.

Upper Primary Curriculum Guide

SOMERSFIELD
Montessori & Middle Years Programme ACADEMY

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Profile of a Somersfield Learner

Somersfield Academy encourages students to achieve high academic standards and to become peaceful, global citizens who are curious, life-long learners. These goals are clearly reflected in the principles of the Montessori and IB Programmes, and in the school's 'Promise' and 'Core Values'. Our teachers inspire students to strive to be:

Inquirers	Students develop their natural curiosity.
Courageous	Students use courage and take risks when confronted with new and difficult situations and face obstacles with assertive communication.
Knowledgeable	Students explore concepts, ideas and issues that have both a local and global significance.
Imaginative	Students use their imagination for the construction of knowledge.
Thinkers	Students think critically to engage themselves in solving complex problems.
Communicators	Students express themselves and their knowledge through various modes of communication.
Peacemakers	Students learn to be open-minded, to accept and appreciate cultural differences, and to develop a sense of peace and harmony.
Principled	Students act honestly and with a strong sense of fairness, justice, and respect for the dignity of the individual, groups, and communities.
Responsible	Students are given freedom to plan their work and to choose appropriate and challenging tasks.
Compassionate	Students show respect, care, and humility towards the needs of others and to all living things.
Reflective	Students give consideration to their own learning and experience.
Balanced	Students understand the importance of intellectual, physical and emotional balance to achieve personal well-being.

What is the Upper Primary Programme?

In P5 and P6, the programme utilizes the principles of the International Baccalaureate Programme (IB) in preparing students for the Middle Years Programme of the IB (MYP). The 'Profile of the Somersfield's Learner' is central to the work of students, teachers and the school. It motivates students to become inquirers, courageous, knowledgeable about content and concepts; imaginative, thinkers, communicators, peacemakers, principled in their actions; responsible, compassionate, reflective and balanced.

The programme is organised in traditional subjects but with the additional goal of promoting students' understanding of the connections between content areas. Students engage in a two - year curricular cycle in order to provide continuity of student - teacher relationships, attention to individual differences, and the time and space to implement a rich and rigorous academic programme.

In order to ensure that each student is well prepared for the challenging and supportive IB Middle Years Programme in the Secondary Division, Somersfield maps and benchmarks the Upper Primary curriculum against the expectations of the Ontario Ministry of Education and those of our own.

At the end of the Primary Years, students will demonstrate significant competence both in their cognitive development and social skills. They possess a strong foundation of higher level skills that allows them to find information, and to apply abstract thinking and imagination to continue to learn about their world and apply their thinking to real life.

Students leaving the Primary Division, most importantly, value community and are committed to further developing their social, emotional and ethical skills for making a positive difference in their school, community, and the world.

What is an example of a regular school day?

Sample Daily Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
8:20 - 8:30	8:20 - 8:45 Circle Time	Attendance in Homeroom	Attendance in Homeroom	Attendance in Homeroom	Attendance in Homeroom
8:30 - 9:20	8:45 - 9:20 Math	Math	Math	Math	Math
9:20 - 10:10	French	Math	Language Arts	Language Arts	Language Arts
10:10 - 10:25	Snack	Snack	Snack	Snack	Snack
10:25 - 10:45	10:25 - 11:15 Innovations Lab (Science)	Language Arts	Language Arts	Language Arts	10:25 - 11:15 Innovations Lab (Science)
10:45 - 11:45	Language (Spelling-Working with Words)	Music	French	Music	11:10-11:45 Math
11:45 - 12:45	Recess and Lunch	Recess and Lunch	Recess and Lunch	Recess and Lunch	Recess and Lunch
12:45 - 1:00	Silent Reading	Silent Reading	Silent Reading	Silent Reading	Silent Reading
1:00 - 2:00	Culture	Culture	Library	Culture	Art
2:00 - 3:00	Language Arts Readers' Theatre	Physical Ed.	Innovations	Physical Ed.	Language Arts (Working with Words)
3:00 - 3:15	Agenda Check & Notices	Agenda Check & Notices	Agenda Check & Notices	Agenda Check & Notices	Agenda Check & Notices

How are students assessed?

Our teachers guide the children in their learning, establishing goals based on the curricular framework, and a child's interest and readiness in learning specific concepts.

Teachers assess the children's understanding of the various concepts taught through daily observations, open-ended questions and a review of the actual work the children produce. If a child has not understood a concept the teachers may reintroduce a lesson using a different approach, ask questions to help guide awareness and provide opportunities for additional practise and repetition. Assessment is a process which is an integral part of instruction as teachers respond to individual students.

If the teachers determine a child is exceeding academic expectations, or struggling academically or behaviourally, they enter discussions with the Learning Resource Coordinator who, along with the teachers, determine if the student requires additional enrichment, a formal assessment, or a specific intervention. Parents are always a part of the discussions when determining a child's needs.

For further information on assessment procedures, please refer to the 'Student Support Services' section of the *Parent Student Handbook.*

Standardised Testing

Somersfield Academy uses the Canadian Achievement Test (CAT 4) to provide an external resource in assessing progress in overall skill development. It is given to P5 and P6 students each June. The CAT is a standardised test series designed to measure achievement in basic skills. These tests measures achievement in: Reading, Language, Mathematics, Word Analysis, Vocabulary, Spelling/Diction, Language/Writing Conventions, Computations and Numerical Estimations**.**

The tests are given to establish benchmarks in basic skill achievement and assess growth and progress over time, to provide diagnostic information to help identify individual student strengths and instructional needs, and to obtain information for instructional planning in September.

What about grading and reporting?

The academic year is divided into 2 semesters with formal reports being prepared and sent home as follows:

Semester	Grade Reports	General Reporting Period
Semester 1	End of Semester Report 1	September - December
Semester 2	End of Semester Report 2	January - June

PROGRESS UPDATES

Parents are updated on the progress of their children at the Parent/Teacher Conferences

SEMESTER REPORTS

There are two end of semester reports which are uploaded into the Parent/Student/Teacher Portals. These reports provide an in-depth assessment of a student's progress by both the homeroom and specialist teachers.

What are the home learning requirements?

Home learning is intended to support the growth and development of children within the context of our rich curriculum. It is our goal to allow the interest of the children to come alive through actively participating in the world and exploring their own interests. It is designed to expand the creative and integrative work that children do in the classroom and should augment and amplify the curiosity and exploration of the child.

Home learning should fall into two classes:

1 - Work in which additional repetition and practice will aid fluency (reading and math facts).

2–Work or activities that cannot be done in the school setting.

Home learning should establish a healthy work habit outside of the classroom environment by fostering each child's innate desire to learn, and to be an active participant within their family and culture. It is a vital link between the classroom and home environments and a catalyst to growing into a member of the world culture.

Home Learning Plan:

1. **Home learning is a weekly expectation**
   All home learning activities are due back into school as indicated by each classroom teacher. During the week, students will spend time sharing or going over activities that they have completed. This sharing could be an oral statement/presentation or a written report/project.

   There are three forms of Home learning that we encourage for primary students.
   ✓Reading and language activities
   ✓Math activities
   ✓Other activities

2. **Reading and language activities**
   Reading and language continue to be critical at the primary level. Continue to talk with your child every day, ideally for at least 20 minutes. Encourage your child in conversation, where both of you take turns speaking. Talk about grocery shopping, events in your life, what you have been reading, where things come from, the weather, friends, sports, music, local and world events. Other language activities include visiting the library, practicing a foreign language, memorizing a poem and word games.

   Spelling:
   Students participate in direct spelling instruction each week. Activities are completed as part of the home learning routine and are due back on the assigned date as indicated by your classroom

teacher. Students work through a spelling workbook and go through a series of carefully constructed activities that provide opportunities to use the list words in real life context. The goal is application of rules and vocabulary growth, not memorization of list words.

Reading:

Learning to read is one of the most important skills your child will develop over the next few years. The more support and encouragement that you can offer your child, the more likely that he or she will progress with enthusiasm and ease. Read together with your children for at least 20 minutes a day at lower primary, 25 minutes for P5 and 30 minutes for P6. Some of this time should be you reading to them, no matter how good the children are at independent reading.

