

NORLIGHTS
INTERNATIONAL SCHOOL
Oslo



Guide to Primary Years Program



Our Mission

Our mission is to provide a high quality education, bringing up inquisitive and knowledgeable, productive learners who are motivated to succeed.

In addition, we aim to nurture internationally minded compassionate young people with intercultural understanding and respect who strive to create a better and more peaceful world.

The objective is to provide the students with the academic and social skills that will help them reach their full potential, enabling them to be open-minded individuals who are able to think critically, and are encouraged to challenge norms and tackle change.

Grade Specific Focus

In the PYP it is understood that children learn through phases, and that different children may be learning at different phases at various stages in their development. Therefore, the grade mentioned with the phase indicate the stage that most instruction will commonly be focused at this grade level, although the other phases may also be addressed. These phases are generally not addressed at this grade level but may be addressed in the context of a particular inquiry or in differentiated instruction for a particular child or children.

Guide to Primary Years Program

Our school is a candidate school with the International Baccalaureate (IB). We intend to prepare the school for authorization to offer the IB Primary Years Programme (PYP). This constitutes the curriculum framework for our school and many other international schools throughout the world.

The Primary Years Programme (PYP), for students aged 3 to 11, focuses on developing the whole child as an inquirer both inside and outside the classroom in order to encourage lifelong learning that is globally minded. It offers a framework that meets children's academic, social, physical, emotional and cultural needs.

The PYP draws on research and best practice from a range of national systems with a wealth of knowledge and experience from international schools to create a relevant, engaging, challenging and significant educational framework for all children.

At the core of the PYP is a commitment to structured inquiry as a means to learn. Six different organizing themes help teachers and students explore understanding throughout the year. Eight conceptual key questions are utilized by the teachers and students to structure their units of inquiry. The development of and learner profile and attitudes and the expectation of socially responsible behaviour as well as action resulting from what we learn, are also key elements of the program.

The IB Learners Profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world. .-*Making the PYP Happen, 2009*

Inquirer

They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.

Knowledgeable

They explore concepts, Ideas and issues that have local and global significance.

In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.

Thinkers

They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.

Communicators

They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.

Principled

They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.

Open-minded

They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.

Caring

They show empathy, compassion and respect towards the needs and feelings of others.

They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.

Risk-takers

They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.

Balanced

They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.

Reflective

They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

The Essential Elements

In the PYP a balance is sought between acquisition of essential knowledge and skills, development of conceptual understanding, demonstration of positive attitudes, and taking of responsible action.

Knowledge: what do we want students to know?

Through units of inquiry we focus on significant, relevant content that we wish the students to explore and know about, taking into consideration their prior experience and understanding. The traditional subject areas of language, mathematics, science, social studies, the arts, and personal, social and physical education are important, but most content is embedded into six transdisciplinary themes.

Who we are:

An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities, and cultures; rights and responsibilities; what it means to be human.

Where we are in place & time:

An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.

How we express ourselves:

An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs, and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.

How the world works:

An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.

How we organize ourselves:

An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.

Sharing the planet:

An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and relationships within and between them; access to equal opportunities; peace and conflict resolution.

The Essential Elements

Concepts – What do we want students to understand?

Concepts are powerful ideas that have relevance within the subject areas but also transcend them and that students must explore and re-explore in order to develop a coherent, in-depth understanding. The IB has identified eight key concepts that provide structure for and deepen student inquiry.

Form: The understanding that everything has a form with recognizable features that can be observed, identified, described and categorized

Function: The understanding that everything has a purpose, a role or a way of behaving that can be investigated.

Causation: The understanding that things do not just happen, that there are causal relationships at work, and that actions have consequences.

Change: The understanding that change is the process of movement from one state to another. It is universal and inevitable.

Connection: The understanding that we live in a world of interacting systems in which the actions of any individual element affect others.

Perspective: The understanding that knowledge is moderated by perspectives; different perspectives lead to different interpretations, understandings and findings; perspectives may be individual, group, cultural or disciplinary.

Responsibility: The understanding that people make choices based on their understandings, and the actions they take as a result do make a difference.

Reflection: The understanding that there are different ways of knowing, and that it is important to reflect on our conclusions, to consider our methods of reasoning, and the quality and the reliability of the evidence we have considered.

Skills – What do we want students to be able to do?

In order to explore concepts fully it is important to employ a range of skills, both in the subject areas and transdisciplinary skills, that are relevant to many subject areas. The PYP has identified five types of skills that are transdisciplinary. The five categories of skills are thinking skills, social skills, communication skills, research skills and self-management skills.

Thinking skills

Acquisition of knowledge Gaining specific facts, ideas, vocabulary; remembering in a similar form.

Comprehension Grasping meaning from material learned; communicating and interpreting learning.

Application Making use of previously acquired knowledge in practical or new ways.

Analysis Taking knowledge or ideas apart; separating into component parts; seeing relationships; finding unique characteristics.

Synthesis Combining parts to create wholes; creating, designing, developing and innovating.

Evaluation Making judgments or decisions based on chosen criteria; standards and conditions.

Dialectical thought Thinking about two or more different points of view at the same time;

understanding those points of view; being able to construct an argument for each point of view based on knowledge of the other(s); realizing that other people can also take one's own point of view.

Metacognition Analysing one's own and others' thought processes; thinking about how one thinks and how one learns

Social skills

Accepting responsibility Taking on and completing tasks in an appropriate manner; being willing to assume a share of the responsibility.

Respecting others Listening sensitively to others; making decisions based on fairness and equality; recognizing that others' beliefs, viewpoints, religions and ideas may differ from one's own; stating one's opinion without hurting others.

Cooperating Working cooperatively in a group; being courteous to others; sharing materials; taking turns.

Resolving conflict Listening carefully to others; compromising; reacting reasonably to the situation; accepting responsibility appropriately; being fair.

Group decision- making Listening to others; discussing ideas; asking questions; working towards and obtaining consensus. Adopting a variety of group roles Understanding what behaviour is appropriate in a given situation and acting accordingly; being a leader in some circumstances, a follower in others.

Communication skills

Listening: Listening to directions; listening to others; listening to information.

Speaking: Speaking clearly; giving oral reports to small and large groups; expressing ideas clearly and logically; stating opinions.

Reading: Reading a variety of sources for information and pleasure; comprehending what has been read; making inferences and drawing conclusions.

Writing: Recording information and observations; taking notes and paraphrasing; writing summaries; writing reports; keeping a journal or record.

Viewing: Interpreting and analysing visuals and multimedia; understanding the ways in which images and language interact to convey ideas, values and beliefs; making informed choices about personal viewing experiences.

Presenting: Constructing visuals and multimedia for a range of purposes and audiences; communicating information and ideas through a variety of visual media; using appropriate technology for effective presentation and representation.

Non-verbal communication: Recognizing the meaning of visual and kinesthetic communication; recognizing and creating signs; interpreting and utilizing symbols.

Respect: Respecting themselves, others and the world around them.

Tolerance: Being sensitive about differences and diversity in the world and being responsive to the needs of others.

Self-management skills

Gross motor skills: Exhibiting skills in which groups of large muscles are used and the factor of strength is primary.

Fine motor skills: Exhibiting skills in which precision in delicate muscle systems is required.

Spatial awareness: Displaying a sensitivity to the position of objects in relation to oneself or each other.

Organization: Planning and carrying out activities effectively.

Time management: Using time effectively and appropriately.

Safety: Engaging in personal behaviour that avoids placing oneself or others in danger or at risk.

Healthy lifestyle: Making informed choices to achieve a balance in nutrition, rest, relaxation and exercise; practising appropriate hygiene and self-care.

Codes of behaviour: Knowing and applying appropriate rules or operating procedures of groups of people.

Informed choices: Selecting an appropriate course of action or behaviour based on fact or opinion.

Research skills

Formulating questions: Identifying something one wants or needs to know and asking compelling and relevant questions that can be researched.

Observing: Using all the senses to notice relevant details.

Planning: Developing a course of action; writing an outline; devising ways of finding out necessary information.

Collecting data: Gathering information from a variety of first- and second-hand sources such as maps, surveys, direct observation, books, films, people, museums and ICT.

Recording data: Describing and recording observations by drawing, note taking, making charts, tallying, writing statements.

Organizing data: Sorting and categorizing information; arranging into understandable forms such as narrative descriptions, tables, timelines, graphs and diagrams.

Interpreting data: Drawing conclusions from relationships and patterns that emerge from organized data.

Presenting: research findings Effectively communicating what has been learned; choosing appropriate media.

Attitudes – What do we want students to feel, value and demonstrate?

While recognizing the importance of knowledge, concepts and skills, these alone do not make an internationally minded person. It is vital that there is also focus on the development of personal attitudes towards people, towards the environment and towards learning, attitudes that contribute to the well-being of the individual and of the group. The PYP, in a commitment to a values-laden curriculum, has decided to include these attitudes in the essential elements of the program.

Appreciation: Appreciating the wonder and beauty of the world and its people.

Commitment: Being committed to their own learning, persevering and showing self-discipline and responsibility.

Confidence: Feeling confident in their ability as learners, having the courage to take risks,

applying what they have learned and making appropriate decisions and choices.

Cooperation: Cooperating, collaborating, and leading or following as the situation demands.

Creativity: Being creative and imaginative in their thinking and in their approach to problems and dilemmas.

Curiosity: Being curious about the nature of learning, about the world, its people and cultures.

Empathy: Imagining themselves in another's situation in order to understand his or her reasoning and emotions, so as to be open-minded and reflective about the perspectives of others.

Enthusiasm: Enjoying learning and willingly putting the effort into the process.

Independence: Thinking and acting independently, making their own judgments based on reasoned argument, and being able to defend their judgments.

Integrity: Being honest and demonstrating a considered sense of fairness.

Action – How do we want students to act?

We believe that education is not just about intellectual growth. It goes beyond developing socially responsible attitudes. A truly educated person takes thoughtful, responsible and appropriate action as a result of their learning. This action will extend the students' learning, but it is voluntary. It can involve service to the community; however, it should start at a very basic level: with the self, within the family, within the classroom, the hallways, and the playground. The action cycle- reflect, choose, act- demonstrates how action is envisioned in the PYP.

