

## Primary Years Programme



# Handbook

INTERNATIONAL SCHOOL OF ESTONIA

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#### Introduction

Dear Students and Parents,

It is a great pleasure to welcome both new and returning pupils to the International School of Estonia.

I am pleased to present the PYP Handbook, our guide to the Primary Years Programme curriculum framework for children in preschool through grade 5. ISE PYP programme is built on the cornerstones of IB teaching and learning philosophy:

- The IB LEARNER PROFILE is fundamental to all learning and teaching in the PYP.
- CONCEPT BASED INQUIRY is the leading pedagogical approach of the PYP
- AGENCY is the power to take meaningful and intentional action, and acknowledges the rights and responsibilities of the individual, which supports voice, choice, and ownership for everyone in the learning community.

Please be aware that our Programme of Inquiry is a living document and the units currently listed may change as we plan, teach, and assess them collaboratively. Thank you for your understanding.

Have a happy, successful and enjoyable school year!

Terje Äkke PYP Coordinator

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## ISE Vision, Mission and Values

#### **Vision**

A globally minded community of diverse learners, empowered as agents of positive change

#### Mission

- Support a safe, caring, respectful environment that values creativity and inclusivity
- Develop self-aware learners with the tools for fulfilment in their world and beyond
- Empower individuals to set and reach high standards through best educational practice
- Encourage students to think globally and act locally

#### **Values**

- Agency
- Belonging
- Excellence
- Contribution

## ISE definition of high quality teaching and learning

"High quality teaching and learning is learner centred, explores real-world ideas, enables individual fulfilment and builds competences for life."

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#### **IB** Learner Profile



The learner profile attributes provide all members of the learning community with a common language to describe and to reflect on the school culture, communications, feedback, and expectations. They will be infused within the programme of inquiry, as well as throughout life in the school.

ISE, in support of the IB Learner Profile and our IB curriculum, champions the aims and goals of the International Baccalaureate Mission:

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.

#### IB learners strive to be:

Inquirers	We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.
Knowledgeable	We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.
Thinkers	We use critical and creative thinking skills to analyze and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.
Communicators	We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.
Principled	We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.
Open-minded	We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.
Caring	We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.
Risk-takers	We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.
Balanced	We understand the importance of balancing different aspects of our lives - intellectual, physical, and emotional- to achieve well-being for others and ourselves. We recognize our interdependence with other people and with the world in which we live.
Reflective	We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

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## Primary Years Programme at ISE

The IB Primary Years Programme (PYP) is designed for students aged 4 to 12 (grades Preschool - 5). It is a transdisciplinary programme of international education designed to foster the development of the whole child. It focuses on the total growth of the developing child, touching hearts, as well as minds and encompassing social, physical, emotional, and cultural needs in addition to academic development. The PYP curriculum has an international perspective where the diversity of student experiences and backgrounds is welcomed and celebrated. A PYP school strives towards developing an internationally minded person who demonstrates the attributes of the Learner Profile, which represent the qualities of a life-long learner.

Concept based inquiry is the leading pedagogical approach of the enhanced PYP and is the basis for all learning and teaching in the programme. Inquiry is an authentic way for students to explore and understand the world, nurturing their curiosity as they move from current to new and deeper understandings, and embark on a lifelong journey of learning.

#### Early Years (from ages 3-6)

The IB knows that young learners are intelligent, resourceful and creative individuals who grow, develop, and learn at different rates. Early learning in the PYP is a holistic learning experience that integrates socio-emotional, physical, and cognitive development.

The power of play is the primary vehicle for inquiry, supporting thoughtful and intentional opportunities for child-initiated play, hands-on learning, and the co-construction of learning between teachers and young learners. Through play and exploration, and relationships with peers, teachers, family, and community members, students will learn to inquire as they build and test theories to help make sense of the world around them.



The PYP is organized according to:

- The written curriculum, which explains what PYP students will learn
- The taught curriculum, which sets out how educators teach the PYP
- The assessed curriculum, which details the principles and practice of effective assessment in the PYP

#### Inclusion and learning diversity

As part of the PYP curriculum, schools address differentiation within the written, taught, and assessed curriculum. This is demonstrated in the unit planner and in the teaching environment. For further information, the school's SEN Policy is available on the school website.

#### The written curriculum

The IBO provides schools with a written curriculum framework of essential elements — the knowledge, understanding, concepts, skills, and action that young students need to equip them for successful lives, both now and in the future.



#### Concepts

What do we want students to understand?

The concepts are expressed by the key questions used to support and structure the inquiries, providing a context in which students can understand and, at the same time, acquire essential knowledge, skills, and attitudes.

Form - What is it like?

Function- How does it work?

Causation - Why is it like this?

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?

## Approaches to learning (ATL)

What do we want students to be able to do?

The approaches to learning develop cognitive and metacognitive skills, which are transferable to different types of learning and school contexts. When combined with the learner profile, development of the approaches to learning will help students learn how to learn and become self- regulated, active, and agentic learners.