In Upper Primary we use a series of carefully chosen novel study books that are part of the literacy circle within each class. Along with each independent book that students choose, these are used to build comprehension and vocabulary skills. Upper Primary Students receive their first student agenda (which is a kind of student diary). This agenda becomes a critical part in a student's learning how to organise themselves, and thus their learning and planning. The agenda at the P5 and P6 level becomes an important tool, and when used effectively can be a critical factor in the student's success. The agenda is also an effective and useful two-way communication tool for teachers and parents.

3. **Mathematics Activities**

Your classroom teacher may periodically send home a math sheet for practice. These will be prepared by the teacher and only reflect what your child has been working on in class. In addition, a weekly assignment may be sent home using our new on-line platform "Front Row Math". Each student will be given the student login information and teachers will receive weekly updates on student progress and activity completion.

4. **Other activities**

Involve your children as much as possible in daily living task. Try to set up the activity so that they can be part of it. Also, a regular schedule of chores or duties is helpful. Other activities such as visiting the museum, attending a cultural event, participating in scouts, cooking, arranging flowers, "Practical Life" activities, practicing music, visiting old towns, etc.

5. **Time Expectation**

We strongly encourage a minimum of 20 minutes per day on language activities.
We also encourage a minimum of 60 minutes a week involved in math and other activities. Spreading this out over the entire week makes the activities manageable. Your child's teacher will periodically conference with your child regarding home learning activities. These conferences will cover such areas as choice of work, accomplishments, goals, etc.

What school resources are available to support students in their learning?

Computers and Technology

Students in P5 and P6 make weekly visits to the computer lab to do research for class projects as well as for technology classes to develop their IT skills. There are computers available in every classroom and all teachers use smart boards as a teaching tool.

Library

The Margaret Hallett Library is open for P5 and P6 students during the lunch hour. Students in P5 and P6 may visit the library between 11:45 am and 12:15 pm. They may also use the library for research purposes throughout the day, with their teacher's permission. Students may use the computers for school work only, and the Librarian is available to support them in their work.

Neither food nor drinks of any kind are permitted in the library. Students are expected to behave in a quiet and studious manner while visiting the library.

Subject Descriptions

Language Arts

The Language curriculum is based on the belief that literacy is critical to responsible and productive citizenship. The curriculum is designed to provide students with the knowledge and skills that they need to achieve this goal. It aims to help students become successful language learners, who:

- understand that language learning is a necessary, life-enhancing, reflective process; communicate - that is, read, listen, view, speak, write, and represent - effectively and with confidence;
- make meaningful connections between themselves, what they encounter in texts, and the world around them;
- think critically;
- understand that all texts advance a particular point of view that must be recognised, questioned, assessed, and evaluated;
- appreciate the cultural impact and aesthetic power of texts;
- use language to interact and connect with individuals and communities, for personal growth, and for active participation as world citizens.

Strands in the Language Curriculum

The expectations in the Language curriculum are organised into four strands: Oral Communication, Reading, Writing, and Media Literacy. The programme is designed to develop a range of essential skills in these four interrelated areas, built on a solid foundation of knowledge of the conventions of standard English and incorporating the use of analytical, critical, and metacognitive thinking skills. At each grade level, the units planned by the teachers have increasingly demanding expectations based on the overarching principles in each of the four areas of literacy.

Oral Communication

Oral communication skills are fundamental to the development of literacy and essential for thinking and learning. Through talk, students not only communicate information but also explore and come to understand ideas and concepts; identify and solve problems; organise their experience and knowledge; and express and clarify their thoughts, feelings, and opinions. Listening and speaking skills are essential for social interaction at home, at school, and in the community.

Reading

The Reading curriculum focuses on developing the knowledge and skills that will enable students to become effective readers. An effective reader is one who not only grasps the ideas communicated in a text but is able to apply them in new contexts. Comprehension strategies include predicting, visualising, questioning, drawing inferences, identifying main ideas, summarising, and monitoring and revising comprehension. After reading, students may analyse, synthesise, make connections, evaluate, and use other critical and creative thinking skills to achieve a deeper understanding of the material they have read.

Writing

Writing provides students with powerful opportunities to learn about themselves and their connections to the world. Through writing, students organise their thoughts, remember important information, solve problems, reflect on a widening range of perspectives, and learn how to communicate effectively for specific purposes and audiences. They find their voice and have opportunities to explore other voices. By putting their thoughts into words and supporting the words with visual images in a range of media, students acquire knowledge and deepen their understanding of the content in all school subjects as well, as to better understand their own thoughts and feelings and the events in their lives.

Media Literacy

Whereas traditional literacy may be seen to focus primarily on the understanding of the word, media literacy focuses on the construction of meaning through the combination of several media "languages" - images, sounds, graphics, and words. Most media texts use words, graphics, sounds, and/or images, in print, oral, visual, or electronic form, to communicate information and ideas to their audience.

Language Arts - P5

Oral Communication

Overall Expectations

By the end of P5, students will:

- listen in order to understand and respond appropriately in a variety of situations for a variety of purposes;
- use speaking skills and strategies appropriately to communicate with different audiences for a variety of purposes;
- reflect on and identify their strengths as listeners and speakers, areas for improvement, and the strategies they found most helpful in oral communication situations.

Reading

Overall Expectations

By the end of P5, students will:

- read and demonstrate an understanding of a variety of literary, graphic, and informational texts, using a range of strategies to construct meaning;
- recognise a variety of text forms, text features, and stylistic elements and demonstrate understanding of how they help communicate meaning;
- use knowledge of words and cueing systems to read fluently;
- reflect on and identify their strengths as readers, areas for improvement, and the strategies they found most helpful before, during, and after reading.

Writing

Overall Expectations

By the end of P5, students will:

- generate, gather, and organise ideas and information to write for an intended purpose and audience;
- draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience;
- use editing, proofreading, and publishing skills and strategies, and knowledge of language conventions, to correct errors, refine expression, and present their work;
- reflect on and identify their strengths as writers, areas for improvement, and the strategies they found most helpful at different stages in the writing process.

Media Literacy

Overall Expectations

By the end of P5, students will:

- demonstrate an understanding of a variety of media texts;
- identify some media forms and explain how the conventions and techniques associated with them are used to create meaning;
- create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques;
- reflect on and identify their strengths as media interpreters and creators, areas for improvement, and the strategies they found most helpful in understanding and creating media texts.

Language Arts – P6

Oral Communication

Overall Expectations

By the end of P6, students will:

- listen in order to understand and respond appropriately in a variety of situations for a variety of purposes;
- use speaking skills and strategies appropriately to communicate with different audiences for a variety of purposes;
- reflect on and identify their strengths as listeners and speakers, areas for improvement, and the strategies they found most helpful in oral communication situations.

Reading

Overall Expectations

By the end of P6, students will:

- read and demonstrate an understanding of a variety of literary, graphic, and informational texts, using a range of strategies to construct meaning;
- recognise a variety of text forms, text features, and stylistic elements and demonstrate understanding of how they help communicate meaning;
- use knowledge of words and cueing systems to read fluently;
- reflect on and identify their strengths as readers, areas for improvement, and the strategies they found most helpful before, during, and after reading.

Writing

Overall Expectations

By the end of P6, students will:

- generate, gather, and organise ideas and information to write for an intended purpose and audience;
- draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience;
- use editing, proofreading, and publishing skills and strategies, and knowledge of language conventions, to correct errors, refine expression, and present their work effectively;
- reflect on and identify their strengths as writers, areas for improvement, and the strategies they found most helpful at different stages in the writing process.

Media Literacy

Overall Expectations

By the end of P6, students will:

- demonstrate an understanding of a variety of media texts;
- identify some media forms and explain how the conventions and techniques associated with them are used to create meaning;
- create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques;
- reflect on and identify their strengths as media interpreters and creators, areas for improvement, and the strategies they found most helpful in understanding and creating media texts.

Mathematics

The Mathematics curriculum is designed to help students build a solid conceptual foundation that will enable them to apply their knowledge and further their learning successfully. It is based on the belief that students learn mathematics most effectively when they are given opportunities to investigate ideas and concepts through problem solving and are then guided carefully into an

understanding of the mathematical principles involved. The acquisition of operational skills remains an important focus of the curriculum.