Language in a Transdisciplinary Program

Language is involved in all learning that goes on in a school, in both the affective and effective domains. Learners listen, talk, read and write their way to negotiating new meanings and understanding new concepts. In the "knowledge" area of the PYP, language is the most significant connecting element across the school's curriculum, both within and outside its transdisciplinary programme of inquiry. It is the school's responsibility to provide authentic contexts for language teaching and learning in all areas of the curriculum that are a reflection of, and relevant to, the community of learners, and to the educational theories underpinning the programme. In PYP schools there should be opportunities for students to negotiate their roles. Literacy, including oral and visual literacy as well as the ability to read and write, becomes increasingly important as greater demands are placed on learners as participants in the learning process.

Language provides a vehicle for inquiry. In an inquiry-based classroom, teachers and students enjoy using language, appreciating it both functionally and aesthetically. The love and enjoyment of language through the integration of literature into student inquiry is an indicator of good practice in a PYP classroom. For example, this may include: a series of books read as an author study; regional fairy tales as part of a unit of inquiry with a particular social studies emphasis; discussing a scientist's biography or a newspaper article to front-load a science investigation; early years counting stories as reinforcement for mathematics development; and the comparison and practice of illustration techniques to encourage the development of art skills.

The programme of inquiry provides an authentic context for learners to develop and use language. Wherever possible, language should be taught through the relevant, authentic context of the units of inquiry. The teacher should provide language learning opportunities that support learners' inquiries and the sharing of their learning. Regardless of whether language is being

taught within or outside the programme of inquiry, it is believed that purposeful inquiry is the way in which learners learn best. The starting point should always be learners' prior experience and current understanding.

When teachers plan learning experiences that enable learners to develop language within meaningful and enjoyable contexts, learners are able to make connections, apply their learning, and transfer their conceptual understanding to new situations. This progressive conceptual development, together with an enjoyment of the process, provides the foundation for lifelong learning.

Because of the variety and scope of individual students' learning experiences, the PYP, and NorLights International School, work with a phase based scope and sequence to identify students' competencies and needs for development across these strands. There are five phases students are expected to progress through during their 7-8 years in the primary years program (including the kindergarten program). As a school, we have expectations, designated on grade level reports, for where a child may be at different ages or grade levels, yet we recognize that all students learn at different rates and with different learning styles and progressions. This means that different children may progress through the phases at different rates and in different pathways.

The Norwegian instruction works with the same scope and sequence as does the English language program. However, it is acknowledged that English is the main language of instruction and that not every element of every strand will be taught through the Norwegian language. Further, we recognize that language competencies represented in the strands are cross-lingual; this means that a skill or competency learned through one language is transferable to another language. Therefore, Norwegian and English language teachers work together to develop students' competencies across the strands.

Because learning, thinking, and learning take place through language, all languages, whether English, Norwegian, or a child's third home language, are seen as tools for communication and for learning. The school regards it as crucial that learning take place through the language and not merely in isolated grammar or vocabulary units. In Norwegian classes, students learn both about language- learning how the Norwegian language works, and learn through the language, discovering literature, culture and Unit of Inquiry knowledge and concepts through the vehicle of Norwegian language.

The school Scope and Sequence documents are planning tools and not prescriptive instructions for what will be taught specifically on what day or what hour. A PYP program is committed to providing a flexible, reflective program that is responsive to the needs of each particular class and the students in it. Thus, the planning and teaching of learning outcomes in the Scope and Sequence documents are designed through collaborative planning sessions with all members of the teaching team for a particular grade level.

In these teams, English and Norwegian teachers share and plan which elements of the learning outcomes they will be responsible for addressing through a given unit of inquiry or as 'stand alone' instruction. For the most part, it is expected that the language outcomes will be addressed through the unit of inquiry work in Norwegian and English language sessions.

In planning meetings, teachers keep in mind these guidelines from the PYP:

The following points should be considered when using the continuums to inform planning, teaching and assessing.

- The phases attempt to describe the language learning processes through which learners

progress.

- It is acknowledged that there are earlier and later phases that have not been described in these continuums.
- Learners within the same age group will have different proficiency levels and needs—therefore teachers should consider a range of phases when planning language learning experiences for a class of learners.
- Each learner is a unique individual with different experiences and perceptions, so no two learners progress at the same rate, or along the same developmental pathways.
- A learner may exhibit a range of learning outcomes from various phases at any one time.
- Learners seldom progress in a neat and predictable manner; instead they may remain in one phase for some length of time and move rapidly through other phases.
- The PYP language continuums are not prescriptive tools that assume a learner must attain all the outcomes of a particular phase before moving on to the next phase, nor that the learner should be in the same phase for each strand, or in the same phase for each language he or she is learning at any one time. (from the PYP Language Scope and Sequence Document, February 2009)

Planning for language within the PYP is a necessarily collaborative and ongoing activity that takes into account the various competencies of a given classroom. The needs of a class and the individuals within it are identified at the pre-unit planning stage, but additional planning takes place individually and between teachers as the unit progresses.

The full Language Scope and Sequence concepts and learning outcomes follow.

Learning Continuum for Oral Language- Listening and Speaking

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<p>Conceptual understandings Spoken words connect us with others. People listen and speak to share thoughts and feelings. People ask questions to learn from others.</p>	<p>Conceptual understandings The sounds of language are a symbolic way of representing ideas and objects. People communicate using different languages. Everyone has the right to speak and be listened to.</p>	<p>Conceptual understandings Spoken language varies according to the purpose and audience. People interpret messages according to their unique experiences and ways of understanding. Spoken communication is different from written communication—it has its own set of rules.</p>	<p>Conceptual understandings Taking time to reflect on what we hear and say helps us to make informed judgments and form new opinions. Thinking about the perspective of our audience helps us to communicate more effectively and appropriately. The grammatical structures of a language enable members of a language community to communicate with each other.</p>	<p>Conceptual understandings Spoken language can be used to persuade and influence people. Metaphorical language creates strong visual images in our imagination. Listeners identify key ideas in spoken language and synthesize them to create their own understanding. People draw on what they already know in order to infer new meaning from what they hear.</p>

Learning outcomes

Learners:

- use gestures, actions, body language and/or words to communicate needs and to express ideas
- listen and respond to picture books, showing pleasure, and demonstrating their understanding through gestures, expression and/or words
- name classmates, teachers and familiar classroom and playground objects
- interact effectively with peers and adults in familiar social settings
- tell their own stories using words, gestures, and objects/ artifacts
- repeat/echo single words
- use single words and two- word phrases in context
- join in with poems, rhymes, songs and repeated phrases in shared books
- understand simple questions and respond with actions or words
- follow classroom directions and routines, using context cues
- realize that people speak different languages
- use the mother tongue (with translation, if necessary) to express needs and explain ideas
- realize that word order can change from one language to another
- use own grammar style as part of the process of developing grammatical awareness.

Learning outcomes

Learners:

- listen and respond in small or large groups for increasing periods of time
- listen to and enjoy stories read aloud; show understanding by responding in oral, written or visual form
- memorize and join in with poems, rhymes and songs
- follow classroom instructions, showing understanding
- describe personal experiences
- obtain simple information from accessible spoken texts
- distinguish beginning, medial and ending sounds of words with increasing accuracy
- follow two-step directions
- predict likely outcomes when listening to texts read aloud
- use language to address their needs, express feelings and opinions
- ask questions to gain information and respond to inquiries directed to themselves or to the class
- use oral language to communicate during classroom activities, conversations and imaginative play
- talk about the stories, writing, pictures and models they have created
- begin to communicate in more than one language
- use grammatical rules of the language(s) of instruction (learners may overgeneralize at this stage).

Learning outcomes

Learners:

- listen attentively and speak appropriately in small and large group interactions
- listen to a variety of oral presentations including stories, poems, rhymes and reports and respond with increasing confidence and detail
- pick out main events and relevant points in oral texts
- follow multi-step directions
- retell familiar stories in sequence
- anticipate and predict when listening to text read aloud
- use language for a variety of personal purposes, for example, invitations
- express thoughts, ideas and opinions and discuss them, respecting contributions from others
- participate in a variety of dramatic activities, for example, role play, puppet theatre, dramatization of familiar stories and poems
- use language to explain, inquire and compare
- recognize patterns in language(s) of instruction and use increasingly accurate grammar
- begin to understand that language use is influenced by its purpose and the audience
- understand and use specific vocabulary to suit different purposes
- hear and appreciate differences between languages.

Learning outcomes

Learners:

- listen appreciatively and responsively, presenting their own point of view and respecting the views of others
- listen for a specific purpose in a variety of situations
- identify and expand on main ideas in familiar oral texts
- listen reflectively to stories read aloud in order to identify story structures and ideas
- understand that ideas and opinions can be generated, developed and presented through talk; they work in pairs and groups to develop oral presentations
- argue persuasively and defend a point of view
- explain and discuss their own writing with peers and adults
- begin to paraphrase and summarize
- organize thoughts and feelings before speaking
- use a range of specific vocabulary in different situations, indicating an awareness that language is influenced by purpose, audience and context
- realize that grammatical structures can be irregular and begin to use them appropriately and consistently
- use oral language appropriately, confidently and with increasing accuracy
- verbalize their thinking and explain their reasoning
- recognize that different forms of grammar are used in different contexts

Learning outcomes

Learners:

- participate appropriately as listener and speaker, in discussions, conversations, debates and group presentations
- generate, develop and modify ideas and opinions through discussion
- listen and respond appropriately to instructions, questions and explanations
- infer meanings, draw conclusions and make judgments about oral presentations
- use an increasing vocabulary and more complex sentence structures with a high level of specificity
- argue persuasively and justify a point of view
- show open-minded attitudes when listening to other points of view
- paraphrase and summarize when communicating orally
- understand and use figurative language such as simile, personification and metaphor
- use oral language to formulate and communicate possibilities and theories
- use standard grammatical structures competently in appropriate situations
- use register, tone, voice level and