Thinking Skills	Critical-thinking skills (analysing and evaluating issues and ideas)
	Creative-thinking skills (generating novel ideas and considering new perspectives)
	Transfer skills (using skills and knowledge in multiple contexts)
	Reflection/metacognitive skills ((re)considering the process of learning)
Communication Skills	Exchanging-information skills (listening, interpreting, speaking)
	Literacy skills (reading, writing and using language to gather and communicate information)
	ICT skills (using technology to gather, investigate and communicate information)
Research Skills	Information-literacy skills (formulating and planning, data gathering and recording, synthesizing and interpreting, evaluating and communicating)
	Media-literacy skills (interacting with media to use and create ideas and information)
	Ethical use of media/information (understanding and applying social and ethical technology)
Social Skills	Developing positive interpersonal relationships and collaboration skills (using self-control, managing setbacks, supporting peers)  Developing social-emotional intelligence
6.16	
Self-management	Organization skills (managing time and tasks effectively)
Skills	States of mind (mindfulness, perseverance, emotional management, self-motivation, resilience)

## Knowledge

#### What do we want students to know about?

This is the significant, relevant content that we wish the students to explore and know about, taking into consideration their prior experience and understanding.

Knowledge is both transdisciplinary and disciplinary, represented by traditional subject areas.

Six transdisciplinary units of inquiry

Languages
Social Studies
Mathematics
Science and technology
Arts

Personal, social and health education Physical Education

#### Action

How do we want students to act?

The students are encouraged to reflect, make choices and take actions that will help not only individuals, but also a wider community.

Action, agency, the learner profile, and international mindedness will work hand in hand to strengthen students' confidence in their capacity to make a positive change in the world.

Student-initiated action will be considered a dynamic outcome of agency, and an integral part of the learning process that can arise at any time.

## Demonstrations of action can include:

- participation contributing as individual or group
- advocacy action to support social / environmental / political change
- social justice relation to rights, equality and equity, social well-being, and justice
- social entrepreneurship innovative, resourceful and sustainable social change
- lifestyle choices e.g. consumption, impact of choices.

## The transdisciplinary themes

The school creates a vertically and horizontally balanced programme of inquiry with units of inquiry under each theme for each grade level. The early years (preschool and reception) have only four units of inquiry. Each unit of inquiry has a conceptual central idea and lines of inquiry.

Who we are	An inquiry into the nature of 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 and time	An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from both 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 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 relationship within and between them; access to equal opportunities; peace and conflict resolution.

#### The taught curriculum

Taught curriculum is the "written curriculum in action." It involves the methodologies that teachers use to engage students with the written curriculum. It is not only "what" students will learn but also "how" they will learn it that matters in a PYP school. The PYP is committed to structured, purposeful inquiry that engages students actively in their own learning. The programme supports students' efforts to construct meaning from the world around them by drawing on their prior knowledge, providing provocation through new experiences, and providing opportunities for reflection and consolidation.

PYP teachers are expected to constantly examine and improve the practices they use to actively involve students in learning and to make learning self-initiated. Teachers support and guide their students through the process of finding answers. This may involve research, experiments, field trips, or discoveries made through reading and classroom experiences. Teachers know that regardless of skill level or background, students vary in their academic abilities, learning styles, interests, background knowledge and experiences. It is their goal to provide a variety of experiences to meet the needs of all their students.

#### The assessed curriculum

The PYP promotes the use of a range of assessment strategies, which are designed to give a clear picture of a student's progress. We use techniques for assessing children's work that considers the diverse, complicated, and sophisticated ways that individual children use to understand experience. We recognize the importance of assessing the process of learning and inquiry, as well as the final results.

Further info: https://www.ibo.org/programmes/primary-years-programme/

For further questions on the PYP programme at ISE, please contact the PYP Coordinator Terje Äkke at <a href="mailto:terjea@ise.edu.ee">terjea@ise.edu.ee</a>

#### The PYP Exhibition

The Primary Years Programme (PYP) exhibition represents a significant event in the life of a PYP school and student, synthesizing the essential elements of the PYP and sharing them with the whole school community. As a culminating experience, it is an opportunity for students to exhibit the attributes of the International Baccalaureate (IB) learner profile that have been developing throughout their engagement with the PYP. Students engage in a collaborative, transdisciplinary inquiry process that involves them in identifying, investigating, and offering solutions to real-life issues or problems.

As a powerful demonstration of agency, the exhibition reflects students' capacity to take action on an issue they have chosen to explore, as well as acknowledging the community of learners that have nurtured them through their years in the PYP.

The PYP exhibition has a number of key purposes:

- for students to engage in an in-depth, collaborative inquiry
- to provide students with an opportunity to demonstrate independence and responsibility for their own learning
- to provide students with an opportunity to explore multiple perspectives
- for students to synthesize and apply their learning of previous years and to reflect upon their journey through the PYP
- to provide an authentic process for assessing student understanding
- to demonstrate how students can take action as a result of their learning
- to unite the students, teachers, parents and other members of the school community in a collaborative experience that incorporates the essential elements of the PYP
- to celebrate the transition of learners from primary to middle/secondary education.

The students will select a real-life issue or problem, carry out an open-ended inquiry, use a variety of source materials, such as first-hand experiences, interviews, surveys, field visits, artefacts, science investigations, working models, not just book and/or Internet research, reflect on the components of and processes involved in the exhibition; keep a journal or portfolio of their planning, draft pieces of work, sketches and photographs of work in progress as well as the final product, carry out self-assessment and peer assessment, and celebrate their learning by presenting the exhibition to the school community.

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#### **Assessment**

The fundamental purpose of assessment is to understand where the student is at any given time and over time in their learning; and to use this information to promote and support further learning. It involves the gathering and analysis of information about student learning to inform teaching practice and identify what students know, understand and can do at different stages in the learning process.

Four pivotal dimensions of assessment—monitoring, documenting, measuring, and reporting—support knowledge and skills acquisition, the development of deep conceptual understandings, and self-regulated learning.

