



# PRIMARY SCHOOL

## IB STANDARDS

Golestan is an International Baccalaureate (IB) candidate school. The following pages outline the IB's Primary Years Programme (PYP) Standards that Golestan is following for Kindergarten class.

The Primary Years Programme (PYP) is a transdisciplinary programme. There are six defined subject areas that have value in themselves and provide students with knowledge and skills to explore the six transdisciplinary themes:

1. Mathematics,
2. Language(s),
3. Social studies,
4. Science,
5. Physical education, and
6. Arts

Students get aware of the links across the curriculum in order to understand the interconnected nature of the subject areas, both with one another and with the transdisciplinary themes.

## **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.

## **Visual language—viewing and presenting**

### **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.

**Written language—reading****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.

**Written language—writing****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.

# Mathematics in the Primary Years Programme

## **Data handling**

### **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.

## **Measurement**

### **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.

## **Shape and space**

### **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.

## **Pattern and function**

### **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.

## **Number**

### **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.

# Science in the Primary Years Programme

## Science strands

### What do we want students to know?

<b>Living things</b>	<p>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.</p> <p><b>Related concepts:</b> adaptation, animals, biodiversity, biology, classification, conservation, ecosystems, evolution, genetics, growth, habitat, homeostasis, organism, plants, systems (digestive, nervous, reproductive, respiratory).</p>
<b>Earth and space</b>	<p>The study of planet Earth and its position in the universe, particularly its relationship with the sun; the natural phenomena and systems that shape the planet and the distinctive features that identify it; the infinite and finite resources of the planet.</p> <p><b>Related concepts:</b> atmosphere, climate, erosion, evidence, geography, geology, gravity, renewable and non-renewable energy sources, resources, seasons, space, sustainability, systems (solar, water cycle, weather), tectonic plate movement, theory of origin.</p>
<b>Materials and matter</b>	<p>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.</p> <p><b>Related concepts:</b> changes of state, chemical and physical changes, conduction and convection, density, gases, liquids, properties and uses of materials, solids, structures, sustainability.</p>
<b>Forces and energy</b>	<p>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.</p> <p><b>Related concepts:</b> conservation of energy, efficiency, equilibrium, forms of energy (electricity, heat, kinetic, light, potential, sound), magnetism, mechanics, physics, pollution, power, technological advances, transformation of energy.</p>

## Overall expectations in science

The Science scope and sequence (2008) identifies the overall expectations considered appropriate in the PYP. It does this by looking at the central ideas included in the sample programme of inquiry published in *Developing a transdisciplinary programme of inquiry* (2008) and by identifying the essential understandings and processes being developed within each age range.

These expectations (outlined here) are not a requirement of the programme. However, schools need to be mindful of practice C1.23 in the *IB Programme standards and practices* (2005) that states “If the school adapts, or develops, its own scope and sequence documents for each PYP subject area, the level of overall expectation regarding student achievement expressed in these documents at least matches that expressed in the PYP scope and sequence documents.” To arrive at such a judgment, and given that the overall expectations in the *Science scope and sequence* (2008) are presented as broad generalities, it is recommended that schools undertake a careful consideration of their own scope and sequence document in order to identify the overall expectations in science for their students.

### 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.

# Social studies in the Primary Years Programme

How are social studies practices changing?	
Increased emphasis on:	Decreased emphasis on:
factual information as a vehicle to conceptual development within units of inquiry that focus on students constructing meaning, and expanding and deepening their knowledge and understanding of the world	factual information (such as dates and names of people or countries) as an end in itself
empowering students to be responsible and to take action in our world today.	teaching about responsibility and the need for action in our world today.

## Knowledge and skills in social studies

In the PYP, social studies is essentially about people: how they think, feel and act; how they interact with others; their beliefs, aspirations and pleasures; the problems they have to face; how and where they live (or lived); how they interact with their environment; the work they do; and how they organize themselves.

All curriculum areas provide an opportunity to utilize the transdisciplinary skills identified in figure 8 in the “Skills: what do we want students to be able to do?” section. The social studies component of the curriculum also provides opportunities for students to:

- formulate and ask questions about the past, the future, places and society
- use and analyse evidence from a variety of historical, geographical and societal sources
- orientate in relation to place and time
- identify roles, rights and responsibilities in society
- assess the accuracy, validity and possible bias of sources.

The PYP *Social studies scope and sequence* (2008) aims to provide information for the whole school community about the learning that is going on in social studies through the transdisciplinary programme of inquiry. The knowledge component of social studies in the PYP is arranged into five strands: **human systems and economic activities, social organization and culture, continuity and change through time, human and natural environments** and **resources and the environment**. These strands do not have fixed boundaries; many areas will necessarily overlap with each other and with other subject areas such as mathematics, arts, and personal, social and physical education (PSPE). Students should be made aware of the inevitable links to other areas of the curriculum in order to understand the interconnected nature of the subject areas, both with one another and with the transdisciplinary themes.

