International School of Nanshan Shenzhen
Grade 4: Unit of Inquiry Summary 2019-2020

Dates:	Aug 26th - Oct. 11th	Oct. 14th - Nov. 29th	Dec. 2nd - Jan. 22nd	Feb. 10th - Mar. 20th	Mar. 23rd - May 8th	May 11th - Jun. 12th
Transdisciplinary Theme	Who We Are	How We Express Ourselves	Where We Are in Place and Time	How We Organize Ourselves	Sharing the Planet	How the World Works
Unit Title	Challenges	The Natural World is Awesome	Exploration	Crisis	Resources	Technology Rocks
Central Idea	Challenges can impact the way we make choices in the future.	People express appreciation for the natural world in many different ways.	Exploration leads to discoveries and new understandings.	Communities have developed ways of organizing themselves to respond to crisis.	People's use of resources impacts the environment.	Advancements in technologies allow us to understand our universe.
Lines of Inquiry (3-4)	• The misconceptions of easy success • Challenges we face as humans • The benefits of failure	•Aesthetics of the natural world •Celebration of the natural word •Natural world through the arts	•The meaning of exploration •Motivation for exploration •Impact of exploration	•Personal, local, and global crisis •Ways of preparing for and responding to crisis •The role of organizations during a crisis	•Finite and infinite resources •Environmental impact •Future implications of finite resources	(LOI will be determined by students)
Key Concepts (2-3)	Responsibility Connection Change	Form Perspective Connection	Form Causation Perspective	Function Causation Responsibility	Function Change Responsibility	(Student choice)
Related Concepts (3-4)	Identity Ownership Idealism Growth	Expression Natural Celebration Symmetry	Exploration Wealth Power Navigation	Communities Organization Response Natural Disasters	Consumption Resources Impact	(Student choice)
Skills	Self-Management Skills	Communication Skills	Research Skills	Thinking Skills	Social Skills	(Student choice)
Attitudes (2)	Independence Confidence	Appreciation Creativity	Cooperation Curiosity	Integrity Empathy	Commitment Respect	(Student choice)
Learner Profile Attributes (2)	Balanced Thinker	Communicator Open Minded	Inquirer Risk Taker	Reflective Caring	Knowledgeable Principled	(Student choice)
Subject Integration	Art, Music, PE & Mandarin	Art, Music, PE & Mandarin	Math (Place Value/Estimation) Art & Mandarin	Mandarin	Mandarin	Math (Data Analysis + Measurement)
Stand-alone Math	Number Sense (x and ÷)	Number Sense/Patterns (Fractions/Decimals)	Shape & Space (Geometry)	Measurement (Area, Perimeter, Vol.)	Patterns & Function	
Reading	Biography	Figurative Language	Fiction/Narrative	Informational	Opinion/Editorial/Bias	Non-fiction
Writing	Personal Narrative Figurative Language	Poetry	Realistic Fiction (On-demand)	Informational— Procedural, exposure to different paragraph types	Persuasive	Informational
Year-long stand-alone	Narrative Writing					

Grade 4 Learning Outcomes

	Who We Are	How We Express Ourselves	Where We Are in Place and Time	How We Organize Ourselves	Sharing the Planet	How the World Works
Math Scope and Sequence Outcomes (integrated into the UOI)			**NUMBER** **PYP Outcomes:** **Constructing** - model numbers to millions or beyond using the base 10 place value system (N4.1) **Transferring** - read, write, compare and order whole numbers up to millions or beyond (N4.12) **Applying** - use whole numbers up to millions or beyond in real-life situations (N4.21) **NB Outcomes:** - Represent and describe whole numbers to 1 000 000 (N1) - Use estimation strategies, including; front end rounding, compensation; compatible numbers in problem solving contexts (N2)			**DATA** **PYP Outcomes:** **Constructing** - understand that data can be collected, displayed and interpreted using simple graphs, for example, bar graphs, line graphs (DH3.1) - understand that one of the purposes of a database is to answer questions and to solve problems (DH3.4) **Transferring** - collect, display and interpret data using simple graphs, for example, bar graphs, line graphs (DH3.6) **Applying** - select appropriate graph forms to display data in pictographs or bar graphs (DH3.10) **NB Outcomes:** - Differentiate between first hand and second hand data (SP1) - Construct and interpret double bar graphs to draw conclusions (SP2) **MEASUREMENT** **PYP Outcomes:** **Applying:** - use timelines in units of inquiry and other real-life situations (M3.10)
Language Scope and Sequence Outcomes Listening & Speaking	**Phase Four Conceptual Understanding:** -Taking time to reflect on what we hear and say helps us to make informed judgments and form new opinions. **PYP Outcomes:**	**Phase Four Conceptual Understanding:** The grammatical structures of language enable members of a language community to communicate with each other. **PYP Outcomes:** - use a range of specific vocabulary in different	**PYP Outcomes:** **NB Outcomes:** - engage in and respond to oral presentations (e.g. Retell a story, sing a song) (SL2.4)			

