ISSH Curriculum Guide
IB Primary Years Programme
(3 - 11 years old)
2021 - 2022

International School
of Schaffhausen

ib Primary Years
Programme

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ISSH Mission Statement

Be Unique + Achieve Potential + Take Responsibility

The International School of Schaffhausen provides quality education in a nurturing and inclusive environment. We are an internationally minded community which fosters intercultural understanding and respect.

We develop responsible global citizens

- by inspiring learners to discover, unlock and develop their potential
- by providing a challenging curriculum that stimulates critical and creative thinking
- by promoting active, life-long learning
- by applying a holistic and balanced approach to all areas of school life
- by encouraging responsibility for self, others and the environment

We know that every student is unique and that

"Each mind has its own method"

(Ralph Waldo Emerson)

IB Mission Statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

"LIVING AND LEARNING FOR ONE WORLD"

A BRIEF PORTRAIT

"Education for one world" is the maxim of the International School of Schaffhausen. Our goal is to provide education for the challenges of the future and for the young people who will shape the future of the world in which we live.

GLOBAL CITIZENS

In this spirit, the curriculum at an International School aims to "produce" international people, who not only accept a world of cultural diversity, but take an active part in shaping it. This can happen in many different ways, but our credo combines the goals of International Schools with UNESCO's key qualifications for the new millennium: "Being a life-long learner".

HUMANS ARE LEARNING BEINGS

Children develop their own learning styles as they grow, indeed "Each Mind has its own Method" according to Ralph Waldo Emerson, the American philosopher. It is the school's central task to provide an environment in which children can develop their knowledge, skills and natural talents, enabling them to find their place in the world and to cope with changes in a constructive manner using their own initiative.

INTERNATIONALLY RECOGNIZED CURRICULUM

The meaning of the word "international" also refers to the school's students. The school offers quality education for expat children. Our internationally recognized curriculum facilitates the integration of these children back into school upon return to their home country or guarantees access to universities worldwide. The school also caters for students from the Schaffhausen region who benefit from the uniqueness of an international educational programme.

CHILDREN AND YOUNG PEOPLE CAN REALIZE THEIR FULL POTENTIAL

Intelligence is a complex phenomenon. Abilities such as logical thought are just as much a part of intelligence as emotional awareness, the power of judgment, creativity, the ability to make decisions and social competence. At ISSH, children and young people can realize their full potential in a supportive environment and according to their individual learning needs. At the same time, students are encouraged to strive for academic excellence.

As learning research and cognitive science have proven, each individual develops his or her own way of learning. Thus, children and young people frequently learn at different rates and in very different ways. At the International School of Schaffhausen teaching and inquiry learning complement each other. This combination provides the ideal framework for self-motivated learning. Within this environment students develop strengths, make improvements in weak areas and explore their interests through a wide range of stimulating resources and material.

RESPECT AND ENTHUSIASM FOR WORK

We apply the principle of mutually supporting and respecting one another as different personalities with the same basic needs. Students and teachers contribute their best to making learning an exciting and enriching experience cognizant that "Each mind has its own method"(Ralph Waldo Emerson).

MOTIVATION MUST COME FROM WITHIN, BUT IT MUST HAVE A SUPPORTING FRAMEWORK

ISSH students are encouraged to be self-motivated in their learning. Teaching and learning is inquiry-based. Asking questions and finding answers to these questions are the key elements to self-motivated and self-directed learning. Wondering why things are the way they are, making connections to what students already know about the world and finding answers to their own questions (with support and guidance from teachers) are the essential processes of our pedagogical approach.

INTRODUCTION

The International School of Schaffhausen (ISSH) is committed to the development of the International Baccalaureate (IB) Primary Years Programme (PYP) from the Early Learning Centre to Grade 5.

The PYP's pedagogy is embedded in best practices for teaching young children, following an inquiry-based, transdisciplinary and holistic approach to learning. Using six transdisciplinary themes, students learn globally relevant, challenging and significant concepts. The PYP provides a consistent and coherent framework from 3 - 11 years of age that matches our beliefs and educational research about how children learn best. In an increasingly globalized world, the PYP challenges students to think critically, research deeply and develop internationally-minded perspectives on a broad range of issues.

Depending on their age, students tackle up to six units of inquiry every school year. In addition, our students undertake a core programme in English and Mathematics, which links closely with the units wherever possible. They also share in diverse and demanding courses in German, the Arts and Physical Education. ICT is embedded within these experiences, supporting and enhancing students' learning. We vary our teaching methods so that each student's unique learning style may be accommodated and each teacher's strengths are used to their best advantage. At the same time, our experience supports research that shows children learn best when they are given opportunities to construct knowledge through their own inquiries, to have agency in their learning, to have opportunities for hands-on experiences and when they participate in authentic learning tasks. Our curriculum focuses on giving students the tools to communicate their learning in a wide variety of formats and styles. To that end, our assessment practices are similarly varied, incorporating an array of assessment strategies and tools to support student achievement. Students are encouraged to set personal goals and continually assess their work through self-reflection, portfolio review and against established criteria.

ISSH's broad after-school activities programme enriches the lives of our students and complements the academic programme. Children can express their creativity, athleticism and collegiality through their participation.

OUR SCHOOL

ISSH is an IB World School. ISSH was officially authorized by the IB in 2003 and has since participated in three successful IB Evaluation visits (the last in May 2016). These visits take place every five years. We welcome this external moderation of our programme, which ensures our students receive an education of the highest standard in line with our mission.

At the end of Grade 5, students host the PYP Exhibition. This serves as a culmination of the students' PYP years. It is an opportunity for each student to demonstrate independence of thought and to show how much they have learned by putting their learning into action in a self-directed unit of inquiry. Students work together in small groups or individually, with the guidance of their teacher and a mentor, to create a personally relevant project centered around a common theme.

Curriculum documents in Mathematics, Science, Social Studies, Language, The Arts, PSPE (Personal, Social and Physical Education) and IT have been developed and are subject to regular review.

THE IB LEARNER PROFILE

Students and faculty share in striving to become globally conscious citizens and life-long learners, guided by the Learner Profile of the IB . We want our students to be **Inquirers, Thinkers, Communicators** and **Risk-takers**, who are **Reflective, Knowledgeable, Principled, Caring, Open-minded** and **Balanced**.

THE LEARNER PROFILE		
INQUIRER	FORSCHER	Be curious, ask questions, enjoy learning
KNOWLEDGEABLE	INFORMIERT	Explore new concepts and issues of local & global significance
THINKER	DENKER	Appreciate the importance of critical and creative thinking In the learning process
COMMUNICATORS	KOMMUNIKATIONSFREUDIG	Express ideas confidently
PRINCIPLED	CHARAKTERFEST	Act with integrity and honesty
OPEN-MINDED	AUFGESCHLOSSEN	Open to new ideas & the perspectives of others
CARING	FÜRSORGLICH	Show empathy, respect & compassion
RISK-TAKER	RISIKO BEREIT	Be prepared to try new approaches
BALANCED	AUSGEGLICHEN	Appreciate the need for intellectual, physical & emotional balance
REFLECTIVE	REFLEKTIEREND	Be reflective and assess your own learning practice

The Primary Years Programme (PYP)

Since its inception, the Primary Years Programme (PYP) has widely impacted not only students aged 3–12 and their school communities worldwide but also the course of international education. As a transdisciplinary, inquiry-based and student-centred education with responsible action at its core, the PYP remains trusted, timeless and transformational. Through the PYP, students experience learning that is engaging, significant, challenging and relevant as it spans between, across and beyond traditional subject boundaries. The enhanced PYP framework emphasizes the central principle of agency that is threaded throughout the new organizing structure of the programme: the learner, learning and teaching and the learning community. These highlight that everyone connected to the school community has voice, choice and ownership to impact learning and teaching. These holistic components complement and reinforce each other to form a coherent whole.
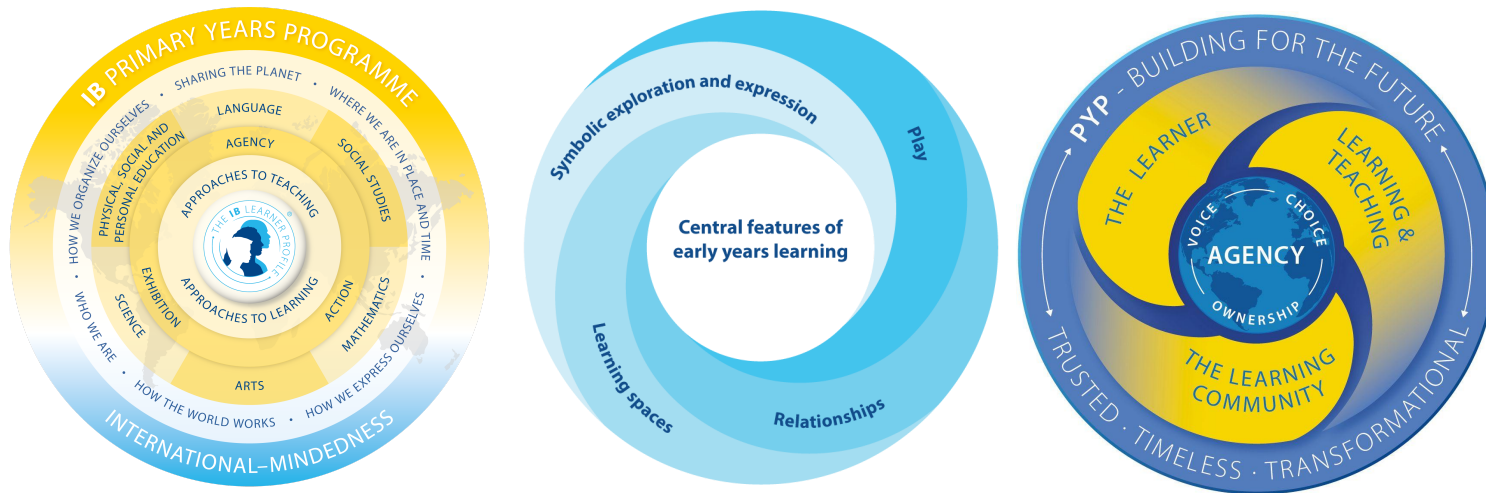
KNOWLEDGE

WHAT DO WE WANT THE STUDENTS TO KNOW?

