

<p>G4 A Year</p>	<p>Unit 1</p>	
<p>Learning will include the development of the following knowledge, concepts and skills</p>	<p>Learning outcomes Students will be able to:</p>	
<p>Transdisciplinary theme</p> <p>1. Who we are</p> <p>An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities, and cultures; rights and responsibilities; what it means to be human.</p> <p>Central idea</p> <ul style="list-style-type: none"> - Interactions amongst human body systems contribute to health and survival. <p>Learner Profile Attributes reflective, caring</p> <p>Key concepts Function, causation, connection</p> <p>Related concepts Diversity, adaptation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Life processes • Life cycles • Adaptations in animals 	<p>Transdisciplinary strands</p> <p>Science Living things</p> <p>Skills</p> <ol style="list-style-type: none"> Observe carefully in order to gather data Interpret and evaluate data gathered in order to draw conclusions <p>Social Studies Continuity and change through time</p> <p>Skills</p> <ol style="list-style-type: none"> Use and analyze evidence from a variety of historical, geographical and societal sources Assess the accuracy, validity and possible bias of sources <p>Language Phase 4 Visual language—Viewing & presenting Written language—Reading & Writing</p> <p>PSPE Phase 4 Identity</p> <p>Math Phase 4 Pattern and function</p> <p>Additional resources <i>Kiki kallira breaks the kingdom</i> <i>Howl's Moving Castle</i> <i>Anne of Green Gables</i> <i>Hoofed animals on RAZ</i> Journeys</p>	<p>Science</p> <ul style="list-style-type: none"> • Demonstrate living things have internal/external structures that function to support reproduction • Be able to distinguish which features are attributable to nature vs nurture & which can not be distinguished • Recognize that plants and animals go through predictable life cycles <p>Social Studies</p> <ul style="list-style-type: none"> • Interpret cultural beliefs or values using evidence provided by rituals, tradition & artifacts • Understand how experience & others' opinions may influence individuals <p>Language</p> <ul style="list-style-type: none"> • Develop ideas & opinions through discussion • Confidently use a range of resources to find information or support their inquiries <p>PSPE Phase 4</p> <ul style="list-style-type: none"> • Examine the complexity of their own evolving identities • Motivate themselves intrinsically & behave with believe in themselves • Reflect on how they cope with change in order to approach & manage situation of adversity <p>Math Phase 4</p> <ul style="list-style-type: none"> • understand that patterns can be represented, analyzed and generalized using tables, graphs, words, and, when possible, symbolic rules.

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Learning will include the development of the following knowledge, concepts and skills		Learning outcomes Students will be able to:
<p>Transdisciplinary theme</p> <p>6. Where we are in place and time</p> <p>An inquiry into organization in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.</p> <p>Central idea The relationship between the universe and human beings.</p> <p>Learner Profile Attributes knowledgeable, thinker</p> <p>Key concepts Form, perspective</p> <p>Related concepts Continuity, progress, technology</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> The effects of gravity and orbital motion Scale of the solar system, galaxies, and the universe; the speed of light How we track time 	<p>Transdisciplinary strands</p> <p><u>Social Studies</u> Continuity and change through time</p> <p>Skills a. Formulate and ask questions about the past, the future, places and society b. Use and analyze evidence from a variety of historical, geographical and societal sources c. Orientate in relation to place and time</p> <p><u>Science</u> Earth and Space</p> <p>Skills c. Use a variety of instruments and tools to measure data accurately h. Consider scientific models and applications of this models (including their limitations)</p> <p><u>Language Phase 4</u> Visual language—Viewing & presenting Written language—Reading & Writing</p> <p><u>PSPE Phase 4</u> Interactions</p> <p><u>Math Phase 4</u> Measurement</p> <p>Additional resources Yosemite and the badge on RAZ Journeys <i>Holes</i> <i>Ender's Game</i> <i>The Phantom Tollbooth</i></p>	<p><u>Science</u></p> <ul style="list-style-type: none"> Explain the scale of the solar system, galaxies, & the universe; Examine how we know the universe is expanding & the future of the universe <p><u>Social Studies</u></p> <ul style="list-style-type: none"> analyze information about past technological advances & societal systems (Greek mathematical models/ philosophies & their reception) predict societal & technological changes in the future <p><u>Language</u></p> <ul style="list-style-type: none"> Work independently to produce written work that is legible & well-presented either by hand or in digital format Recognize the author's purpose, for example to inform, entertain, persuade, instruct <p><u>PSPE</u></p> <ul style="list-style-type: none"> Embrace optimism to shape a positive attitude towards themselves & their future Motivate themselves intrinsically & behave with confidence. <p><u>Math Phase 4</u></p> <ul style="list-style-type: none"> timetables and schedules (12-hour and 24-hour clocks) in real-life situations