	-verbalize their thinking and explain their reasoning -begin to paraphrase and summarize	situations, indicating an awareness that language is influenced by purpose audience and context (LS4. 10) - appreciate that language is not always used literally; understand and use the figurative language of their own culture (LS4.15) **NB Outcomes:** - engage in and respond to oral presentations (e.g. Retell a			
Language Scope and Sequence Outcomes Viewing & Presenting				**Phase Four Conceptual Understanding:** Interpreting visual texts involve making an informed judgement about the intention of the message. **PYP Outcomes:** - view, respond to and describe visual information communicating in oral, writing and visual form (VP4.1) - describe personal reactions to visual messages; reflect on why others may perceive the images differently (VP4.2) - recognize and name familiar visual texts and explain why they are or are not effective, for example, advertising, logos, labels, signs, billboards (VP4.3) - interpret visual cues in order to analyse and make inferences about the intention of the message (VP4.4) - design posters and charts, using shapes, colours, symbols, layout and fonts, to achieve particular effects; explain how the desired effect is achieved (VP4.5) - design posters and charts, using shapes, colours, symbols, layout and fonts, to achieve particular effects; explain how the desired effect is achieved (VP4.8) - prepare, individually or in collaboration, visual presentations using a range of media, including computer and	**Phase Four Conceptual Understanding:** Visual texts have the power to influence thinking and behavior. **PYP Outcomes:** - prepare, individually or in collaboration, visual presentations using a range of media, including computer and web-based applications (VP4. 10) - experience a range of different visual language formats; appreciate and describe why particular formats are selected to achieve particular events (VP4. 12) - observe and discuss the choice and composition of visual presentations and explain how they contribute to meaning and impact, for example, facial expressions, speech bubbles, word images to convey sound effects (VP4.13) - realize that visual presentations have been created to reach out to a particular audience and influence the audience in some way; discuss the effects used and how they might influence the audience (VP4.14) NB Outcomes	

				web-based applications (VP4.10) - discuss and explain visual images and effects using appropriate terminology, for example, image, symbol, graphics balance, techniques, composition (VP4.11) - experience a range of different visual language formats; appreciate and describe why particular formats are selected to achieve particular events (VP4.12) - observe and discuss the choice and composition of visual presentations and explain how they contribute to meaning and impact, for example, facial expressions, speech bubbles, word images to convey sound effects (VP4.13) - realize that visual presentations have been created to reach out to a particular audience and influence the audience in some way; discuss the effects used and how they might influence the audience (VP4.14) NB Outcomes		
Language Scope and Sequence Outcomes Reading	**PYP Outcomes:** -read a variety of books for pleasure, instruction and information; reflect regularly on reading and set future goals -understand that the internet must be used with the approval and supervision of a parent or teacher; read, understand and sign the school's cyber-safety policy.	**PYP Outcomes:** **NB Outcomes:** - describe, share, and discuss their personal reactions to texts (RV 6.1) **Reading Genre:** Poetry	**Phase Four Conceptual Understanding:** Reading and thinking work together to enable us to make meaning. **PYP Outcomes:** - understand and respond to the ideas, feelings and attitudes expressed in various texts, showing empathy for characters (R4.3) - use reference books, dictionaries, and computer and web-based applications with increasing independence and responsibility (R4.7) - as part of the inquiry process, work collaboratively with others to access, read,	**PYP Outcomes:** **NB Outcomes** **Reading Genre:** Non-Fiction	**Phase Four Conceptual Understanding:** Knowing what we aim, to achieve helps us to select useful reference material and conduct research. **PYP Outcomes:** - appreciate that writers plan and structure their stories to achieve particular effects; identify features that can be replicated when planning their own stories (R4.6) NB Outcomes **Reading Genre:** Non-Fiction/Informative	**PYP Outcomes:** **NB Outcomes** **Reading Genre:** Non-Fiction/Informative

