



Primary Years Programme

**Subject-specific expectations
defined by age ranges**

July 2005

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Introduction

The content of this document is derived from the PYP subject-specific scope and sequence documents—language, mathematics, social studies, science and technology, personal and social education, physical education, visual arts, music and drama.

The subject-specific expectations, defined by age ranges, have been consolidated here to provide a convenient document for:

- revising the school’s written curriculum, or articulating the school’s written curriculum, in keeping with the PYP
- supporting the required collaborative planning involving all teachers at each grade level, and across grade levels.

The subject-specific expectations have been organized into four age ranges, 3–5 years, 5–7 years, 7–9 years and 9–12 years. The expectations give broad, summative descriptors of what a PYP student could be expected to achieve by the end of each age range.

For more details regarding specific expectations, sample questions, activities and assessments, teachers should refer to the relevant scope and sequence document.

Age range 3–5

Children will have the opportunity to identify and reflect upon “big ideas” by making connections between the questions asked and the concepts that drive the inquiry. They will become aware of the relevance these concepts have to all of their learning.

Language

Oral communication: listening and speaking

Children will use oral language for social interaction and to obtain knowledge of people, places and things in their environment and in the wider community. They will communicate needs, feelings and ideas in order to respond to a variety of experiences. They will participate appropriately in conversations, tell stories and events in sequence, and will give and follow instructions. In order to learn to communicate effectively, children will be given daily opportunities to listen and speak in authentic contexts, either independently, in small groups or with the whole class.

Written communication: reading and writing

Children will be eager to read. They will enjoy playing and experimenting with reading behaviours as they practise reconstructing text. They will show an interest in books, stories, charts and songs as they “read” simple, familiar text using visual, contextual and memory cues to make sense of print. Children will “read” daily with support and guidance, either independently, in small groups, or in whole-class situations. They will be encouraged to focus on the meaning of texts rather than on reading word by word with complete accuracy. Children will be read to daily, and will have opportunities to read with and to one another, and to discuss what they have read. Through these experiences children will gain an understanding of concepts about print.

Children will be curious about print. They will enjoy playing and experimenting with writing by making marks to emulate writing. They will progress from scribble or “pretend” writing to writing letters and words. Drawing, sketching and diagramming are important parts of early writing development as children imitate, rehearse and think about the process. Children will use representations of their name (and/or those of family members) in a variety of ways. Regardless of their stage of written development, they will assign meaning to messages and will gradually produce recognizable (though not necessarily conventional) spellings of a range of words. Children will be encouraged to write daily with or without support and guidance, either independently, in small groups or with the whole class.

Visual communication: viewing and presenting

Children will play, experiment, talk about and relate to a variety of media. They will enjoy using media to make sense of their world and will learn to respond both verbally and non-verbally. They will show a natural curiosity and interest in many forms of familiar visual communication and, with guidance and support, will make connections between the real and the imaginary. Children will view and react to media items or factual information in order to understand and describe what they see.

Mathematics

Data handling: statistics and probability

Children will sort real objects by attributes, create graphs using real objects and compare quantities. They will discuss and identify outcomes that will happen, won't happen or might happen.

Measurement

Children will identify and compare attributes of real objects, and events in their realm of experience.

Shape and space

Children will sort, describe and compare 3-D shapes and explore the paths, regions and boundaries of their immediate environment and their position.

Pattern and function

Children will find, describe and create simple patterns in their world.

Number

Children will read, write, count, compare and order numbers to 20. They will model number relationships to 10, develop a sense of 1–1 correspondence and conservation of number. They will select and explain an appropriate method for solving a problem.

Social studies

Social studies learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all children in all cultures. Children will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, children will gain an understanding of people and their lives, focusing on themselves, their friends and families, and their immediate environment. They will gain an increasing awareness of themselves in relation to the various groups to which they belong. They will gain a sense of place and the reasons why particular places are important to people. They will also gain a sense of time and recognize important events in their own lives, and how time and change affect people's lives.

Social studies perspective

Social studies is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to an understanding of human activity.

History

The study of what we think is important about the human past. Through it we develop an understanding of the past, its influences on the present and its implications for the future.

Geography

The study of the relationship between people and their environment, both natural and built. Through it we develop a sense of place and an understanding of human interaction with the Earth's surface and resources.

Society

The study of people and their relationships in society. Through it we develop an understanding of the ways in which individuals, groups and society interact with each other and how their values shape our social systems. It incorporates the disciplines of anthropology, economics, ethics, politics, psychology and sociology.

Science and technology

Science and technology learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all children in all cultures. Children will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, children will develop their observational skills by using their senses to gather and record information, and will use their observations to identify simple patterns, make predictions and discuss their ideas. They will explore the way objects and phenomena function, and recognize basic cause and effect relationships. Children will examine change over varying time periods and know that different variables and conditions may affect change. They will be aware of different perspectives and will show care and respect for themselves, other living things and the environment. Children will communicate their ideas or provide explanations using their own scientific experience and vocabulary.