Immediate, effective feedback enables students to develop their assessment capabilities, self-monitor, and adjust their learning, building self-efficacy, resilience and well-being.

In PYP students reflect on their learning, identify or co-construct learning goals and success criteria, develop metacognitive skills (thinking about thinking), give and receive feedback and consider next steps to consolidate their learning.

Highly effective assessment in the PYP is integrated, authentic, holistic, developmentally appropriate, and responsive to learners.

#### Portfolio:

The students will keep an ongoing digital portfolio on an app called SeeSaw.

#### **Conferences:**

At ISE, we have student-parent-teacher conferences in fall and student-led conferences in spring.

#### **Reports:**

At the end of the second and fourth quarter a written report is sent home through the Managebac system.

For further information: See the PYP Assessment Policy (We will update the policy this year)

#### Homework

In ISE's Lower School, there are specific time guidelines in the student handbook for homework. Parents need to understand that the philosophy of homework in ISE's Lower School is different from the traditional idea of homework. Educational research shows no benefit to time-wasting, rote, or repetitive tasks. The children are in school for an extended day and they are tired at the end of it. We want children to understand that they are always learners, both in school and after school. Instead of "homework," activities for children in the evening should be considered "continued learning."

Children will be encouraged to read, write, perform arithmetic, better understand the world around them in terms of civics, science, and the arts, and, of course, develop their people skills -- their emotional intelligence. In the ISE's Lower School, children are asked to simply continue their learning at home and formal homework assignments will be rarely given.

## **Academics**

**Programme of inquiry** Please be aware that our Programme of Inquiry is a living document and the units currently listed may change as we plan, teach, and assess them collaboratively. Thank you for your understanding.

## **Pre-school**

Trans-disciplinary	Central ideas and lines of inquiry
	Central ideas and times of inquiry
<u>themes</u>	
	CI: We discover and learn about our world and ourselves through our
Who we are	senses.
Willo We are	
	Lines of Inquiry:
	The senses we use (Form),
	<ul> <li>How we use our senses to explore and learn(function),</li> </ul>
	How our senses are connected to our feelings (connection)
Where we are in place	-
•	
and time	
	CI: Creative play leads to discovery and self-expression.
How we express	Lines of Inquiry:
ourselves	How we use imagination to communicate through play
04.1001.00	Ways imagination helps to create perspectives
	<ul> <li>Imaginative use of everyday materials</li> </ul>
	CI: Materials and tools have different properties that determine how
	they are used and what they are used for.
	they are used and what they are used for.
How the world works	Lines of Inquiry:
now the world works	How we explore materials and tools
	Behaviour of materials and tools
	Uses of materials and tools
	• Oses of materials and tools
How we organize	
ourselves	
	CI: Living things have certain needs in order to grow and stay healthy.
	Ci. Living timigs have certain needs in order to grow and stay healthy.
	Lines of Inquiry:
Sharing the planet	characteristics of living things
	the needs of plants and animals     how we care for plants and animals
	how we care for plants and animals

Reception

Reception	
<u>Trans-disciplinary</u> <u>themes</u>	Central ideas and lines of inquiry
Who we are	CI: The choices people make effect their health and well-being.  Lines of inquiry:  Healthy choices and relationships How to care for our bodies Balancing our day Safety
Where we are in place and time	CI: Journeys can take people near and far.  Lines of inquiry:  sense of Location and direction why people make journeys decisions when planning a journey
How we express ourselves	<ul> <li>CI: Images communicate ideas and information.</li> <li>Lines of Inquiry: <ul> <li>how images, text, and sound are used to express ideas and feelings</li> <li>how we interpret and respond to images</li> </ul> </li> </ul>
How the world works	
How we organize ourselves	CI: Most foods need to go through various stages before they reach our mouths.  Lines of Inquiry:  • where food comes from  • stages food goes through before distributed and eaten  • how people select the food they eat
Sharing the planet	

Trans disabilities	
<u>Trans-disciplinary</u> <u>themes</u>	Central ideas and lines of inquiry
Who we are	CI: People create environments where they feel a sense of belonging.  Lines of Inquiry:  what is a community  sense of belonging  our responsibility to our community
Where we are in place and time	CI: An understanding of our host country develops our respect for its culture and brings us together.  Lines of Inquiry:  the geography and nature of our local environment the culture and identity of Estonia how has Estonia changed and continues to change
How we express ourselves	CI: Stories can be told in many ways, inform us and influence the way we feel and think.  Lines of Inquiry:
How the world works	CI: People use their understanding of forces and movement to carry out every day actions.  Lines of Inquiry:  • the factors that influence the way things move and change shape  • how people use the knowledge of forces to create machines  • how to use forces appropriately
How we organize ourselves	CI: In a community, people share responsibility towards a common purpose.  Lines of Inquiry:  Purpose of a community Interconnectedness of people in a community Importance of a shared vision or common purpose
Sharing the planet	CI: The places in which living things are found provides them with what they need to survive.  Lines of Inquiry:

Grade Z	
<u>Trans-disciplinary themes</u>	Central ideas and lines of inquiry
Who we are	CI: Understanding different ways of learning enables people to respond to their own learning needs, as well as those of others.  Lines of Inquiry:
Where we are in place and time	<ul> <li>CI: Family stories provide an insight into cultural and personal identity.</li> <li>Lines of inquiry:         <ul> <li>Ways to find out and record about the past</li> <li>How learning about the past generations helps to understand the relationship between the past and the present</li> <li>Similarities and differences between generations within a family</li> </ul> </li> </ul>
How we express ourselves	CI: We express our creativity and imagination through the arts.  Lines of Inquiry:  exploring art forms and associated materials  how we use materials and objects to express ourselves  how we express our imagination and creativity
How the world works	CI: The more people understand the continual change of Earth the better they can cope with the changes that are occurring.  Lines of Inquiry:  • planet Earth  • how the Earth has changed and is continuing to change  • why the Earth changes  • human response to the Earth's changes
How we organize ourselves	CI: Innovation is a response to the challenges of a changing world.  Lines of Inquiry:  an innovator's mindset  design cycle the impact of innovations on daily life and communities. how innovation supports/impacts sustainability