		interpret and evaluate a range of source materials (R4.9) - identify relevant, reliable and useful information and decide on appropriate ways to use it (R4.10) - access information from a variety of texts both in print and online, for example, newspapers, magazines, journals, comics, graphic books, e-books, blogs, wikis (R4.11) - know when and how to use the internet and multimedia resources for research (R4.12) **NB Outcomes:** - answer, with assistance, their own and others' questions by seeking information from a variety of texts (RV 5.1) • Recognize the purpose of classification systems and basic reference material • Use a range of reference texts and a database or an electronic search to facilitate the selection process • Reflect on the process of generating and responding to their own and others' questions • Determine their own and community (class) needs of information **Reading Genre:** Drama			
Language Scope and Sequence Outcomes Writing	**PYP Outcomes:** - organize ideas in a logical sequence	**Phase Four Conceptual Understanding:** Writing and thinking work together to enable us to express ideas and convey meaning. **PYP Outcomes:** - write independently and with confidence, demonstrating a personal voice as a writer **NB Outcomes:** - experiment with language appropriate to audience,	**PYP Outcomes:** **NB Outcomes:** **Writing Form: Recount**	**PYP Outcomes:** **NB Outcomes:** **Writing Form: Descriptive**	**PYP Outcomes:** **NB Outcomes:** **Writing Form: Informative**

	purpose, and form, that enhances meaning and demonstrates imagination in writing and other ways of representing (WR 8.3) - demonstrate an awareness of purpose and audience (WR 9.2) **Writing Form: Poetry**					
Science Scope and Sequence Outcomes (integrated into the UOI)	**NB Outcomes:** **104-4** compare the results of their investigations to those of others and recognize results may vary **204-1** propose questions to investigate and practical problems to solve **204-8** identify appropriate tools, instruments, and materials to complete investigations **206-9** identify new questions or problems that arise from what was learned	**NB Outcomes:** **104-6** demonstrate that specific terminology is used in science and technology contexts **205-5** make observations and collect information relevant to a given question or problem **206-9** identify new questions or problems that arise from what was learned	**PYP Outcomes:** - demonstrate an understanding of other methods of navigation (for example, compasses, satellites.) -investigate and explain how stars are used for navigation **NB Outcomes:** **107-1** describe examples, in the home and at school, of tools, techniques, and materials that can be used to respond to their needs **107-5** provide examples of how science and technology have been used to solve problems in their community and region **204-8** identify appropriate tools, instruments, and materials to complete investigations **206-9** identify new questions or problems that arise from what was learned	**PYP Outcomes:** - explore health and safety issues facing children (for example, spread of disease, accidents, access to health care) **NB Outcomes:** **107-5** provide examples of how science and technology have been used to solve problems in their community and region **205-7** record observations using a single word, notes in point form, sentences, and simple diagrams and charts **206-9** identify new questions or problems that arise from what was learned	**PYP Outcomes:** - identify and describe different forms of energy - assess renewable and sustainable energy sources (for example, wind, solar, water) - examine ways in which the local community could be improved in relation to the conservation of energy - examine the impact of particular technologies on sustainability - recognize and report on the environmental impact of some manufacturing processes - explain how human activities can have positive or adverse effects on local and other environments (for example, waste disposal, agriculture, industry) **NB Outcomes:** - relate habitat loss to the endangerment or extinction of plans and animals (301-2) - describe how rocks and minerals are used (107-1) **104-6** demonstrate that specific terminology is used in science and technology contexts **108-6** identify their own and their family's impact on natural resources **108-3** describe how personal actions help conserve natural resources and care for living things and their habitats	**PYP Outcomes:** - identify regular and irregular events in time and space that occur in the solar system - examine the impact of events that occur in the solar system on Earth - investigate technology developments - examine the impact of particular technologies on sustainability - suggest areas for future technological advances **NB Outcomes:** **104-6** demonstrate that specific terminology is used in science and technology contexts **106-4** describe instances in which scientific ideas and discoveries have led to new inventions and applications **108-1** identify positive and negative effects of familiar technologies **205-5** make observations and collect information relevant to a given question or problem **206-9** identify new questions or problems that arise from what was learned

| | | | | | | 206-9 identify new questions or problems that arise from what was learned | |