Science and technology perspective

Science and technology is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to an understanding of human activity.

Living things

The study of humans and other animals, plants, and the environment and the interactions between them.

Earth and space

The study of the planet Earth and its relationship to the universe.

Materials and matter

The study of the origins, properties and uses of natural and human-made solids, liquids and gases.

Forces and energy

The study of energy, its origins and transfer, and its effects.

Personal and social education

Personal and social education (PSE) is concerned with developing the attributes and dispositions embodied in the student profile, together with the attitudes found in *Making the PYP happen*. PSE learning can take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all children in all cultures. Children will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, children will develop an awareness of their self-identity and recognize some of their strengths and weaknesses. They will show self-confidence and self-worth. They will learn to recognize and communicate their own feelings and emotions in an appropriate way. They will reflect on their own abilities and behaviour. Children will show awareness of healthy lifestyle choices. They will develop a sense of safety and an ability to protect themselves from danger and abuse. Children will show increasing independence, and will approach learning with flexibility, creativity and commitment. They will develop social skills when interacting with others in different situations and will develop and maintain appropriate relationships. They will show awareness of and respect for the views, needs, rights and differences of others. They will become aware of different ways of dealing with conflict situations.

PSE perspective

PSE is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to personal and social development.

Self-concept

The set of beliefs, attitudes and feelings that children have about themselves. The extent to which they value themselves will not only affect what they can do, but how they interact with others. It is important that they are confident to try new things, to express their views and are eager to explore new learning.

Health and safety

The development of an awareness of aspects of overall health, including nutrition and control of diseases. Positive lifestyle choices that promote and maintain health are encouraged, and safe behaviour practices to be used in the home, school and community are developed.

Interaction with others

The development of an awareness of social norms and values within the family, the school community and society, including the study and acceptance of cultural, racial and religious similarities and differences. It leads to an understanding of conflict and appropriate ways of dealing with it.

Organization for learning

The development of an awareness of strategies to become a successful learner, including the adoption of a positive attitude toward responsibilities. It encourages making independent choices in relation to learning.

Physical education

Physical education (PE) offers children the opportunity to explore the capabilities of their bodies and the variety of ways in which they are able to use their bodies to solve simple problems, tackle appropriate physical challenges, manipulate equipment or apparatus, and express themselves in a range of situations. Children will be exposed to a number of activities that will develop gross motor skills that may later be applied in various sports. Children will become aware of safe behaviour practices when engaging in physical activities, recognize the importance of fair play, cooperative behaviours and the ability to function as part of a group. Children will be introduced to some of the ways exercise affects their bodies.

The strands have been grouped as follows: **body control and spatial awareness, adventure challenge, athletics, movement to music, games, gymnastics and health-related activities.**

Visual arts

Children will enjoy working both individually and in small groups. They will begin to develop an understanding of the varied functions and uses of different materials and tools. They will learn to choose the best materials and tools for a particular task and to care for them appropriately.

The strands have been grouped as follows: **creative processes, elements of art and design, visual arts in society and reflection and appreciation.**

Music

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 will join together in musical activities, using their voices and simple instruments to develop concepts about sound and musical awareness. They will participate both individually and in groups in games, songs, and creative movement activities. Children will develop musical ideas in composition using musical notation. They will begin to develop an awareness and appreciation of music from different cultures.

The strands have been grouped as follows: **performing: singing, performing: playing instruments, creating and composing, notation and listening and appreciation.**

Drama

Children will work together, share ideas and begin to make group decisions. They will listen and respond positively to the suggestions of others. Children will welcome the variety of cultural backgrounds inherent within their group and the dramas they develop. They will develop an awareness and acceptance of differences in traditions, celebrations, beliefs and behaviour. Children will use drama to explore concepts in the units of inquiry taken from the programme of inquiry and they will be introduced to teacher-in-role. Children will use a variety of stimuli to initiate classroom play and make-believe activities. They will develop the confidence to create their own dramas through play, and to share these with others where appropriate. Children will be willing and eager to explore movement and space using music and other stimuli. Where possible, children will be exposed to a variety of performance and presentation experiences and will discuss what they have seen and experienced.

The strands have been grouped as follows: **creative exploration and expression, technical incorporation, performance, personal and social development, reflection, evaluation and appreciation and drama in society.**

Age range 5–7

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

Language

Oral communication: listening and speaking

Students will use a variety of oral language appropriately and with increasing confidence. They will talk about their own thoughts, feelings and opinions and they will be able to work in groups to discuss their ideas. They will appreciate that listening is important and, in both small- and large-group situations, listen with increasing concentration and consideration. They will be able to pick out main events and relevant points, and they will increase their ability to anticipate and predict. Students will listen to others carefully and with sensitivity.