			<ul style="list-style-type: none"> • appreciate that language is not always used literally; understand and use the figurative language of their own culture. 	intonation to enhance meaning <ul style="list-style-type: none"> • appreciate that people speak and respond according to personal and cultural perspectives • use speech responsibly to inform, entertain and influence
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Learning continuum for Visual Language- Viewing and Presenting

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<p>Conceptual understandings</p> <p>Visual language is all around us. The pictures, images, and symbols in our environment have meaning. We can enjoy and learn from visual language.</p>	<p>Conceptual understandings</p> <p>People use static and moving images to communicate ideas and information. Visual texts can immediately gain our attention. Viewing and talking about the images others have created helps us to understand and create our own presentations.</p>	<p>Conceptual understandings</p> <p>Visual texts can expand our database of sources of information. Visual texts provide alternative means to develop new levels of understanding. Selecting the most suitable forms of visual presentation enhances our ability to express ideas and images. Different visual techniques produce different effects and are used to present different types of information.</p>	<p>Conceptual understandings</p> <p>Visual texts have the power to influence thinking and behaviour. Interpreting visual texts involves making an informed judgment about the intention of the message. To enhance learning we need to be efficient and constructive users of the internet.</p>	<p>Conceptual understandings</p> <p>The aim of commercial media is to influence and persuade viewers. Individuals respond differently to visual texts, according to their previous experiences, preferences and perspectives. Knowing about the techniques used in visual texts helps us to interpret presentations and create our own visual effects. Synthesizing information from visual texts is dependent upon personal interpretation and leads to new understanding.</p>
<p>Learning outcomes</p> <p>Learners:</p> <ul style="list-style-type: none"> • attend to visual information showing understanding through play, gestures, facial expression • reveal their own feelings in response to visual presentations, for 	<p>Learning outcomes</p> <p>Learners:</p> <ul style="list-style-type: none"> • attend to visual information showing understanding through discussion, role play, illustrations • talk about their own feelings in response to visual messages; show 	<p>Learning outcomes</p> <p>Learners:</p> <ul style="list-style-type: none"> • view visual information and show understanding by asking relevant questions and discussing possible meaning • discuss their own 	<p>Learning outcomes</p> <p>Learners:</p> <ul style="list-style-type: none"> • view, respond to and describe visual information, communicating understanding in oral, written and visual form • describe personal 	<p>Learning outcomes</p> <p>Learners:</p> <ul style="list-style-type: none"> • view and critically analyse a range of visual texts, communicating understanding through oral, written and visual media • identify factors that

<p>example, by showing amusement, curiosity, surprise</p> <ul style="list-style-type: none"> • observe visual cues that indicate context; show understanding by matching pictures with context • recognize familiar signs, labels and logos, for example, pedestrian walking sign, emergency exit sign, no dogs allowed; identify similarities and differences • make personal connections to visual texts, for example, a picture book about children making friends in a new situation • use body language to communicate and to convey understanding, for example, pointing, gesturing, facial expressions • select and incorporate colours, shapes, symbols and images into visual presentations • show appreciation of illustrations in picture books by selecting and rereading familiar books, focusing on favourite pages • locate and use appropriate ICT iconography to activate different devices, for example, computer games, CD player, television • listen to terminology associated with visual texts and understand terms such as colour, shape, size. 	<p>empathy for the way others might feel</p> <ul style="list-style-type: none"> • relate to different contexts presented in visual texts according to their own experiences, for example, "That looks like my uncle's farm." • locate familiar visual texts in magazines, advertising catalogues, and connect them with associated products • show their understanding that visual messages influence our behaviour • connect visual information with their own experiences to construct their own meaning, for example, when taking a trip • use body language in mime and role play to communicate ideas and feelings visually • realize that shapes, symbols and colours have meaning and include them in presentations • use a variety of implements to practise and develop handwriting and presentation skills • observe and discuss illustrations in picture books and simple reference books, commenting on the information being conveyed • recognize ICT iconography and follow prompts to access programs or activate devices • through teacher modelling, become aware of terminology used to tell about visual effects, for example, features, layout, border, frame • view different versions of the same story and discuss the effectiveness of the different ways of 	<p>feelings in response to visual messages; listen to other responses, realizing that people react differently</p> <ul style="list-style-type: none"> • realize that visual information reflects and contributes to the understanding of context • recognize and name familiar visual texts, for example, advertising, logos, labels, signs, ICT iconography • observe and discuss familiar and unfamiliar visual messages; make judgments about effectiveness • discuss personal experiences that connect with visual images • use actions and body language to reinforce and add meaning to oral presentations • select and use suitable shapes, colours, symbols and layout for presentations; practise and develop writing/ calligraphy styles • realize that text and illustrations in reference materials work together to convey information, and can explain how this enhances understanding • with guidance, use the internet to access relevant information; process and present information in ways that are personally meaningful • use appropriate terminology to discuss visual texts, for example, logos, font, foreground, background, impact • view a range of visual language formats and discuss 	<p>reactions to visual messages; reflect on why others may perceive the images differently</p> <ul style="list-style-type: none"> • understand and explain how visual effects can be used to reflect a particular context • recognize and name familiar visual texts and explain why they are or are not effective, for example, advertising, logos, labels, signs, billboards • interpret visual cues in order to analyse and make inferences about the intention of the message • explain how relevant personal experiences can add to the meaning of a selected film/movie; write and illustrate a personal response • identify aspects of body language in a dramatic presentation and explain how they are used to convey the mood and personal traits of characters • design posters and charts, using shapes, colours, symbols, layout and fonts, to achieve particular effects; explain how the desired effect is achieved • discuss a newspaper report and tell how the words and pictures work together to convey a particular message • prepare, individually or in collaboration, visual 	<p>influence personal reactions to visual texts; design visual texts with the intention of influencing the way people think and feel</p> <ul style="list-style-type: none"> • analyse and interpret the ways in which visual effects are used to establish context • identify elements and techniques that make advertisements, logos and symbols effective and draw on this knowledge to create their own visual effects • realize that cultural influences affect the way we respond to visual effects and explain how this affects our interpretation, for example, the use of particular colours or symbols • realize that individuals interpret visual information according to their personal experiences and different perspectives • show how body language, for example, facial expression, gesture and movement, posture and orientation, eye contact and touch, can be used to achieve effects and influence meaning • apply knowledge of presentation techniques in original and innovative ways; explain their own ideas for achieving desired effects • examine and analyse text and illustrations in reference material, including online text, explaining how visual and written information work together to reinforce each other and make meaning
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	<p>telling the same story, for example, the picture book version and the film/movie version of a story</p> <ul style="list-style-type: none"> • become aware of the use and organization of visual effects to create a particular impact, for example, dominant images show what is important in a story • observe visual images and begin to appreciate, and be able to express, that they have been created to achieve particular purposes. 	<p>their effectiveness, for example, film/video, posters, drama</p> <ul style="list-style-type: none"> • realize that effects have been selected and arranged to achieve a certain impact, for example, the way in which colour, lighting, music and movement work together in a performance • observe and discuss visual presentations; make suggestions about why they have been created and what the creator has been aiming to achieve. 	<p>presentations using a range of media, including computer and web-based applications</p> <ul style="list-style-type: none"> • discuss and explain visual images and effects using appropriate terminology, for example, image, symbol, graphics, balance, techniques, composition • experience a range of different visual language formats; appreciate and describe why particular formats are selected to achieve particular effects • observe and discuss the choice and composition of visual presentations and explain how they contribute to meaning and impact, for example, facial expressions, speech bubbles, word images to convey sound effects • realize that visual presentations have been created to reach out to a particular audience and influence the audience in some way; discuss the effects used and how they might influence the audience. 	<p>more explicit</p> <ul style="list-style-type: none"> • navigate the internet in response to verbal and visual prompts with confidence and familiarity; use ICT to prepare their own presentations • use appropriate terminology to identify a range of visual effects/formats and critically analyse their effectiveness, for example, mood, media, juxtaposition, proportion • analyse the selection and composition of visual presentations; select examples to explain how they achieve a particular impact, for example, dominant images, use of colour, texture, symbolism • identify the intended audience and purpose of a visual presentation; identify overt and subliminal messages • reflect on ways in which understanding the intention of a visual message can influence personal responses
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Learning continuum for Written Language- Reading

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<p>Conceptual understandings</p> <p>Illustrations convey meaning. Print conveys meaning. People read for pleasure. Stories can tell about imagined worlds. Printed information can tell about the real world. There are established ways of setting out print and organizing books.</p>	<p>Conceptual understandings</p> <p>The sounds of spoken language can be represented visually. Written language works differently from spoken language. Consistent ways of recording words or ideas enable members of a language community to communicate. People read to learn. The words we see and hear enable us to create pictures in our minds.</p>	<p>Conceptual understandings</p> <p>Different types of texts serve different purposes. What we already know enables us to understand what we read. Applying a range of strategies helps us to read and understand new texts. Wondering about texts and asking questions helps us to understand the meaning. The structure and organization of written language influences and conveys meaning.</p>	<p>Conceptual understandings</p> <p>Reading and thinking work together to enable us to make meaning. Checking, rereading and correcting our own reading as we go enable us to read new and more complex texts. Identifying the main ideas in the text helps us to understand what is important. Knowing what we aim to achieve helps us to select useful reference material to conduct research.</p>	<p>Conceptual understandings</p> <p>Authors structure stories around significant themes. Effective stories have a structure, purpose and sequence of events (plot) that help to make the author's intention clear. Synthesizing ideas and information from texts leads to new ideas and understanding. Reading opens our minds to multiple perspectives and helps us to understand how people think, feel and act.</p>
<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • enjoy listening to stories • choose and "read" picture books for pleasure • locate and respond to aspects of interest in self- selected texts (pointing, examining pictures closely, commenting) • show curiosity and ask questions about pictures or text • listen attentively and respond to stories read aloud • participate in shared reading, joining in with rhymes, refrains and repeated text as they gain familiarity • make connections to their own 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • select and reread favourite texts for enjoyment • understand that print is permanent, for example, when listening to familiar stories, notices when the reader leaves out or changes parts • participate in shared reading, posing and responding to questions and joining in the refrains • participate in guided reading situations, observing and applying reading behaviours and interacting effectively with the group • listen attentively and respond actively 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • develop personal preferences, selecting books for pleasure and information • read texts at an appropriate level, independently, confidently and with good understanding • recognize a range of different text types, for example, letters, poetry, plays, stories, novels, reports, articles • identify and explain the basic structure of a story— beginning, middle and end; may use storyboards or comic strips to communicate elements • make predictions 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • read a variety of books for pleasure, instruction and information; reflect regularly on reading and set future goals • distinguish between fiction and non-fiction and select books appropriate to specific purposes • understand and respond to the ideas, feelings and attitudes expressed in various texts, showing empathy for characters • recognize the author's purpose, for example, to inform, entertain, persuade, instruct • understand that stories have a plot; 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • read a wide range of texts confidently, independently and with understanding • work in cooperative groups to locate and select texts appropriate to purpose and audience • participate in class, group or individual author studies, gaining an in-depth understanding of the work and style of a particular author and appreciating what it means to be an author • identify genre (including fantasy, biography, science fiction, mystery, historical novel) and