Social Studies Scope and Sequence Outcomes	**PYP Outcomes:** - suggest ways in which an individual can overcome adversity - identify and describe ways that family, groups and community influences personal choices - reflect on his or her own misconceptions about people (for example, relating to age, race, gender, disability). - explore how families influence the individual - reflect upon how beliefs affect the individual and society - explore how cultures may have certain expectations on how to act	utcomes: t on the influence of the arts chnology throughout history in presentation of culture. tcomes: ine the relationship between s and the physical environment	**PYP Outcomes:** **-** identify the reasons why people feel compelled to explore the unknown - investigate the impact of exploration on people in the past, present and future - analyse how available technology influences people's abilities to navigate - demonstrate an understanding of methods of navigation (for example, stars, compasses, satellites) **NB Outcomes:** **-** explore the concept of exploration (4.1.1) - examine the stories of various explorers of land, ocean, space and ideas (4.2.1) - analyze factors that motivate exploration (4.2.2) - evaluate the impact of exploration over time (4.2.3)	**PYP Outcomes:** - analyse ways that people adapt when they move from one place to another - assess settlement patterns and population distribution in selected regions, areas or countries - analyse how individuals' and communities' needs and/or wants are met - describe how organizations and individuals meet the needs and wants of children	**PYP Outcomes:** - explain how supply and demand are affected by population and the availability of resources - explain how human activities can have positive or adverse effects on local and other environments (for example, agriculture, industry) - examine the impact of particular technologies on sustainability **NB Outcomes:** - examine the relationship between humans and the physical environment (4.3.3)	**PYP Outcomes:** - analyse information about past and technological advances and societal systems - predict societal and technological changes in the future - identify and describe examples in which technology has changed the lives of people - describe the connection between human needs and wants and technological development - reflect on the role of technology in his or her own life
PSPE Scope and Sequence (integrated into the UOI)	**PYP Outcomes** **Identity:** - recognize how a person's identity affects how they are perceived by others and influences interactions (I4.3)	**PYP Outcomes** **Phase Four Conceptual Understanding:** Complexity and style adds aesthetic value to a performance. **Active Living:** - introduce greater complexity and refine movements to improve the quality of a movement sequence (AL4.6)	**PYP Outcomes** **Identity:** **Phase Four Conceptual Understanding:** Stereotyping and prejudging can lead to misconceptions and conflict.	**PYP Outcomes** **Identity:** **Phase Four Conceptual Understanding:** Coping with situations of change, challenge and adversity develops our resilience.	**PYP Outcomes:** **Phase Four Conceptual Understanding:** People are interdependent with, and have a custodial responsibility towards, the environment in which they live. People have a responsibility to repair and restore relationships and environments where harm has taken place. **Interactions:** - take action to support reparation in relationships and in the environment when harm has been done (Int.4.5)	

