Self-Management and Research and Thinking Skills	SOL Science Life Science objectives: 2, 3, 5, and 12	Unit Test - A	Communicators		
<b>December to January</b>											
Cell Processes	Systems	Structure, Function	Personal Cultural Expression	Cells exhibit forms and specialized functions through inquiry into how humans use their understanding of scientific models	A: i., ii., iii. B: i., ii., iii., iv. C: i., ii., iii., iv., v.	Communication, Social, Self-Management and Research and Thinking Skills	SOL Science Life Science objectives: 2, 3, 5, and 12	Unit Test - A	Thinkers		
<b>February to March</b>											
Evolution	Relationships	Identity, Patterns	Identities and Relationships	The physical identity of an organism is determined by relationships among genetic patterns.	B: i., ii., iii., iv. C: i., ii., iii., iv., v. D: i., ii., iii., iv.	Communication, Social, Self-Management and Research and Thinking Skills	SOL Science Life Science objectives: 12	Paper Pet Lab	Inquirers		
<b>April to June</b>											
Classification	Relationships	Form, Function, Patterns	Scientific and Technical Innovation	Relationships and patterns identified amongst organisms provide evidence that allows the natural world to be classified using human-made systems.	A: i., ii., iii. D: i., ii., iii., iv.	Communication, Social, Self-Management and Research and Thinking Skills	SOL Science Life Science objectives: 4	Classification foldable	Communicators		
<b>MYP Year 3 (8th Grade) Science 8</b>											
<b>September</b>											
Energy	Change	Energy, Forms	Globalization and sustainability: Consumption, conservation, natural resources and public goods	Communities must change how they consume and generate forms of energy in order to be sustainable.	D: i., ii., iii., iv	Communication and Research Skills	SOL Science Physical Science objectives:	Letter to Local Officials (D)	Communicators		Write a letter to someone relevant- inform them of Arlington's Energy Plan
<b>October</b>											
Atoms	Relationships	Forms, Model	Scientific and Technical Innovation: systems, models and methods	Humans conduct investigations and develop models to understand the relationship between subatomic particles and an atom's form.	A: i., iii.	Communication and Thinking Skills	SOL Science Physical Science objectives: 2a-c	Atoms Unit Test (A)	Thinkers	Study of scientist around the world, their contributions to the atomic theory, and how these contributions helped advance our current knowledge of atoms.	
<b>the</b>											
Measuring Matter	Change	Evidence, Patterns	Scientific and Technical Innovation: systems, models and methods	Scientists discern patterns when they investigate the process of change using methods and evidence to understand nature.	A: i., ii., iii. B: i., ii., iii., iv. C: i., ii., iii., iv., v.	Communication and Thinking Skills	SOL Science Physical Science objectives:	Describing Matter and Its Changes Test (A) Independent Project (B, C)	Inquirer	Extreme weather across the world	

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Periodic Table	Systems	Patterns, Interactions	Scientific and technical innovation: systems, models and methods	Patterns help scientists predict how elements will interact in a natural system.	A: i., ii.	Thinking Skills	SOL Science Physical Science objectives: 4.	Periodic Table Test	Thinkers	Connect to World Geography- countries with resources (ex: Cobalt Mining in DRC) do not profit	Educate others about the human cost of rechargeable batteries
<b>February</b>											
Electricity and Magnetism	Relationships	Patterns, Interactions	Relationships and interactions between electricity and magnetism form patterns that can impact the environment.	Globalization and sustainability: Human impact on the environment	D: i., ii., iii., iv.	Research and Media Literacy Skills	SOL Science Physical Science objectives	Unit Test (A) and Offshore Wind Farm Analysis (D)	Thinkers and Communicators	Discussions about electricity availability in our own country versus other countries. Ask for information about other countries from our students whose families are from other countries	
<b>March to April</b>											
Waves: Sound and Light	Change	Movement, Interaction	Scientific and Technical Innovation: systems, models and methods	We develop technological innovations to change the ways waves move and interact to help us understand nature and to make life easier.	C: i., ii., iii., iv., v.	Research and Thinking Skills	SOL Science Physical Science objectives	Unit Test and Collect/Analyze Data from a simulation (Gizmo)	Inquirers	The greenhouse effect increases temperatures. This can be applied climate change and, on a local level, public safety issues that arise when pets and children are left alone in cars with the windows rolled up.	Create a PSA to raise awareness of the dangers of leaving pets and children in closed cars.
<b>May to June</b>											
Forces and Motion	Relationships	Consequences, Movement, Function	Scientific and Technical Innovation: principles and discoveries	Predictable relationships exist between forces and motion that can be used to determine consequences and discoveries.	A: i., ii., iii. B: i., ii., iii., iv.	Communication, Social and Thinking skills	SOL Science Physical Science objectives	Unit Test	Thinkers		