Written communication: reading and writing

Students will read for pleasure and information with increasing independence. They will be confident about their own reading and will continue to develop a range of reading strategies to decode and make sense of text. They will discuss stories heard and read, demonstrate an awareness of the role of the characters and plot, and will respond to the ideas and feelings expressed. They will begin to use a variety of reference books and dictionaries independently. A balanced learning experience includes opportunities to participate either independently, in small groups or in whole-class situations. Daily independent and instructional reading are essential.

Students will write confidently, with developing legibility and fluency. They will write for a variety of purposes and will develop an understanding of different story structures. They will begin to plan, edit and review their own writing, showing an increasing ability to spell high-frequency words. They will begin to use spelling patterns and will continue to use their phonetic skills to spell, especially when constructing more complex words. As risk-takers, they will demonstrate confidence in attempting to write unfamiliar words using a variety of strategies. Daily independent and instructional writing are essential.

Visual communication: viewing and presenting

Students will understand that communication involves both visual, verbal, and kinaesthetic features. They will understand that signs and symbols carry meaning and will begin to read a range of signs widely used in their immediate environment. They will be able to read and use texts with different types of layout and will understand information presented by a range of visual media including television, theatre and computer. Using a variety of visual and technological media, the students will search for, record and present information. As they continue to develop an increasing understanding of what they view, they will make more informed choices.

Mathematics

Data handling: statistics and probability

Students will sort, label, collect, display and compare data in a variety of forms, including pictographs and bar graphs. They will understand the purpose of graphing data. They will discuss, identify, predict and place outcomes in order of likelihood.

Measurement

Students will estimate, measure, label and compare using non-standard units of measurement, and understand why we use standard units of measurement to measure length, mass, time and temperature. They will read and write time to the hour, half hour and quarter hour, and identify and compare lengths of time (days, weeks and months).

Shape and space

Students will describe the properties of 3-D shapes, including the 2-D shapes that can be seen, using mathematical vocabulary. They will find and explain symmetry in the immediate environment and create symmetrical patterns. They will give and follow simple directions using left, right, forward and backward.

Pattern and function

Students will describe, continue, create and compare patterns. They will recognize and extend patterns in number. They will identify commutative property. They will model the relationships in, and between, addition and subtraction.

Number

Students will read, write, estimate, count, compare and order numbers to 1,000. They will read, write, model and understand addition and subtraction, using mathematical vocabulary and symbols. They will automatically use addition and subtraction facts to 10. They will explore multiplication and division using their own methods, use fraction names to describe part and whole relationships, and explore counting patterns. They will select and explain appropriate methods for solving a problem and estimate reasonableness of answers.

Social studies

Social studies learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will gain an understanding of their world, focusing on themselves, their friends and families and their environment. They will appreciate the reasons why people belong to groups, the roles they fulfill and the different ways that people interact within groups. They will gain a sense of place and the reasons why particular places are important to people as well as how and why people's activities influence and are influenced by the places in their environment. They will gain a sense of time, recognizing important events in their own lives and how time and change affect people.

Social studies perspective

Social studies is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to our understanding of human activity.

History

The study of what we think is important about the human past. Through it we develop an understanding of the past, its influences on the present and its implications for the future.

Geography

The study of the relationship between people and their environment, both natural and built. Through it we develop a sense of place and an understanding of human interaction with the Earth's surface and resources.

Society

The study of people and their relationships in society. Through it we develop an understanding of the ways in which individuals, groups and society interact with each other and how their values shape our social systems. It incorporates the disciplines of anthropology, economics, ethics, politics, psychology and sociology.

Science and technology

Science and technology learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will develop their observational skills by using their senses to gather and record information, and will use their observations to identify patterns, make predictions and refine their ideas. They will explore the way objects and phenomena function, identify parts of a system and gain an understanding of cause and effect relationships. Students will examine change over varying time periods and recognize that more than one variable may affect change. They will be aware of different perspectives and ways of organizing the world and will show care and respect for themselves, other living things and the environment. Students will communicate their ideas or provide explanations using their own scientific experience.

Science and technology perspective

Science and technology is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to an understanding of human activity.

Living things

The study of humans and other animals, plants, and the environment and the interactions between them.

Earth and space

The study of the planet Earth and its relationship to the universe.

Materials and matter

The study of the origins, properties and uses of natural and human-made solids, liquids and gases.

Forces and energy

The study of energy, its origins and transfer, and its effects.

Personal and social education

Personal and social education (PSE) is concerned with developing the attributes and dispositions embodied in the student profile, together with the attitudes found in *Making the PYP happen*. PSE learning can take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will develop an awareness of their self-identity and their strengths and weaknesses. They will show self-confidence and self-worth. They will learn to recognize, communicate and manage their own feelings and emotions. They will reflect on their own abilities and behaviour and will set achievable personal goals. Students will show awareness of and take responsibility for the choices they make to maintain a healthy lifestyle. They will develop a sense of safety and an ability to protect themselves from danger and abuse. Students will show initiative and self-direction with increasing independence, and will approach learning with flexibility, creativity and commitment. Students will develop social skills when interacting with others in different situations, and will develop and maintain appropriate relationships. They will show awareness of and respect for the views, needs and rights of others. They will show appreciation of cultural, racial, social, linguistic and religious differences. They will recognize and deal appropriately with conflict situations.