Grade 4 Year-Long Learning Outcomes

	Listening and Speaking	Viewing and Presenting	Reading	Writing
Year-Round Language Outcomes	- listen appreciatively and responsively, presenting their own point of view and respecting the views of others (LS4.1) - listen for specific purpose in a variety of situations (LS4.2) - identify and expand on main ideas in familiar oral texts (LS4.3) - listen reflectively to stories read aloud in order to identify story structures and ideas (LS4.4) - understand that ideas and opinions can be generated, developed and presented through talk; they work in pairs and groups to develop oral presentation (LS4.5) - argue persuasively and defend a point of view (LS4.6) - explain and discuss their own writing with peers and adults (LS4.7) - begin to paraphrase and summarize (LS4.8) - organize thoughts and feelings before speaking (LS4.9) - use a range of specific vocabulary in different situations, indicating an awareness that language is influenced by purpose audience and context (LS4.10) - appreciate that language is not always used literally; understand and use the figurative language of their own culture (LS4.15) - realize that grammatical structures can be irregular and begin to use them appropriately and consistently (LS4.11) - use oral language appropriately, confidently and with increasing accuracy (LS4.12) - verbalize their thinking and explain their reasoning (LS4.13) - recognize that different forms of grammar are used in different contexts (LS4.14) **New Brunswick Outcomes:** - explore and discuss their thoughts, ideas, and experiences and consider those of their peers (SL 1.1) - ask and respond to questions to clarify information and explore solutions to problems (SL 1.2) - explain personal opinions and respond to the questions and opinions of others (SL 1.3) - listen to others' ideas or opinions expressed (SL 1.4) - contribute to conversations small-group and whole-group discussion, show an awareness of when to speak and when to listen (SL 2.1) - use word choice, tone of voice, facial expressions, and gestures appropriate to the speaking occasion (SL 2.2) - give and follow instructions and respond to questions and directions (SL 2.3) - engage in and respond to oral presentations (e.g. Retell a story, sing a song) (SL2.4) - show basic courtesies of conversation in group interactions (SL 3.1)	- view, respond to and describe visual information communicating in oral, writing and visual form (VP4.1) - describe personal reactions to visual messages; reflect on why others may perceive the images differently (VP4.2) - understand and explain how visual effects can be used to reflect a particular context (VP4.3) - recognize and name familiar visual texts and explain why they are or are not effective, for example, advertising, logos, labels, signs, billboards (VP4.4) - interpret visual cues in order to analyse and make inferences about the intention of the message (VP4.5) explain how relevant personal experiences can add to the meaning of a selected film/movie; write and illustrate a personal response (VP4.6) - identify aspects of body language in a dramatic presentation and explain how they are used to convey the mood and personal traits of characters (VP4.7) - design posters and charts, using shapes, colours, symbols, layout and fonts, to achieve particular effects; explain how the desired effect is achieved (VP4.8) - prepare, individually or in collaboration, visual presentations using a range of media, including computer and web-based applications (VP4. 10) - discuss and explain visual images and effects using appropriate terminology, for example, image, symbol, graphics balance, techniques, composition (VP4.11) - experience a range of different visual language formats; appreciate and describe why particular formats are selected to achieve particular events (VP4. 12) - observe and discuss the choice and composition of visual presentations and explain how they contribute to meaning and impact, for example, facial expressions, speech bubbles, word images to convey sound effects (VP4.13) - realize that visual presentations have been created to reach out to a particular audience and influence the audience in some way; discuss the effects used and how they might influence the audience (VP4.14)	==- read a variety of books for pleasure, instruction and information; reflect regularly on reading and set future goals (R4.1)== - understand and respond to the ideas, feelings and attitudes expressed in various texts, showing empathy for characters (R4.3) ==- recognize the author's purpose, for example, to inform, entertain persuade, instruct (R4.4)== - understand that stories have a plot; identify the main idea; discuss and outline the sequence of events leading to the final outcome (R4.5) - use reference books, dictionaries, and computer and web-based applications with increasing independence and responsibility (R4.7) ==- know how to skim and scan texts to decide whether they will be useful, before attempting to read in detail (R4.8)== - as part of the inquiry process, work collaboratively with others to access, read, interpret and evaluate a range of source materials (R4.9) - identify relevant, reliable and useful information and decide on appropriate ways to use it (R4.10) - access information from a variety of texts both in print and online, for example, newspapers, magazines, journals, comics, graphic books, e-books, blogs, wikis (R4.11) - know when and how to use the internet and multimedia resources for research (R4.12) - understand that the internet must be used with the approval and supervision of a parent or teacher; read, understand and sign the school's cyber-safety policy (R4.13) **New Brunswick Outcomes:** ==- select with growing independence, texts appropriate to their interests and learning needs (RV 4.1)== - use pictures and illustrations, word structures, and text features (e.g., table of contents, headings and subheadings, glossaries, structures of narrative and expository texts, key ideas, margin notes) to locate topics and obtain or verify their understanding of information (RV 4.1) - read widely and experience a variety of children's literature with an emphasis in genre and authors (RV 4.2)	- write for a range of purposes, both creative and informative, using different types of structures and styles according to the purpose of the writing (W4.2) - show awareness of different audiences and adapt writing appropriately (W4.3) - select vocabulary and supporting details to achieve desired effects (W4.4) - organize ideas in a logical sequence (W4.5) - reread, edit and revise to improve their own writing, for example, content, language, organization (W4.6) - respond to the writing of others sensitively (W4.7) - use appropriate punctuation to support meaning (W4.8) - use knowledge of written code patterns to accurately spell high-frequency and familiar words (W4.9) - use a range of strategies to record words/ideas of increasing complexity (W4.10) - realize that writers ask questions of themselves and identify ways to improve their writing, for example, "Is this what I meant to say?", "Is it interesting/relevant?" (W4.11) - check punctuation, variety of sentence starters, spelling, presentation (W4.12) - use a dictionary and thesaurus to check accuracy, broaden vocabulary and enrich their writing (W4.13) - work cooperatively with a partner to discuss and improve each other's work, taking the roles of authors and editors (W4.14) - work independently, to produce written work that is legible and well-presented, written either by hand or in digital format (W4.15) - write independently and with confidence, demonstrating a personal voice as a writer **New Brunswick Outcomes:** - use strategies in writing and other ways of representing to; (W 8.1) • formulate questions • generate topics of personal interest and importance to express feelings, opinions, and imaginative ideas