<p>experience when listening to or “reading” texts</p> <ul style="list-style-type: none"> • begin to discriminate between visual representations such as symbols, numbers, ICT iconography, letters and words • recognize their own first name • express opinions about the meaning of a story • show empathy for characters in a story • distinguish between pictures and written text, for example, can point to a picture when asked • indicate printed text where the teacher should start reading • handle books, showing an understanding of how a book works, for example, cover, beginning, directional movement, end 	<p>to read- aloud situations; make predictions, anticipate possible outcomes</p> <ul style="list-style-type: none"> • read and understand the meaning of self-selected and teacher-selected texts at an appropriate level • use meaning, visual, contextual and memory cues, and cross-check cues against each other, when necessary (teacher monitors miscues to identify strategies used and strategies to be developed) • read and understand familiar print from the immediate environment, for example, signs, advertisements, logos, ICT iconography • make connections between personal experience and storybook characters • understand sound-symbol relationships and recognize familiar sounds/symbols/ words of the language community 	<p>about a story, based on their own knowledge and experience; revise or confirm predictions as the story progresses</p> <ul style="list-style-type: none"> • realize that there is a difference between fiction and non-fiction and use books for particular purposes, with teacher guidance • recognize and use the different parts of a book, for example, title page, contents, index • understand sound-symbol relationships and apply reliable phonetic strategies when decoding print • use a range of strategies to self-monitor and self-correct, for example, meaning, context, rereading, reading on, cross-checking one cue source against another • discuss personality and behaviour of storybook characters, commenting on reasons why they might react in particular ways 	<p>identify the main idea; discuss and outline the sequence of events leading to the final outcome</p> <ul style="list-style-type: none"> • appreciate that writers plan and structure their stories to achieve particular effects; identify features that can be replicated when planning their own stories • use reference books, dictionaries, and computer and web-based applications with increasing independence and responsibility • know how to skim and scan texts to decide whether they will be useful, before attempting to read in detail • as part of the inquiry process, work cooperatively with others to access, read, interpret, and evaluate a range of source materials • identify relevant, reliable and useful information and decide on appropriate ways to use it 	<p>explain elements and literary forms that are associated with different genres</p> <ul style="list-style-type: none"> • appreciate structural and stylistic differences between fiction and non-fiction; show understanding of this distinction when structuring their own writing • appreciate authors’ use of language and interpret meaning beyond the literal • understand that authors use words and literary devices to evoke mental images • recognize and understand figurative language, for example, similes, metaphors, idioms • make inferences and be able to justify them • identify and describe elements of a story—plot, setting, characters, theme—and explain how they contribute to its effectiveness • compare and contrast the plots of two different but similar novels, commenting on effectiveness
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Learning continuum for Written Language- Writing

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<p>Conceptual understandings</p> <p>Writing conveys meaning. People write to tell about their experiences, ideas and feelings. Everyone can express themselves in writing. Talking about our stories and pictures helps other people to understand and enjoy them.</p>	<p>Conceptual understandings</p> <p>People write to communicate. The sounds of spoken language can be represented visually (letters, symbols, characters). Consistent ways of recording words or ideas enable members of a language community to understand each other's writing. Written language works differently from spoken language.</p>	<p>Conceptual understandings</p> <p>We write in different ways for different purposes. The structure of different types of texts includes identifiable features. Applying a range of strategies helps us to express ourselves so that others can enjoy our writing. Thinking about storybook characters and people in real life helps us to develop characters in our own stories. When writing, the words we choose and how we choose to use them enable us to share our imaginings and ideas.</p>	<p>Conceptual understandings</p> <p>Writing and thinking work together to enable us to express ideas and convey meaning. Asking questions of ourselves and others helps to make our writing more focused and purposeful. The way we structure and organize our writing helps others to understand and appreciate it. Rereading and editing our own writing enables us to express what we want to say more clearly.</p>	<p>Conceptual understandings</p> <p>Stories that people want to read are built around themes to which they can make connections. Effective stories have a purpose and structure that help to make the author's intention clear. Synthesizing ideas enables us to build on what we know, reflect on different perspectives, and express new ideas. Knowing what we aim to achieve helps us to plan and develop different forms of writing. Through the process of planning, drafting, editing and revising, our writing improves over time.</p>
<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • experiment with writing using different writing implements and media • choose to write as play, or in informal situations, for example, filling in forms in a pretend post office, writing a menu or wish list for a party • differentiate between illustrations and written text • use their own experience as a stimulus when drawing and "writing" • show curiosity and ask questions about written language • participate in shared writing, observing the teacher's writing and making suggestions 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • enjoy writing and value their own efforts • write informally about their own ideas, experiences and feelings in a personal journal or diary, initially using simple sentence structures, for example, "I like ...", "I can ...", "I went to ...", "I am going to ..." • read their own writing to the teacher and to classmates, realizing that what they have written remains unchanged • participate in shared and guided writing, observing the teacher's model, asking questions and offering suggestions 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • engage confidently with the process of writing • write about a range of topics for a variety of purposes, using literary forms and structures modelled by the teacher and/or encountered in reading • use graphic organizers to plan writing, for example, Mind Maps, storyboards • organize ideas in a logical sequence, for example, write simple narratives with a beginning, middle and end • use appropriate writing conventions, for example, word order, as required by the 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • write independently and with confidence, demonstrating a personal voice as a writer • write for a range of purposes, both creative and informative, using different types of structures and styles according to the purpose of the writing • show awareness of different audiences and adapt writing appropriately • select vocabulary and supporting details to achieve desired effects • organize ideas in a logical sequence • reread, edit and revise to improve their own writing, for 	<p>Learning outcomes Learners:</p> <ul style="list-style-type: none"> • write independently and with confidence, showing the development of their own voice and style • write using a range of text types in order to communicate effectively, for example, narrative, instructional, persuasive • adapt writing according to the audience and demonstrate the ability to engage and sustain the interest of the reader • use appropriate paragraphing to organize ideas • use a range of vocabulary and relevant supporting details to convey meaning and

- listen and respond to shared books (enlarged texts), observing conventions of print, according to the language(s) of instruction
- begin to discriminate between letters/characters, numbers and symbols
- show an awareness of sound-symbol relationships and begin to recognize the way that some familiar sounds can be recorded
- write their own name independently.

- write to communicate a message to a particular audience, for example, a news story, instructions, a fantasy story
- create illustrations to match their own written text
- demonstrate an awareness of the conventions of written text, for example, sequence, spacing, directionality
- connect written codes with the sounds of spoken language and reflect this understanding when recording ideas
- form letters/characters conventionally and legibly, with an understanding as to why this is important within a language community
- discriminate between types of code, for example, letters, numbers, symbols, words/ characters
- write an increasing number of frequently used words or ideas independently
- illustrate their own writing and contribute to a class book or collection of published writing.

language(s) of instruction

- use familiar aspects of written language with increasing confidence and accuracy, for example, spelling patterns, high-frequency words, high-interest words
- use increasingly accurate grammatical constructs
- write legibly, and in a consistent style
- proofread their own writing and make some corrections and improvements
- use feedback from teachers and other students to improve their writing
- use a dictionary, a thesaurus and word banks to extend their use of language
- keep a log of ideas to write about
- over time, create examples of different types of writing and store them in their own writing folder
- work cooperatively with a partner to discuss and improve each other's work, taking the roles of authors and editors
- work independently, to produce written work that is legible and well-presented, written either by hand or in digital format.

example, content, language, organization

- respond to the writing of others sensitively
- use appropriate punctuation to support meaning
- use knowledge of written code patterns to accurately spell high-frequency and familiar words
- use a range of strategies to record words/ideas of increasing complexity
- realize that writers ask questions of themselves and identify ways to improve their writing, for example, "Is this what I meant to say?", "Is it interesting/relevant?"
- check punctuation, variety of sentence starters, spelling, presentation
- use a dictionary and thesaurus to check accuracy, broaden vocabulary and enrich their writing
- work cooperatively with a partner to discuss and improve each other's work, taking the roles of authors and editors
- work independently, to produce written work that is legible and well-presented, written either by hand or in digital format.

create atmosphere and mood

- use planning, drafting, editing and reviewing processes independently and with increasing competence
- critique the writing of peers sensitively; offer constructive suggestions
- vary sentence structure and length
- demonstrate an increasing understanding of how grammar works
- use standard spelling for most words and use appropriate resources to check spelling
- use a dictionary, thesaurus, spellchecker confidently and effectively to check accuracy, broaden vocabulary and enrich their writing
- choose to publish written work in handwritten form or in digital format independently
- use written language as a means of reflecting on their own learning
- recognize and use figurative language to enhance writing, for example, similes, metaphors, idioms, alliteration
- identify and describe elements of a story—setting, plot, character, theme
- locate, organize, synthesize and present written information obtained from a variety of valid sources
- use a range of tools and techniques to produce written work that is attractively and effectively presented.