	CI: Over time, living things need to adapt in order to survive.
Sharing the planet	Lines of Inquiry:

Trans-disciplinary	Central ideas and lines of inquiry
themes	
Who we are	CI: Our human body is made up of interconnected systems which require maintenance.  Lines of Inquiry:  The way our body systems interact  Maintaining healthy body systems  Factors that contribute to wellbeing
Where we are in place and time	CI: Throughout history, individuals have taken action that has changed people's lives.  Lines of Inquiry:  What makes people influential What leads them to take action How people have changed lives
How we express ourselves	CI: Feelings and emotions can be expressed in words, actions, and facial/body movements.  Lines of Inquiry:  How feelings and emotions can be expressed  Verbal and nonverbal forms of expression found in the arts  Our preferred methods of expression
How the world works	CI: Forces in the universe manipulate Earth's systems.  Lines of Inquiry  How are forces of the universe connected to Earth's systems  Ways humans use their understanding of scientific principles of the solar system  Differences in planets
How we organize ourselves	CI: Human-made systems and communities of ancient civilizations continue to influence our everyday lives.  Lines of Inquiry:  How various civilizations were organized  The positive and negative influences  The impact of civilizations on today's society

	CI: People can make choices to support sustainability of the Earth's resources
Sharing the planet	<ul> <li>Lines of Inquiry:</li> <li>Earth's finite and infinite resources</li> <li>The impact of people's choices on the environment</li> <li>Sustainable practices</li> </ul>

Grade 4	
<u>Trans-disciplinary themes</u>	Central ideas and lines of inquiry
	CI: People construct mental models of who they are as a unique self.
Who we are	Lines of Inquiry:
	the complexity of identity
	ways identities may change over time
	<ul> <li>the ways beliefs, values, and identity guide behaviour and</li> </ul>
	choices
	<ul> <li>how different perspectives lead to different understanding</li> </ul>
Where we are in place	CI: Communities change throughout time by local and global influence.
and time	Lines of Inquiry
and time	The importance of location of human settlement and cities
	Circumstances that determine the development of the cities
	<ul> <li>How the design of spaces reflects history, culture and society</li> </ul>
	CI: Lens and screen based art allows to tell stories and convey meaning
How we express	Lines of Inquiry:
ourselves	ways to become active and ethical media creators and user
our serves	how to creatively tell stories and communicate with digital
	images, sounds and texts
	how to coordinate and mix variety of forms and content
	individual empathetic and aesthetic awareness
	CI: Understanding properties and changes of matter allows people to
	handle and store it.
How the world works	
	Lines of Inquiry:
	what everything is made of
	why and how matter changes
	how do we handle and store the materials
	CI: Sustainable consumption and production promotes balance
	between providing quality of life for all and minimizing negative
How we organize	environmental impact.
ourselves	Lines of Inquiry:
our serves	consumption and production
	personal economic behaviours
	how global movement and communication affect the
	availability of goods and services
	, -

	CI: Children's rights create access to equal opportunities
Sharing the planet	Lines of Inquiry:

Trans-disciplinary	Central ideas and lines of inquiry
themes	
Who we are	CI: Changes people experience at different stages of their lives affect their evolving sense of self.  Lines of Inquiry:  • the physical, social, & emotional changes that occur throughout adolescence,  • factors that contribute to well-being during adolescence  • strategies to enhance personal well-being during adolescence
Where we are in place and time	<ul> <li>CI: Exploration is a response to human circumstances and challenges.</li> <li>Lines of Inquiry:         <ul> <li>human exploration over time</li> <li>circumstances that lead to exploration</li> <li>our perspectives and responsibilities towards immigrants and consequences of exploration</li> </ul> </li> </ul>
How we express ourselves	Exhibition Student choice: Transdisciplinary Theme, Central Idea, and Inquiry into
How the world works	CI: Energy may be converted, transformed, and used to support human progress.  Lines of Inquiry:

How we organize ourselves	CI: Governing organizations and community members collaborate to implement solutions for human rights and social justice.  Lines of Inquiry:  • the structure and function of governing organisations principles of human rights & social justice  • the rights and responsibilities of different community members.
Sharing the planet	CI: Reaching a resolution for a conflict is influenced by many factors.  Lines of Inquiry:  types of conflict (local and global)  human rights and equity  strategies used to resolve conflict  consequences of resolutions

#### Subject overviews

The importance of the traditional subject areas is acknowledged: language; mathematics; social studies; science; personal, social and physical education; and the arts are specified as components of the PYP curriculum model.

IBO has provided the school with scope and sequence documents with overall expectations for each subject. The overall expectations are represented in phases, reflecting the stages a learner goes through when developing conceptual understanding rather than grade level expectations.

ISE used these documents to create the school's scope and sequence documents. IBO believes in the transdisciplinary nature of learning, therefore, as much as possible the single subjects are embedded into the units of inquiry.

The science and social studies are fully incorporated in the Programme of Inquiry. The relationship between the other subject areas and the units of inquiry will change from one unit to another.