	- identify examples of prejudice and stereotyping in oral language, and use language that shows respect for all people (SL 3.2) - show an awareness of the kinds of language appropriate to different situations and audiences (SL 3.3)		<mark>- use and integrate the pragmatic, semantic, syntactic and graphophonic cueing systems (including context cues; word order; suffixes, compound words, contractions, and singular and plural words) and a variety of strategies to construct meaning (RV 4.4)</mark> - describe their own processes and strategies in reading and viewing (RV 4.5) - appreciate that writers plan and structure their stories to achieve particular effects; identify features that can be replicated when planning their own stories (R4.6) - answer, with assistance, their own and others' questions by seeking information from a variety of texts (RV 5.1) • Recognize the purpose of classification systems and basic reference material • Use a range of reference texts and a database or an electronic search to facilitate the selection process • Reflect on the process of generating and responding to their own and others' questions • Determine their own and community (class) needs of information - describe, share, and discuss their personal reactions to texts (RV 6.1) - give reasons for their opinions about texts and types of texts and the work of authors and illustrators (RV 6.2) - use their background knowledge to question information presented in print and visual texts (RV 7.1) - identify conventions and characteristics of different types of print and media texts that help them understand what they read and view (RV 7.2) - respond critically to texts by; (RV 7.3) • <mark>Asking questions and formulating understandings</mark> • <mark>Discussing texts from the perspective of their own experiences</mark> • Identifying instances where language is being used, not only to entertain, but to manipulate persuade or control them • Identifying instances of prejudice and stereotyping	• discover and express personal attitudes, feelings and opinions • compare their own thoughts and beliefs to those of others • describe feelings reactions, values and attitudes • record experiences • formulate goals for learning • practice strategies for monitoring their own learning - experiment with different ways of making their own notes (W 8.2) - experiment with language appropriate to audience, purpose, and form, that enhances meaning and demonstrates imagination in writing and other ways of representing (W 8.3) - create written and media texts, collaboratively and independently, in different modes and in a variety of forms • recognize that particular forms require the use of specific features, structures, and patterns (W 9.1) - demonstrate an awareness of purpose and audience (W 9.2) - invite responses to early drafts of their writing/media productions • use audience reaction to help shape subsequent drafts (W 9.3) - develop a range of prewriting, drafting, revising, editing/proofreading, and presentation strategies (W 10.1) - demonstrate an understanding of many conventions of written language in final products (W 10.2) • correctly spell many familiar and commonly used words • demonstrate an increasing understanding of punctuation, capitalization, and paragraphing • demonstrate a growing awareness of appropriate syntax • use references while editing - use technology with increasing proficiency in writing and other forms of representing (W 10.3) - demonstrate a commitment to shaping pieces of writing and other presentations through stages of development (W 10.4) - select, organize, and combine relevant information from two or more sources to