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<p>Transdisciplinary theme</p> <h2>2.How we express ourselves</h2> <p>An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect upon, extend and enjoy our creativity; our appreciation of the aesthetic</p> <p>Central idea People who find their voice and use it positively, empower themselves and influence others.</p> <p>Learner Profile Attributes inquirer, communicator</p> <p>Key concepts Function, change, perspective</p> <p>Related concepts Interpretation, communication, subjectivity</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • How to express your thinking with justifications • Ways to express thoughts, beliefs, and feelings • Personal goal setting in the classroom and home 	<p>Transdisciplinary strands</p> <p>Science Life cycle and growth of flowering plants</p> <p>Skills</p> <ol style="list-style-type: none"> Make and test predictions Interpret and evaluate data gathered in order to draw conclusions Consider scientific models and applications of this models (including their limitations) <p>Social Studies Social organizations and culture</p> <p>Skills</p> <ol style="list-style-type: none"> Formulate and ask questions about the past, the future, places and society Use and analyze evidence from a variety of historical, geographical and societal sources <p>Language Phase 4 Visual language—Viewing & presenting Written language—Reading & Writing Oral language—listening & speaking</p> <p>PSPE Phase 4 Identity Active living</p> <p>Math Phase 4 Numbers</p> <p>Additional resources <i>Coraline</i> <i>Out of My Mind</i> <i>Harry Potter and the Sorcerer’s Stone</i> <i>Howl’s Moving Castle</i> <i>Alice in Wonderland</i> RAZ Journeys Write a Narrative - Artifacts, rituals and traditions in your life</p> <p>Science</p> <ul style="list-style-type: none"> • Do plants have feelings? • Identify and describe the needs of a living thing which can not speak. • How do plants express them? • Identify the structures of plants that are responsible for reproduction <p>Social Studies</p> <ul style="list-style-type: none"> • reflect on his or her own misconceptions about people (for example, relating to age, race, gender, disability). • Be able to understand how experience and others’ opinions may influence individuals <p>Language</p> <ul style="list-style-type: none"> • use appropriate paragraphing to organize ideas • demonstrate an increasing understanding of how grammar works <p>PSPE Phase 4</p> <ul style="list-style-type: none"> • Analyze how assumptions can lead to misconceptions • Use emotional awareness and personal skills to relate to and help others • Identify realistic goals and strategies to improve physical fitness <p>Math Phase 4</p> <ul style="list-style-type: none"> • read, write, compare and order percentages • use fractions, decimals and percentages interchangeably in real-life

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<p>Transdisciplinary theme</p> <h1>4.How the World Works</h1> <p>An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.</p> <p>Central idea Energy may be converted from one form to another and stored in various ways</p> <p>Learner Profile Attributes risk-taker, Inquirer</p> <p>Key concepts Form, change, connection</p> <p>Related concepts Transformation, chemical and physical changes</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Different forms of energy- Kinetic/Potential (chemical/gravitational/elastic/electric) (Thermodynamic) • The storage and transformation of energy, and their byproducts • How machines make work easier 	<p>Transdisciplinary strands</p> <p>Science Forces and energy</p> <p>Skills a. Identify or generate a question or problem to be explored b. Consider scientific models and applications of this models (including their limitations)</p> <p>Social Studies Continuity and change through time</p> <p>Skills a. Use and analyze evidence from a variety of historical, geographical and societal sources b. Orientate in relation to place and time</p> <p>Language Phase 4 Oral language—listening and speaking Visual language—viewing and presenting</p> <p>PSPE Phase 4 Interactions</p> <p>Math Phase 4 Data handling</p> <p>Additional resources Journeys</p> <p>Energy Sources : The Pros and Cons on RAZ</p> <p><i>Spy School</i> <i>The Phantom Tollbooth</i> <i>Series of Unfortunate Events</i> <i>Anne of Green Gables</i></p>	<p>Science</p> <ul style="list-style-type: none"> • Investigate energy transformations and conversions • Support the argument that the gravitational force exerted by Earth on objects is directed down • Develop a model to describe that when the arrangement of objects interaction at a distance changes, different amounts of potential energy are stored in the system <p>Social Studies</p> <ul style="list-style-type: none"> • Investigate which simple machines were developed by past civilizations • Explore scientific and technological developments that help people understand and respond to the changing Earth. <p>Language</p> <ul style="list-style-type: none"> • Apply knowledge of presentation techniques in original and innovative ways; explain their own ideas for achieving desired effects • Participate in collaborative learning, considering multiple perspectives and working with peers to co-construct new understanding <p>PSPE Phase 4</p> <ul style="list-style-type: none"> • Reflect critically on the effectiveness of the group during and at the end of the process • Identify how their attitudes, opinions, and beliefs affect the way they act and how those of others also impact their actions • Participate in collaborative learning, considering multiple perspectives and working with peers to co-construct new understanding <p>Math Phase 4</p> <ul style="list-style-type: none"> • understand that different types of graphs have special purposes