PSE perspective

PSE is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to personal and social development.

Self-concept

The set of beliefs, attitudes and feelings that students have about themselves. The extent to which they value themselves will not only affect what they can do, but how they interact with others. It is important that they are confident to try new things, to express their views and are eager to explore new learning.

Health and safety

The development of an awareness of aspects of overall health, including nutrition and control of diseases. Positive lifestyle choices that promote and maintain health are encouraged, and safe behaviour practices to be used in the home, school and community are developed.

Interaction with others

The development of an awareness of social norms and values within the family, the school community and society, including the study and acceptance of cultural, racial and religious similarities and differences. It leads to an understanding of conflict and appropriate ways of dealing with it.

Organization for learning

The development of an awareness of strategies to become a successful learner, including the adoption of a positive attitude toward responsibilities. It encourages making independent choices in relation to learning.

Physical education

Physical education (PE) 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 will be 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 will 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 will be introduced to a healthy and active lifestyle and the ways exercise affects their bodies and overall fitness or well-being.

The strands have been grouped as follows: **body control and spatial awareness, adventure challenge, athletics, movement to music, games, gymnastics and health-related activities.**

Visual arts

Students will use first-hand source materials, including their immediate environment and their imagination as an inspiration for their work. They will exhibit an increasing ability to concentrate on and complete a piece of artwork. They will discover and develop their own preferences and individual interests, which will contribute to the development of understanding and artistic vision. They will continue to explore the use of a wide variety of materials, tools and media and will draw on their increasing knowledge and skills to express their ideas, observations and feelings. Students will be exposed to and will respond to both western and non-western artifacts and artworks and will become familiar with the process of reflection and how to appreciate their own and others' artworks.

The strands have been grouped as follows: **creative processes, elements of art and design, visual arts in society and reflection and appreciation.**

Music

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. Students will gain an awareness and appreciation of music in all its forms from a range of times, places and cultures. Students will sing and play a variety of songs and pieces with an awareness of beat. Students will have the opportunity to experiment with sounds in composition tasks and to make expressive use of musical elements such as pitch and rhythm. They will use notation to develop musical ideas. They will develop an awareness and appreciation of music from different cultures and be able to describe and compare sounds using simple appropriate musical vocabulary.

The strands have been grouped as follows: **performing: singing, performing: playing instruments, creating and composing, notation and listening and appreciation.**

Drama

Students will work together, sharing ideas and making group decisions. They will listen and respond positively to the suggestions of others. Students will welcome the variety of cultural backgrounds inherent within their group and value the cross-cultural aspects of the dramas they develop. They will develop an awareness and acceptance of differences in traditions, celebrations, beliefs and behaviour. Students will use drama to explore concepts in the units of inquiry taken from the programme of inquiry and they will be introduced to teacher-in-role. Students will use a variety of stimuli to initiate classroom play and make-believe activities. They will develop the confidence to create their own dramas through play, and to share these with others where appropriate. Students will be willing and eager to explore movement and space using music and other stimuli. Where possible, students will be exposed to a variety of performance and presentation experiences and will discuss what they have seen and experienced.

The strands have been grouped as follows: **creative exploration and expression, technical incorporation, performance, personal and social development, reflection, evaluation and appreciation and drama in society.**

Age range 7–9

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

Language

Oral communication: listening and speaking

Students will appreciate the power of oral language and use speech with increasing awareness and responsibility. They will participate appropriately in discussions and will talk about a wide range of topics. They will use increasingly complex language confidently and creatively, with increasing accuracy, detail and range of vocabulary. They will become increasingly aware of the use of oral language to articulate, organize and reflect on learning. They will begin to communicate in more than one language.

Written communication: reading and writing

Students will read a variety of fiction and non-fiction books confidently, fluently and independently, and they will be able to select books appropriate to their reading level and for a specific purpose. They will be interested in a variety of literature and will begin to show an appreciation of different literary styles. They will understand and respond to the ideas, feelings and attitudes expressed in various reading materials, and will be able to use reference books, dictionaries and information technology independently. They will read daily in class and will regularly read for a sustained period of time, both in class and at home.

Students will develop fluency in writing, and will write independently and with confidence. They will begin to use a wide and vivid vocabulary with supporting details. They will understand that different types of writing have different structures. They will write for a range of purposes, both creative and informational, and will plan, edit and review their own writing. They will spell most high-frequency words accurately and use a range of strategies to spell words of increasing complexity. They will present their writing appropriately using a consistent, legible style.