#### **Language Arts**

The development of language is fundamental to that need to communicate; it supports and enhances our thinking and understanding. Language permeates the world in which we live; it is socially constructed and dependent on the number and nature of our social interactions and relationships.

The learning process simultaneously involves learning language—as learners listen to and use language with others in their everyday lives; learning about language—as

learners grow in their understanding of how language works; and learning through language—as learners use language as a tool to listen, think, discuss and reflect on information, ideas and issues.

Language in PYP is developed through 4 strands: oral language (listening and speaking), visual language (viewing and presenting), written language (reading), and written language (writing). Oral language encompasses all aspects of listening and speaking—skills that are essential for ongoing language development, for learning and for relating to others. Viewing and presenting allow students to understand the ways in which images and language interact to convey ideas, values, and beliefs. Reading is a developmental process that involves constructing meaning from text. Reading helps students to clarify their ideas, feelings, thoughts and opinions. And writing is a way of expressing themselves. It is a personal act that grows and develops with the individual.

#### **Overall expectations**

# Oral Language - listening and speaking

#### Phase 1

Learners show an understanding of the value of speaking and listening to communicate. They recognize that sounds are associated with objects, or with symbolic representations of them. They are using language to name their environment, to get to know each other, to initiate and explore relationships, to question and inquire.

#### Phase 2

Learners show an understanding that sounds are associated with objects, events and ideas, or with symbolic representations of them. They are aware that an object or symbol may have different sounds or words associated with it in different languages. They are beginning to be cognizant about the high degree of variability of language and its uses.

#### Phase 3

Learners show an understanding of the wide range of purposes of spoken language: that it instructs, informs, entertains, reassures; that each listener's perception of what they hear is unique. They are compiling rules about the use of different aspects of language.

#### Phase 4

Learners show an understanding of the conventions associated with

speaking and listening and the value of adhering to those conventions. They are aware that language is a vehicle for becoming knowledgeable; for negotiating understanding; and for negotiating the social dimension.

#### Phase 5

Learners are able to understand the difference between literal and figurative language; how to use language differently for different purposes. They are aware that they are building on their previous experiences and using language to construct new meaning.

# Visual language—view ing and presenting

#### Overall expectations

#### Phase 1

Learners show an understanding that the world around them is full of visual language that conveys meaning. They are able to interpret and respond to visual texts. Although much of their own visual language is spontaneous, they are extending and using visual language in more purposeful ways.

#### Phase 2

Learners identify, interpret and respond to a range of visual text prompts and show an understanding that different types of visual texts serve different purposes. They use this knowledge to create their own visual texts for particular purposes.

#### Phase 3

Learners show an understanding that visual text may represent reality or fantasy. They recognize that visual text resources can provide factual information and increase understanding. They use visual text in a reflective way to enrich their storytelling or presentations, and to organize and represent information.

#### Phase 4

Learners show an open-mindedness about the use of a range of visual text resources to access information. They think critically, and are articulate about the use of visual text to influence the

viewer. They are able to use visual imagery to present factual information, or to tell a story.

#### Phase 5

Through inquiry, learners engage with an increasing range of visual text resources. As well as exploring the viewing and presenting strategies that are a part of the planned learning environment, they select and use strategies that suit their learning styles. They are able to make connections between visual imagery and social commentary. They show more discernment in selecting information they consider reliable. They are able to use visual imagery to support a position.

# Written language-read ing

#### Overall expectations

#### Phase 1

Learners show an understanding that print represents the real or the imagined world. They know that reading gives them knowledge and pleasure; that it can be a social activity or an individual activity. They have a concept of a "book", and an awareness of some of its structural elements. They use visual cues to recall sounds and the words they are "reading" to construct meaning.

#### Phase 2

Learners show an understanding that language can be represented visually through codes and symbols. They are extending their data bank of printed codes and symbols and are able to recognize them in new contexts. They understand that reading is a vehicle for learning, and that the combination of codes conveys meaning.

#### Phase 3

Learners show an understanding that text is used to convey meaning in different ways and for different purposes—they are developing an awareness of context. They use strategies, based on what they know, to read for understanding. They recognize that the structure and organization of text conveys meaning.

#### Phase 4

Learners show an understanding of the relationship between reading, thinking and reflection. They know that reading is extending their

world, both real and imagined, and that there is a reciprocal relationship between the two. Most importantly, they have established reading routines and relish the process of reading.

#### Phase 5

Learners show an understanding of the strategies authors use to engage them. They have their favourite authors and can articulate reasons for their choices. Reading provides a sense of accomplishment, not only in the process, but in the access it provides them to further knowledge about, and understanding of, the world.

#### Written language writing

#### Overall expectations

#### Phase 1

Learners show an understanding that writing is a form of expression to be enjoyed. They know that how you write and what you write conveys meaning; that writing is a purposeful act, with both individual and collaborative aspects.

#### Phase 2

Learners show an understanding that writing is a means of recording, remembering and communicating. They know that writing involves the use of codes and symbols to convey meaning to others; that writing and reading uses the same codes and symbols. They know that writing can describe the factual or the imagined world.

#### Phase 3

Learners show an understanding that writing can be structured in different ways to express different purposes. They use imagery in their stories to enhance the meaning and to make it more enjoyable to write and read. They understand that writing can produce a variety of responses from readers. They can tell a story and create characters in their writing.

#### Phase 4

Learners show an understanding of the role of the author and are able to take on the responsibilities of authorship. They demonstrate an understanding of story structure and are able to make critical judgments about their writing, and the writing of others. They are

able to rewrite to improve the quality of their writing.