The PYP recognizes the importance of the traditional subject areas. Language, Mathematics, Science, Social Studies, PSE, and The Arts are all addressed within the PYP framework. The PYP also recognizes that these subjects alone do not make up a complete education. Knowledge, skills and concepts need to be explored in context *across* the subject disciplines. In order for this to happen, the PYP has six transdisciplinary themes that provide a framework for learning and inquiry. These themes are globally significant, support the acquisition of knowledge, concepts and skills and are revisited at each grade level ensuring students receive a broad, in-depth and articulated curriculum.

The six themes are:

Who we are	Where we are in place and time	How we express ourselves
How the world works	How we organize ourselves	Sharing the planet

Throughout the year, students in the Early Learning Centre inquire into four of the transdisciplinary themes while Grades 1 through to Grade 5 inquire into all six. This is undertaken through **Units of Inquiry,** which address a **central idea** relevant to each theme.

CONCEPTS

WHAT DO WE WANT THE STUDENTS TO UNDERSTAND?

Through the units of inquiry the students explore seven key concepts. This exploration leads to a deeper understanding and allows students to transfer knowledge learned in one subject area to another.

- FORM   What is it like?
- FUNCTION   How does it work?
- CAUSATION   Why is this happening?
- CHANGE   How is it changing?
- CONNECTION   How is it connected to other things?
- PERSPECTIVE   What are the points of view?
- RESPONSIBILITY   What is our responsibility?

Skills

What do we want students to be able to do?

The development of a range of skills gives students the tools for inquiry and to succeed in all aspects of their lives. There are five skills that apply across the curriculum:

- Thinking Skills
- Social Skills
- Communication Skills
- Self-management Skills
- Research Skills

Action

How do we want our students to act?

Students are encouraged to reflect on their learning, make informed choices and take action that will help others. Student-initiated action is considered as a dynamic outcome of agency, and an integral part of the learning process that can arise at any time, within or outside the programme of inquiry. Action might come in the form of: participation, advocacy, social justice, social entrepreneurship, and life choices

Further information pertaining to the Primary Years Programme can be found on the IB website www.ibo.org.

Subject Areas

Language

What do we want students to learn?

At ISSH we view language holistically; it is central to all learning. We consider language to be a vital tool for developing international mindedness amongst our student body through appreciating the many different languages we speak. We want our students to become active listeners, articulate speakers, fluent readers and confident writers in two or more languages. At ISSH we foster a love of language in our students together with an understanding of the power of language and a developing sense of personal responsibility for language use.

How best will students learn?

The **PYP language scope and sequence**, supplemented by an additional ISSH specific language scope and sequence, provides the framework for the ISSH language curriculum. The five components of language production (speaking, listening, reading, writing and visual communication) are all apparent in the languages used in our school. At ISSH we honour mother tongue languages and encourage families to continually support their child's mother tongue development at home through a variety of discussion, literature and media.

The predominant language of instruction at ISSH is English. German, as the host country language, is taught from 3 years old upwards. In the Early Learning Centre, students experience a bilingual education, receiving instruction in both English and German. From Grade 1 upwards, students attend focussed German lessons in addition to receiving English language instruction. French is introduced from 10/11 years old. English as an Additional Language (EAL) instruction is available for all students both on an individual basis, where students are withdrawn, and in-class support where students are supported with English as part of a small group in the classroom. EAL students are actively encouraged to become risk-takers with their newly acquired English skills.

At ISSH language refers to the following areas:

ENGLISH – the language of instruction

GERMAN – the language of the host country and immediate environment

FRENCH – another language of the host country

EAL – English as an additional language

N.B. In the Early Learning Centre (3 - 6 years old), students follow a bilingual model with English and German the languages of instruction.

ENGLISH

All students have daily language instruction. It may take the form of whole class, group or individual work. Language permeates all classroom activities and is the medium through which learning occurs.

ISSH Language Learning Outcomes for each class form the basis of the taught curriculum. The majority of these outcomes are integrated into the transdisciplinary units of inquiry but some, such as the development of basic literacy skills, are taught as stand-alone lessons.

Assessment starts with what the students already know and builds on the practice of establishing criteria for what a good listener, speaker, reader, writer or visual communicator does. The teacher supports the students in reflecting on their language practices and abilities and helps them identify personal goals in order to improve their language skills.

EAL – ENGLISH AS AN ADDITIONAL LANGUAGE

HOW DO WE SUPPORT EAL STUDENTS AT ISSH?

EAL support on an individual basis is available for all students at extra cost. Initially the individual support takes the form of a withdrawal programme consisting of daily sessions of approximately 20 minutes. When the student is assessed to be confident enough in the classroom to cope with the demands of the English programme the EAL teacher provides some in-class support. At the end of six months the situation is reviewed with the EAL teacher, parents and class teacher to assess if further paid EAL provision is required.

EAL support in the classroom

The classroom teacher provides ongoing EAL support to meet the needs of students for whom English is not their mother tongue. When an EAL student enters the class they are given a buddy who, where possible, has the same mother tongue. Class teachers prepare the class for a new EAL student by reflecting with them on their own first weeks in the school in order to create a feeling of empathy. The class are asked to suggest ways of supporting their new classmate based on their experience. The buddy takes the new student on a tour of the school and helps them through daily routines such as snack, lunch and playtimes. The class teacher speaks clearly, uses facial expression, mime, body language and puppets to make the new student feel welcome and supported.

In the first few weeks the focus is on survival language to support the EAL student in their new learning environment. If the student is able to write independently, written assignments are completed in their mother tongue. If the student is not an independent writer the teacher acts as scribe. Visual aids such as pictures, maps and photographs are used extensively to establish meaning and check understanding.

Individual EAL support

In the beginning students are given lots of oral practice in basic survival language including greeting someone, telling someone their name, asking for help and telling someone how they feel. When students have acquired some basic survival language they take part in interviews to give practice in asking and answering simple questions. High frequency words from the classroom such as days of the week, numbers, colours and simple written instructions are supported with a lot of visual materials and role-play.

Picture dictionaries, lotto, alphabet games, puzzles and games linked to the student's personal belongings are played regularly to reinforce basic language in a fun way. Fiction and non-fiction books are introduced from the first lesson where the student reads with the teacher. The Oxford Reading Tree series is used extensively to support EAL students to become independent readers in English. Once a student is assessed to be beyond beginner EAL, support with English structures are given by using WOW: Window on the Word book with older students and a variety of games including "Guess Who" and "Questions" game with younger students. Intermediate EAL students are largely supported with extending vocabulary within the context of their own assignments.

GERMAN – THE LANGUAGE OF THE HOST COUNTRY AND IMMEDIATE ENVIRONMENT

WHAT DOES THE GERMAN PROGRAMME LOOK LIKE AT ISSH?

German instruction at ISSH begins in the early years as part of a bilingual English/German programme. From Grade 1 (6 - 7 years) onwards German are grouped according to their needs: German as an Additional Language and German Mother Tongue. Whenever possible and beneficial, the groups work collaboratively to support and develop authentic language experiences for the students.

German teachers make connections to the units of inquiry, in order to support and further build students' conceptual understandings or approaches to learning.

GERMAN AS THE HOST COUNTRY LANGUAGE

As an international school we have a special responsibility to recognise and support our students in the learning of the host country language. The acquisition of the host country language enhances cognitive growth, enriches the personal experience of living in the host country, allows students to communicate and socialise with their host country schoolmates and in their local community, gives a deeper awareness of cultural values and traditions and of social norms different from their own. Learning another language also brings greater awareness and understanding of one's home language and how it works and of one's own culture and cultural identity.

The primary focus of German as an Additional Language is to facilitate student understanding and the use of spoken German. Reading and writing German are also taught but the emphasis of the programme is on confident, fluent oral language use. While listening, speaking, reading and writing may be thought of as separate for the purpose of planning and assessing, these four components are taught in an integrated and interactive way.

The following areas are covered:

- Learning how to use German in everyday situations, for social interactions and in leisure activities. Topics include: making friends, shopping and money, clothes, weather, the seasons, food and eating out and leisure time activities
- Learning about Switzerland and the Swiss Culture, its customs, traditions and holidays, history and geography
- Learning about the German language and how it works compared to other languages
- Learning through German about the personal, social and scientific worlds in close collaboration with the Programme of Inquiry

Sound knowledge and a good grounding in their mother tongue is vital for students whose mother tongue is not the language of instruction. We cater for the needs of the German mother tongue speakers by providing a well-balanced curriculum that incorporates the holistic language approach of the PYP and specific learning outcomes outlined in the official Schaffhausen curriculum for Swiss Primary Schools.

The primary focus of the German mother tongue lessons are to enhance the students' confidence in expressing themselves orally and in writing and to instill a love of reading both fiction and non-fiction books in their mother tongue. Speaking, listening and visual communication are also features of the programme but the emphasis is clearly on reading and writing.

FRENCH

WHAT DOES THE FRENCH PROGRAMME LOOK LIKE AT ISSH?