Mathematics within a transdisciplinary framework

Wherever possible, mathematics should be taught through the relevant, realistic context of the units of inquiry. The direct teaching of mathematics in a unit of inquiry may not always be feasible but, where appropriate, prior learning or follow-up activities may be useful to help students make connections between the different aspects of the curriculum. Students also need opportunities to identify and reflect on —big ideas within and between the different strands of mathematics, the programme of inquiry and other subject areas.

Links to the transdisciplinary themes should be explicitly made, whether or not the mathematics is being taught within the programme of inquiry. A developing understanding of these links will contribute to the students' understanding of mathematics in the world and to their understanding of the transdisciplinary theme.

The role of inquiry in mathematics is important, regardless of whether it is being taught inside or outside the programme of inquiry. However, it should also be recognized that there are occasions when it is preferable for students to be given a series of strategies for learning mathematical skills in order to progress in their mathematical understanding rather than struggling to proceed.

Mathematics: Data Management

Phase 1	Phase 2	Phase 3	Phase 4
<p>Conceptual understandings</p> <p>We collect information to make sense of the world around us.</p> <p>Organizing objects and events helps us to solve problems.</p> <p>Events in daily life involve chance.</p>	<p>Conceptual understandings</p> <p>Information can be expressed as organized and structured data.</p> <p>Objects and events can be organized in different ways.</p> <p>Some events in daily life are more likely to happen than others.</p>	<p>Conceptual understandings</p> <p>Data can be collected, organized, displayed and analysed in different ways.</p> <p>Different graph forms highlight different aspects of data more efficiently.</p> <p>Probability can be based on experimental events in daily life.</p> <p>Probability can be expressed in numerical notations.</p>	<p>Conceptual understandings</p> <p>Data can be presented effectively for valid interpretation and communication.</p> <p>Range, mode, median and mean can be used to analyse statistical data.</p> <p>Probability can be represented on a scale between 0–1 or 0%–100%.</p> <p>The probability of an event can be predicted theoretically.</p>

<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that sets can be organized by different attributes • understand that information about themselves and their surroundings can be obtained in different ways • discuss chance in daily events (impossible, maybe, certain). 	<p>When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that sets can be organized by one or more attributes • understand that information about themselves and their surroundings can be collected and recorded in different ways • understand the concept of chance in daily events (impossible, less likely, maybe, most likely, certain). 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that data can be collected, displayed and interpreted using simple graphs, for example, bar graphs, line graphs • understand that scale can represent different quantities in graphs • understand that the mode can be used to summarize a set of data • understand that one of the purposes of a database is to answer questions and solve problems • understand that probability is based on experimental events. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that different types of graphs have special purposes • understand that the mode, median, mean and range can summarize a set of data • understand that probability can be expressed in scale (0–1) or per cent (0%–100%) • understand the difference between experimental and theoretical probability.
<p>Learning outcomes When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • represent information through pictographs and tally marks • sort and label real objects by attributes. 	<p>Learning outcomes When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • collect and represent data in different types of graphs, for example, tally marks, bar graphs • Represent the relationship between objects in sets using tree, Venn and Carroll diagrams • express the chance of an event happening using words or phrases (impossible, less likely, maybe, most likely, certain). 	<p>Learning outcomes When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • collect, display and interpret data using simple graphs, for example, bar graphs, line graphs • identify, read and interpret range and scale on graphs • identify the mode of a set of data • use tree diagrams to express probability using simple fractions. 	<p>Learning outcomes When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • collect, display and interpret data in circle graphs (pie charts) and line graphs • identify, describe and explain the range, mode, median and mean in a set of data • set up a spreadsheet using simple formulas to manipulate data and to create graphs • express probabilities using scale (0–1) or per cent (0%–100%).

<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • create pictographs and tally marks • create living graphs using real objects and people* • describe real objects and events by attributes. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • collect, display and interpret data for the purpose of answering questions • create a pictograph and sample bar graph of real objects and interpret data by comparing quantities (for example, more, fewer, less than, greater than) • use tree, Venn and Carroll diagrams to explore relationships between data • identify and describe chance in daily events (impossible, less likely, maybe, most likely, certain). 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • design a survey and systematically collect, organize and display data in pictographs and bar graphs • select appropriate graph form(s) to display data • interpret range and scale on graphs • use probability to determine mathematically fair and unfair games and to explain possible outcomes • express probability using simple fractions. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • design a survey and systematically collect, record, organize and display the data in a bar graph, circle graph, line graph • identify, describe and explain the range, mode, median and mean in a set of data • create and manipulate an electronic database for their own purposes • determine the theoretical probability of an event and explain why it might differ from experimental probability.
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Mathematics: Measurement

Phase 1	Phase 2	Phase 3	Phase 4
<p>Conceptual understandings</p> <p>Measurement involves comparing objects and events. Objects have attributes that can be measured using non-standard units. Events can be ordered and sequenced.</p>	<p>Conceptual understandings</p> <p>Standard units allow us to have a common language to identify, compare, order and sequence objects and events. We use tools to measure the attributes of objects and events. Estimation allows us to measure with different levels of accuracy.</p>	<p>Conceptual understandings</p> <p>Objects and events have attributes that can be measured using appropriate tools. Relationships exist between standard units that measure the same attributes.</p>	<p>Conceptual understandings</p> <p>Accuracy of measurements depends on the situation and the precision of the tool. Conversion of units and measurements allows us to make sense of the world we live in. A range of procedures exists to measure different attributes of objects and events.</p>

<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that attributes of real objects can be compared and described, for example, longer, shorter, heavier, empty, full, hotter, colder • understand that events in daily routines can be described and sequenced, for example, before, after, bedtime, storytime, today, tomorrow. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand the use of standard units to measure, for example, length, mass, money, time, temperature • understand that tools can be used to measure • understand that calendars can be used to determine the date, and to identify and sequence days of the week and months of the year • understand that time is measured using universal units of measure, for example, years, months, days, hours, minutes and seconds. length, mass, capacity, money and Temperature 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand the use of standard units to measure perimeter, area and volume • understand that measures can fall between numbers on a measurement scale, for example, 3½ kg, between 4 cm and 5 cm • understand relationships between units, for example, metres, centimetres and millimetres • understand an angle as a measure of rotation. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand procedures for finding area, perimeter and volume • understand the relationships between area and perimeter, between area and volume, and between volume and capacity • understand unit conversions within measurement systems (metric or customary).
<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • identify, compare and describe attributes of real objects, for example, longer, shorter, heavier, empty, full, hotter, colder • compare the length, mass and capacity of objects using nonstandard units • identify, describe and sequence events in their daily routine, for example, before, after, bedtime, story time, today, tomorrow. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • estimate and measure objects using standard units of measurement • read and write the time to the hour, half hour and quarter hour • estimate and compare lengths of time: second, minute, hour, day, week and month. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • estimate and measure using standard units of measurement: perimeter, area and volume • describe measures that fall between numbers on a scale • read and write digital and analogue time on 12-hour and 24-hour clocks. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • develop and describe formulas for finding perimeter, area and volume • use decimal and fraction notation in measurement, for example, 3.2 cm, 1.47 kg, 1½ miles • read and interpret scales on a range of measuring instruments • measure and construct angles in degrees using a protractor • carry out simple unit conversions within a system of measurement (metric or customary).

<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • describe observations about events and objects in real-life situations • use non-standard units of measurement to solve problems in real-life situations involving length, mass and capacity. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • use standard units of measurement to solve problems in real-life situations involving length, mass, capacity, money and temperature • use measures of time to assist with problem solving in real-life situations. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • use standard units of measurement to solve problems in real-life situations involving perimeter, area and volume • select appropriate tools and units of measurement • use timelines in units of inquiry and other real-life situations. 	<p>• When applying with understanding learners:</p> <ul style="list-style-type: none"> • select and use appropriate units of measurement and tools to solve problems in real-life situations • determine and justify the level of accuracy required to solve real-life problems involving measurement • use decimal and fractional notation in measurement, for example, 3.2 cm, 1.47 kg, 1½ miles • use timetables and schedules (12- hour and 24-hour clocks) in real-life Situations • determine times worldwide.
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Mathematics: Shape and Space

Phase 1	Phase 2	Phase 3	Phase 4
<p>Conceptual understandings</p> <p>Shapes can be described and organized according to their properties. Objects in our immediate environment have a position in space that can be described according to a point of reference.</p>	<p>Conceptual understandings</p> <p>Shapes are classified and named according to their properties. Some shapes are made up of parts that repeat in some way. Specific vocabulary can be used to describe an object's position in space.</p>	<p>Conceptual understandings</p> <p>Changing the position of a shape does not alter its properties. Shapes can be transformed in different ways. Geometric shapes and vocabulary are useful for representing and describing objects and events in real-world situations.</p>	<p>Conceptual understandings</p> <p>Manipulation of shape and space takes place for a particular purpose. Consolidating what we know of geometric concepts allows us to make sense of and interact with our world. Geometric tools and methods can be used to solve problems relating to shape and space.</p>

<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • Understand that 2D and 3D shapes have characteristics that can be described and compared • understand that common language can be used to describe position and direction, for example, inside, outside, above, below, next to, behind, in front of, up, down. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that there are relationships among and between 2D and 3D shapes • understand that 2D and 3D shapes can be created by putting together and/or taking apart other shapes • understand that examples of symmetry and transformations can be found in their immediate environment • understand that geometric shapes are useful for representing real-world situations • understand that directions can be used to describe pathways, regions, positions and boundaries of their immediate environment. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand the common language used to describe shapes • understand the properties of regular and irregular polygons • understand congruent or similar shapes • understand that lines and axes of reflective and rotational symmetry assist with the construction of shapes • understand an angle as a measure of rotation • understand that directions for location can be represented by coordinates on a grid • understand that visualization of shape and space is a strategy for solving problems. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand the common language used to describe shapes • understand the properties of regular and irregular polyhedra • understand the properties of circles • understand how scale (ratios) is used to enlarge and reduce shapes • understand systems for describing position and direction • understand that 2D representations of 3D objects can be used to visualize and solve problems • understand that geometric ideas and relationships can be used to solve problems in other areas of mathematics and in real life.
<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • sort, describe and compare 3D shapes • describe position and direction, for example, inside, outside, above, below, next to, behind, in front of, up, down. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • sort, describe and label 2D and 3D shapes • analyse and describe the relationships between 2D and 3D shapes • create and describe symmetrical and tessellating patterns • identify lines of reflective symmetry • represent ideas about the real world using geometric vocabulary and symbols, for example, through oral description, drawing, modelling, labelling • interpret and create simple directions, describing paths, regions, positions and boundaries of their immediate environment. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • sort, describe and model regular and irregular polygons • describe and model congruency and similarity in 2D shapes • analyse angles by comparing and describing rotations: whole turn; half turn; quarter turn; north, south, east and west on a compass • locate features on a grid using coordinates • describe and/or represent mental images of objects, patterns, and paths. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • analyse, describe, classify and visualize 2D (including circles, triangles and quadrilaterals) and 3D shapes, using geometric vocabulary • describe lines and angles using geometric vocabulary • identify and use scale (ratios) to enlarge and reduce shapes • identify and use the language and notation of bearing to describe direction and position • create and model how a 2D net converts into a 3D shape and vice versa • explore the use of geometric ideas and relationships to solve problems in other areas of mathematics.