#### Phase 5

Learners show an understanding of the conventions pertaining to writing, in its different forms, that are widely accepted. In addition, they demonstrate a high level of integration of the strands of language in order to create meaning in a manner that suits their learning styles. They can analyse the writing of others and identify common or recurring themes or issues. They accept feedback from others.

#### **Mathematics**

The power of mathematics for describing and analysing the world around us is such that it has become a highly effective tool for solving problems. Students can appreciate the intrinsic fascination of mathematics and explore the world through its unique perceptions. The programme provides students with the opportunity to see themselves as "mathematicians", where they enjoy and are enthusiastic when exploring and learning about mathematics.

In the IB Primary Years Programme (PYP), mathematics is also viewed as a vehicle to support inquiry, providing a global language through which we make sense of the world around us. It is intended that students become competent users of the language of mathematics, and can begin to use it as a way of thinking, as opposed to seeing it as a series of facts and equations to be memorized.

It is important that learners acquire mathematical understanding by constructing their own meaning through ever-increasing levels of abstraction, starting with exploring their own personal experiences, understandings and knowledge. Additionally, it is fundamental to the philosophy of the PYP that, since it is to be used in real-life situations, mathematics needs to be taught in relevant, realistic contexts, rather than by attempting to impart a fixed body of knowledge directly to students.

Mathematics in the PYP looks at 5 strands - data handling; measurement; shape and space; pattern and function; and number.

Data handling allows us to make a summary of what we know about the world and to make inferences about what we do not know. To measure is to attach a number to a quantity using a chosen unit. Since the attributes being measured are continuous, ways must be found to deal with quantities that fall between numbers. It is important to know how accurate a measurement needs to be or can ever be. The regions, paths

and boundaries of natural space can be described by shape. An understanding of the interrelationships of shape allows us to interpret, understand and appreciate our two-dimensional (2D) and three-dimensional (3D) world. To identify pattern is to begin to understand how mathematics applies to the world in which we live. The repetitive features of patterns can be identified and described as generalized rules called "functions". This builds a foundation for the later study of algebra. Our number system is a language for describing quantities and the relationships between quantities. For example, the value attributed to a digit depends on its place within a base system. Numbers are used to interpret information, make decisions and solve problems. For example, the operations of addition, subtraction, multiplication and division are related to one another and are used to process information in order to solve problems. The degree of precision needed in calculating depends on how the result will be used.

#### Data handling

#### Overall expectations

#### Phase 1

Learners will develop an understanding of how the collection and organization of information helps to make sense of the world. They will sort, describe and label objects by attributes and represent information in graphs including pictographs and tally marks. The learners will discuss chance in daily events.

#### Phase 2

Learners will understand how information can be expressed as organized and structured data and that this can occur in a range of ways. They will collect and represent data in different types of graphs, interpreting the resulting information for the purpose of answering questions. The learners will develop an understanding that some events in daily life are more likely to happen than others and they will identify and describe likelihood using appropriate vocabulary.

#### Phase 3

Learners will continue to collect, organize, display and analyse data, developing an understanding of how different graphs highlight different aspects of data more efficiently. They will understand that scale can represent different quantities in graphs and that mode can be used to summarize a set of data. The learners will make the connection that probability is based on experimental events and can

be expressed numerically.

#### Phase 4

Learners will collect, organize and display data for the purposes of valid interpretation and communication. They will be able to use the mode, median, mean and range to summarize a set of data. They will create and manipulate an electronic database for their own purposes, including setting up spreadsheets and using simple formulas to create graphs. Learners will understand that probability can be expressed on a scale (0-1 or 0%-100%) and that the probability of an event can be predicted theoretically.

#### Measurement

#### Overall expectations

#### Phase 1

Learners will develop an understanding of how measurement involves the comparison of objects and the ordering and sequencing of events. They will be able to identify, compare and describe attributes of real objects as well as describe and sequence familiar events in their daily routine.

#### Phase 2

Learners will understand that standard units allow us to have a common language to measure and describe objects and events, and that while estimation is a strategy that can be applied for approximate measurements, particular tools allow us to measure and describe attributes of objects and events with more accuracy. Learners will develop these understandings in relation to measurement involving length, mass, capacity, money, temperature and time.

#### Phase 3

Learners will continue to use standard units to measure objects, in particular developing their understanding of measuring perimeter, area and volume. They will select and use appropriate tools and units of measurement, and will be able to describe measures that fall between two numbers on a scale. The learners will be given the

opportunity to construct meaning about the concept of an angle as a measure of rotation.

#### Phase 4

Learners will understand that a range of procedures exists to measure different attributes of objects and events, for example, the use of formulas for finding area, perimeter and volume. They will be able to decide on the level of accuracy required for measuring and using decimal and fraction notation when precise measurements are necessary. To demonstrate their understanding of angles as a measure of rotation, the learners will be able to measure and construct angles.

## Shape and space

#### Overall expectations

#### Phase 1

Learners will understand that shapes have characteristics that can be described and compared. They will understand and use common language to describe paths, regions and boundaries of their immediate environment.

#### Phase 2

Learners will continue to work with 2D and 3D shapes, developing the understanding that shapes are classified and named according to their properties. They will understand that examples of symmetry and transformations can be found in their immediate environment. Learners will interpret, create and use simple directions and specific vocabulary to describe paths, regions, positions and boundaries of their immediate environment.