In order to be able to cater for the needs of our local students, in regards to their future integration into the Swiss system of training and professional development, we also provide a French programme as an additional language from Grade 5 (10 - 11 years old). The fact that we are recognized by the local authorities as a private school delivering an equivalent education to the Swiss public schools obliges Swiss students from the age of 10 to participate in the French programme. Students from other national backgrounds may choose whether and up to which level they participate in the French programme.

The main objective of the French course is to enable the students to understand and communicate confidently in basic everyday situations. The curriculum is taken from the Swiss Primary School's curriculum document.

MATHEMATICS

WHAT DO WE WANT STUDENTS TO LEARN?

At ISSH we view mathematics as a way of thinking and a tool for solving problems. We aim, in our mathematical teaching, to develop powerful young mathematicians who feel mathematically secure, who use numbers confidently to come to decisions, who understand mathematical principles and how to apply them in the real world. Students who are taught to think mathematically can apply their mathematics understanding and skills to solve problems. They can see relationships and patterns and use numbers confidently to make decisions. Because they are mathematically secure, students enjoy mathematical investigations and are challenged and stimulated by them. The teaching of mathematics at ISSH values the reasoning process as part of students explaining their mathematical thinking.

HOW BEST WILL STUDENTS LEARN?

The **PYP mathematics scope and sequence** provides the framework for the ISSH mathematics curriculum. The five strands of knowledge identified by the scope and sequence document are **Number, Pattern and Function, Data Handling, Measurement** and **Shape and Space**. The Number and Pattern and Function strands are mainly taught as stand-alone topics whereas Data Handling, Measurement and Shape and Space are taught within the units of inquiry wherever possible. Mathematics teaching at ISSH recognises three stages of development in students:

I. LEARNERS CONSTRUCTING MEANING

Students experience concepts through the use of concrete materials.

II. LEARNERS TRANSFERRING MEANING

The concept, concretely experienced by the student, is connected to recognized mathematical symbols and procedures.

III. LEARNERS APPLYING MEANING WITH UNDERSTANDING

The students independently write mathematical symbols to represent the concepts they have learned and so record their mathematical thinking.

All students have daily mathematics instruction. It may take the form of whole class, group or individual work. Math manipulatives such as Multibase and other concrete materials are available in all classrooms and easily accessible to students.

ISSH Mathematics Student Learning Outcomes for each grade level form the basis for the taught curriculum. These learning outcomes are derived from the student expectations outlined in the PYP Mathematics Scope and Sequence Document.

Assessment takes place in an ongoing manner to reflect and support the students as they learn.

SOCIAL STUDIES

In the PYP, social studies is viewed as the study of people in relation to their past, their present and their future, their environment and their society. Social studies encourages curiosity and develops an understanding of a rapidly changing world.

Through social studies, students develop an understanding of their personal and cultural identities. They develop the skills and knowledge needed to participate actively in their classroom, their school, their community and the world: to understand themselves in relation to their communities. Exposure to and experience with social studies opens doors to key questions about life and learning.

Within the PYP Social Studies is organized into the following strands:

- Human systems and economic activities
- Social organization and culture
- Continuity and change through time
- Human and natural environments
- Resources and the environment

The aim of social studies at ISSH is to promote intercultural understanding and respect for individuals and their values and traditions. The Social Studies outcomes are integrated into the PYP units of inquiry.

Evidence of student learning will be apparent in their willingness and ability to take action in order to make a difference in the world.

SCIENCE

In the PYP, science is viewed as the exploration of the behaviours of, and the interrelationships among, the natural, physical and material worlds. Our understanding of science is constantly changing and evolving. The inclusion of science within the curriculum leads learners to an appreciation and awareness of the world as it is viewed from a scientific perspective. It encourages curiosity, develops an understanding of the world, and enables the individual to develop a sense of responsibility regarding the impact of their actions on themselves, others and their world.

The knowledge component of Science is arranged into four 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.
EARTH AND SPACE	The study of planet Earth and its position in the universe, particularly its relationship with the sun; the systems, distinctive features and natural phenomena that shape and identify the planet; the infinite and finite resources of the planet.
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.
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.

The Science outcomes and skills are all integrated within the units of inquiry. Inquiry is central to scientific investigation and understanding. Students actively construct and challenge their understanding of the world around them by combining scientific knowledge with reasoning and thinking skills. Scientific knowledge is made relevant through its innumerable applications in the real world.

The scientific process, by encouraging hands-on experience and inquiry, enables the individual to make informed and responsible decisions, not only in science but also in other areas of life.

INFORMATION & COMMUNICATION TECHNOLOGY (ICT)

ICT provides opportunities for the enhancement of learning, and may significantly support students in their inquiries, and in developing their conceptual understanding. It is best considered as a tool for learning, albeit with its own set of skills, as opposed to an additional subject area. ICT skills are developed and learned in order to support the needs of our students in their inquiries.

The use of ICT:

- documents learning, making it available to all parties

- provides opportunities for rapid feedback and reflection

- provides opportunities to enhance authentic learning

- provides access to a broad range of sources of information

- provides students with a range of tools to store, organize and present their learning

- encourages and allows for communication with a wide-ranging audience.

PERSONAL, SOCIAL AND PHYSICAL EDUCATION

Personal, social and physical education (PSPE) is concerned with the development of knowledge, attitudes and skills related to personal, social and physical well-being in order to make healthy lifestyle choices.

Personal and social education is included in the curriculum in order to help students develop an understanding of how to manage and communicate their feelings; understand how their choices and practices can promote and maintain their health and safety; develop an awareness of social norms and perspectives; build relationships and develop an appreciation of commonalities and differences; develop strategies to resolve conflicts; recognize their rights and responsibilities towards others and the environment; and develop self-management strategies to become a successful learner. PSE learning takes place to ensure that cultural contexts can be appreciated, and wider perspectives can be embraced.

PSE is always transdisciplinary in nature and is integrated within the units of inquiry.

Physical Education has an important role to play in various aspects of human development: physical, social, personal and emotional. PE develops these aspects by giving students the opportunity to learn about movement and through movement. Students at ISSH experience a wide variety of physical activities to help develop their movement skills. Through these activities, students can increase their confidence and cooperative skills. They develop an understanding of the role of physical activity in a healthy lifestyle in order to make informed choices, and the cultural significance of physical activities for communities and individuals.

The Arts

Arts are viewed by the PYP as a form of expression that is inherent in all cultures. They are a powerful means to assist in the development of the whole child, and are important for interpreting and understanding the world. Arts in the PYP promote imagination, communication, creativity, social development and original thinking.

Through the arts, students gain confidence and competence in self-expression and collaborative learning, in both formal and informal settings. A competence in reflecting on and evaluating their own work and the work of others is integral, and empowers students to take risks in and beyond the arts setting.

In the PYP, the arts are identified as drama, music and visual art. The transdisciplinary nature of the arts makes them an essential resource throughout the curriculum: through the arts we learn to communicate, have exposure to other cultures and other times, and find out more about ourselves. The creative process is seen as a driving force in learning through inquiry.

Music is taught by a specialist teacher across the Primary school who collaborates as much as possible with the units of inquiry. Visual art and drama are taught by the class teacher.

In addition, the students have the opportunity to join the school choir and to enroll for specialist instrument lessons after school.

ASSESSMENT IN THE PYP

Assessment is integral to all teaching and learning. It is central to the PYP goal of thoughtfully and effectively guiding students through the essential elements of learning: the acquisition of knowledge, the understanding of concepts, the mastering of skills and the decision to take action. The prime objective of assessment in the PYP is to provide feedback on the learning process and to inform future teaching.

Assessment at ISSH involves the gathering and analysis of information about student performance and is designed to inform practice. It identifies what the students know, understand, can do, and feel at different stages in the learning process. Students and teachers are both actively engaged in assessing the students' progress as part of the development of their wider critical-thinking and self-assessment skills.

A variety of assessment strategies and tools are used for assessing student's work, taking into account the diverse ways that individual children understand experiences. Assessment tools include anecdotal notes, checklists, portfolios, continuums and rubrics.

The PYP requires that individual **portfolios** of student achievement are kept throughout the students' time in Primary school. During the year, students and teachers gather examples of work that show progression in learning in all areas, from Mathematics to PE, Art to Units of inquiry. These portfolios are digital in nature and, thus, are accessible to students, parents and teachers at all times. Additionally, they form the basis of discussions during the student parent teacher conferences.

Grade 5 students who are in their final year of the PYP participate in a culminating project called the **PYP exhibition** which is designed to demonstrate and celebrate their skills in all areas of the programme. The parents and other classes in the school are invited to visit the Exhibition towards the end of the year.

Progress reports are sent out twice a year at the end of each semester. The report indicates progress being made in all academic areas, as well as work habits and social skills. Furthermore, it also identifies areas to be improved upon .

FIELD TRIPS

Each class takes several field trips over the course of the school year. These constitute an integral part of the Programme of Inquiry. Parent volunteers may be requested closer to the time of each trip. In the past trips have included:
- Visit to Zurich airport
- Farm visits
- Technorama
- Schaffhausen museums
- Rhine Falls
- Visit to the Kunsthaus in Zürich

In addition, the classes encourage visitors to come into school to share experiences or expertise with the children.
From Grade 2 upwards, students also go away on overnight field trips. These field trips form an invaluable part of students' personal and social development. The length of the trips increase as students progress through the Primary School:

Grade 2 – 1 night
Grade 3 – 2 nights
Grade 4 – 3 nights
Grade 5 – 4 nights.