Attention to the processes that support effective learning of mathematics are considered essential to a balanced mathematics programme.

Seven mathematical processes are identified in this curriculum document: problem solving, reasoning and proving, reflecting, selecting tools and computational strategies, connecting, representing, and communicating.

This curriculum recognises the benefits that current technologies can bring to the learning and doing of mathematics. It therefore integrates the use of appropriate technologies, while recognising the continuing importance of students' mastering essential arithmetic skills.

The development of mathematical knowledge is a gradual process. A continuous, cohesive programme throughout the grades helps students develop an understanding of the "big ideas" of mathematics – that is, the interrelated concepts that form a framework for learning mathematics in a coherent way.

Mathematical Process Expectations

The mathematical process expectations are integrated into student learning associated with all the strands at each grade level with increasingly demanding expectations.

Throughout P5 and 6, students will:

Problem Solving

- develop, select, and apply problem-solving strategies as they pose and solve problems and conduct investigations, to help deepen their mathematical understanding;

Reasoning and Proving

- develop and apply reasoning skills (e.g., classification, recognition of relationships, use of counter-examples) to make and investigate conjectures and construct and defend arguments;

Reflecting

- demonstrate that they are reflecting on and monitoring their thinking to help clarify their understanding as they complete an investigation or solve a problem.

Selecting Tools and Computational Strategies

- select and use a variety of concrete, visual, and electronic learning tools and appropriate computational strategies to investigate mathematical ideas and to solve problems;

Connecting

- make connections among mathematical concepts and procedures, and relate mathematical ideas to situations or phenomena drawn from other contexts (e.g., other curriculum areas, daily life, sports);

Representing

- create a variety of representations of mathematical ideas (e.g., by using physical models, pictures, numbers, variables, diagrams, graphs, onscreen dynamic representations), make connections among them, and apply them to solve problems;

Communicating

- communicate mathematical thinking orally, visually, and in writing, using everyday language, a basic mathematical vocabulary, and a variety of representations, and observing basic mathematical conventions.

Mathematics - P5

The following are highlights of student learning in P5 that provides an overview of the mathematical knowledge and skills that students are expected to acquire in each strand in this grade. The overall expectations outline the required knowledge and skills and provide information about the ways in which students are expected to demonstrate their learning.

Number Sense and Numeration: representing and ordering numbers to 1,000,000; representing money amounts to $100; developing the concept of place value to tenths; representing and comparing fractions using fractional notation; adding and subtracting three-digit numbers in a variety of ways; multiplying and dividing two-digit whole numbers by one-digit whole numbers; relating halves, fifths, and tenths to decimals.

Overall Expectations

By the end of P5, students will:

- read, represent, compare, and order whole numbers to 1,000, 000, decimal numbers to tenths, and simple fractions, and represent money amounts to $100;
- demonstrate an understanding of magnitude by counting forward and backwards by 0.1 and by fractional amounts;
- solve problems involving the addition, subtraction, multiplication, and division of single- and multi-digit whole numbers, and involving the addition and subtraction of decimal numbers to tenths and money amounts, using a variety of strategies;
- demonstrate an understanding of proportional reasoning by investigating whole-number unit rates.

Measurement: measuring length using millimetres; measuring time intervals to the nearest minute; determining elapsed time; measuring volume using concrete materials; determining area and perimeter relationships for rectangles; comparing the mass and capacity of objects using standard units; relating years to decades and decades to centuries.

Overall Expectations

By the end of P5, students will:

- estimate, measure, and record length, perimeter, area, mass, capacity, volume, and elapsed time, using a variety of strategies;
- determine the relationships among units and measurable attributes, including the area and perimeter of rectangles.

Geometry and Spatial Sense: identifying geometric properties of parallelograms; classifying two-dimensional shapes by geometric properties (number of sides, angles, and symmetry); identifying a straight angle, a right angle, and half a right angle; classifying prisms and pyramids by geometric properties; constructing three-dimensional figures in a variety of ways; describing location using a grid system; performing and describing reflections.

Overall Expectations

By the end of P5, students will:

- identify quadrilaterals and three-dimensional figures and classify them by their geometric properties, and compare various angles to benchmarks;
- construct three-dimensional figures, using two-dimensional shapes;
- identify and describe the location of an object, using a grid map, and reflect two-dimensional shapes.

Patterning and Algebra: relating the term and the term number in a numeric sequence; generating patterns that involve addition, subtraction, multiplication, and reflections; determining the missing numbers in equations involving multiplication of one- and two-digit numbers; using the commutative and distributive properties to facilitate computation.

Overall Expectations

By the end of P5, students will:

- describe, extend, and create a variety of numeric and geometric patterns, make predictions related to the patterns, and investigate repeating patterns involving reflections;
- demonstrate an understanding of equality between pairs of expressions, using addition, subtraction, and multiplication.

Data Management and Probability: Collecting and organising discrete data; reading and displaying data using stem-and-leaf plots and double bar graphs; understanding median; comparing two related sets of data; predicting the frequency of an outcome; investigating how the number of repetitions of a probability experiment affects the conclusion drawn.

Overall Expectations

By the end of P5, students will:

- collect and organise discrete primary data and display the data using charts and graphs, including stem-and-leaf plots and double bar graphs;

- read, describe, and interpret primary data and secondary data presented in charts and graphs, including stem-and-leaf plots and double bar graphs;
- predict the results of a simple probability experiment, then conduct the experiment and compare the prediction to the results.

Mathematics - P6

The following are highlights of student learning in P6. They give an overview of the mathematical knowledge and skills that students are expected to acquire in each strand in this grade. The overall expectations outline the required knowledge and skills and provide information about the ways in which students are expected to demonstrate their learning.

Number Sense and Numeration: representing and ordering numbers to 100 000; representing money amounts to $1000; developing the concept of place value to hundredths; comparing and ordering fractional amounts with like denominators; adding and subtracting decimal amounts to hundredths; multiplying two-digit whole numbers by two-digit whole numbers; dividing three-digit whole numbers by one-digit whole numbers; relating simple fractions to decimals.

Overall Expectations

By the end of P6, students will:

- read, represent, compare, and order whole numbers to 100 000, decimal numbers to hundredths, proper and improper fractions, and mixed numbers;
- demonstrate an understanding of magnitude by counting forward and backwards by 0.01;
- solve problems involving the multiplication and division of multi-digit whole numbers, and involving the addition and subtraction of decimal numbers to hundredths, using a variety of strategies;
- demonstrate an understanding of proportional reasoning by investigating whole-number rates.

Measurement: measuring time intervals to the nearest second; determining elapsed time; measuring temperature; converting from metres to centimetres and from kilometres to metres;

relating the 12-hour clock to the 24-hour clock; developing and applying area and perimeter relationships for a rectangle; relating capacity and volume; developing and applying the volume relationship for a right rectangular prism.

Overall Expectations

By the end of P6, students will:

- estimate, measure, and record perimeter, area, temperature change, and elapsed time, using a variety of strategies;
- determine the relationships among units and measurable attributes, including the area of a rectangle and the volume of a rectangular prism.

Geometry and Spatial Sense: distinguishing among polygons and among prisms; identifying acute, right, obtuse, and straight angles; measuring angles to 90° with a protractor; constructing triangles; constructing nets of prisms and pyramids; locating objects using the cardinal directions; performing and describing translations.

Overall Expectations

By the end of P6, students will:

- identify and classify two-dimensional shapes by side and angle properties, and compare and sort three-dimensional figures;
- identify and construct nets of prisms and pyramids;
- identify and describe the location of an object, using the cardinal directions, and translate two-dimensional shapes.

Patterning and Algebra: representing a pattern using a table of values; predicting terms in a pattern; determining the missing numbers in equations involving addition, subtraction, multiplication, or division and one- or two-digit numbers; investigating variables as unknown quantities; demonstrating equality using multiplication or division in equations with unknown quantities on both sides.