<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • explore and describe the paths, regions and boundaries of their immediate environment (inside, outside, above, below) and their position (next to, behind, in front of, up, down). 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • analyse and use what they know about 3D shapes to describe and work with 2D shapes • recognize and explain simple symmetrical designs in the environment • apply knowledge of symmetry to problem-solving situations • interpret and use simple directions, describing paths, regions, positions and boundaries of their immediate environment. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • analyse and describe 2D and 3D shapes, including regular and irregular polygons, using geometrical vocabulary • identify, describe and model congruency and similarity in 2D shapes • recognize and explain symmetrical patterns, including tessellation, in the environment • apply knowledge of transformations to problem-solving situations. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • use geometric vocabulary when describing shape and space in mathematical situations and beyond • use scale (ratios) to enlarge and reduce shapes • apply the language and notation of bearing to describe direction and position • use 2D representations of 3D objects to visualize and solve problems, for example using drawings or models.
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Mathematics: Pattern and Function

Phase 1	Phase 2	Phase 3	Phase 4
<p>Conceptual understandings</p> <p>Patterns and sequences occur in everyday situations. Patterns repeat and grow.</p>	<p>Conceptual understandings</p> <p>Whole numbers exhibit patterns and relationships that can be observed and described. Patterns can be represented using numbers and other symbols.</p>	<p>Conceptual understandings</p> <p>Functions are relationships or rules that uniquely associate members of one set with members of another set. By analysing patterns and identifying rules for patterns it is possible to make predictions.</p>	<p>Conceptual understandings</p> <p>Patterns can often be generalized using algebraic expressions, equations or functions. Exponential notation is a powerful way to express repeated products of the same number.</p>

<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that patterns can be found in everyday situations, for example, sounds, actions, objects, nature. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that patterns can be found in numbers, for example, odd and even numbers, skip counting • understand the inverse relationship between addition and subtraction • understand the associative and commutative properties of addition. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that patterns can be analysed and rules identified • understand that multiplication is repeated addition and that division is repeated subtraction • understand the inverse relationship between multiplication and division • understand the associative and commutative properties of multiplication. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand that patterns can be generalized by a rule • understand exponents as repeated multiplication • understand the inverse relationship between exponents and roots • understand that patterns can be represented, analysed and generalized using tables, graphs, words, and, when possible, symbolic rules.
<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • describe patterns in various ways, for example, using words, drawings, symbols, materials, actions, numbers. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • represent patterns in a variety of ways, for example, using words, drawings, symbols, materials, actions, numbers • describe number patterns, for example, odd and even numbers, skip counting. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • describe the rule for a pattern in a variety of ways • represent rules for patterns using words, symbols and tables • identify a sequence of operations relating one set of numbers to another set. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • represent the rule of a pattern by using a function • analyse pattern and function using words, tables and graphs, and, when possible, symbolic rules
<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • extend and create patterns. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • extend and create patterns in numbers, for example, odd and even numbers, skip counting • use number patterns to represent and understand real-life situations • use the properties and relationships of addition and subtraction to solve problems. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • select appropriate methods for representing patterns, for example using words, symbols and tables • use number patterns to make predictions and solve problems • use the properties and relationships of the four operations to solve problems. 	<p>When applying with understanding learners:</p> <ul style="list-style-type: none"> • select appropriate methods to analyse patterns and identify rules • use functions to solve problems.

Mathematics: Numbers

Phase 1	Phase 2	Phase 3	Phase 4
<p>Conceptual understandings</p> <p>Numbers are a naming system. Numbers can be used in many ways for different purposes in the real world. Numbers are connected to each other through a variety of relationships. Making connections between our experiences with number can help us to develop number sense.</p>	<p>Conceptual understandings</p> <p>The base 10 place value system is used to represent numbers and number relationships. Fractions are ways of representing whole part relationships. The operations of addition, subtraction, multiplication and division are related to each other and are used to process information to solve problems. Number operations can be modelled in a variety of ways. There are many mental methods that can be applied for exact and approximate computations.</p>	<p>Conceptual understandings</p> <p>The base 10 place value system can be extended to represent magnitude. Fractions and decimals are ways of representing whole-part relationships. The operations of addition, subtraction, multiplication and division are related to each other and are used to process information to solve problems. Even complex operations can be modelled in a variety of ways, for example, an algorithm is a way to represent an operation.</p>	<p>Conceptual understandings</p> <p>The base 10 place value system extends infinitely in two directions. Fractions, decimal fractions and percentages are ways of representing whole-part relationships. For fractional and decimal computation, the ideas developed for whole-number computation can apply. Ratios are a comparison of two numbers or quantities.</p>
<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • understand one-to-one correspondence • understand that, for a set of objects, the number name of the last object counted describes the quantity of the whole set • understand that numbers can be constructed in multiple ways, for example, by combining and partitioning • understand conservation of number* • understand the relative magnitude of whole numbers • recognize groups of zero to five objects without counting (subitizing) • part relationships • use the language of mathematics to compare quantities, for example, more, less, first, second. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • model numbers to hundreds or beyond using the base 10 place value system** • estimate quantities to 100 or beyond • model simple fraction relationships • use the language of addition and subtraction, for example, add, take away, plus, minus, sum, difference • model addition and subtraction of whole numbers • develop strategies for memorizing addition and subtraction number facts • estimate sums and differences • understand situations that involve multiplication and division 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • model numbers to thousands or beyond using the base 10 place value system • model equivalent fractions • use the language of fractions, for example, numerator, denominator • model decimal fractions to hundredths or beyond • model multiplication and division of whole numbers • use the language of multiplication and division, for example, factor, multiple, product, quotient, prime numbers, composite number • model addition and subtraction of fractions with related denominators*** • model addition and subtraction of decimals. 	<p>Learning outcomes When constructing meaning learners:</p> <ul style="list-style-type: none"> • model numbers to millions or beyond using the base 10 place value system • model ratios • model integers in appropriate contexts • model exponents and square roots • model improper fractions and mixed numbers • simplify fractions using manipulatives • model decimal fractions to thousandths or beyond • model percentages • understand the relationship between fractions, decimals and percentages • model addition, subtraction, multiplication and division of fractions • model addition,

	<ul style="list-style-type: none"> • model addition and subtraction of fractions with the same denominator. 		subtraction, multiplication and division of decimals.
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<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • connect number names and numerals to the quantities they represent. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • read and write whole numbers up to hundreds or beyond • read, write, compare and order cardinal and ordinal numbers • describe mental and written strategies for adding and subtracting two-digit numbers. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • read, write, compare and order whole numbers up to thousands or beyond • develop strategies for memorizing addition, subtraction, multiplication and division number facts • read, write, compare and order fractions • read and write equivalent fractions • read, write, compare and order fractions to hundredths or beyond • describe mental and written strategies for multiplication and division. 	<p>When transferring meaning into symbols learners:</p> <ul style="list-style-type: none"> • read, write, compare and order whole numbers up to millions or beyond • read and write ratios • read and write integers in appropriate contexts • read and write exponents and square roots • convert improper fractions to mixed numbers and vice versa • simplify fractions in mental and written form • read, write, compare and order decimal fractions to thousandths or beyond • read, write, compare and order percentages • convert between fractions, decimals and percentages.
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When applying with understanding

learners:

- count to determine the number of objects in a set
 - use number words and numerals to represent quantities in real-life situations
- Situations use the language of mathematics to compare quantities in real-life situations, for example, more, less, first, second
- subitize in real-life situations
 - use simple fraction names in real-life situations.

When applying with understanding

learners:

- use whole numbers up to hundreds or beyond in real-life situations
- use cardinal and ordinal numbers in real-life situations
- use fast recall of addition and subtraction number facts in real-life situations
- use fractions in real-life situations
- use mental and written strategies for addition and subtraction of twodigit numbers or beyond in real-life situations
- select an appropriate method for solving a problem, for example, mental estimation, mental or written strategies, or by using a calculator
- use strategies to evaluate the reasonableness of answers.

When applying with understanding

learners:

- use whole numbers up to thousands or beyond in real-life situations
- use fast recall of multiplication and division number facts in real-life situations
- use decimal fractions in real-life situations
- use mental and written strategies for multiplication and division in real-life situations
- select an efficient method for solving a problem, for example, mental estimation, mental or written strategies, or by using a calculator
- use strategies to evaluate the reasonableness of answers
- add and subtract fractions with related denominators in real-life situations
- add and subtract decimals in real-life situations, including money
- estimate sum, difference, product and quotient in real-life situations, including fractions and decimals.

When applying with understanding

learners:

- use whole numbers up to millions or beyond in real-life situations
- use ratios in real-life situations
- use integers in real-life situations
- convert improper fractions to mixed numbers and vice versa in real-life situations
- simplify fractions in computation answers
- use fractions, decimals and percentages interchangeably in real-life situations
- select and use an appropriate sequence of operations to solve word problems
- select an efficient method for solving a problem: mental estimation, mental computation, written algorithms, by using a calculator
- use strategies to evaluate the reasonableness of answers
- use mental and written strategies for adding, subtracting, multiplying and dividing fractions and decimals in real-life situations
- estimate and make approximations in real-life situations involving fractions, decimals and percentages.