	NUMBERS	DATA ANAYLSIS	MEASUREMENT	PATTERN & FUNCTION	SHAPE & SPACE
Year-Round Math Outcomes	**PYP Outcomes:** **Constructing** - model equivalent fractions (N3.2) - use the language of fractions, for example, numerator, denominator (N3.3) - model decimal fractions to hundredths or beyond (N3.4) - model multiplication and division of whole numbers (N3.5) - use the language of multiplication and division, for example, factor, multiple product, quotient, prime numbers, composite numbers (N3.6) - model addition and subtraction of fractions with related/unlike denominators (N3.7) - model addition and subtraction of decimals (N3.8) - model numbers to millions or beyond using the base 10 place value system (N4.1) - model decimal fractions to thousands or beyond (N4.7) **Transferring** - develop strategies for memorizing addition, subtraction, multiplication, and division number facts (N3.10) - read, write, compare and order fractions (N3.11) - read and write equivalent fractions (N3.12) - read, write, compare and order fractions to hundredths or beyond (N3.13) - describe mental and written strategies for multiplication and division (N3.14) - read, write, compare and order whole numbers up to millions or beyond (N4.12) - read, write, compare and order decimal fractions to thousandths or beyond (N4.18) **Applying** - use fast recall or multiplication and division number facts in real-life situations (N3.16) - use decimal fractions in real-life situations (N3.17)	**PYP Outcomes:** **Constructing** - understand that probability is based on experimental events (DH3.5) **Transferring** - use tree diagrams to express probability using simple fractions (DH3.9) **Applying** - express probability using simple fractions (DH3.14) **NB Outcomes** - Describe the likelihood of a single outcomes occurring using words, such as; impossible, possible, certain (SP3) - Compare the likelihood of two possible outcomes occurring using words, such as; less likely; equally likely; more likely (SP4)	**Phase Three Conceptual Understandings:** Objects and events have attributes that can be measured using appropriate tools. Relationships exist between standard units that measure the same attributes. **PYP Outcomes:** **Constructing:** - understand the use of standard units to measure perimeter, area and volume (M3.1) - understand that measures can fall between numbers on a measurement scale, for example, 3.5 kg, between 4cm and 5cm (M3.2) - understand relationships between units, for example, meters, centimeters and millimeters (M3.3) **Transferring** - estimate and measure using standard units of measurement: perimeter, area and volume (M3.5) - describe measures that fall between numbers on a scale (M3.6) - read and write digital and analogue time on a 12-hour and 24-hour clock (M3.7) **Applying** - use standard units of measurement to solve problems in real-life situations involving perimeter, area and volume (M3.8) - select appropriate tools and units of measurement (M3.9) **NB Outcomes:**	**Phase Three Conceptual Understandings:** By analyzing patterns and identifying rules for patterns, it is possible to make predictions. **PYP Outcomes:** **Constructing** - understand that patterns can be analysed and rules identified (PF3.1) **Transferring** - describe the rule for a pattern in a variety of ways (PF3.5) - represent rules for patterns using words, symbols and tables (PF3.6) **Applying** - select appropriate methods for representing patterns, for example using words, symbols and tables (PF3.8) - use number patterns to make predictions and solve problems (PF3.9) **NB Outcomes:** - Determine the pattern rule to make predictions about subsequent terms (elements) (PR1) - Solve problems involving single-variable, one-step equations with whole umber coefficients and whole number solutions (PR2)	**Phase Three Conceptual Understandings:** Changing the position of a shape does not alter its properties. Shapes can be transformed in different ways. Geometric shapes and vocabulary are useful for representing and describing objects and events in real-world situations. **PYP Outcomes:** **Constructing** - understand the common language used to describe shapes (SS3.1) - understand the properties of regular and irregular polygons (SS3.2) - understand congruent or similar shapes (SS3.3) - understand that lines and axes of reflective and rotational symmetry assist with the construction of shapes (SS3.4) **Transferring** - sort, describe and model regular and irregular polygons (SS3.8) - describe and model congruency and similarity in 2D shapes (SS3.9) **Applying** - analyse and describe 2D and 3D shapes, including regular and irregular polygons, using geometrical vocabulary (SS3.13) - identify, describe and model congruency and similarity in 2D shapes (SS3.14) - apply knowledge of transformations to problem-solving situations (SS3.16)