Overall Expectations

By the end of P6, students will:

- determine, through investigation using a table of values, relationships in growing and shrinking patterns, and investigate repeating patterns involving translations;
- demonstrate, through investigation, an understanding of the use of variables in equations.

Data Management and Probability: collecting and organising discrete and continuous data; displaying data using broken-line graphs; sampling data from a population; understanding mean; comparing two related sets of data; representing probability using fractions.

Overall Expectations

By the end of P6, students will:

- collect and organise discrete or continuous primary data and secondary data and display the data using charts and graphs, including broken-line graphs;
- read, describe, and interpret primary data and secondary data presented in charts and graphs, including broken-line graphs;
- represent as a fraction the probability that a specific outcome will occur in a simple probability experiment, using systematic lists and area models.

Science and Technology

The Science and Technology curriculum expectations are organised in four strands, which are the major areas of knowledge and skills in the Science and Technology curriculum.

The four strands are as follows:

1. Understanding Life Systems
2. Understanding Structures and Mechanisms
3. Understanding Matter and Energy
4. Understanding Earth and Space Systems

Along with a knowledge foundation, the study of Science and Technology offers students varied opportunities to learn and master skills that are relevant to their everyday world.

In the specific expectations, reference is made to the following three skill areas:

- Scientific inquiry/experimentation skills
- Scientific inquiry/research skills
- Technological problem-solving skills

Skill continua are provided on the following pages for these skill areas. The continua present an ordered series of descriptive statements that mark out students' development along the road to mastery of these specific skills. The continua provide teachers with a way of looking at what students can do so that they can plan for further development of their students' skills. In general terms, the skills involved in scientific inquiry and technological problem solving are the following:

- initiating and planning (e.g., asking questions, clarifying problems, planning procedures);
- performing and recording (e.g., following procedures, accessing information, recording observations and findings);
- analysing and interpreting (e.g., organising data, reflecting on the effectiveness of actions performed, drawing conclusions);
- communicating (e.g., using appropriate vocabulary, communicating findings in a variety of ways).

Scientific Inquiry/Experimentation Skill Development

Although there is no single scientific method, there are scientific methodologies - practises that are followed when investigating questions in a scientific manner. In scientific inquiry, students engage in activities that allow them to develop knowledge and understanding of scientific ideas in much the same way as scientists would. Like scientists, students must also develop skills in the two major components of scientific inquiry - experimentation and research.

Experimentation involves conducting "fair tests" to determine whether changing one factor in the experimental set-up affects the results, and, if so, in what ways. In a fair test, the scientist/student identifies variables that may affect the results of the experiment; selects one variable to be altered (tested), and keeps other variables constant; measures all trials in the same way; and repeats tests to determine the validity of the results.

Technological Problem-Solving Skill Development

Through technological problem solving, students develop the ability to design solutions to problems. Students create models of new devices or new processes to help address human needs and desires, as well as new knowledge about those devices or processes.

When engaged in technological problem solving, students are given opportunities to be creative in their thinking, rather than merely asked to find a prescribed answer. Critical aspects of technological problem solving are: careful planning; purposeful selection of tools and materials; testing, retesting, and modifications of a product or process; communicating about the solution; and recommending of changes or improvements.

Understanding Life Systems

Biodiversity Overview

Because all living things (including humans) are connected, maintaining biodiversity is critical to the health of the planet. Students learn that biodiversity includes diversity among individuals, species, and ecosystems. Through observations of a specific habitat and the classification of organisms, students have a first-hand opportunity to appreciate the diversity of living things while recognising the roles and interactions of individual species within the whole.

Fundamental Concepts: Systems and Interactions

- Biodiversity includes diversity of individuals, species, and ecosystems.

Fundamental Concepts: Sustainability and Stewardship

- Classification of the components within a diverse system is a beginning point for understanding the interrelationships among the components.

- Because all living things are connected, maintaining diversity is critical to the health of the planet.
- Humans make choices that can have an impact on biodiversity.

Overall Expectations

By the end of P5 and P6, students will:

- assess human impacts on biodiversity, and identify ways of preserving biodiversity;
- investigate the characteristics of living things, and classify diverse organisms according to specific characteristics;
- demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans.

Interactions in the Environment Overview

By P5 and P6, students realise that humans have many impacts on the environment. In the study of this topic, they analyse some of these impacts and their consequences, while reflecting upon their personal responsibility to protect the environment.

During investigations, the students observe existing ecosystems and investigate factors that may affect balances within the system. Students learn that ecosystems consist of communities of plants and animals that are dependent on each other as well as on the non-living parts of the environment.

Fundamental Concepts: Systems and Interactions

- Ecosystems are made up of biotic (living) and abiotic (non-living) elements, which depend on each other to survive.

Fundamental Concepts: Sustainability and Stewardship

- Ecosystems are in a constant state of change. The changes may be caused by nature or by human intervention.
- Human activities have the potential to alter the environment. Humans must be aware of these impacts and try to control them.

Overall Expectations

By the end of P5 and P6, students will:

- assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts;
- investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem;
- demonstrate an understanding of interactions between and among biotic and abiotic elements in the environment.

Understanding Structures and Mechanisms

Flight Overview

The use of flight technologies has substantial effects on both society and the environment. In order to understand the principles of flight, students learn about the properties of air that make flight possible. Through investigations, observations, and experiments, students discover that flight occurs when the characteristics of structures take advantage of certain properties of air (e.g, air takes up space, has mass, expands, and can exert a force when compressed). They then apply their newly acquired knowledge to design and test a flying device.

Fundamental Concepts: Structure and Function

- Flight occurs when the characteristics of structures take advantage of certain properties of air.

Fundamental Concepts: Matter

- Air has many properties that can be used for flight and for other purposes.

Overall Expectations

By the end of P5 and P6, students will:

- assess the societal and environmental impacts of flying devices that make use of properties of air;
- investigate ways in which flying devices make use of properties of air;
- explain ways in which properties of air can be applied to the principles of flight and flying devices.

Understanding Matter and Energy

Forces Causing Movement Overview

There are two basic types of forces that cause movement. Contact forces involve direct interaction (pushes and pulls between surfaces that are in direct contact). Non-contact forces include magnetic and gravitational forces and involve interaction at a distance. In exploring the effects of forces, students learn about ways in which forces, including forces in nature, cause objects to move. In addition, students expand their understanding of control by designing and building devices that can use forces to create controlled movement.

Overall Expectations

By the end of P5 and P6, students will:

- assess the impact of various forces on society and the environment;
- investigate devices that use forces to create controlled movement;
- demonstrate an understanding of how forces cause movement and changes in movement.

Fundamental Concepts: Energy

- There are several types of forces that cause movement.

Fundamental Concepts: Change and Continuity

- Forces cause objects to speed up, slow down, or change direction through direct contact or through interaction at a distance.

Understanding Earth and Space Systems

Conservation of Energy and Resources Overview

Energy choices are becoming increasingly important. Making greater use of renewable and alternative sources and conserving energy are options that students need to know about if we are to sustain our present standard of living and ensure adequate energy supplies for future generations. Students must also recognise that there are immediate and long-term impacts and costs associated with every choice.

Never has it been more important for our students to be creative and critical thinkers. More than ever, they need to know how to understand situations and to respond to them in new ways. They need to be able to recognise the choices made by others, while being able to question the ideas behind the choices. They need to be able to think critically, to see things from many different perspectives, and to use all of the information available to make informed and reasoned personal choices about energy use and conservation.

Fundamental Concepts: Energy

- Energy sources are either renewable or non-renewable.

Fundamental Concepts: Sustainability and Stewardship

- Energy can neither be created nor destroyed, but it can be transformed.
- Choices about using energy and resources have both immediate and long-term impacts.
- Conservation (reducing our use of energy and resources) is one way of reducing the impacts of using energy and resources.

Overall Expectations

By the end of P5 and P6, students will:

- analyse the immediate and long-term effects of energy and resource use on society and the environment, and evaluate options for conserving energy and resources;
- investigate energy transformation and conservation;

- demonstrate an understanding of the various forms and sources of energy and the ways in which energy can be transformed and conserved.