Science within a transdisciplinary program

In the Primary Years Programme (PYP), science is viewed as the exploration of the biological, chemical and physical aspects of the natural world, and the relationships between them. Our understanding of science is constantly changing and evolving. The inclusion of science within the PYP leads learners to an appreciation and awareness of the world as it is viewed from a scientific perspective. It encourages curiosity and ingenuity and enables the student to develop an understanding of the world. Reflection on scientific knowledge also helps students to develop a sense of responsibility regarding the impact of their actions on themselves, others and their world. It is recognized that teaching and learning science as a subject, while necessary, is not sufficient. Of equal importance is the need to learn science in context, exploring content relevant to students, and transcending the boundaries of the traditional subject area. The transdisciplinary themes provide the framework for a highly defined, focused, in-depth programme of inquiry, and as science is relevant to all the transdisciplinary themes, all planned science learning should take place within this framework. In return, the science knowledge and the application of that knowledge will enhance inquiries into the central ideas defined by the transdisciplinary themes. It is worthwhile to note that spontaneous, student-initiated science inquiries will occur that are not directly related to any planned units of inquiry. These are valuable teaching and learning experiences in themselves and they provide teachers and students with the opportunity to apply the pedagogy of the PYP to authentic, of-the-moment situations.

What do we want students to know?

The science component of the PYP should be characterized by concepts and skills rather than by content. However, schools should ensure that a breadth and balance of science content is covered through the units of inquiry. The knowledge component of science in the PYP is arranged into four strands: living things, Earth and space, materials and matter, and forces and energy.

Science Strands

Living things: The study of the characteristics, systems and behaviours of humans and other animals, and of plants; the interactions and relationships between and among them, and with their environment.

Related concepts: adaptation, animals, biodiversity, biology, classification, conservation, ecosystems, evolution, genetics, growth, habitat, homeostasis, organism, plants, systems (digestive, nervous, reproductive, respiratory).

Earth and space: The study of planet Earth and its position in the universe, particularly its relationship with the sun; the natural phenomena and systems that shape the planet and the distinctive features that identify it; the infinite and finite resources of the planet.

Related concepts: atmosphere, climate, erosion, evidence, geography, geology, gravity, renewable and non-renewable energy sources, resources, seasons, space, sustainability, systems (solar, water cycle, weather), tectonic plate movement, theory of origin.

Materials and matter: The study of the properties, behaviours and uses of materials, both natural and human-made; the origins of human-made materials and how they are manipulated to suit a purpose.

Related concepts: changes of state, chemical and physical changes, conduction and convection, density, gases, liquids, properties and uses of materials, solids, structures, sustainability.

Forces and energy The study of energy, its origins, storage and transfer, and the work it can do; the study of forces; the application of scientific understanding through inventions and machines.

Related concepts: conservation of energy, efficiency, equilibrium, forms of energy (electricity, heat, kinetic, light, potential, sound), magnetism, mechanics, physics, pollution, power, technological advances, transformation of energy.

Related concepts: While the key concepts have been identified, related concepts could provide further links to the transdisciplinary programme of inquiry or further understanding of the subject area.

Social Science within a transdisciplinary program

In the Primary Years Programme (PYP), social studies learning guides students towards a deeper understanding of themselves and others, and of their place in an increasingly global society. It provides opportunities for students to look at and think about human behaviour and activity realistically, objectively, and with sensitivity. Exposure to and experience with social studies therefore opens doors to key questions about life and learning.

It is recognized that teaching and learning social studies as a subject, while necessary, is not sufficient. Of equal importance is the need to learn social studies in context, exploring content relevant to students, and transcending the boundaries of the traditional subject area. The transdisciplinary themes provide the framework for a highly defined, focused, in-depth programme of inquiry, and as social studies is relevant to all the transdisciplinary themes, all planned social studies learning should take place within this framework. In return, the social studies knowledge and the application of that knowledge will enhance inquiries into the central ideas defined by the transdisciplinary themes.

It is worthwhile to note that there will be occasions that present themselves for student-initiated, spontaneous, social studies inquiries that are not directly related to any planned units of inquiry. These are valuable teaching and learning experiences in themselves and they provide teachers and students with the opportunity to apply the pedagogy of the PYP to authentic, of-the-moment situations.

The social studies component of the PYP should be characterized by concepts and skills rather than by content. However, schools should ensure that a breadth and balance of social studies content is covered through the units of inquiry. The knowledge component of social studies in the PYP is arranged into five strands: human systems and economic activities, social organization and culture, continuity and change through time, human and natural environments, and resources and the environment. These strands are concept-driven and are inextricably linked to each other. They also provide links to other subject areas of the PYP curriculum model.

Social Studies is defined as the study of people in relation to their past, their environment and their society. Its subject matter covers what is traditionally known as History, Geography and Social Science and aims to prepare the students for the IB Middle Years Programme in these subjects. In the PYP, social studies are viewed as the study of people in relation to their past, their

present and their future, their environment and their society. Within this scope and sequence document there are 5 different strands that are collectively known as social studies:

Social Science Strands

Strand		Central Concept	Related Concept
Human systems and economic activities	The study of how and why people construct organizations and systems; the ways in which people connect locally and globally; the distribution of power and authority.	Communications Conflict Cooperation Education Employment Freedom	Governments Justice Legislation Production Transportation
Social organization and culture	The study of people, communities, cultures and societies; the ways in which individuals, groups and societies interact with each other.	Artefacts Authority Citizenship Communication Conflict Diversity Family	Identity Networks Prejudice Religion Rights Roles Traditions.
Continuity and change through time	The study of the relationships between people and events through time; the past, its influences on the present and its implications for the future; people who have shaped the future through their actions.	Chronology Civilizations Conflict Discovery, Exploration	History Innovation Migration Progress Revolution.
Human and natural environments	The study of the distinctive features that give a place its identity; how people adapt to and alter their environment; how people experience and represent place; the impact of natural disasters on people and the built environment.	Amenities Borders (natural, social and political) Dependence Geography Impact Landscape	Locality, Ownership Population Regions Settlements.
Resources and the environment	The interaction between people and the environment; the study of how humans allocate and manage resources; the positive and negative effects of this management; the impact of scientific and technological developments on the environment.	Conservation Consumption Distribution Ecology Energy	Interdependence Pollution Poverty Sustainability Wealth

Learning continuum for Music

	Phase 1 students will be able to	Phase 2 students will be able to	Phase 3 students will be able to	Phase 4 students will be able to
Responding	<p>explore body and untuned percussion instrument sounds</p> <p>recognise different sources of music in daily life</p> <p>recognise that sound can be notated in a variety of ways.</p> <p>use voice to imitate sounds and learn songs</p> <p>move their bodies to express the mood of the music</p> <p>bring music from home to share</p> <p>describe how music makes them feel</p> <p>describe the differences in music</p> <p>distinguish the sounds of different instruments in music</p> <p>listen to music and create their own work in response</p> <p>express their responses to music in multiple ways (drawings, games, songs, dance, oral discussion)</p>	<p>express their responses to music from different cultures and styles</p> <p>sing individually and in unison</p> <p>create a musical composition to match the mood of a visual image (for example, paintings, photographs, film)</p> <p>recognise music from a basic range of cultures and styles</p> <p>explore individually or collectively a musical response to a narrated story</p> <p>reflect on and communicate their reactions to music using musical vocabulary</p> <p>record and share the stages of the process of creating a composition</p> <p>share performances with each other and give constructive criticism.</p>	<p>sing with accuracy and control focusing awareness on the musical elements</p> <p>sing partner songs</p> <p>create and perform a movement sequence accompanied by music that they have created</p> <p>discuss music that relates to social issues and/or values</p> <p>share and compare their experiences as audience members at various performances</p> <p>compare aspects of music from different times and places</p> <p>describe the process used to create their own music and</p> <p>compare it with others, in order to improve their compositions</p> <p>analyse different compositions describing how the musical elements enhance the message</p> <p>reflect upon how their music expresses their personal voice and the impact it has on others.</p>	<p>explain the role and relevance of music in their own culture, its uses and associations through place and time</p> <p>interpret and explain the cultural and/or historical perspectives of a musical composition</p> <p>modify their practices and/or compositions based on the audience's responses</p> <p>explore different artistic presentations that are/ were innovative and their implications.</p> <p>sing individually and in harmony</p>
Creating	<p>explore body and untuned percussion instrument sounds</p> <p>recognise different sources of music in daily life</p> <p>recognise that sound can be notated in a variety of ways.</p> <p>use voice to imitate sounds and learn songs</p> <p>move their bodies to express the mood of the music</p> <p>bring music from home to share</p> <p>describe how music makes them feel</p>	<p>express their responses to music from different cultures and styles</p> <p>sing individually and in unison</p> <p>create a musical composition to match the mood of a visual image (for example, paintings, photographs, film)</p> <p>recognise music from a basic range of cultures and styles</p> <p>explore individually or collectively a musical response to a narrated story</p>	<p>sing with accuracy and control focusing awareness on the musical elements</p> <p>sing partner songs</p> <p>create and perform a movement sequence accompanied by music that they have created</p> <p>discuss music that relates to social issues and/or values</p> <p>share and compare their experiences as audience members at various performances</p>	<p>incorporate the other arts and available resources in order to broaden their creative expression</p> <p>create music that will be continually refined after being shared with others</p> <p>read and write music in traditional and/or non-traditional notation.</p> <p>present, in small groups, innovative musical performances on a selected issue</p>

<p>describe the differences in music</p> <p>distinguish the sounds of different instruments in music</p> <p>listen to music and create their own work in response express their responses to music in multiple ways (drawings, games, songs, dance, oral discussion)</p>	<p>reflect on and communicate their reactions to music using musical vocabulary</p> <p>record and share the stages of the process of creating a composition</p> <p>share performances with each other and give constructive criticism.</p>	<p>compare aspects of music from different times and places</p> <p>describe the process used to create their own music and compare it with others, in order to improve their compositions</p> <p>analyse different compositions describing how the musical elements enhance the message</p> <p>reflect upon how their music expresses their personal voice and the impact it has on others.</p>	
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Learning continuum for Visual Arts