EXTRACURRICULAR ACTIVITIES

Throughout the year a broad range of extracurricular activities are on offer for students from Grade 1 upwards. These clubs typically take place after school. In previous years after school clubs offered have included:

• Gardening club	• Art and craft club	• Puppet making club
• Football club	• Dinosaur club	• Codebreakers club
• Theatre club	• Cooking club	• Story and drama club
• Computer club	• German conversation	• Recorder club
• Egyptology club	• Cricket club	

Appendices

APPENDIX 1
PROGRAMME OF INQUIRY 2021 – 2022

ISSH PROGRAMME OF INQUIRY 2021 – 2022

Age	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 interconnecte-ness 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 the relationships within and between them; access to equal opportunities; peace and conflict resolution.
6-8 Grades 1&2 Cycle A	**Central Idea:** We use our senses to explore the world around us. **Key Concepts:** Form, Function, Perspective **Related Concepts:** Senses, Properties of materials, Perseverance, Resilience **Lines of inquiry:** ● Our senses ● How we use our senses ● What it is like to live without a sense **Subject foci:** Science, PSE, Language	**Central Idea:** By inquiring into our interests, we become more knowledgeable about the world. **Key Concepts**: TBD **Lines of Inquiry:** TBD *SELF-DIRECTED UNIT*	**Central Idea:** Patterns are all around us and can be used by people to express themselves. **Key Concepts:** Form, Perspective, Function **Related Concepts:** Classification, Traditions, Diversity, Artifacts, Ethnicity, Image, Culture, Imagination, Interpretation **Lines of inquiry:** ● What makes a pattern ● Pattern in different cultures ● Patterns as a form of expression **Subject foci:** PSPE, Mathematics, Arts, Language, Social Studies, Science	**Central Idea:** Light comes from many sources and creates reflections and shadows. **Key Concepts:** Form, Function, Change **Related Concepts:** Space , Day and Night, Systems (solar), Forms of energy (light), Materials **Lines of inquiry:** ● Sources of light ● How shadows are created ● Reflective surfaces **Subject foci:** Science, Arts	**Central Idea:** Schools are organized to help us learn and work together. **Key Concepts:** Function, Connection, Responsibility **Related Concepts:** Communication, Education, Cooperation, Networks, Rights, Authority, Roles, Belonging, Community, Interdependence, Teamwork, Self-regulation **Lines of inquiry:** ● How a school is organized ● The jobs different people do in our school and how these jobs are connected ● Our role (and responsibilities) within the community of learners **Subject foci:** Social Studies, PSPE	**Central Idea:** Children throughout the world have universal needs. **Key concepts:** TBD with students **Related Concepts:** Impact, Consequences, Similarities and differences **Lines of inquiry:** ● TBD with students ● TBD with students ● TBD with students **Subject foci:** Social Studies, PSPE

Age	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 interconnecte-ness 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 the relationships within and between them; access to equal opportunities; peace and conflict resolution.
8-10 **Grades 3 & 4** Cycle A	**Central Idea:** By inquiring into our interests, we become more knowledgeable about the world. **Key Concepts**: TBD **Lines of Inquiry:** TBD ***SELF-DIRECTED UNIT***	**Central Idea:** Technology helps shape civilization and present day societies **Key Concepts:** Form, Connection, Causation **Related Concepts:** Innovation, Design, Resilience **Lines of inquiry** ●Past civilization discoveries ●Use of accumulated knowledge for innovation ●Previous human discoveries affect our daily lives **Subject foci:** Social Studies, Language, Maths, Arts	**Central Idea:** Artists use visual art to express their ideas, feelings and values. **Key Concepts:** TBD with students **Related Concepts:** Creativity, Techniques, Interpretation **Lines of inquiry:** TBD with students TBD with students TBD with students **Subject foci:** Arts, Language	**Central Idea:** Through scientific investigation we can discover scientific principles and their applications. **Key Concepts:** Form, Function, Causation **Related Concepts:** Forces, Movement, Order, Organization. **Lines of inquiry** ●The scientific process for organising, collecting, interpreting and making conclusions on data. ●Relationships and interactions **Subject foci:** Science, Maths,	**Central Idea:** For communities to be effective, members must cooperate. **Key Concepts:** Form, Perspective, Responsibility **Related concepts:** Teamwork, Effectiveness, Cooperation, Respect **Lines of inquiry** ●Roles and responsibilities within a community ●Tools for problem solving and decision making ●The importance of communication for a community **Subject foci:** PSPE, Social Studies	**Central Idea:** Our locality has its own unique identity. **Key Concepts:** Form, Connection, Change **Related Concepts:** Natural resources, conservation, Identification Taxonomy **Lines of inquiry** ●The natural features of our locality ●How our natural features interact ●How our locality has changed over time **Subject foci:** Science, Social Studies

Age	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 interconnecte-ness 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 the relationships within and between them; access to equal opportunities; peace and conflict resolution.
10-11 **Grade 5** Cycle A	**Central Idea:** Understanding how we learn helps us to learn more effectively. **Key Concepts:** Causation, Function, Connection **Related Concepts:** Biology, Nervous system, Growth, Genetics, Character, Gender, Perseverance, Self-regulation, Fulfillment **Lines of inquiry:** ● How our mindset shapes our learning ● The ways in which people learn ● The brain and its impact on learning. **Subject foci:** Science, PSPE	**Central Idea:** Explorations lead to discoveries, opportunities, and new understandings **Key Concepts**: Causation, Perspective, Change **Related Concepts:** Exploration, Civilizations, Discovery; Conflict; Progress; Revolution, Borders, Geography, Regions, Ownership, Settlements, Population, Impact **Lines of inquiry:** ●Reasons for exploration ●The impact of exploration ●Exploration over time **Subject foci:** Social Studies, Language, Maths	**Central Idea:** Beauty is in the eye of the beholder. **Key Concepts:** TBD with students **Related Concepts:** Aesthetics/beauty, Subjectivity, Opinion **Lines of inquiry:** ● TBD with students ● TBD with students ● TBD with students **Subject foci:** Arts, Social Studies	**Central Idea:** Human survival is connected to understanding the continual changing nature of the Earth. **Key Concepts:** Change, Causation, Connection **Related Concepts:** Erosion, Geology, Tectonic plates, Movement **Lines of inquiry:** ● How different components of the Earth are interrelated ● How the Earth has changed and is continuing to change ● Human responses to the Earth's changes **Subject foci:** Science, Social Studies	**Central Idea:** By inquiring into our interests, we become more knowledgeable about the world. **Key Concepts**: TBD **Lines of Inquiry:** TBD ***SELF-DIRECTED UNIT***	**Central Idea:** Finding peaceful solutions to conflict can lead to a better quality of life. **Key Concepts:** Form, Causation, Responsibility **Related Concepts:** Prejudice, Rights, Conflict Diversity, Citizenship, Self-regulation, Resilience, Community, Control, Peace Belonging, Fair play, Justice **Lines of inquiry:** ● Conflict and its causes ● The effect of conflict in our lives ● Conflict resolution and management strategies **Subject foci:** Social Studies, PSPE

Appendix 2
IB Language Learning Continuum

N.B. – The IB Learning Continuums are grouped into phases of learning. As a <u>ROUGH</u> guide these phases may be attributed to each age group in the following manner:

Phase 1 – 3 - 5 years old

Phase 2 – 5 - 7 years old

Phase 3 – 7 - 9 years old

Phase 4 – 9 - 11 years old

Phase 5 – 10 - 11 years and above (this only applies to the Language continuum)

It should be noted that for a number of reasons (each child is unique, each mind has its own method, learning rarely occurs in a linear manner, students have different levels of proficiency in the different areas of English and Mathematics) **a student may be working in a different phase than the <u>rough guidelines</u> detailed above.** In the classroom, teachers differentiate instruction to meet the needs of students based on the phase they are in.

Learning continuum for oral language—listening and speaking

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Conceptual understandings Spoken words connect us with others. People listen and speak to share thoughts and feelings. People ask questions to learn from others.	**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.	**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.	**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.	**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.
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	**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	**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	**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	**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

- 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.

- 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).

- 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.

- 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 vocabu-lary 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
- appreciate that language is not always used literally; understand and use the figurative language of their own culture.

- 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 intonation to enhance meaning
- appreciate that people speak and respond according to personal and cultural perspectives
- use speech responsibly to inform, entertain and influence others
- reflect on communication to monitor and assess their own learning.

LEARNING CONTINUUM FOR VISUAL LANGUAGE—VIEWING AND PRESENTING

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Conceptual understandings	**Conceptual understandings**	**Conceptual understandings**	**Conceptual understandings**	**Conceptual understandings**
Visual language is all around us. The pictures, images, and symbols in our environment have meaning. We can enjoy and learn from visual language.	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.	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.	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.	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.
Learning outcomes Learners: • attend to visual information showing understanding through play, gestures, facial expression • reveal their own feelings in response to visual	**Learning outcomes** Learners: • attend to visual information showing understanding through discussion, role play, illustrations • talk about their own feelings in response to visual	**Learning outcomes** Learners: • view visual information and show understanding by asking relevant questions and discussing possible meaning	**Learning outcomes** Learners: • view, respond to and describe visual information, communicating understanding in oral, written and visual form	**Learning outcomes** Learners: • view and critically analyse a range of visual texts, communicating understanding through oral, written and visual media

- presentations, for example, by showing amusement, curiosity, surprise

- 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

- messages; show empathy for the way others might feel

- 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

- discuss their own feelings in response to visual messages; listen to other responses, realizing that people react differently

- 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

- describe personal reactions to visual messages; reflect on why others may perceive the images differently

- 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

- identify factors that influence personal reactions to visual texts; design visual texts with the intention of influencing the way people think and feel

- 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

different devices, for example, computer games, CD player, television

- listen to terminology associated with visual texts and understand terms such as colour, shape, size.