Culture

A basic goal of the Cultural programme is to provide students with the foundational knowledge, skills, and attitudes they will need to continue to grow as global citizens. Thus, the goals of the curriculum are to enable students to:

- understand the basic concepts of social studies, history, and geography;
- develop the skills, strategies, and habits of mind required for effective inquiry and communication, and for the application of the basic concepts of social studies, history, and geography to a variety of learning tasks;
- relate and apply the knowledge acquired through social studies and the study of history and geography to the world outside the classroom.

These goals are equally important. They can be achieved simultaneously in a concrete, practical context through learning activities that combine the acquisition of knowledge with the application of various skills, including inquiry/research, communication, and map, globe, and graphic representation skills.

Concepts Underlying the Cultural Curriculum

The Cultural curriculum in P5 and 6 organises students' learning around a set of fundamental concepts: systems and structures; interactions and interdependence; environment; change and continuity; culture; and power and governance. History and Geography offer different perspectives on these concepts. In History, for example, students may consider change and continuity over a relatively short period that covers only a few years in the story of a country or person. In geography, on the other hand, they may use this same concept to study much longer time periods covering the slow, almost imperceptible, changes in some physical features.

Understanding relationships among concepts is also an important part of student learning. Each of the fundamental concepts can be linked with a number of related concepts that help to explain the concept further.

Geography and History

Geography – P5

Geography is the study of place. It examines the earth's physical systems and the people in them. It also investigates how people and environments affect each other. In the study of Geography, students learn to gather, organise, analyse, and present information obtained from a variety of sources.

Overall Expectations

By the end of P5, students will:

- name and locate the various physical regions, parishes, physical landmarks of Bermuda and identify the chief natural resources of Bermuda;
- use a variety of resources and tools to determine the influence of physical factors on the economies and cultures of Bermuda;
- identify, analyse, and describe economic and cultural relationships that link communities between Bermuda and the world.

Map, Globe, and Graphic Skills

By the end of P5, students will:

- locate on a map community boundaries and adjacent communities (e.g., towns, counties) within a region;
- use a variety of sources (e.g., atlases, relief maps, globes, aerial and satellite photographs) to locate and label the physical regions of Bermuda;
- use cardinal and intermediate directions, pictorial and non-pictorial symbols (e.g., dots to represent entire cities), scale, and colour to locate and display geographic information on various maps;
- use number and letter grids to locate places on base maps and road maps, and in atlases;
- create and use a variety of thematic maps of Bermuda's physical features;
- prepare various forms of maps, using symbols and legends, to display places, transportation routes, and political boundaries.

Application

By the end of P5, students will:

- identify relationships, in a variety of fields, that link Bermuda to other countries of the world (e.g., in art, literature, music, dance, technology, heritage, tourism, sports);
- compare Bermuda with another region of the world (e.g., the Arctic or the Prairies), with respect to their physical environments and exchanges of goods and services;
- describe how technology (e.g., in communications, transportation) affects the lives of people in Bermuda

Medieval History – P5

History involves the examination of individuals and unique events, as well as of groups, movements, institutions, nations, and eras. The P5 History programme focuses on Medieval History. Students learn how lessons from the past can be used to make wise decisions for the present and the future. As well, by exploring various points of view and evaluating a variety of historical evidence, they practise achieving a balanced perspective.

By the end of P5, students will:

- identify and describe major features of daily life and social organisation in medieval European societies from about 500 to 1500 AD;
- use a variety of resources and tools to investigate the major events and influences of the era and determine how they shaped medieval society;
- relate significant elements of medieval societies to comparable aspects of contemporary Bermudian communities.

Inquiry/Research and Communication Skills

By the end of P5, students will:

- formulate questions to guide research (e.g., Why did castles have moats? Which medieval trade guilds have comparable apprenticeship programs today? What valuable items did Marco Polo bring back from Asia?);

- use primary and secondary sources to locate information about medieval civilisations (e.g., primary sources: artefacts, field trips; secondary sources: atlases, encyclopedias and other print materials, illustrations, videos, CD-ROMs, Internet sites);

- use graphic organisers to summarise information (e.g., pyramid showing social hierarchies, circle chart showing system of crop rotation, timeline showing dates of innovations and events, T-chart showing comparison of peasants' and lords' lifestyles);

- draw and label maps or create models to illustrate features of medieval landscapes (e.g., a village, a castle or palace, a mosque with a minaret);

- read and interpret maps relevant to the period (e.g., showing trade routes, locations of castles, layout of a town or city);

- use media works, oral presentations, written notes and descriptions, and drawings to communicate information about life in medieval society (e.g., the roles of men, women, and children; the problems of sanitation and health in towns and cities);

- use appropriate vocabulary (e.g., peasant, page, clergy, squire, caliph, imam, merchant, trade guild, chivalry, manor, monastery, mosque, pilgrimage, Magna Carta, Crusades) to describe their inquiries and observations.

Application

By the end of P5, students will:

- compare aspects of life in a medieval community and their own community (e.g., with respect to housing, social structure, recreation, land use, geography, climate, food, dress, government);

- make connections between social or environmental concerns of medieval times and similar concerns today (e.g., pollution, the spread of disease, crime, warfare, poverty, religious intolerance);

- use artistic expression to re-create or respond to imaginative works from medieval times (e.g., illustrate a coat of arms; dramatize a story about the Knights of the Round Table; listen and respond to medieval ballads and poems.

Heritage and Citizenship - P6

Early Civilisations Overview

Students investigate the influence of the natural environment on the development of various early civilisations around the world. They examine changes in the ways human needs were met as a result of technological advances. Students investigate the significant innovations of early civilisations and assess their continuing relevance to modern society.

Overall Expectations

By the end of P6, students will:

- identify and compare the ways in which people in various early civilisations met their physical and social needs, including how they interacted with and used the natural environment;

- use a variety of resources and tools to investigate characteristics of a number of early civilisations, including their significant innovations and technological advances;

- show how innovations made by various early civilisations have influenced the modern world.

Inquiry/Research and Communication Skills

By the end of P6, students will:

- formulate questions to develop a research focus (e.g., What farming methods were used by the Aztecs? How did trade between early African civilisations contribute to mutual prosperity? How did social organization differ among various North American First Nation peoples?

- use primary and secondary sources to locate information about early civilisations (e.g., primary sources: artefacts, field trips; secondary sources: atlases, encyclopedias and other print materials, illustrations, videos, CD-ROMs, Internet sites);

- use graphic organisers and graphs to sort information and make connections (e.g., Venn diagrams comparing governments, subject webs illustrating physical needs, year-round calendar to show agricultural cycles, bar graph for temperature data);

- compare maps of early civilisations with modern maps of the same area;

- use knowledge of map-making techniques and conventions to map sites of early civilisations (e.g., grids and direction symbols to show locations; colour and shading to show elevations/physical features);

- use media works, oral presentations, written notes and descriptions, drawings, tables, charts, maps, and graphs to communicate information about early communities;

- use appropriate vocabulary (e.g., culture, myth, legend, civilisation, technology, democracy) to describe their inquiries and observations.

Application

By the end of P6, students will:

- make connections between some elements of modern life and similar elements from early civilisations (e.g., the Olympic ideal, democracy, money as a medium of exchange, citizenship, philosophy, mythology, trade, social structures, legal systems, theatre, architecture);

- compare and respond to myths and legends from two or more early civilisations;

- report on the relevance to modern society of selected scientific and technological discoveries made by early civilisations (e.g., written language, astronomy, irrigation, mathematics, navigational instruments, medicine, architecture, the mining and smelting of metals).

Bermuda and World Connections - P6

Aspects of Citizenship and Government in Bermuda Overview

Students examine the structure and function of the three levels of government in Bermuda and how they relate to one another. Students use research skills and critical thinking skills to extend their understanding of the rights of groups and individuals and the responsibilities of citizenship

in Bermuda. Students also identify ways in which government and the responsibilities of citizenship directly affect their own lives.