Visual communication: viewing and presenting

Students will experience a wide variety of visual media materials. They will respond to viewing experiences orally and in writing. They will interpret visual media and recognize the power of visual media to influence thinking and behaviour, and will begin to learn how to make informed choices in their personal viewing experiences. They will use a variety of materials to plan and create projects with different media and will use electronic media (eg CD-Rom, Internet) to find information.

Mathematics

Data handling: statistics and probability

Students will discuss, compare and create sets that have subsets; design a survey; and process and interpret the data on a bar graph where the scale represents larger quantities. They will manipulate information in a database. They will find, describe and explain the mode in a set of data and will use probability to determine the outcome of mathematically fair and unfair games.

Measurement

Students will estimate, measure, label and compare length, mass, time and temperature using formal methods and standard units of measurement. They will determine appropriate tools and units of measurement including the use of small units of measurement for precision (cm, mm, °C). They will also estimate, measure, label and compare perimeter and area, using non-standard units of measurement. Students will model the addition and subtraction of money and be able to read and write time to the minute and second.

Shape and space

Students will sort, describe and model regular and irregular polygons, including identifying congruency in 2-D shapes. They will combine and transfer 2-D shapes to create another shape. They will identify lines and axes of reflective and rotational symmetry, understand angles as a measure of rotation and locate features on a grid using coordinates.

Pattern and function

Students will recognize, describe and analyse patterns in number systems. They will identify patterns and rules for multiplication and division, together with their relationship with addition and subtraction. They will model multiplication as an array and use number patterns to solve problems.

Number

Students will read, write, estimate, count, compare and order numbers to 1,000, extending understanding of the base 10 system to the thousands. They will read, write and model multiplication and division problems. They will use and describe multiple strategies to solve addition, subtraction, multiplication and division problems, reasonably estimating the answers. They will compare fractions using manipulatives, mathematical vocabulary and fractional notation. They will understand and model the concept of equivalence to one.

Social studies

Social studies learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will extend their understanding of human society, focusing on themselves and others within their own community as well as other communities that are distant in time and place. They will investigate how and why groups are organized within communities and the ways in which communities reflect the cultures and customs of their people. They will deepen their understanding of how people influence and are influenced by the places in their environment. Students will gain an appreciation of the relationship between valuing the environment and protecting it. They will extend their understanding of time, recognizing important events in people's lives and how the past is recorded and remembered in different ways.

Social studies perspective

Social studies is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to our understanding of human activity.

History

The study of what we think is important about the human past. Through it we develop an understanding of the past, its influences on the present and its implications for the future.

Geography

The study of the relationship between people and their environment, both natural and built. Through it we develop a sense of place and an understanding of human interaction with the Earth's surface and resources.

Society

The study of people and their relationships in society. Through it we develop an understanding of the ways in which individuals, groups and society interact with each other and how their values shape our social systems. It incorporates the disciplines of anthropology, economics, ethics, politics, psychology and sociology.

Science and technology

Science and technology learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will develop their observational skills by using their senses and selected observational tools. They will gather and record observed information in a number of ways, and reflect on these findings to identify patterns or connections, make predictions, and test and refine their ideas with increasing accuracy. Students will explore the way objects and phenomena function, identify parts of a system and gain an understanding of increasingly complex cause and effect relationships. They will examine change over time and recognize that change may be affected by one or more variables. They will be aware of different perspectives and ways of organizing the world, and will be able to consider how these views and customs may have been formulated. Students will use their learning in science to plan positive and realistic action to improve their welfare and that of other living things and the environment. Students will communicate their ideas or provide explanations using their own scientific experience, and that of others.

Science and technology perspective

Science and technology is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to an understanding of human activity.

Living things

The study of humans and other animals, plants, and the environment and the interactions between them.

Earth and space

The study of the planet Earth and its relationship to the universe.

Materials and matter

The study of the origins, properties and uses of natural and human-made solids, liquids and gases.

Forces and energy

The study of energy, its origins and transfer, and its effects.

Personal and social education

Personal and social education (PSE) is concerned with developing the attributes and dispositions embodied in the student profile, together with the attitudes found in *Making the PYP happen*. PSE learning can take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will develop an awareness of their self-identity and their strengths and weaknesses. They will show self-confidence and self-worth. They will learn to recognize, communicate and manage their own feelings and emotions. They will reflect on their own abilities and behaviour and will set achievable personal goals. Students will show awareness of and take responsibility for the choices they make to maintain a healthy lifestyle. They will develop a sense of safety and an ability to protect themselves from danger and abuse. Students will show initiative and self-direction with increasing independence, and will approach learning with flexibility, creativity and commitment. Students will develop social skills when interacting with others in different situations, and will develop and maintain appropriate relationships. They will show awareness of and respect for the views, needs and rights of others. They will show appreciation of cultural, racial, social, linguistic and religious differences. They will recognize and deal appropriately with conflict situations.