- 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 telling the same story, for example, the picture book version and the film/movie version of a story

- 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.

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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 their effectiveness, for example, film/video, posters, drama

- 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.

- discuss a newspaper report and tell how the words and pictures work together to convey a particular message

- prepare, individually or in collaboration, visual presentations using a range of media, including computer and web-based applications

- 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

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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 more explicit

- 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

			some way; discuss the effects used and how they might influence the audience.	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 responsibility.

Learning continuum for written language—reading

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Conceptual understandings 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.	**Conceptual understandings** 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.	**Conceptual understandings** 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.	**Conceptual understandings** 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.	**Conceptual understandings** 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.
Learning outcomes Learners: • 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	**Learning outcomes** Learners: • 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	**Learning outcomes** Learners: • 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	**Learning outcomes** Learners: • 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	**Learning outcomes** Learners: • 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

- participate in shared reading, joining in with rhymes, refrains and repeated text as they gain familiarity
- make connections to their own experience when listening to or "reading" texts
- 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
- realize that the organization of on-screen text is different from how text is organized in a book
- join in with chants, poems, songs, word games and

and interacting effectively with the group
- listen attentively and respond actively to read-aloud situations; make predictions, anticipate possible outcomes
- 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

instantly recognize an increasing bank of high-frequency and high-interest words, characters or symbols

story—beginning, middle and end; may use storyboards or comic strips to communicate elements
- make predictions about a story, based on their own knowledge and experience; revise or confirm predictions as the story progresses
- 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
- discuss their own experiences and relate them to fiction and non-fiction texts

inform, entertain, persuade, instruct
- understand that stories have a plot; identify the main idea; discuss and outline the sequence of events leading to the final outcome
- 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
- access information from a variety of texts both in print and online, for example, newspapers, magazines, journals,

- identify genre (including fantasy, biography, science fiction, mystery, historical novel) and explain elements and literary forms that are associated with different genres
- 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

clapping games, gaining familiarity with the sounds and patterns of the language of instruction.	• have a secure knowledge of the basic conventions of the language(s) of instruction in printed text, for example, orientation, directional movement, layout, spacing, punctuation • participate in learning engagements involving reading aloud—taking roles and reading dialogue, repeating refrains from familiar stories, reciting poems.	• participate in collaborative learning experiences, • acknowledging that people see things differently and are entitled to express their point of view • wonder about texts and ask questions to try to understand what the author is saying to the reader.	comics, graphic books, e-books, blogs, wikis • know when and how to use the internet and multimedia resources for research • understand that the internet must be used with the approval and supervision of a parent or teacher; read, understand and sign the school's cyber-safety policy.	on effectiveness and impact • distinguish between fact and opinion, and reach their own conclusions about what represents valid information • use a range of strategies to solve comprehension problems and deepen their understanding of a text • consistently and confidently use a range of resources to find information and support their inquiries • participate in collaborative learning, considering multiple perspectives and working with peers to co-construct new understanding • use the internet responsibly and knowledgeably, appreciating its uses and limitations • locate, organize and synthesize information from a variety of sources including the library/media centre, the internet, people in the school, family, the immediate community or the global community

Learning continuum for written language—writing

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Conceptual understandings	**Conceptual understandings**	**Conceptual understandings**	**Conceptual understandings**	**Conceptual understandings**
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.	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.	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.	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.	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.
Learning outcomes Learners: • 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	**Learning outcomes** Learners: • 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	**Learning outcomes** Learners: • 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	**Learning outcomes** Learners: • 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	**Learning outcomes** Learners: • 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

- 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
- 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.

- 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
- 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

- 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 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

- 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 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

- 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 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

	• illustrate their own writing and contribute to a class book or collection of published writing.	• participate in teacher conferences with teachers recording progress and noting new learning goals; self-monitor and take responsibility for improvement • with teacher guidance, publish written work, in handwritten form or in digital format.	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.

• 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.

LEARNING CONTINUUM FOR DATA HANDLING

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

When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:
• represent information through pictographs and tally marks • sort and label real objects by attributes.	• 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).	• 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.	• 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%).
When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:
• create pictographs and tally marks • create living graphs using real objects and people* • describe real objects and events by attributes.	• 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).	• 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.	• 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.

LEARNING CONTINUUM FOR MEASUREMENT

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings Measurement involves comparing objects and events. Objects have attributes that can be measured using non-standard units. Events can be ordered and sequenced.	**Conceptual understandings** 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.	**Conceptual understandings** Objects and events have attributes that can be measured using appropriate tools. Relationships exist between standard units that measure the same attributes.	**Conceptual understandings** 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.
Learning outcomes When **constructing meaning** learners: • 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.	**Learning outcomes** When **constructing meaning** learners: • 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. •	**Learning outcomes** When **constructing meaning** learners: • 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.	**Learning outcomes** When **constructing meaning** learners: • 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).

When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:
• 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 non-standard units • identify, describe and sequence events in their daily routine, for example, before, after, bedtime, storytime, today, tomorrow.	• estimate and measure objects using standard units of measurement: length, mass, capacity, money and temperature • 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.	• 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.	• 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).
When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:
• 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.	• 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.	• 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.	• 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.

Learning continuum for shape and space

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings	**Conceptual understandings**	**Conceptual understandings**	**Conceptual understandings**
Shapes can be described and organized according to their properties.	Shapes are classified and named according to their properties.	Changing the position of a shape does not alter its properties.	Manipulation of shape and space takes place for a particular purpose.
Objects in our immediate environment have a position in space that can be described according to a point of reference.	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.	Shapes can be transformed in different ways. Geometric shapes and vocabulary are useful for representing and describing objects and events in real-world situations.	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.
Learning outcomes	**Learning outcomes**	**Learning outcomes**	**Learning outcomes**
When **constructing meaning** learners:	When **constructing meaning** learners:	When **constructing meaning** learners:	When **constructing meaning** learners:
- 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.	- 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.	- 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.	- 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.

When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:	When **transferring meaning into symbols** learners:
• sort, describe and compare 3D shapes • describe position and direction, for example, inside, outside, above, below, next to, behind, in front of, up, down.	• 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.	• sort, describe and model regular and irregular polygons • describe and model congruence 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.	• 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.
When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:
• 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).	• 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.	• 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.	• 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.

LEARNING CONTINUUM FOR PATTERN AND FUNCTION

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings Patterns and sequences occur in everyday situations. Patterns repeat and grow.	**Conceptual understandings** Whole numbers exhibit patterns and relationships that can be observed and described. Patterns can be represented using numbers and other symbols.	**Conceptual understandings** 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.	**Conceptual understandings** 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.
Learning outcomes When **constructing meaning** learners: • understand that patterns can be found in everyday situations, for example, sounds, actions, objects, nature.	**Learning outcomes** When **constructing meaning** learners: • 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.	**Learning outcomes** When **constructing meaning** learners: • 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.	**Learning outcomes** When **constructing meaning** learners: • 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.
When **transferring meaning into symbols** learners: • describe patterns in various ways, for example, using words, drawings, symbols, materials, actions, numbers.	When **transferring meaning into symbols** learners: • 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.	When **transferring meaning into symbols** learners: • 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.	When **transferring meaning into symbols** learners: • represent the rule of a pattern by using a function • analyse pattern and function using words, tables and graphs, and, when possible, symbolic rules.

When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:	When **applying with understanding** learners:
• extend and create patterns.	• 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.	• 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.	• select appropriate methods to analyse patterns and identify rules • use functions to solve problems.

Learning continuum for number

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings	**Conceptual understandings**	**Conceptual understandings**	**Conceptual understandings**
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.	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.	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.	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.
Learning outcomes When **constructing meaning** learners: • 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	**Learning outcomes** When **constructing meaning** learners: • 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	**Learning outcomes** When **constructing meaning** learners: • 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,	**Learning outcomes** When **constructing meaning** learners: • 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

• recognize groups of zero to five objects without counting (subitizing) • understand whole-part relationships • use the language of mathematics to compare quantities, for example, more, less, first, second.	• develop strategies for memorizing addition and subtraction number facts • estimate sums and differences • understand situations that involve multiplication and division • model addition and subtraction of fractions with the same denominator.	multiple, product, quotient, prime numbers, composite number • model addition and subtraction of fractions with related denominators*** • model addition and subtraction of decimals.	• model percentages • understand the relationship between fractions, decimals and percentages • model addition, subtraction, multiplication and division of fractions • model addition, subtraction, multiplication and division of decimals.
When **transferring meaning into symbols** learners: • connect number names and numerals to the quantities they represent.	When **transferring meaning into symbols** learners: • 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.	When **transferring meaning into symbols** learners: • 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.	When **transferring meaning into symbols** learners: • 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.
When applying with understanding learners: • count to determine the number of objects in a set	When applying with understanding learners: • use whole numbers up to hundreds or beyond in real-life situations	When applying with understanding learners: • use whole numbers up to thousands or beyond in real-life situations	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

• use number words and numerals to represent quantities in real-life 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.	• 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 two-digit 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.	• 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.	• 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