	Phase 1 students will be able to	Phase 2 students will be able to	Phase 3 students will be able to	Phase 4 students will be able to
Responding	<p>enjoy experiencing artworks</p> <p>show curiosity and ask questions about artworks</p> <p>describe what they notice about an artwork</p> <p>identify the materials and processes used in the creation of an artwork</p> <p>analyse the relationships within an artwork and construct meanings</p> <p>communicate their initial responses to an artwork in visual, oral or physical modes</p> <p>make personal connections to artworks</p> <p>express opinions about an artwork</p> <p>create artwork in response to a variety of stimuli.</p>	<p>sharpen their powers of observation</p> <p>identify the formal elements of an artwork</p> <p>use appropriate terminology to discuss artwork</p> <p>describe similarities and differences between artworks</p> <p>identify the stages of their own and others' creative processes</p> <p>become an engaged and responsive audience for a variety of art forms.</p> <p>investigate the purposes of artwork from different times, places and a range of cultures including their own</p>	<p>compare, contrast and categorize artworks from a range of cultures, places and times</p> <p>identify and consider the contexts in which artworks were made</p> <p>use their knowledge and experiences to make informed interpretations of artworks</p> <p>reflect on their own and others' creative processes to inform their thinking</p> <p>use relevant and insightful questions to extend their understanding</p> <p>recognize that different audiences respond in different ways to artworks</p> <p>provide constructive criticism when responding to artwork.</p>	<p>explain the cultural and historical perspectives of an artwork</p> <p>understand the role and relevance of visual arts in society</p> <p>reflect on the factors that influence personal reactions to artwork</p> <p>reflect throughout the creative process to</p> <p>challenge their thinking and enact new and unusual possibilities critique and make informed judgments about artworks.</p>
Creating	<p>enjoy experiencing artworks</p> <p>show curiosity and ask questions about artworks describe what they notice about an artwork</p> <p>identify the materials and processes used in the creation of an artwork</p>	<p>sharpen their powers of observation</p> <p>identify the formal elements of an artwork</p> <p>use appropriate terminology to discuss artwork</p>	<p>compare, contrast and categorize artworks from a range of cultures, places and times</p> <p>identify and consider the contexts in which artworks were made</p> <p>use their knowledge and experiences to make</p>	<p>become increasingly independent in the realization of the creative process</p> <p>adjust and refine their creative process in response to constructive criticism</p> <p>identify factors to be considered when</p>

<p>analyse the relationships within an artwork and construct meanings</p> <p>communicate their initial responses to an artwork in visual, oral or physical modes</p> <p>make personal connections to artworks</p> <p>express opinions about an artwork</p> <p>create artwork in response to a variety of stimuli.</p>	<p>describe similarities and differences between artworks</p> <p>identify the stages of their own and others' creative processes</p> <p>become an engaged and responsive audience for a variety of art forms.</p> <p>investigate the purposes of artwork from different times, places and a range of cultures including their own</p>	<p>informed interpretations of artworks</p> <p>reflect on their own and others' creative processes to inform their thinking</p> <p>use relevant and insightful questions to extend their understanding</p> <p>recognize that different audiences respond in different ways to artworks</p> <p>provide constructive criticism when responding to artwork.</p>	<p>displaying an artwork</p> <p>utilize a broad range of ways to make meaning</p> <p>select, research and develop an idea or theme for an artwork</p> <p>develop an awareness of their personal preferences.</p>
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Learning continuum for PSPE:

Since learning is a developmental process and that the phases a learner passes through are not always linear or age related. Thus the content is presented in continuums for each of the three strands of PSPE—identity, active living, and interactions.

Identity

Phase 1 Learners have an awareness of themselves and how they are similar and different to others. They can describe how they have grown and changed, and they can talk about the new understandings and abilities that have accompanied these changes. They demonstrate a sense of competence with developmentally appropriate daily tasks and can identify and explore strategies that help them cope with change. Learners reflect on their experiences in order to inform future learning and to understand themselves better.

Phase 2 Learners understand that there are many factors that contribute to a person's identity and they have an awareness of the qualities, abilities, character and characteristics that make up their own identity. They are able to identify and understand their emotions in order to regulate their emotional responses and behaviour. Learners explore and apply different strategies that help them approach challenges and new situations with confidence.

Phase 3 Learners understand that a person's identity is shaped by a range of factors and that this identity evolves over time. They explore and reflect on the strategies they use to manage change, approach new challenges and overcome adversity. They analyse how they are connected to the wider community and are open to learning about others. Learners use their understanding of their own emotions to interact positively with others. They are aware that developing self-reliance and persisting with tasks independently will support their efforts to be more autonomous learners.

Phase 4 Learners understand that the physical changes they will experience at different stages in their lives affect their evolving identities. They understand that the values, beliefs and norms within society can impact on an individual's self-concept and self-worth. Learners understand that being emotionally aware helps them to manage relationships. They recognize and describe how a sense of self-efficacy contributes to human accomplishments and personal well-being. Learners apply and reflect on strategies that develop resilience and, in particular, help them to cope with

change, challenge and adversity in their lives.

Active living

Phase 1 Learners show an awareness of how daily practices, including exercise, can have an impact on well-being. They understand that their bodies change as they grow. They explore the body's capacity for movement, including creative movement, through participating in a range of physical activities. Learners recognize the need for safe participation when interacting in a range of physical contexts.

Phase 2 Learners recognize the importance of being physically active, making healthy food choices, and maintaining good hygiene in the development of well-being. They explore, use and adapt a range of fundamental movement skills in different physical activities and are aware of how the body's capacity for movement develops as it grows. Learners understand how movements can be linked to create sequences and that these sequences can be created to convey meaning. They understand their personal responsibilities to themselves and others in relation to safety practices.

Phase 3 Learners understand the factors that contribute to a healthy lifestyle. They understand that they can enhance their participation in physical activities through developing and maintaining physical fitness, refining movement skills, and reflecting on technique and performance. Learners are able to identify different stages of life and understand that rates of development are different for everyone. Learners understand that there are potential positive and negative outcomes for risk-taking behaviours and are able to identify these risks in order to maximize enjoyment and promote safety.

Phase 4 Learners understand the interconnectedness of the factors that contribute to a safe and healthy lifestyle, and set goals and identify strategies that will help develop well-being. They understand the physical, social and emotional changes associated with puberty. They apply movement skills appropriately, and develop plans to help refine movements, improve performance and enhance participation in a range of physical contexts.

Interactions

Phase 1 Learners interact, play and engage with others, sharing ideas, cooperating and communicating feelings in developmentally appropriate ways. They are aware that their behaviour affects others and identify when their actions have had an impact. Learners interact with, and demonstrate care for, local environments.

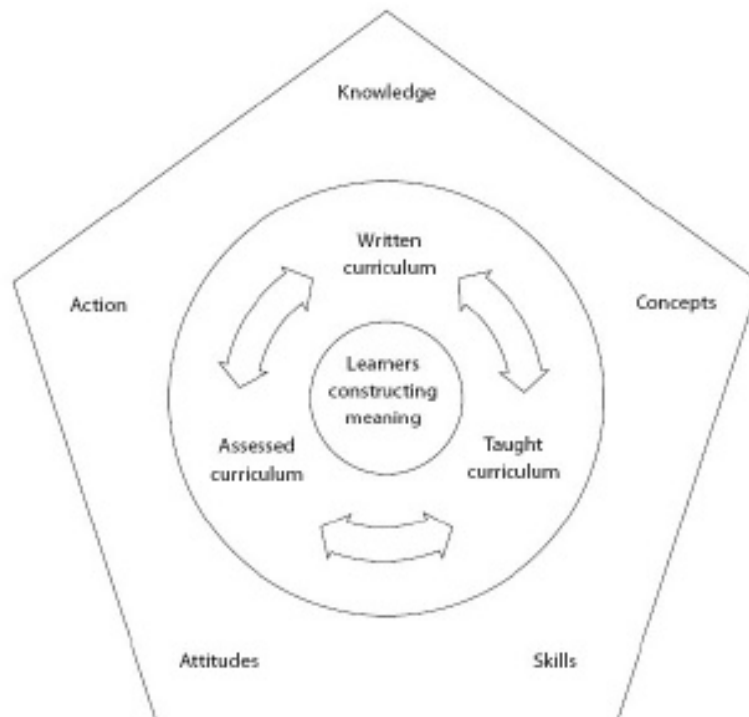
Phase 2 Learners recognize the value of interacting, playing and learning with others. They understand that participation in a group can require them to assume different roles and responsibilities and they show a willingness to cooperate. They nurture relationships with others, sharing ideas, celebrating successes and offering and seeking support as needed. Learners understand that responsible citizenship involves conservation and preservation of the environment.

Phase 3 Learners understand that group work can be enhanced through the development of a plan of action and through identifying and utilizing the strengths of individual group members. Learners reflect on the perspectives and ideas of others. They understand that healthy relationships are supported by the development and demonstration of constructive attitudes towards other people and the environment.

Phase 4 Learners understand that they can experience intrinsic satisfaction and personal growth from interactions with others in formal and informal contexts. They understand the need for developing and nurturing relationships with others and are able to apply strategies independently to resolve conflict as it arises. They recognize that people have an interdependent relationship with the environment and other living things and take action to restore and repair when harm has been done.

The PYP as a holistic program

The word "holistic" is much abused. Nonetheless, it is applicable in describing the PYP curriculum model that presents the essential elements as a whole; the written, taught and assessed components of the curriculum as a whole; the transdisciplinary themes and subject areas as aspects of a whole; and the school community as a whole. It is a difficult task to try to represent a holistic programme visually, particularly one as multifaceted as the PYP. However, figure below is an attempt to condense and articulate those parts as simply as possible.



References:

(2009). *Making the PYP happen: A curriculum framework for international primary education.*