PSE perspective

PSE is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to personal and social development.

Self-concept

The set of beliefs, attitudes and feelings that students have about themselves. The extent to which they value themselves will not only affect what they can do, but how they interact with others. It is important that they are confident to try new things, to express their views and are eager to explore new learning.

Health and safety

The development of an awareness of aspects of overall health, including nutrition and control of diseases. Positive lifestyle choices that promote and maintain health are encouraged, and safe behaviour practices to be used in the home, school and community are developed.

Interaction with others

The development of an awareness of social norms and values within the family, the school community and society, including the study and acceptance of cultural, racial and religious similarities and differences. It leads to an understanding of conflict and appropriate ways of dealing with it.

Organization for learning

The development of an awareness of strategies to become a successful learner, including the adoption of a positive attitude toward responsibilities. It encourages making independent choices in relation to learning.

Physical education

Physical education (PE) 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 will be 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 will 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 will be introduced to a healthy and active lifestyle and the ways exercise affects their bodies and overall fitness or well-being.

The strands have been grouped as follows: **body control and spatial awareness, adventure challenge, athletics, movement to music, games, gymnastics and health-related activities.**

Visual arts

Students will establish a foundation of self-awareness about their own interests and preferences in art. They will develop this interest by exploring and experimenting with a variety of tools, materials and techniques. Students will exhibit confidence in choosing tools and materials that are appropriate for their artworks and that reflect their growing individual creative vision. They will exhibit greater control and purpose in their use of a variety of media and tools. They will make initial sketches and will be aware that a piece of artwork requires thought, planning, effort and revision. They will discuss their work using specific art vocabulary and will be increasingly aware of the fact that other students and groups will produce work that varies in style and content. Students will search beyond the classroom for resources and begin to see links with other areas of the curriculum. They will respond reflectively to the artwork of others.

The strands have been grouped as follows: **creative processes, elements of art and design, visual arts in society and reflection and appreciation.**

Music

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. Students will gain an awareness and appreciation of music in all its forms from a range of times, places and cultures. Through singing songs and playing instruments, students will develop the ability to perform accurately and confidently, making expressive use of musical elements. They will control and develop musical ideas in composition and will use notation as an aid to storing and refining ideas. They will listen with greater understanding to a range of music from different times and places.

The strands have been grouped as follows: **performing: singing, performing: playing instruments, creating and composing, notation and listening and appreciation.**

Drama

Students will work independently and with confidence in small groups and with partners. They will apply their knowledge of the content of the programme of inquiry to develop dramas. Students will apply their knowledge of cross-cultural differences when creating dramatic roles and locations. They will use personal experiences and other stimuli to create a drama. Students will reflect and comment on their own work and the work of others in a sensitive and positive way. They will be able to adopt a role and switch in and out of role to discuss their discoveries. They will be able to respond to contributions from the teacher-in-role. Students will develop an understanding of the way body and voice can be used to depict a character through specific voice and body exercises and activities. Where possible, students will be exposed to performance conventions from other cultures and to a variety of performance and/or presentation experiences; they will observe carefully and will be able to discuss what they have seen.

The strands have been grouped as follows: **creative exploration and expression, technical incorporation, performance, personal and social development, reflection, evaluation and appreciation and drama in society.**

Age range 9–12

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

Language

Oral communication: listening and speaking

Students will show an increasing awareness of the power of oral language and how it helps them to construct meaning and connect with others. They will use speech responsibly to inform, entertain and influence others. They will understand that oral language is a medium for learning and use the speaking and listening processes as learning strategies as well as for individual enjoyment. They will interact confidently with others in a variety of situations. They will use a wide variety of linguistic structures and features of spoken language to develop and present ideas and information, adapting their speaking and listening strategies to the context, purpose and audience. By reflecting on their own approach to communication and the ways in which others interact, they will monitor and assess their own learning.

Written communication: reading and writing

Students will read a wide range of texts with understanding and accuracy and will be able to use a variety of reading strategies for different texts and purposes. They will recognize and appreciate the various literary styles, forms and structures, and appreciate the structural and stylistic differences between fiction and non-fiction. They will be able to discuss what has been read, reflect on and talk about the feelings and motivations of the characters in a story, and analyse details of plot and characterization. They will appreciate the author’s use of language and they will begin to recognize meaning beyond the literal. They will locate and use a range of reference materials to find information and they will understand that this information can be used to generate ideas and opinions and guide research. They will read for enjoyment and information daily for sustained periods, both in school and at home.

Students will write fluently and effectively for a wide range of purposes, both creative and informal, using a range of styles. They will understand that different types of writing have different styles and structures, and are used for different purposes. Their writing will show a clear awareness of audience. They will use relevant and appropriate supporting details, a wide range of effective vocabulary and a variety of sentence structures and sentence lengths. They will use an appropriate writing process independently and confidently; planning, revising, and editing their own writing. Considering and acting upon the responses of others, students will gain an awareness of themselves as authors and will develop their own voice and style to personalize their writing. They will write for enjoyment and communication daily for sustained periods, at school and at home.