## Social studies strands

### What do we want students to know?

#### Human systems and economic activities

The study of how and why people construct organizations and systems; the ways in which people connect locally and globally; the distribution of power and authority.

**Related concepts:** communications, conflict, cooperation, education, employment, freedom, governments, justice, legislation, production, transportation, truth.

<b>Social organization and culture</b>	<p>The study of people, communities, cultures and societies; the ways in which individuals, groups and societies interact with each other.</p> <p><b>Related concepts:</b> artifacts, authority, citizenship, communication, conflict, diversity, family, identity, networks, prejudice, religion, rights, roles, traditions.</p>
<b>Continuity and change through time</b>	<p>The study of the relationships between people and events through time; the past, its influences on the present and its implications for the future; people who have shaped the future through their actions.</p> <p><b>Related concepts:</b> chronology, civilizations, conflict, discovery, exploration, history, innovation, migration, progress, revolution.</p>
<b>Human and natural environments</b>	<p>The study of the distinctive features that give a place its identity; how people adapt to and alter their environment; how people experience and represent place; the impact of natural disasters on people and the built environment.</p> <p><b>Related concepts:</b> amenities, borders (natural, social and political), dependence, geography, impact, landscape, locality, ownership, population, regions, settlements.</p>
<b>Resources and the environment</b>	<p>The interaction between people and the environment; the study of how humans allocate and manage resources; the positive and negative effects of this management; the impact of scientific and technological developments on the environment.</p> <p><b>Related concepts:</b> conservation, consumption, distribution, ecology, energy, interdependence, pollution, poverty, sustainability, wealth.</p>

Concept	Sample teacher/student questions
<b>Responsibility</b> What is our responsibility?	<ul style="list-style-type: none"> <li>• Why should we care about the past?</li> <li>• How can we act to prevent further damage to the natural environment?</li> <li>• What does it mean to be a world citizen?</li> <li>• What rights should all children have throughout the world?</li> <li>• How is conflict resolved?</li> </ul>
<b>Reflection</b> How do we know?	<ul style="list-style-type: none"> <li>• What makes one historical source better than another?</li> <li>• What stereotypes do we have about this place?</li> <li>• Which primary sources have we used to gather data?</li> <li>• How reliable are our own opinions and those of others?</li> </ul>

## Overall expectations in social studies

The *Social studies scope and sequence* (2008) identifies the expectations considered appropriate in the PYP. It does this by looking at the central ideas presented in the sample programme of inquiry published in *Developing a transdisciplinary programme of inquiry* (2008) and identifying the overall understandings being developed within each age range.

These expectations (outlined here) are not a requirement of the programme. However, schools need to be mindful of practice C1.23 in the *IB Programme standards and practices* (2005) that states “If the school adapts, or develops, its own scope and sequence documents for each PYP subject area, the level of overall expectation regarding student achievement expressed in these documents at least matches that expressed in the PYP scope and sequence documents.” To arrive at such a judgment, and given that the overall expectations in the *Social studies scope and sequence* (2008) are presented as broad generalities, it is recommended that schools undertake a careful consideration of their own scope and sequence document in order to identify the overall expectations in social studies for their students.

### 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

# Personal, social and physical education in the Primary Years Programme

## Overall expectations in PSPE

The *Personal, social and physical education scope and sequence* (2009) aims to provide information for the whole school community of the learning that is going on in PSPE. It has been designed in recognition of the fact that learning is a developmental process and that the phases a learner passes through are not always linear or age related. For this reason the content is presented in continuums for each of the three **strands** of PSPE—identity, active living, and interactions. For each of the strands there is a strand description and a set of **overall expectations**. The overall expectations provide a summary of the conceptual understandings and subsequent learning being developed in each phase within a strand.

These expectations (outlined here) are not a requirement of the programme. However, schools need to be mindful of practice C1.23 in the *IB Programme standards and practices* (2005) that states, “If the school adapts, or develops its own scope and sequence documents for each PYP subject area, the level of overall expectation regarding student achievement expressed in these documents at least matches that expressed in the PYP scope and sequence documents.” To arrive at such a judgment, and given that the overall expectations in the *Personal, social and physical education scope and sequence* (2009) are presented as broad generalities, it is recommended that the entire document be read and considered.

## Identity

### Phase 1

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

### Phase 2

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

## **Active living**

### **Phase 1**

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

### **Phase 2**

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

## **Interactions**

### **Phase 1**

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

### **Phase 2**

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

# Arts in the Primary Years Programme

## Responding

### 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 artworks. They are aware that arts may be created with a specific audience in mind.

## 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.