APPENDIX 4
IB LEARNING CONTINUUM FOR PERSONAL, SOCIAL AND PHYSICAL EDUCATION

LEARNING CONTINUUM FOR IDENTITY

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings Each person is an individual. As people grow and change they develop new skills, understandings and abilities. Emotions, attitudes and beliefs influence the way we act. Positive thoughts help us to develop a positive attitude. Knowing how we are similar to and different from others helps shape our understanding of self. Reflecting on our experiences helps us to understand ourselves better. Developing independence builds self-worth[1] and personal responsibility.	**Conceptual understandings** There are many factors that contribute to a person's individual identity. Understanding and respecting other peoples' perspectives helps us to develop empathy. Identifying and understanding our emotions helps us to regulate our behaviour. A positive attitude helps us to overcome challenges and approach problems. A person's self-concept[2] can change and grow with experience. Using self-knowledge[3] allows us to embrace new situations with confidence. Different challenges and situations require different strategies.	**Conceptual understandings** A person's identity evolves as a result of many cultural influences. A person's self-concept is influenced by how others regard and treat him or her. Embracing and developing optimism helps us to have confidence in ourselves and our future. Understanding ourselves helps us to understand and empathize with others. Self-efficacy influences the way people feel, think and motivate themselves, and behave. Reflecting on the strategies we use to manage change and face challenges helps us to develop new strategies to cope with adversity. Increasing our self-reliance and persisting with tasks independently supports our efforts to be more autonomous.	**Conceptual understandings** Many different and conflicting cultures influence identity formation. The physical changes people experience at different stages in their lives affect their evolving identities. Stereotyping or prejudging can lead to misconceptions and conflict. The values, beliefs and norms of a society can impact an individual's self-concept and self-worth. Being emotionally aware helps us to manage relationships and support each other. A person's self-worth is reinforced and reflected in engagement with and/or service to others. A strong sense of self-efficacy enhances human accomplishments and personal well-being. Coping with situations of change, challenge and adversity develops our resilience.
Learning outcomes Learners: - identify themselves in relation to others (for example, family, peers, school class, ethnicity, gender) - describe how they have grown and changed	**Learning outcomes** Learners: - describe similarities and differences between themselves and others through the exploration of cultures, appearance, gender, ethnicity, and personal preferences - describe how personal growth has resulted in new skills and abilities	**Learning outcomes** Learners: - explain how a person's identity is made up of many different things, including membership in different cultures, and that this can change over time - examine different factors (heritable and non-heritable) that shape an	**Learning outcomes** Learners: - examine the complexity of their own evolving identities - recognize how a person's identity affects self-worth

- describe some physical and personal characteristics and personal preferences
- talk about similarities and differences between themselves and others
- identify their feelings and emotions and explain possible causes
- recognize that others have emotions, feelings and perspectives that may be different from their own
- identify and explore strategies that help them to cope with change
- identify positive thoughts and attitudes in themselves and others
- willingly approach and persevere with new situations
- reflect on their experiences in order to build a deeper understanding of self
- demonstrate a sense of competence with developmentally appropriate daily tasks and seek support to develop independence.

- explain how different experiences can result in different emotions
- identify feelings and begin to understand how these are related to behaviour
- express hopes, goals and aspirations
- solve problems and overcome difficulties with a sense of optimism
- examine possible strategies to deal with change, including thinking flexibly and reaching out to seek help
- recognize others' perspectives and accommodate these to shape a broader view of the world
- identify and understand the consequences of actions
- are aware of their emotions and begin to regulate their emotional responses and behaviour
- reflect on inner thoughts and self-talk[4]
- demonstrate a positive belief in their abilities and believe they can reach their goals by persevering.

- identity (for example, gender, sexuality, nationality, language group)
- identify how their attitudes, opinions and beliefs affect the way they act and how those of others also impact on their actions
- recognize personal qualities, strengths and limitations
- analyse how they are connected to the wider community
- reflect on how they cope with change in order to approach and manage situations of adversity
- reflect on their own cultural influences, experiences, traditions and perspectives, and are open to those of others
- use understanding of their own emotions to interact positively with others
- embrace optimism to shape a positive attitude towards themselves and their future
- explain how self-talk can influence their behaviour and their approach to learning
- motivate themselves intrinsically and behave with belief in themselves
- work and learn with increasing independence.

- recognize how a person's identity affects how they are perceived by others and influences interactions
- analyse how society can influence our concept of self-worth (for example, through the media and advertising)
- identify how aspects of a person's identity can be expressed through symbols, spirituality, dress, adornment, personal attitudes, lifestyle, interests and activities pursued
- analyse how assumptions can lead to misconceptions
- recognize, analyse and apply different strategies to cope with adversity
- accept and appreciate the diversity of cultures, experiences and perspectives of others
- identify causal relationships and understand how they impact on the experience of individuals and groups
- use emotional awareness and personal skills to relate to and help others
- identify how their self-knowledge can continue to support the growth and development of identity
- understand the role of and strategies for optimism in the development of their own well-being
- analyse self-talk and use it constructively
- embrace a strong sense of self-efficacy that enhances their

			accomplishments, attitudes and personal well-being.

Learning continuum for active living

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings Our daily practices can have an impact on our well-being. We can observe changes in our bodies when we exercise. Our bodies change as we grow. We can explore our body's capacity for movement. Our bodies can move creatively in response to different stimuli. Safe participation requires sharing space and following rules.	**Conceptual understandings** Regular exercise is part of a healthy lifestyle. Food choices can affect our health. Maintaining good hygiene can help to prevent illness. Growth can be measured through changes in capability as well as through physical changes. We can apply a range of fundamental movement skills to a variety of activities. Movements can be used to convey feelings, attitudes, ideas or emotions. The use of responsible practices in physical environments can contribute to our personal safety and the safety of others.	**Conceptual understandings** Regular exercise, hydration, nutrition and rest are all important in a healthy lifestyle. We can develop and maintain physical fitness by applying basic training principles. People go through different life stages, developing at different rates from one another. Attention to technique and regular practice can improve the effectiveness of our movements. A dynamic cycle of plan, perform and reflect can influence a creative movement composition. There are positive and negative outcomes for taking personal and group risks that can be evaluated in order to maximize enjoyment and promote safety.	**Conceptual understandings** Identifying and participating in activities we enjoy can motivate us to maintain a healthy lifestyle. There is a connection between exercise, nutrition and physical well-being. Setting personal goals and developing plans to achieve these goals can enhance performance. There are physical, social and emotional changes associated with puberty. Appropriate application of skills is vital to effective performance. Complexity and style adds aesthetic value to a performance. Understanding our limits and using moderation are strategies for maintaining a safe and healthy lifestyle.
Learning outcomes Learners: • engage in a variety of different physical activities • demonstrate an awareness of how being active contributes to good health • demonstrate an awareness of basic hygiene in their daily routines • identify some of the effects of different physical activity on the body	**Learning outcomes** Learners: • recognize the importance of regular exercise in the development of well-being • identify healthy food choices • communicate their understanding of the need for good hygiene practices • reflect on the interaction between body systems during exercise	**Learning outcomes** Learners: • identify ways to live a healthier lifestyle • understand how daily practices influence short- and long-term health • understand that there are substances that can cause harm to health	**Learning outcomes** Learners: • reflect and act upon their preferences for physical activities in leisure time • understand the interdependence of factors that can affect health and well-being • identify realistic goals and strategies to improve personal fitness

• explore and reflect on the changing capabilities of the human body • develop a range of fine and gross motor skills • explore creative movements in response to different stimuli • recognize that acting upon instructions and being aware of others helps to ensure safety.	• explain how the body's capacity for movement develops as it grows • use and adapt basic movement skills (gross and fine motor) in a variety of activities • explore different movements that can be linked to create sequences • display creative movements in response to stimuli and express different feelings, emotions and ideas • reflect upon the aesthetic value of movement and movement sequences • understand the need to act responsibly to help ensure the safety of themselves and others.	• demonstrate an understanding of the principles of training in developing and maintaining fitness • identify different stages of life and how these can affect physical performance • develop plans to improve performance through technique refinement and practice • demonstrate greater body control when performing movements • self-assess performance and respond to feedback on performance from others • plan, perform and reflect on movement sequences in order to improve • identify potential personal and group outcomes for risk-taking behaviours.	• identify and discuss the changes that occur during puberty and their impact on well-being • exhibit effective decision-making processes in the application of skills during physical activity • introduce greater complexity and refine movements to improve the quality of a movement sequence • recognize the importance of moderation in relation to safe personal behaviour

LEARNING CONTINUUM FOR INTERACTIONS

Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings Interacting with others can be fun. Group experiences depend on cooperation of group members. Ideas and feelings can be communicated with others in a variety of modes. Our relationships with others contribute to our well-being (for example, parent:child; teacher:student; friend:friend). Our behaviour affects others. Caring for local environments fosters appreciation.	**Conceptual understandings** Participation in a group can require group members to take on different roles and responsibilities. There are norms of behaviour that guide the interactions within different groups, and people adapt to these norms. Accepting others into a group builds open-mindedness. Relationships require nurturing. Our actions towards others influence their actions towards us. Responsible citizenship involves conservation and preservation of the local environment.	**Conceptual understandings** A plan of action is a necessary strategy for a group to achieve its goal. An effective group capitalizes on the strengths of its individual members. Healthy relationships are supported by the development and demonstration of constructive attitudes such as respect, empathy and compassion. Behaviour can be modified by applying deliberate strategies. Communities and societies have their own norms, rules and regulations. Communities and their citizens have a collective responsibility to care for local and global environments.	**Conceptual understandings** An effective group can accomplish more than a set of individuals. An individual can experience both intrinsic satisfaction and personal growth from interactions. Individuals can extend and challenge their current understanding by engaging with the ideas and perspectives of others. People are interdependent with, and have a custodial responsibility towards, the environment in which they live. People have a responsibility to repair and restore relationships and environments where harm has taken place.
Learning outcomes Learners: - enjoy interacting, playing and engaging with others - take turns - listen respectfully to others - share their own relevant ideas and feelings in an appropriate manner - ask questions - celebrate the accomplishments of others - reach out for help when it is needed for themselves or others	**Learning outcomes** Learners: - value interacting, playing and learning with others - discuss and set goals for group interactions - cooperate with others - ask questions and express wonderings - recognize the different group roles and responsibilities - assume responsibility for a role in a group - celebrate the accomplishment of the group	**Learning outcomes** Learners: - recognize that committing to shared goals in group situations improves individual and shared experiences and outcomes - identify individual strengths that can contribute to shared goals - develop a shared plan of action for group work that incorporates each individual's experiences and strengths - adopt a variety of roles for the needs of the group, for example, leader, presenter	**Learning outcomes** Learners: - reflect critically on the effectiveness of the group during and at the end of the process - build on previous experiences to improve group performance - independently use different strategies to resolve conflict - work towards a consensus, understanding the need to negotiate and compromise - take action to support reparation in relationships and in the

• identify when their actions have impacted on others • talk about their interactions with the environment.	• share ideas clearly and confidently • seek adult support in situations of conflict • reflect on the process of achievement and value the achievements of others • understand the impact of their actions on each other and the environment.	• discuss ideas and ask questions to clarify meaning • reflect on the perspectives and ideas of others • apply different strategies when attempting to resolve conflict • reflect on shared and collaborative performance.	environment when harm has been done.