Visual communication: viewing and presenting

Students will demonstrate appropriate viewing behaviour for a large range of visual material (movies, posters, CD-Roms, atlases, architectural plans, sculptures, paintings, graphic organizers, codes). They will respond to viewing experiences orally and in writing using specific vocabulary and terminology. They will show an understanding of media elements and the effect of design on the meaning of the visual. They will identify stereotypes and the purpose of visual material. They will be willing to work with a variety of materials to plan and carry out different projects. They will recognize the implications of commercial media and will make informed judgments about television, film and video productions.

Mathematics

Data handling: statistics and probability

Students will collect, display and interpret data in a variety of ways. They will compare data displays, including how well they communicate information. They will create and manipulate an electronic database and set up a spreadsheet using simple formulas to create graphs. They will find, describe and explain the range, mode, median and mean in a set of data, use a numerical probability scale 0–1 or 0%–100%. They will determine the theoretical probability of an event and explain why this might be different from the experimental probability.

Measurement

Students will estimate, measure, label and compare perimeter, area and volume using formal methods and standard units of measurement. They will develop procedures for finding perimeter, area and volume and recognize the relationship between them. They will use the correct tool for any measurement with accuracy. They will measure and construct angles in degrees using a protractor. They will know that the accuracy of measurement depends on the situation and the precision of the tools. They will use and construct 12-hour and 24-hour timetables and be able to determine times worldwide.

Shape and space

Students will use the mathematical vocabulary of 2-D and 3-D shapes and angles. They will classify, sort and label all types of triangle and quadrilateral. They will turn a 2-D net into a 3-D shape and vice versa. They will find and use scale and ratio to enlarge and reduce shapes. They will use the language and notation of bearing to describe position, and be able to read and plot coordinates in four quadrants.

Pattern and function

Students will understand and use the relationships between the four operations. They will model and explain number patterns and use real-life problems to create a number pattern following a rule. They will develop, explain and model simple algebraic formulas. They will model exponents as repeated multiplication, and understand and use exponents and roots as inverse functions.

Number

Students will read, write and model numbers to one million and beyond, extending the base 10 system to the millions and thousandths. They will automatically use number facts. They will read, write, model, compare and order fractions (including improper fractions and mixed numbers), decimals (to any given place), and percentages. They will interchange fractions, decimals and percentages. They will add and subtract fractions with related denominators, simplify fractions and explore fractions using a calculator. They will add and subtract decimals to the thousandths and will model multiplication and division of decimals in the context of money. They will find and use ratios; read, write and model addition and subtraction of integers; and use exponential notation. They will use and describe multiple strategies to create and solve more complex problems, reasonably estimating the answers. They will select and defend the most appropriate and efficient method.

Social studies

Social studies learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will investigate aspects of human society, focusing on themselves and others within their own community as well as groups of people that are distant in time and place. They will extend their understanding of how and why groups are organized within communities and how participation within groups involves both rights and responsibilities. Students will gain an appreciation of how cultural groups may vary in their customs and practices, but reflect similar purposes. They will deepen their understanding of how people influence and are influenced by places in the environment. They will appreciate the significance of developing a sense of belonging and stewardship towards the environment, valuing and caring for it, in the interests of themselves and future generations. They will extend their understanding of time, recognizing how ideas and actions of people in the past have changed the lives of others and appreciating how the past is recorded and remembered in different ways. They will gain an understanding of how and why people manage resources and why different systems for the exchange of goods and services have developed.

Social studies perspective

Social studies is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to our understanding of human activity.

History

The study of what we think is important about the human past. Through it we develop an understanding of the past, its influences on the present and its implications for the future.

Geography

The study of the relationship between people and their environment, both natural and built. Through it we develop a sense of place and an understanding of human interaction with the Earth's surface and resources.

Society

The study of people and their relationships in society. Through it we develop an understanding of the ways in which individuals, groups and society interact with each other and how their values shape our social systems. It incorporates the disciplines of anthropology, economics, ethics, politics, psychology and sociology.

Science and technology

Science and technology learning will take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

In this age range, students will develop their observational skills by using their senses and selected observational tools. They will gather and record observed information in a number of ways, and reflect on these findings to identify patterns or connections, make predictions, and test and refine their ideas with increasing accuracy. Students will explore the way objects and phenomena function, identify parts of a system and gain an understanding of increasingly complex cause and effect relationships. They will examine change over time and recognize that change may be affected by one or more variables. They will be aware of different perspectives and ways of organizing the world, and will be able to consider how these views and customs may have been formulated. Students will use their learning in science to plan positive and realistic action to improve their welfare and that of other living things and the environment. Students will communicate their ideas or provide explanations using their own scientific experience, and that of others.