#### Phase 3

Learners will sort, describe and model regular and irregular polygons, developing an understanding of their properties. They will be able to describe and model congruency and similarity in 2D shapes. Learners will continue to develop their understanding of symmetry, in particular reflective and rotational symmetry. They will understand how geometric shapes and associated vocabulary are useful for representing and describing objects and events in

real-world situations.

#### Phase 4

Learners will understand the properties of regular and irregular polyhedra. They will understand the properties of 2D shapes and understand that 2D representations of 3D objects can be used to visualize and solve problems in the real world, for example, through the use of drawing and modelling. Learners will develop their understanding of the use of scale (ratio) to enlarge and reduce shapes. They will apply the language and notation of bearing to describe direction and position.

## Pattern and function

#### Overall expectations

#### Phase 1

Learners will understand that patterns and sequences occur in everyday situations. They will be able to identify, describe, extend and create patterns in various ways.

#### Phase 2

Learners will understand that whole numbers exhibit patterns and relationships that can be observed and described, and that the patterns can be represented using numbers and other symbols. As a result, learners will understand the inverse relationship between addition and subtraction, and the associative and commutative properties of addition. They will be able to use their understanding of pattern to represent and make sense of real-life situations and, where appropriate, to solve problems involving addition and subtraction.

#### Phase 3

Learners will analyse patterns and identify rules for patterns, developing the understanding that functions describe the relationship or rules that uniquely associate members of one set with members of another set. They will understand the inverse relationship between multiplication and division, and the

associative and commutative properties of multiplication. They will be able to use their understanding of pattern and function to represent and make sense of real-life situations and, where appropriate, to solve problems involving the four operations.

#### Phase 4

Learners will understand that patterns can be represented, analysed and generalized using algebraic expressions, equations or functions. They will use words, tables, graphs and, where possible, symbolic rules to analyse and represent patterns. They will develop an understanding of exponential notation as a way to express repeated products, and of the inverse relationship that exists between exponents and roots. The students will continue to use their understanding of pattern and function to represent and make sense of real-life situations and to solve problems involving the four operations.

#### Number

#### **Overall expectations**

#### Phase 1

Learners will understand that numbers are used for many different purposes in the real world. They will develop an understanding of one-to-one correspondence and conservation of number, and be able to count and use number words and numerals to represent quantities.

#### Phase 2

Learners will develop their understanding of the base 10 place value system and will model, read, write, estimate, compare and order numbers to hundreds or beyond. They will have automatic recall of addition and subtraction facts and be able to model addition and subtraction of whole numbers using the appropriate mathematical language to describe their mental and written strategies. Learners will have an understanding of fractions as representations of whole-part relationships and will be able to model fractions and use fraction names in real-life situations.

#### Phase 3

Learners will develop the understanding that fractions and decimals are ways of representing whole-part relationships and will

demonstrate this understanding by modelling equivalent fractions and decimal fractions to hundredths or beyond. They will be able to model, read, write, compare and order fractions, and use them in real-life situations. Learners will have automatic recall of addition, subtraction, multiplication and division facts. They will select, use and describe a range of strategies to solve problems involving addition, subtraction, multiplication and division, using estimation strategies to check the reasonableness of their answers.

#### Phase 4

Learners will understand that the base 10 place value system extends infinitely in two directions and will be able to model, compare, read, write and order numbers to millions or beyond, as well as model integers. They will develop an understanding of ratios. They will understand that fractions, decimals and percentages are ways of representing whole-part relationships and will work towards modelling, comparing, reading, writing, ordering and converting fractions, decimals and percentages. They will use mental and written strategies to solve problems involving whole numbers, fractions and decimals in real-life situations, using a range of strategies to evaluate reasonableness of answers.

#### Arts

Arts are integral to the IB Primary Years Programme (PYP). They are a powerful mode of communication through which students explore and construct a sense of self and develop an understanding of the world around them. Arts provide students with a wide range of opportunities and means to respond to their experiences and engage with historical, social and cultural perspectives. The students are stimulated to think and to articulate their thoughts in new ways, and through a variety of media and technologies. ISE currently offers Music and Visual Arts courses. Drama and Dance are part of Programme of Inquiry.

Two common strands have been identified that apply across the different art forms and define the critical artistic processes.

Responding	The process of <i>responding</i> provides students with opportunities to	
	respond to their own and other artists' works and processes, and in so	

doing develop the skills of critical analysis, interpretation, evaluation, reflection and communication. Students will demonstrate knowledge and understanding of the concepts, methods and elements of dance, drama, music and visual arts, including using specialized language. Students consider their own and other artists' works in context and from different perspectives in order to construct meaning and inform their own future works and processes.

The *responding* strand is not simply about reflecting; responding may include creative acts and encompasses presenting, sharing and communicating one's own understanding. By responding to their own artwork and that of others, students become more mindful of their own artistic development and the role that arts play in the world around them.

#### Creating

The process of *creating* provides students with opportunities to communicate distinctive forms of meaning, develop their technical skills, take creative risks, solve problems and visualize consequences. Students are encouraged to draw on their imagination, experiences and knowledge of materials and processes as starting points for creative exploration. They can make connections between their work and that of other artists to inform their thinking and to provide inspiration. Both independently and collaboratively, students participate in creative processes through which they can communicate ideas and express feelings. The *creating* strand provides opportunities for students to explore their personal interests, beliefs and values and to engage in a personal artistic journey.