Please note: The term "group" has been used throughout this continuum. Depending on the context for learning, "group" could refer to a team, a family group, the whole class, smaller work groups, social groups and play groups.

APPENDIX 5
IB ARTS LEARNING CONTINUUMS

LEARNING CONTINUUM FOR RESPONDING

	Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings	We enjoy and experience different forms of arts. The art is a means of communication and expression. People make meaning through the use of symbols. People share art with others. We express our responses to artwork in a variety of ways. We reflect on our artwork and the work of others.	We are receptive to art practices and artworks from different cultures, places and times (including our own). People communicate ideas, feelings and experiences through the arts. We can reflect on and learn from the different stages of creating. There is a relationship between the artist and the audience.	When experiencing arts, we make connections between different cultures, places and times. People explore issues, beliefs and values through arts. There are different kinds of audiences responding to different arts. We use what we know to interpret arts and deepen our understanding of ourselves and the world around us.	Through exploring arts across cultures, places and times we can appreciate that people innovate. People communicate across cultures, places and times through arts. The arts provide us with multiple perspectives. We reflect and act on the responses to our creative work.
Dance	**Learning outcomes** Learners: • show curiosity about live and recorded dance performances • describe the ideas and feelings communicated through body movements • identify and explain why certain body postures and movements communicate certain ideas and feelings • display audience etiquette and appropriate responses such as watching, listening and responding to favourite parts of the performance • respond to dance through spoken, written, visual	**Learning outcomes** Learners: • compare a variety of dance genres over time to the contemporary dance form of their culture • recognize the theme of a dance and communicate their personal interpretation • identify dance components such as rhythm and use of space in their own and others' dance creations • describe and evaluate the learnings and understandings developed through their exploration of dance	**Learning outcomes** Learners: • recognize that dance plays an innovative role in communicating ideas within cultures and societies • reflect on their personal and family history and make connections with cultural and historical dance forms • consider the composition of an audience when preparing an effective formal and/or informal presentation • reflect on artistic processes in dance achievements and how to incorporate new ideas into future work	**Learning outcomes** Learners: • investigate a cultural or historical dance form and identify how it communicates artistic, ritual or social issues, beliefs or values • recognize the role and relevance of dance in their own society through exposure to a variety of performers and their perspectives • analyse how the meanings of movements can change in various cultural and historical contexts • analyse and integrate the reflections of others into

	and/or kinesthetic mediums.	realize that there is a dynamic connection between the audience and performer.	recognize how dance can be used to express and under-stand our inner thoughts and our understanding of the world around us.	the creative process when evaluating and improving.
Drama	**Learning outcomes** Learners: • respond to live performances, stories and plays from other times and/or places • talk about ideas and feelings in response to dramatic performances • display audience etiquette and appropriate responses • realize that dramatic conventions are used to craft performance • use materials to symbolically show location and character • respond to dramatic ideas through spoken, visual, auditory and kinesthetic mediums.	**Learning outcomes** Learners: • compare varied styles of performance with drama from their own culture • use drama performance to tell stories about people and events from various cultures, including their own • discuss and explain the way ideas, feelings and experiences can be communicated through stories and performance • describe and evaluate the learning and understandings developed through their exploration of drama • describe the dynamic connection between the audience and performer.	**Learning outcomes** Learners: • discuss aspects of drama that illustrate relationships between culture, history and location • explore how dramatic meaning illustrates the values, beliefs and observations of an individual or community • consider the composition of an audience when preparing an effective formal and/or informal presentation • reflect on achievement and challenges and how they can incorporate these influences in future work • recognize and discuss how the consequences and actions of a performance teach audience members and performers life lessons.	**Learning outcomes** Learners: • describe how drama plays an innovative role in communicating ideas within cultures and societies • understand the role and relevance of drama in their own society through exposure to a variety of performers and their perspectives • reflect on a variety of dramatic forms to identify new understandings within the arts • recognize and explore some of the different roles in theatre • use responses to drama to adapt and improve work, considering the original intention.
Music	**Learning outcomes** Learners: • use voice to imitate sounds and learn songs	**Learning outcomes** Learners: • sing individually and in unison	**Learning outcomes** Learners: • sing with accuracy and control focusing awareness on the musical elements	**Learning outcomes** Learners: • sing individually and in harmony • explain the role and relevance of music in their

	• bring music from home to share • describe the differences in music • move their bodies to express the mood of the music • describe how music makes them feel • distinguish the sounds of different instruments in music • listen to music and create their own work in response • express their responses to music in multiple ways (drawings, games, songs, dance, oral discussion) • explore body and untuned percussion instrument sounds • recognize different sources of music in daily life • recognize that sound can be notated in a variety of ways.	• recognize music from a basic range of cultures and styles • express their responses to music from different cultures and styles • create a musical composition to match the mood of a visual image (for example, paintings, photographs, film) • explore individually or collectively a musical response to a narrated story • reflect on and communicate their reactions to music using musical vocabulary • record and share the stages of the process of creating a composition • share performances with each other and give constructive criticism.	• sing partner songs • discuss music that relates to social issues and/or values compare aspects of music from different times and places • create and perform a movement sequence accompanied by music that they have created • share and compare their experiences as audience members at various performances • describe the process used to create their own music and compare it with others, in order to improve their compositions • analyse different compositions describing how the musical elements enhance the message • reflect upon how their music expresses their personal voice and the impact it has on others.	own culture, its uses and associations through place and time • interpret and explain the cultural and/or historical perspectives of a musical composition • modify their practices and/or compositions based on the audiences' responses • explore different artistic presentations that are/were innovative and their implications.
Visual arts	**Learning outcomes** Learners: • enjoy experiencing artworks • show curiosity and ask questions about artworks • describe what they notice about an artwork	**Learning outcomes** Learners: • investigate the purposes of artwork from different times, places and a range of cultures including their own • sharpen their powers of observation	**Learning outcomes** Learners: • compare, contrast and categorize artworks from a range of cultures, places and times • identify and consider the contexts in which artworks were made	**Learning outcomes** Learners: • explain the cultural and historical perspectives of an artwork • understand the role and relevance of visual arts in society

	• identify the materials and processes used in the creation of an artwork • analyse the relationships within an artwork and construct meanings • communicate their initial responses to an artwork in visual, oral or physical modes • make personal connections to artworks • express opinions about an artwork • create artwork in response to a variety of stimuli.	• identify the formal elements of an artwork • use appropriate terminology to discuss artwork • describe similarities and differences between artworks • identify the stages of their own and others' creative processes • become an engaged and responsive audience for a variety of art forms.	• use their knowledge and experiences to make informed interpretations of artworks • reflect on their own and others' creative processes to inform their thinking • use relevant and insightful questions to extend their understanding • recognize that different audiences respond in different ways to artworks • provide constructive criticism when responding to artwork.	• reflect on the factors that influence personal reactions to artwork • reflect throughout the creative process to challenge their thinking and enact new and unusual possibilities • critique and make informed judgments about artworks

LEARNING CONTINUUM FOR CREATING

	Phase 1	Phase 2	Phase 3	Phase 4
Conceptual understandings	We can enjoy and learn from creating art. The creative process involves joining in, exploring and taking risks. In creating art, people make choices to construct meaning about the world around them. We can express ourselves through arts. Our experiences and imagination can inspire us to create.	We can communicate our ideas, feelings and experiences through our artwork. We solve problems during the creative process by thinking critically and imaginatively. Applying a range of strategies helps us to express ourselves. We are receptive to the value of working individually and collaboratively to create art.	Arts have the power to influence thinking and behaviour. We make connections between our artwork and that of others to extend our thinking. We can explore our personal interests, beliefs and values through arts.	We act on the responses to our artwork to inform and challenge our artistic development. We explore a range of possibilities and perspectives to communicate in broader ways through our creative work. Arts provide opportunities to explore our creative potential and engage in a personal artistic journey.
Dance	**Learning outcomes** Learners: • respond to word, rhythm and/or music through movements • communicate and express feelings through body movements • explore the dynamic flow of body movements such as fast, slow, big, small, strong, smooth, sharp, tension and relaxation • move freely through the space to show levels of low, medium and high and change of direction	**Learning outcomes** Learners: • create movement to various tempos • interpret and communicate feeling, experience and narrative through dance • design a dance phrase with a beginning, middle and ending • create movement that explores dimensions of direction, level and shape • develop physical balance and coordination	**Learning outcomes** Learners: • explore various sources of musical and natural rhythms such as beat, breath, emotional and environmental rhythms • investigate and perform a cultural or historical dance form with an understanding of the function of the dance form as artistic, ritual or social • perform increasingly more difficult sequences with control • create movement to show contrast in designs such as	**Learning outcomes** Learners: • improvise to create various movements for specific purposes • choreograph movement to music, word and sound • choreograph performance to express and communicate an idea, feeling, experience, relationship or narrative. • create and perform in a variety of dance genres and cultural dance types • show physical confidence in the use of their bodies