Science and technology perspective

Science and technology is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to an understanding of human activity.

Living things

The study of humans and other animals, plants, and the environment and the interactions between them.

Earth and space

The study of the planet Earth and its relationship to the universe.

Materials and matter

The study of the origins, properties and uses of natural and human-made solids, liquids and gases.

Forces and energy

The study of energy, its origins and transfer, and its effects.

Personal and social education

Personal and social education (PSE) is concerned with developing the attributes and dispositions embodied in the student profile, together with the attitudes found in *Making the PYP happen*. PSE learning can take place within the context of the transdisciplinary themes (who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet). These transdisciplinary themes address the fields of knowledge that form the traditional disciplines, but present them in a way that transcends the disciplines, therefore facilitating transdisciplinary learning that has significance for all students in all cultures. Students will experience the transdisciplinary themes through units of inquiry and the exploration of central ideas that have relevance and significance in their lives.

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PSE perspective

PSE is an integrated area of inquiry. The unique perspective provided by following the strands outlined below contributes to personal and social development.

Self-concept

The set of beliefs, attitudes and feelings that students have about themselves. The extent to which they value themselves will not only affect what they can do, but how they interact with others. It is important that they are confident to try new things, to express their views and are eager to explore new learning.

Health and safety

The development of an awareness of aspects of overall health, including nutrition and control of diseases. Positive lifestyle choices that promote and maintain health are encouraged, and safe behaviour practices to be used in the home, school and community are developed.

Interaction with others

The development of an awareness of social norms and values within the family, the school community and society, including the study and acceptance of cultural, racial and religious similarities and differences. It leads to an understanding of conflict and appropriate ways of dealing with it.

Organization for learning

The development of an awareness of strategies to become a successful learner, including the adoption of a positive attitude toward responsibilities. It encourages making independent choices in relation to learning.

Physical education

Physical education (PE) 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 will be 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 will 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 will be introduced to a healthy and active lifestyle and the ways exercise affects their bodies and overall fitness or well-being.

The strands have been grouped as follows: **body control and spatial awareness, adventure challenge, athletics, movement to music, games, gymnastics and health-related activities.**

Visual arts

Students will develop confidence in seeing themselves as artists and will have a growing appreciation of their individual artistic interpretation and vision. Their responses to tasks will demonstrate increased levels of technical detail and heightened levels of sophistication. They will continue to develop skills of observation and to seek out a variety of resources. They will be confident in the everyday use of sketchbooks for recording observations, ideas, pattern and colour. They will choose the appropriate materials for the task, building on previous skills and experiences when using a variety of materials. They will develop the skill of looking at artworks and artifacts from different periods and will draw conclusions and make predictions about their function. Students will work well, both alone and in groups, and will be sensitive to the work of others, suggesting modifications and discussing reactions constructively. They will be aware of the elements and principles of art and design and will develop a more critical stance to their own immediate environment.

The strands have been grouped as follows: **creative processes, elements of art and design, visual arts in society and reflection and appreciation.**

Music

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. Students will develop musical ideas in composition using musical notation. They will gain an awareness and appreciation of music in all its forms from a range of times, places and cultures. Students will experience a wide range of songs in different languages and from different times, and will perform them with sensitivity and accuracy. They will create their own music and perform it to others using increasingly sophisticated instruments, and be able to interpret the music of others through the understanding of complex notation. They will continue to develop their understanding of music from different sources and cultures.

The strands have been grouped as follows: **performing: singing, performing: playing instruments, creating and composing, notation and listening and appreciation.**

Drama

Through creative exploration and expression, students will reach an emotional and conceptual understanding of the areas being studied. Students will make immediate connections between fantasy and real-life situations. They will practise self-discipline in the presentation of material to an audience as well as within the role of the audience. They will incorporate production elements effectively to enhance their work, using costume, make-up, set, lights, sound and props. Students will bring original text to life using a variety of conventions. They will continue to explore the way the body and voice can be manipulated to depict a character, an emotion or a concept through a variety of exercises. Students will work towards creating a healthy group dynamic, where students feel comfortable making suggestions and accepting criticism on how their work, and the work of others, can be developed. They will listen carefully to suggestions and will begin to be able to apply these to the development of their work. They will be able to work independently, in pairs, in small groups and as a class group. They will use a journal to reflect on and evaluate their work, to record their ideas, their discoveries and the subjects being addressed. Students will be introduced to performance conventions from other cultures and will be given the opportunity to practise these in their dramas. Where possible, they will be exposed to a variety of performance and/or presentation experiences; they will be encouraged to discuss and evaluate what they have seen, to identify what was effective and to begin to transfer these discoveries to the presentation of their own work.

The strands have been grouped as follows: **creative exploration and expression, technical incorporation, performance, personal and social development, reflection, evaluation and appreciation and drama in society.**