Overall Expectations

By the end of P6, students will:

- summarise the structures, functions, and interactions of Bermuda's government, and identify and describe significant Bermudian symbols, ceremonies, buildings, and political figures;
- use a variety of resources and tools to gather and analyse information about government processes, the rights of groups and individuals, and the responsibilities of citizenship in Bermuda, including participation in the electoral process;
- identify concrete examples of how government plays a role in contemporary society and of how the rights of groups and individuals and the responsibilities of citizenship apply to their own lives.

Map, Globe, and Graphic Skills

By the end of P6, students will:

- construct and read a variety of maps, graphs, diagrams, and/or models to display and interpret information for specific purposes.

Application

By the end of P6, students will:

- research and report on concrete examples of how the government works to meet challenges or perform tasks (e.g., in responding to crises);
- model activities and processes of responsible citizenship (e.g. engage in democratic class meetings; hold a mock election; plan and participate in a Heritage Day event).

Art and Art Appreciation

All children have the ability to be creative. The Art programme builds upon this ability and deepens children's capacity for artistic expression and representation. Awareness of one's inner feelings and thoughts is a prerequisite to making art. Inspiration and innovative thinking spring from this awareness.

The Art programme incorporates a comprehensive approach to art education that includes developing creativity, communicating through art, understanding diverse historical and cultural contexts and making connections with the world around them. Students are provided with many opportunities for creative self-expression and develop a lifelong appreciation for art. Students are taught that art is not created in a vacuum, but reflects the personal, social, and historical context of the artists. This is true for works created by professional artists and by the students in the classroom.

Students observe objects in nature and examples of the achievements of artists past and present to acquire knowledge of the vocabulary of art and to develop their aesthetic awareness. By using the creative process and engaging in dynamic discussions, students develop a solid understanding of the building blocks of art production and feel a sense of pride and connection with their own art making. Through the creation and presentation of art, students learn to express and communicate their creative insights in a range of forms and with varying degrees of concreteness and abstraction. The creative process comprises several stages: challenging and inspiring; imagining and generating; planning and focusing; exploring and experimenting; producing preliminary work; revising and refining; presenting, performing, and sharing; reflecting and evaluating.

A comprehensive approach to art includes making connections with what is learned in the Art room to other subject areas and to careers. Through these connections students perceive a sense of purpose and validity to skills acquired in the Art room. Students learn to link the study of the Arts with the study of a variety of subjects and topics such as History, Geography, Language, Culture, and Human Interaction. They gain an appreciation of the great importance of the Arts as sources of enjoyment and as means of communication in cultures around the world. They also learn to understand that the Arts have long served as important media for recording and communicating ideas and feelings. Students learn that all the Arts not only reflect historical and cultural values, but can also be interpreted differently depending on the experiences of the viewer and the perspective presented by the art work.

The curriculum is based on observational and expressive drawing, art history, colour theory, the elements of art, the principles of design, painting, printmaking, sculpture, ceramics, a vocabulary of art terms, and critiquing of artwork.

Art and Art Appreciation- P5

Students develop understanding of the following concepts through participation in a variety of hands-on, open-ended visual arts experiences.

Elements of Art

Students develop understanding of all elements of art:

- line: lines to indicate emotion (e.g., smooth, horizontal lines can give a feeling of peace and harmony); contour lines (e.g., edges of objects); lines of various weights; repetition of lines to create visual rhythm; lines indicating movement vs. stillness;

- shape and form: free-standing forms "in the round" and bas relief sculpture; shapes organised in a pattern showing radial symmetry; changes in shapes, depending on the angle or point of view (e.g., view from the top, side, bottom); grouping of shapes and forms; geometrical and organic shapes and form;

- space: positive and negative space in art work; diminishing perspective in various contexts (e.g., in vertical placement, in diminishing size, and/or in overlapping shapes); variation in size to create the illusion of depth;

- colour: monochromatic colour scheme; colour emphasis through variations in intensity (e.g., subdued colours next to bright, intense colours); advancing colour;

- texture: texture elaboration (e.g., embossing, piercing, pinching, pressing, scoring, scraping); low relief in collagraphs; visual texture (e.g. patterns that indicate texture);

- value: mixing of shades and tints; variations in value to create emphasis (contrast in value), creating gradations of value to indicate depth.

Overall Expectations

By the end of P5, students will:

- apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings (creating and presenting);

- apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences (reflecting, responding, and analysing);

- demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their sociocultural and historical contexts (exploring forms and cultural contexts).

Principles of Design

Students develop understanding of all principles of design (that is, contrast, repetition and rhythm, variety, emphasis, proportion, balance, unity and harmony, and movement), but the focus in P5 will be on emphasis.

- emphasis: use of colour intensity, contrast in value, placement and size of shapes, and/or weight of line to create a particular focal point.

Art and Art Appreciation – P6

In addition to the concepts introduced in P2 - 5, students in P6 develop understanding of the following concepts through participation in a variety of hands-on, open-ended art experiences.

Elements of Art

Students develop understanding of all elements of art:

- line: linear and curved hatching and cross-hatching that add a sense of depth to shape and form; gesture drawings; implied lines for movement and depth;

- shape and form: symmetrical and asymmetrical shapes and forms; positive and negative shapes that occur in the environment;

- space: shading and cast shadows that create the illusion of depth; atmospheric perspective; negative and positive space;

- colour: complementary colours, hue, intensity (e.g., dulling, or neutralizing, colour intensity by mixing the colour with a small amount of its complementary hue);

- texture: textures created with a variety of tools, materials, and techniques; patterning; visual texture with pointillism, wood grain and cross-hatching;
- value: gradations of value to create illusion of depth, shading .

Overall Expectations

By the end of P6, students will:

- apply the creative process to produce a variety of two- and three-dimensional art works, using elements, principles, and techniques of visual arts to communicate feelings, ideas, and understandings (creating and presenting);
- apply the critical analysis process to communicate feelings, ideas, and understandings in response to a variety of art works and art experiences (reflecting, responding, and analysing);
- demonstrate an understanding of a variety of art forms, styles, and techniques from the past and present, and their sociocultural and historical contexts (Exploring Forms and Cultural Contexts).

Principles of Design

Students develop understanding of all principles of design (that is, contrast, repetition and rhythm, variety, emphasis, proportion, balance, unity and harmony, and movement), but the focus in P6 will be on proportion.

- proportion: the relationship of the size and shape of the parts of a figure to the whole figure; the scale of one object compared to its surroundings, with indications of how close and how large the object is; one and two point perspective, diminution and overlap; proportions of the human body.

Music and Music Appreciation

Music is the study and exploration of sound and the expressive use of musical elements through the singing of songs and the playing of instruments. Children's early learning experiences have a

profound effect on their development. The Upper Primary Music programme focuses on experiences in music. These are broken down to focuses on four main headings performing which encompasses singing and playing instruments; creating and composing; notation, and listening and appreciation.

The expectations build on students' prior knowledge and experience to strengthen their oral language, understanding of concepts, capacity for imagining and pretending, vocabulary knowledge, visual and musical tonal awareness, higher-order thinking skills, and capacity for reflection.

Students gain an awareness and appreciation of music in all its forms from a range of times, places and cultures. Students sing and play a variety of songs and pieces with an awareness of *beat*. Students have the opportunity to experiment with sounds in *composition* tasks and to make expressive use of musical *elements* such as *pitch* and *rhythm*. They use notation to develop musical ideas. They develop an awareness and appreciation of music from different cultures and are able to describe and compare sounds using simple appropriate musical vocabulary. Students have the opportunity to identify and reflect by making connections between the questions asked and the concepts that drive the inquiry. They become aware of the relevance these concepts have to all of their learning.

Music and Music Appreciation – P5

In P5, students learn to sing with accuracy and control, focusing awareness on the musical elements of pitch, rhythm, tempo, duration, harmony and dynamics. Students continue to perform rhythmic and melodic patterns of increasing length on a variety of classroom instruments, including but not limited to drums, guitar, keyboard, steel orchestra, and in different meters of two, three and four, by rote and/or traditional notation. They explore, create, select, combine and organise sounds into simple musical forms such as binary and ternary.