Responding	Overall expectations	
	Phase 1	
	Learners show an understanding that the different forms of arts are forms of expression to be enjoyed. They know that dance, drama, music and visual arts use symbols and representations to convey meaning. They have a concept of being an audience of different art forms and display awareness of sharing art with others. They are able to interpret and respond to different art forms, including their	

own work and that of others.

#### Phase 2

Learners show an understanding that ideas, feelings and experiences can be communicated through arts. They recognize that their own art practices and artwork may be different from others. They are beginning to reflect on and learn from their own stages of creating arts. They are aware that artworks may be created with a specific audience in mind.

#### Phase 3

Learners show an understanding that issues, beliefs and values can be explored in arts. They demonstrate an understanding that there are similarities and differences between different cultures, places and times. They analyse their own work and identify areas to revise to improve its quality. They use strategies, based on what they know, to interpret arts and understand the role of arts in our world.

#### Phase 4

Learners show an understanding that throughout different cultures, places and times, people have innovated and created new modes in arts. They can analyse different art forms and identify common or recurring themes or issues. They recognize that there are many ways to enjoy and interpret arts. They accept feedback from others.

#### Creating

#### Phase 1

Learners show an understanding that they can express themselves by creating artworks in dance, drama, music and visual arts. They know that creating in arts can be done on their own or with others. They are aware that inspiration to create in arts comes from their own experiences and imagination. They recognize that they use symbols and representations to convey meaning in their work.

#### Phase 2

Learners show an understanding that they can use arts to communicate their ideas, feelings and experiences. They use strategies in their work to enhance the meaning conveyed and to make it more enjoyable for others. They are aware that their work can provoke different responses from others. They understand the value of working individually and collaboratively when creating different art forms.

#### Phase 3

Learners show that, as artists, they can influence thinking and behaviour through the arts they create. They think critically about their work and recognize that their personal interests, beliefs and values can inform their creative work. They show an understanding of the relationships between their work and that of others.

#### Phase 4

Learners show an understanding that their own creative work in dance, drama, music and visual arts can be interpreted and appreciated in different ways. They explore different media and begin to innovate in arts. They consider the feedback from others in improving their work. They recognize that creating in arts provides a sense of accomplishment, not only in the process, but also in providing them with a way to understand the world.

#### Personal, Social and Physical Education

PSPE in the IB Primary Years Programme (PYP) is concerned with the individual's well-being through the promotion and development of concepts, knowledge, attitudes and skills that contribute to this wellbeing.

Well-being is intrinsically linked to all aspects of a student's experience at school and beyond. It encompasses physical, emotional, cognitive, spiritual and social health and development, and contributes to an understanding of self, to developing and

maintaining relationships with others, and to participation in an active, healthy lifestyle. (Personal, social and physical education scope and sequence 2009)

#### PSPE consists of three strands:

Identity	An understanding of our own beliefs, values, attitudes, experiences and feelings and how they shape us; the impact of cultural influences; the recognition of strengths, limitations and challenges as well as the ability to cope successfully with situations of change and adversity; how the learner's concept of self and feelings of self-worth affect his or her approach to learning and how he or she interacts with others.
Active Living	An understanding of the factors that contribute to developing and maintaining a balanced, healthy lifestyle; the importance of regular physical activity; the body's response to exercise; the importance of developing basic motor skills; understanding and developing the body's potential for movement and expression; the importance of nutrition; understanding the causes and possible prevention of ill health; the promotion of safety; rights and the responsibilities we have to ourselves and others to promote well-being; making informed choices and evaluating consequences, and taking action for healthy living now and in the future.
Interactions	An understanding of how an individual interacts with other people, other living things and the wider world; behaviours, rights and responsibilities of individuals in their relationships with others, communities, society and the world around them; the awareness and understanding of similarities and differences; an appreciation of the environment and an understanding of, and commitment to, humankind's responsibility as custodians of the Earth for future generations.

Identity	Overall expectations
	Phase 1
	Learners have an awareness of themselves and how they are similar and different to others. They can describe how they have grown and

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

#### Phase 2

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

#### Phase 3

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

#### Phase 4

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

#### Active living

#### **Overall expectations**

#### Phase 1

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

#### Phase 2

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

#### Phase 3

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

#### Phase 4

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

	in a range of physical contexts.
Interactions	Overall expectations
	Phase 1
	Learners interact, play and engage with others, sharing ideas, cooperating and communicating feelings in developmentally appropriate ways. They are aware that their behaviour affects others and identify when their actions have had an impact. Learners interact with, and demonstrate care for, local environments.
	Phase 2
	Learners recognize the value of interacting, playing and learning with others. They understand that participation in a group can require them to assume different roles and responsibilities and they show a willingness to cooperate. They nurture relationships with others, sharing ideas, celebrating successes and offering and seeking support as needed. Learners understand that responsible citizenship involves conservation and preservation of the environment.
	Phase 3
	Learners understand that group work can be enhanced through the development of a plan of action and through identifying and utilizing the strengths of individual group members. Learners reflect on the perspectives and ideas of others. They understand that healthy relationships are supported by the development and demonstration of constructive attitudes towards other people and the environment.
	Phase 4
	Learners understand that they can experience intrinsic satisfaction and personal growth from interactions with others in formal and informal contexts. They understand the need for developing and nurturing relationships with others and are able to apply strategies independently to resolve conflict as it arises. They recognize that people have an interdependent relationship with the environment and other living things and take action to restore and repair when harm has been done.

For further information about the ISE scope and sequence documents and units of inquiry, please contact the PYP Principal- Coordinator Ms. Terje Äkke at <a href="mailto:terjea@ise.edu.ee.">terjea@ise.edu.ee.</a>

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