	- use mental and written strategies for multiplication and division in real-life situations (N3.18) - select an efficient method for solving a problem, for example, mental estimation, mental or written strategies, or by using a calculator (N3.19) - use strategies to evaluate the reasonableness of answers (N3.20) - add and subtract fractions with related denominators in real-life situations (N3.21) - add and subtract decimals in real-life situations, including money (N3.22) - estimate sum, difference, product and quotient in real-life situations, including fractions and decimals (N3.23) - use whole numbers up to millions or beyond in real-life situations (N4.21) **New Brunswick Outcomes:** - represent and describe whole numbers to 1 000 000 (N1) - use estimation strategies, including; (in problem-solving contexts) • Front end rounding • Compensation • Compatible numbers (N2) - apply mental mathematics strategies and number properties, such as; (to determine answers for basic multiplication facts to 81 and related division facts) • Skip counting from a known fact • Using doubling or halving • Using patterns in the 9s facts • Using repeated doubling or halving (N3) - apply mental mathematics strategies for multiplication such as; • Annexing then adding zero • Halving and doubling • Using the distributive property (N4) - demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems (N5) - demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems (N6) - demonstrate an understanding of fractions by using concrete and pictorial representations to; • Create sets of equivalent fractions		- Design and construct different rectangles given either perimeter or area, or both (whole numbers) and draw conclusions (SS1) - Demonstrate an understanding of measuring length (mm and km) (SS2) - Demonstrate an understanding of volume by; selecting and justifying referents for cm3 or m3 units; estimating volume by using referents for cm3 or m3; measuring and recording volume (cm3 or m3); constructing rectangular prisms for a given volume (SS3) - Demonstrate an understanding of capacity by; describing the relationships between mL and L; selecting and justifying referents for mL or L units; estimating capacity by using referents for mL or L; measuring and recording capacity (mL or L) (SS4)		**NB Outcomes:** - Describe and provide examples of edges and faces of 3D objects and sides of 2D shapes that are; parallel; intersecting; perpendicular; vertical; horizontal (SS5) - Identify and sort quadrilaterals, including; rectangles, squares, trapezoids, parallelograms, rhombuses according to their attributes (SS6) - Perform a single transformation (translation, rotation or reflection) of a 2D shape, (with or without technology) and draw and describe the image (SS7) - Identify a single transformation including translation, a rotation and a reflection of 2D shapes (SS8)

	• Compare fractions with like and unlike denominators (N7) - describe and represent decimals (tenth, hundredths, thousandths) concretely, pictorially and symbolically (N8) - relate decimals to fractions (to thousandths) (N9) - compare and order decimals (to thousandths) by using; • Benchmarks • Place value • Equivalent decimals (N10) - demonstrate an understanding of addition and subtraction of decimals (limited to thousandths) (N11)	

	Science	Observe carefully in order to gather data
		Use a variety of instruments and tools to measure data accurately
		Use scientific vocabulary to explain their observations and experiences
		Identify or generate a question or problem to be explored
		Plan and carry out systematic investigations, manipulating variables as necessary
		Make and test predictions
		Interpret and evaluate data gathered in order to draw conclusions
		Consider scientific models and application of these models (including their limitations)
Year-Round Skills	**Social Studies**	Formulate and ask questions about the past, the future, places and society
		Use and analyse evidence from a variety of historical, geographical and societal sources
		Orientate in relation to place and time
		Identify roles, rights and responsibilities in society

PYP Transdisciplinary Skills	**Social Skills**	**Communication Skills**	**Research Skills**	**Thinking Skills**	**Self-Management Skills**
	Accepting responsibility Respecting others Cooperating Resolving conflict Group decision-making Adopting a variety of group roles	Listening Speaking Reading Viewing Presenting Non-verbal communication	Formulating questions Observing Planning Collecting data Recording data Organizing data Interpreting data Presenting research findings	Acquisition of knowledge Comprehension Application Analysis Synthesis Evaluation Dialectical thought Metacognition	Gross motor skills Fine motor skills Spatial awareness Organization Time management Safety Healthy lifestyle Codes of behavior Informed choices