They read and notate using basic rhythm values of whole, half, quarter and eighth *note*, and their respective rest, and are introduced to reading and notate *dotted rhythms* in simple meters. Through their music appreciation exercises they continue to describe musical *elements* using appropriate musical vocabulary, giving reasons for preferences. Students identify the sounds and names of an increasing number of instruments: orchestral, non-orchestral, non-western and multiethnic through their world music study.

Performing

By the end of P5, students will:

Singing

- sing in tune from musical notation, unison and two part music with simple accompaniments from a wide range of cultures, styles and historic periods;
- sing more complex songs with increasing accuracy, including: singing notes of increased intervals; singing accurate note lengths; being aware of dynamics and tempo; using appropriate singing style.

Playing

- apply the elements of music when playing, composing, and arranging music to create contrast and changes in mood, such as staccato/legato, crescendo/decrescendo;
- demonstrate an understanding of musical signs and standard notation on the treble and bass staff;
- play a wide range of instruments with increasing accuracy in solo and ensemble performances;
- perform complex rhythmic and melodic patterns in different simple and compound meters;
- perform expressively to show tempo, dynamics, texture, style and articulation;
- demonstrate knowledge of techniques to produce a clear and open tone while singing.

Create and Composing

- continue to explore, create, select and organise sounds in simple musical forms purposefully organise sounds in simple musical forms including rondo;
- use devices of motif and sequence in composition;
- perform compositions using classroom instruments and other sound sources;
- identify the tone color in familiar music.

Notation

- recognise that the treble & bass clef defines the names of the lines and spaces on the staff;
- distinguish between the intervals to show steps and skips;

- identify the whole, half, quarter and eighth note and their corresponding rest in 4/4 time.

Listening and Appreciation

- identify the individual instruments of the woodwind, brass, string and percussion families;
- continue to describe musical elements using appropriate musical vocabulary, giving reasons for preferences;
- identify the sounds and names of an increasing number of instruments: orchestral, non-orchestral, non-western and multiethnic;
- develop an awareness and appreciation of music from different sources and cultures; its uses and associations;
- discuss music that relates to social issues and/or values;
- analyse different compositions describing how the musical elements enhance the message.

Music and Music Appreciation – P6

In P6 students build on their knowledge of the elements of musical concepts that were introduced in P2 - P5. They sing with increasing accuracy, including: singing notes of increased intervals; singing accurate note lengths; being aware of dynamics, tempo and harmony; using appropriate singing style. Students will play a wide range of instruments with increasing accuracy in solo and ensemble performances and perform expressively to show tempo, dynamics, texture, style and articulation.

Students continue to explore, create, select and organise sounds to create specific effects (e.g. AABA, ABAC and ABACADA form). They have opportunities to perform *compositions* using classroom instruments and other sound sources. They are introduced to key signatures (C, G, D, F) and continue to read and notate using basic rhythm values of quarter note, eighth *note*, half *note* and whole note and their respective rests, along with the dotted rhythms. They are introduced to the sixteenth note and rhythm using dotted eighth and sixteenth notes. Students identify the sounds and names of an increasing number of instruments: orchestral, non-orchestral, non-western and multi-ethnic through their world music study.

Performing

By the end of P6, students will:

Singing

- sing in tune, from musical notation, unison and two-part music with accompaniments, from a wide variety of cultures, styles and historical periods;
- apply the musical elements when singing;
- perform in major/minor tonalities.

Playing

- play a wide range of instruments with increasing accuracy in solo and ensemble performances;
- perform complex rhythmic and melodic patterns in different simple and compound time;
- perform expressively to show tempo, dynamics, texture, style and articulation;
- use the tools and techniques of musicianship in musical performances;
- play music using non-traditional or traditional notation;
- respond to directions from a conductor.

Creating and Composing

- purposefully organise sounds in simple musical forms including rondo;
- use devices of motif and sequence in composition;
- perform compositions using classroom instruments and other sound sources;
- use a variety of textures in compositions;
- use detailed notation to record and communicate ideas.

Notation

- demonstrate an understanding of standard and other types of musical notation through performance and composition. (e.g. notation of rhythms in 6/8, dynamic markings, clefs, key signature, guitar tablature);
- use non-traditional and traditional notation to represent and record sound events and songs;
- use notation to practise and perform a piece of music;
- read and notate using basic rhythm values of quarter note, eighth note, half note and whole note; quarter, half and whole rests.
- Begin to read and notate using rhythm values of sixteenth note;
- Begin to read and notate using dotted rhythms in compound meters;
- Distinguish between major and minor tone;
- Understand chord progression I IV V.

Listening and Appreciation

- Express detailed personal responses to musical performances in a variety of ways;
- Identify the elements of music in the music they perform, listen to, and create, and describe how they are used;
- Identify and give examples of their strengths and areas for growth as musical performers, creators, interpreters and audience;
- Demonstrate an awareness of the use of music and musical instruments in various traditions, from early time to contemporary time.

Physical Education

The purpose of Physical Education (P.E.) is to develop a combination of transferable skills promoting physical, intellectual, emotional and social development; to encourage present and future choices that contribute to long-term healthy living; and to understand the cultural significance of physical activities for individuals and communities. The development of overall well-being is defined through three common strands that have relevance to all teachers: identity, active living and interactions. These strands are concept driven and are designed to interact with each other, working together to support the overall development of students.

Regular exposure to all kinds of physical learning experiences will enable students to make informed choices throughout their lives. The following types of experiences 'strands' support the three concepts and are deemed essential at Somersfield Academy:

1. Body control and spatial awareness
2. Adventure Challenge
3. Athletics
4. Movement to Music
5. Games
6. Gymnastics
7. Health-related activities

Through P.E., students learn the 'language' of physical movement, exploring the skills associated with different strands of P.E. They learn to understand what they can and cannot do physically

and become aware of their strengths and weaknesses in this discipline. P.E. helps to build self-esteem, confidence, cooperation and fitness.

Physical Education - P5

Physical Education offers students the opportunity to discover the capabilities of their bodies and the variety of ways in which they are able to use their bodies to solve problems, address physical challenges, function as part of a group, manipulate equipment or apparatus, and express themselves in a range of situations. Students are exposed to a number of activities that will develop *gross motor skills* that may later be applied in various *sports*. They will become aware of a number of positive leisure time pursuits.

Students develop skills that they may apply in a variety of contexts within and beyond the school setting. These skills include the use of proper safety precautions when engaging in physical activities, recognition of the importance of *fair play*, use of cooperative behaviours and the ability to function as part of a group or team. Students are introduced to a healthy and active lifestyle and the ways exercise affects their bodies and overall fitness or well-being.

Students have the opportunity to identify and reflect by making connections between the questions asked and the concepts that drive the inquiry. They become aware of the relevance these concepts have to all of their learning.

Overall Expectations

Body Control and Spatial Awareness

At this age, body control and spatial awareness activities will be incorporated into other P.E. content areas.

By the end of P5 students will:

Adventure Challenge

- solve challenging problems, individually, in pairs or in small groups;
- participate in group activities to accomplish a common goal.

Athletics

- practise specific techniques of jumping, throwing and running events;
- learn and apply the rules of athletic events;
- learn how to collect and record results for some athletic events;
- understand and apply the safety rules in athletic events;
- learn how to evaluate their athletic performance and understand how they can improve their performance.

Movement to Music

- demonstrate controlled combinations of movement, changing speed and direction;
- combine locomotor and non-locomotor skills in order to refine rhythmic responses;
- respond through movement to a range of stimuli;
- express feelings and moods using imagination and original ideas;
- create more complex movement sequences;
- be exposed to a range of dances containing more complex step patterns;
- create dances containing complex step patterns with partners and in small groups;
- be aware of the different purposes and types of dance;
- appreciate the dances of different countries and cultures.

Games

- develop coordination, manipulation, balance and spatial awareness;
- participate in activities that refine spatial awareness and locomotor skills;
- handle different apparatus and small equipment using various body parts with some competence;
- participate in scaled-down or adapted versions of the recognised sports, for example invasion games, fielding and striking games, net games and target games;
- develop their own innovative games and related activities.

Gymnastics

- combine simple movements to create short sequences;
- refine the traditional gymnastic skills, involving physical agility, flexibility, strength and coordination;
- interpret and answer movement tasks in their own way, and at their own level, on the floor;
- interpret and answer movement tasks in their own way, and at their own level, using apparatus;
- combine locomotor and non-locomotor skills while using small equipment.