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<p>Transdisciplinary theme</p> <p>3.How we organize ourselves</p> <p>An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.</p> <p>Central idea Governmental systems and decisions can affect human rights, the environment, and other living organisms.</p> <p>Learner Profile Attributes Reflective, principled</p> <p>Key concepts Function, responsibility, connection</p> <p>Related concepts Rules, principles, laws</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Types of governance What factors help government system to work effectively Importance of good governance 	<p>Transdisciplinary strands</p> <p>Science Living things</p> <p>Skills a. Identify or generate a question or problem to be explored b. Make & test predictions</p> <p>Social Studies Human systems & economic activities Resources & the environment</p> <p>Skills a. Use and analyze evidence from a variety of historical, geographical and societal sources b. Assess the accuracy, validity and possible bias of sources</p> <p>Language Phase 4 Oral language—listening and speaking Visual language—viewing and presenting Written language—reading</p> <p>PSPE Phase 4 Active living Interactions</p> <p>Math Phase 4 Shape and space</p> <p>Additional resources Journeys The Executive Branch on RAZ <i>Wonder</i> <i>The Hobbit</i> <i>The Phantom Tollbooth</i></p>	<p>Science</p> <ul style="list-style-type: none"> What is their campaign for the environment and how would they change it if they were elected. <p>Social studies</p> <ul style="list-style-type: none"> Explain how human activities can have positive or adverse effects on local and other environments Explain principles of human rights (distinguish between personal beliefs and belief systems) <p>Language</p> <ul style="list-style-type: none"> Participate appropriately as listener and speaker in discussions, conversations, debates and group presentations Identify and describe the elements of a story and explain how they contribute to its effectiveness Reread, edit and revise their own writing <p>PSPE Phase 4</p> <ul style="list-style-type: none"> Identify and discuss the changes that occur during puberty and their impact on well-being Work towards consensus, understanding the need to negotiate and compromise <p>Math Phase 4</p> <ul style="list-style-type: none"> understand that geometric ideas and relationships can be used to solve problems in other areas of mathematics and in real life. Choose a shape to describe a government structure.

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<p>Transdisciplinary theme</p> <p>5.Sharing the planet</p> <p>An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution</p> <p>Central idea The fact that materials can undergo permanent or temporary changes poses challenges and provides benefits for society and the environment.</p> <p>Learner Profile Attributes open-minded, thinker</p> <p>Key concepts Form, change, perspective</p> <p>Related concepts transformation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Types of matter/ types of changes to matter Investigation of matter around us Scarcity and Interconnectedness 	<p>Transdisciplinary strands</p> <p><u>Social Studies</u> Resources and the environment</p> <p>Skills</p> <p>a. Use and analyze evidence from a variety of historical, geographical and societal sources b. Identify roles, rights and responsibilities in society</p> <p><u>Science</u> Forces and energy Matter</p> <p>Skills</p> <p>a. Observe carefully in order to gather data c. Use scientific vocabulary to explain their observations and experiences h. Consider scientific models and applications of this models (including their limitations)</p> <p><u>Language Phase 4</u> Oral language—listening and speaking Visual language—viewing and presenting Written language—reading</p> <p><u>PSPE Phase 4</u> Identity Interactions</p> <p><u>Math Phase 4</u> Data handling</p> <p>Additional resources <i>Out of My Mind</i> <i>Alice in Wonderland</i> Journeys Seven Wonders You Can Visit on RAZ</p>	<p><u>Social Studies</u></p> <ul style="list-style-type: none"> reflect on his or her own strategies in dealing with situations of personal conflict. evaluate effectiveness of real-life conflict management (for example, research and analyze a global conflict situation) <p><u>Science</u></p> <ul style="list-style-type: none"> Understand what it means to be scientifically minded and the scientific method Investigate the ways materials can be changed <p><u>Language</u></p> <ul style="list-style-type: none"> Verbalize their thinking and explain their reasoning Paraphrase and summarize when communicating Distinguish between fact and opinion <p><u>PSPE Phase</u></p> <ul style="list-style-type: none"> Discuss ideas and ask questions to clarify meaning Reflect on the perspectives and ideas of others <p><u>Math Phase 4</u></p> <ul style="list-style-type: none"> design a survey and systematically collect, record, organize and display the data in a bar graph, circle graph, line graph