	• use stimulus materials to extend the body and enhance body movements such as streamers, scarves, props and costumes • develop physical awareness in using isolated body movements and gross motor skills • explore different types of movements such as travelling, jumping and turning • develop the ability to cooperate and communicate with others in creating dance • work individually or in groups with trust and confidence.	• share dance with different audiences by participating, listening and watching • work cooperatively towards a common goal, taking an active part in a creative experience • consider and maintain appropriate behaviours in dance, as an audience member or as a performer, by listening, watching and showing appreciation.	symmetry/asymmetry and opposition/succession • develop physical flexibility and strength • experience varying groupings when performing dance, including ensemble performance • express their unique values, beliefs and interests through a dance form • interpret and replicate a variety of dance styles and genres.	• work to develop each other's ideas during the creative process • analyse and integrate the reflections of others into the creative process when evaluating and improving.
Drama	**Learning outcomes** Learners: • engage in imaginative play using a range of stimuli • develop the ability to cooperate and communicate with others in creating drama • explore basic bodily movements and the use of space • explore familiar roles, themes and stories dramatically • create roles in response to props, set and costumes	**Learning outcomes** Learners: • share drama with different audiences by participating, listening and watching • identify with characters through role-play development • use performance as a problem-solving tool • work cooperatively towards a common goal, taking an active part in a creative experience • make use of simple performance conventions to share ideas	**Learning outcomes** Learners: • create a devised or scripted performance for a particular audience or purpose • make artistic choices about role, situation and context • identify how cultural connections can be made with different types of drama • identify and develop the personal and related skills encountered through the drama experience • find appropriate ways to communicate specific	**Learning outcomes** Learners: • manipulate a variety of different drama strategies and techniques to create informed scripts, characterizations and contexts • work to develop each other's ideas during the creative process • create and perform a sequential drama that explores a particular issue by experimenting with different dramatic forms • consider the skills and techniques used by a range

	• work individually or in groups with confidence.	• consider and maintain appropriate behaviours in drama, as an audience member or as a performer • value and develop imaginary roles or situations.	meaning using dramatic action • express their unique values, beliefs and interests through a dramatic form • interpret written dialogues or scenarios.	of drama practitioners in the performing arts • show an awareness of audience and adapt performances accordingly • consider the advice and feedback of others as an essential part of the creative process • explore writing for performance.

Music	Learning outcomes	Learning outcomes	Learning outcomes	Learning outcomes
	Learners: • use vocal sounds, rhythms and instruments to express feelings or ideas • create and accompany music using a variety of sounds and instruments • play untuned percussion instruments in time with a beat • use the voice and body to create musical patterns • explore sound as a means of expressing imaginative ideas • recreate sounds from familiar experiences • participate in performing and creating music both individually and collectively • record their personal, visual interpretation of elements of sound (for example, loud/soft, high/low, fast/slow) • create their own basic musical instruments.	Learners: • explore vocal sounds, rhythms, instruments, timbres to communicate ideas and feelings • express one or more moods/feelings in a musical composition • create music to represent different cultures and styles • create a soundscape based on personal experiences • collaboratively create a musical sequence using known musical elements (for example, rhythm, melody, contrast) • read, write and perform simple musical patterns and phrases • create music for different purposes.	Learners: • create a musical composition expressing their own ideas and feelings on a social issue • deliver a musical message to different audiences (for example, peace message to parents, kindergarten children, friends) • create and perform a movement sequence using known musical elements • improvise upon a basic pattern to reinforce the importance of the individual within the group • create and record a composition focusing on form, structure and style to give more meaning to their message • express themselves as individuals through musical composition • read and write music using non-traditional notation.	Learners: • create music that will be continually refined after being shared with others • present, in small groups, innovative musical performances on a selected issue • incorporate the other arts and available resources in order to broaden their creative expression • read and write music in traditional and/or non-traditional notation.
Visual arts	Learning outcomes	Learning outcomes	Learning outcomes	Learning outcomes
	Learners: • engage with, and enjoy a variety of visual arts experiences	Learners: • identify, plan and make specific choices of materials, tools and processes	Learners: • show awareness of the affective power of visual arts • make connections between the ideas they are exploring in their artwork	Learners: • become increasingly independent in the realization of the creative process • adjust and refine their creative process in

	• select tools, materials and processes for specific purposes • combine different formal elements to create a specific effect • realize that their artwork has meaning • use their imagination and experiences to inform their art making • create artwork in response to a range of stimuli • take responsibility for the care of tools and materials • take responsibility for their own and others' safety in the working environment • participate in individual and collaborative creative experiences.	• sharpen their powers of observation • demonstrate control of tools, materials and processes • make predictions, experiment, and anticipate possible outcomes • combine a variety of formal elements to communicate ideas, feelings and/or experiences • identify the stages of their own and others' creative processes • consider their audience when creating artwork.	and those explored by other artists through time, place and cultures • create artwork for a specific audience • use a personal interest, belief or value as the starting point to create a piece of artwork • use a range of strategies to solve problems during the creative process.	response to constructive criticism • identify factors to be considered when displaying an artwork • utilize a broad range of ways to make meaning • select, research and develop an idea or theme for an artwork • develop an awareness of their personal preferences

Appendix 6
IB Overall Expectations in Science

Overall expectations in science: 3–5 years

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

Overall expectations in science: 5–7 years

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

Overall expectations in science: 7–9 years

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

Overall expectations in science: 9–12 years

Students will develop their observational skills by using their senses and selected observational tools. They will gather and record observed information in a number of ways, and they will reflect on these findings to identify patterns or connections, make predictions, and test and refine their ideas with increasing accuracy. Students will explore the way objects and phenomena function, identify parts of a system, and gain an understanding of increasingly complex cause and effect relationships. They will examine change over time, and they will recognize that change may be affected by one or more variables. Students will reflect on the impact that the application of science, including advances in technology, has had on themselves, society and the environment. They will be aware of different perspectives and ways of organizing the world, and they will be able to consider how these views and customs may have been formulated. Students will examine ethical and social issues in science-related contexts and express their responses appropriately. They will use their learning in science to plan thoughtful and realistic action in order to improve their welfare and that of other living things and the environment. Students will communicate their ideas or provide explanations using their own scientific experience and that of others.

IB OVERALL EXPECTATIONS IN SOCIAL STUDIES

OVERALL EXPECTATIONS IN SOCIAL STUDIES: 3–5 YEARS

Students will explore their understanding of people and their lives, focusing on themselves, their friends and families, and their immediate environment. They will practise applying rules and routines to work and play. They will gain an increasing awareness of themselves in relation to the various groups to which they belong and be conscious of systems by which they organize themselves. They will develop their sense of place, and the reasons why particular places are important to people. They will also develop their sense of time, and recognize important events in their own lives, and how time and change affect people. They will explore the role of technology in their lives.

OVERALL EXPECTATIONS IN SOCIAL STUDIES: 5–7 YEARS

Students will increase their understanding of their world, focusing on themselves, their friends and families and their environment. They will appreciate the reasons why people belong to groups, the roles they fulfill and the different ways that people interact within groups. They will recognize connections within and between systems by which people organize themselves. They will broaden their sense of place and the reasons why particular places are important to people, as well as how and why people's activities influence, and are influenced by, the places in their environment. Students will start to develop an understanding of their relationship with the environment. They will gain a greater sense of time, recognizing important events in their own lives, and how time and change affect people. They will become increasingly aware of how advances in technology affect individuals and the environment.

Overall expectations in social studies: 7–9 years

Students will extend their understanding of human society, focusing on themselves and others within their own community as well as other communities that are distant in time and place. They will investigate how and why groups are organized within communities, and the ways in which communities reflect the cultures and customs of their people. They will recognize the interdependency of systems and their function within local and national communities. They will increase their awareness of how people influence, and are influenced by, the places in their environment. Students will explore the relationship between valuing the environment and protecting it. They will extend their understanding of time, recognizing important events in people's lives, and how the past is recorded and remembered in different ways. They will broaden their understanding of the impact of advances in technology over time, on individuals, society and the environment.

Overall expectations in social studies: 9–12 years

Students will recognize different aspects of human society, focusing on themselves and others within their own community as well as groups of people that are distant in time and place. They will extend their understanding of how and why groups are organized within communities, and how participation within groups involves both rights and responsibilities. They will understand the interdependency of systems and their function within local and national communities. Students will gain an appreciation of how cultural groups may vary in their customs and practices but reflect similar purposes. They will deepen their awareness of how people influence, and are influenced by, places in the environment. They will realize the significance of developing a sense of belonging and stewardship towards the environment, valuing and caring for it, in the interests of themselves and future generations. Students will consolidate their understanding of time, recognizing how ideas and actions of people in the past have changed the lives of others, and appreciating how the past is recorded and remembered in different ways. They will gain an understanding of how and why people manage resources. They will understand the impact of technological advances on their own lives, on society and on the world, and will reflect on the need to make responsible decisions concerning the use of technologies

Photo: Edsard Vegter