Health - Related Activities

- recognise the elements and the benefits of a healthy lifestyle (rest, well-balanced nutrition, exercise etc);
- become aware of the importance of physical activities in daily life;
- recognise basic changes that occur to their bodies when exercising;
- demonstrate safety when exercising.

Physical Education - P6

Students will be able to demonstrate competency in many movement forms and proficiency in a few movement forms. Students are beginning to achieve maturity with most locomotor (traveling actions), non-locomotor (movement in place) and manipulative (throw, catch, strike, swing, push, pull) skills. They will begin the process of integrating (putting together) these skills into a variety of individual and team sports and activities that have been modified to their developmental level.

The student will be able to apply movement concepts and principles to the learning and development of motor skills. Students will begin to demonstrate an understanding of proper movement forms. They will self-analyse their own skills and that of their classmates and discuss methods for improving performance.

Students will begin to understand that physical activity provides the opportunity for enjoyment, challenge, self-expression, and social interaction, and they will begin to better identify those activities they enjoy and those in which they have greater skill or less skill. They will begin to articulate why they like or dislike certain activities. The student will be able to exhibit a physically active lifestyle and choose to participate in activities out of school that are healthy and will produce a desired level of fitness.

As their fitness levels improve, students will participate in moderate to vigorous activity for longer periods of time. They will be able to describe how high levels of fitness are achieved, and identify what their age appropriate physical fitness goals should be. They will participate in group and self-assessment activities.

The student will be able to demonstrate responsible personal and social behaviour in physical activity settings. They seek out the company of many different people through physical activity, and begin to apply conflict management skills when needed during these physical activities.

Overall Expectations

Body Control and Spatial Awareness

At this age, body control and spatial awareness activities will be incorporated into other PE content areas.

By the end of P6 students will:

Adventure Challenge

- solve challenging problems, individually, in pairs or in groups;
- participate in group activities to accomplish a common goal.

Athletics

- practise specific techniques for jumping, throwing and running events;
- learn and apply the rules of various events;
- learn how to collect and record results;
- understand and apply the safety rules in these events;
- evaluate their athletic performance and understand how they can improve their performance.

Movement to Music

- demonstrate controlled combinations of movement, changing speed and direction;
- combine locomotor and non-locomotor skills in order to refine rhythmic responses;
- respond through movement to a range of stimuli;
- express feelings and moods using imagination and original ideas;
- create more complex movement sequences;
- be exposed to a range of dances containing more complex step patterns;
- master dances containing complex step patterns with partners and in small groups;
- begin to recognise techniques and forms of dance;
- be aware of the different purposes and types of dance;
- appreciate the dances of different countries and cultures.

Games

- develop coordination, manipulation, balance and spatial awareness;
- participate in activities that refine locomotor skills;
- become competent in handling different apparatus and small equipment;
- participate in lead-up games;
- participate in scaled-down or adapted versions of the recognised sports, for example invasion games, fielding and striking games, net games and target games;
- develop their own innovative games and related activities.

Gymnastics

- combine movements to create sequences;
- refine the traditional gymnastic skills, involving physical agility, flexibility, strength and coordination;
- interpret and answer movement tasks in their own way, and at their own level, on the floor;
- interpret and answer movement tasks in their own way, and at their own level, using apparatus;
- combine locomotor and non-locomotor skills while manipulating small equipment.

Health - Related Activities

- identify and recognise the elements of a healthy lifestyle (rest,well-balanced nutrition, exercise etc);
- identify and recognise the benefits of a healthy lifestyle;
- be aware of the importance of physical activity in daily life;
- recognise the physical changes that occur to their bodies when exercising;
- demonstrate and apply safety when exercising.

P.E. Skill Areas Covered:

Fall Term				
	Sept. – Oct.		**Nov. – Dec.**	
	Indoor	**Outdoor**	**Indoor**	**Outdoor**
P5	Adventure Challenge	Invasion Games	Movement	Invasion Games
P6	Adventure Challenge	Invasion Games	Movement	Invasion Games
Winter Term				
	Jan. – Feb.		**Feb. - March**	
	Indoor	**Outdoor**	**Indoor**	**Outdoor**
P5	Net/Wall Games	Athletics	Invasion Games	Athletics
P6	Net/Wall Games	Athletics	Invasion Games	Athletics
Spring Term				
	April - May		**May - June**	
	Indoor	**Outdoor**	**Indoor**	**Outdoor**
P5	Net/Wall Games	Striking and Fielding	Movement	Target Games
P6	Net/Wall Games	Striking and Fielding	Movement	Target Games

Selected sport for the respective classification unit is decided upon based on available resources and student interest at the time. Specific skill development is tailored to the particular sport(s) being introduced.

Specific Sports offered:

Net/Wall Games	badminton, tennis, table tennis, volleyball, squash
Striking Games	baseball, softball, rounders, cricket

Target Games	frisbee, golf, bowling, archery
Athletics	jump rope, cross country, track and field, cross fit, fitness gram testing
Invasion Games	football, netball, field hockey, basketball, lacrosse, speedball, tag rugby, ultimate frisbee, American football

Foreign Language

The Upper Primary Foreign Language curriculum is taught using the Accelerative Integrated Method (AIM), which is also used in Lower Primary and The Children's House. This is an interactive program utilising gestures to convey meaning and reinforce high-frequency vocabulary. There are no textbooks. AIM is based on the belief that when language learning is supportive and fun, it enhances participation and retention. Emphasis is on partner and group activities in order for students to practise the language skills and develop the highest level of proficiency possible.

AIM incorporates drama, music, writing, and dance in a dynamic and kinesthetic environment that appeals to various learning styles of students. Activities and creative work are integrated into the program to reinforce grammar, introduce culture and promote diversity. P5 and P6 students receive French and Spanish instruction during alternate school terms to help foster an appreciation of the consistencies and variations in languages. At the end of the programme, students are well prepared to transition into the MYP Foreign Language curriculum.

Foreign Language - P5

Oral Communication

Overall Expectations

By the end of P5, students will:

- talk about familiar topics, using simple phrases and sentences;
- listen to short, simple oral texts, and respond to specific simple questions;
- read a variety of simple materials, 50 to 100 words long containing basic learned vocabulary, and demonstrate understanding;
- write very simple texts and responses following a model;
- identify and use the vocabulary, grammar and language conventions appropriate for this grade level.

Reading

By the end of P5, students will:

- read aloud familiar material, using correct pronunciation and intonation;
- read at least six simple passages or stories (e.g. greeting cards, song lyrics);
- read and respond briefly to written materials (e.g. answer short questions, fill in missing words, draw a picture, select answers);
- use all available cues (e.g. visual cues, knowledge of basic sounds, and context) to determine meaning.

Writing

By the end of P5, students will:

- copy and write simple words, phrases, and short sentences and questions, using basic vocabulary and very simple language structures;
- write responses to very simple questions;
- use and spell the vocabulary appropriate for this grade level.

Foreign Language - P6

Oral Communication

By the end of P6, students will:

- listen to and talk about short, simple oral texts dealing with familiar topics;

- read a variety of simple materials, 100 to 150 words long, and demonstrate understanding;
- provide written responses to simple questions, using simple sentences;
- identify and use the vocabulary, grammar and language conventions appropriate for this grade level.

Reading

By the end of P6, students will:

- read at least nine simple passages or stories (e.g. games, a play);
- read aloud with expression, using correct pronunciation and intonation;
- read and respond briefly to written materials (e.g. a play) by answering short questions or restating information;
- use various reading strategies to determine meaning and make sense of unfamiliar words (e.g. visual and verbal cues, and use of context and patterns).

Writing

By the end of P6, students will:

- write simple phrases, short sentences and questions, using learned vocabulary and simple language structures;
- use and spell the vocabulary appropriate for this grade level.

Our Aims

Notes

The Somersfield Promise

To stimulate intellectual curiosity and accomplishment; to instil compassion and respect; and to always honour the daring dreams and hidden talents of the individual.

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