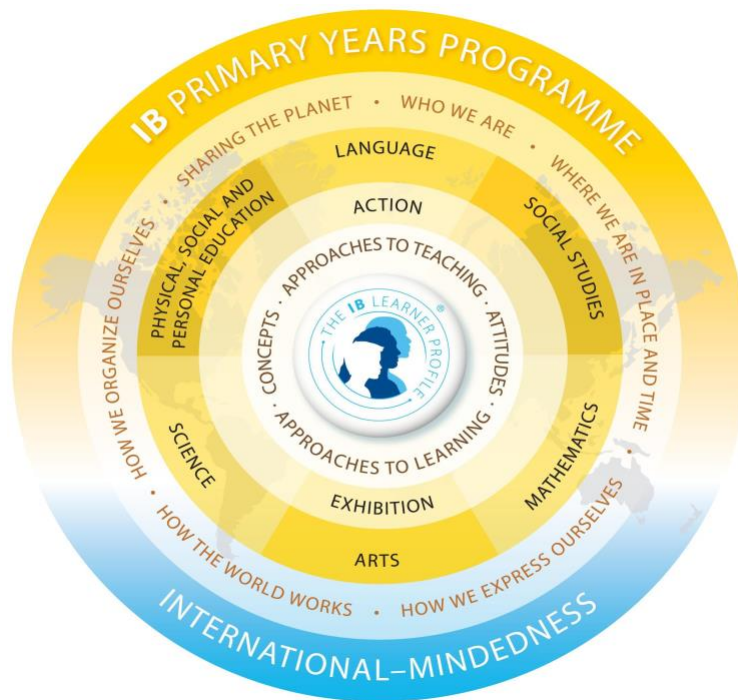


Grade 5

CURRICULUM GUIDE





As an International Baccalaureate (IB) World School, we at Bonn International School are committed to the Primary Years Programme (PYP). This is the IB programme designed for students aged 3–12 years. At BIS, students are in the PYP from Early Learning until Grade 5. The PYP is the best preparation for the IB programmes that follow, the Middle Years Programme (MYP) in Grades 6 - 10 and the Diploma Programme (DP) in Grades 11 and 12.

The PYP is an international curriculum framework, based on best practice and research from around the world. The programme focuses on the development of the whole child, both in the classroom and in the world outside. We challenge students to excel in their learning and in their personal growth, and we aim to inspire in them a quest for learning throughout life.

Learning in the PYP is:

Inquiry-based: We believe children learn best through structured, purposeful inquiry. Students are expected to play an active role in, and take responsibility for, their own learning. Students are encouraged to ask questions, investigate and find ways to answer these questions, and to sustain this enjoyment of learning throughout life.

Collaborative: Learning is a social endeavour, and there is great emphasis on sharing, group work and collaboration at our school. Students learn to communicate well, to encourage each other, and to develop an open mind so they can learn from each other.

Differentiated: The learner is at the heart of our curriculum framework. Children come to school with a range of experiences, backgrounds and prior knowledge. Teachers in the PYP aim to

design learning to suit children at all different levels of competence or experience, providing support for those who need it, and extensions for those who need more challenge.

Concept-driven: Students spend their time at school exploring and learning about important concepts that have relevance in their own lives, and that they can transfer to other contexts. Our aim is to develop students' understanding of big ideas, not just their knowledge or skills.

The Learner Profile Attributes

International mindedness is defined by the IB in the attributes of the Learner Profile. The PYP curriculum design supports students in developing these attributes, which are actively modeled by all members of our learning community. The Learner Profile attributes help develop internationally minded people. We want our learners to become:

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 forms. 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 ourselves and others. 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.

Concepts

Our aim is for students to develop an understanding of big concepts, to explore these concepts in different ways, and to be able to apply their understanding of these concepts to new and unfamiliar situations. Our Units of Inquiry are organized in such a way that they offer opportunities for students to explore the **PYP key concepts** multiple times and in lots of ways throughout the PYP. These key concepts are:

Form (what is it like?)

Function (how does it work?)

Change (how is it changing?)

Connection (how is it connected to other things?)

Causation (why is it like it is?)

Responsibility (what is our responsibility?)

Perspective (what are the points of view?)

Approaches to Learning

Students develop a range of transdisciplinary skills throughout the PYP. These skills are divided into the following sets of skills:

Communication skills

Social skills

Self-management skills

Research skills

Thinking skills

Action

We believe that real learning will lead to some action or some change in attitude or thinking. Once something is learned and fully understood, it will lead to action of some kind. Student action in the PYP can be big or small, happen at school or at home, and will develop over time. Examples of student action might be: including more people on the playground, choosing healthy foods, trying a new activity, turning off the lights when leaving a room, and lots more.

The Programme of Inquiry In Grade 5

Each school year, students explore six different 'Units of Inquiry'. Each unit of inquiry lasts for approximately 6 weeks. In Grade 5, students complete five Units of Inquiry, plus the PYP Exhibition. The units are designed to be relevant, significant, engaging and challenging, as well as developmentally appropriate. Our units provide the context for much of the learning in Language and Mathematics, as well as all content within Science and Social Studies. Units of Inquiry are transdisciplinary. Where appropriate and authentic, connections are also made between these units and the single subjects Music, Visual Arts, German and PE.

Grade 5 Units of Inquiry

<p><i>Who we are</i></p> <p>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.</p>	<p><i>Where we are in place and time</i></p> <p>An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.</p>	<p><i>How we express ourselves</i></p> <p>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.</p>
<p>Central idea Understanding who we are as individuals and as a community empowers us to grow as learners.</p> <p>Lines of inquiry:</p> <ul style="list-style-type: none"> ● Who we are as individuals ● Who we are as a community ● Issues that arise when people do not appreciate or accept diversity 	<p>Central idea Exploring space provides new perspectives for mankind.</p> <p>Lines of inquiry:</p> <ul style="list-style-type: none"> ● Earth and its place as part of the universe ● The history of space exploration ● The impact of space exploration ● How space exploration provides new perspectives and raises new questions 	<p>Central idea Media has the power to influence our choices and perceptions.</p> <p>Lines of inquiry:</p> <ul style="list-style-type: none"> ● The role of different types of media in people's lives ● Techniques used in media to influence us ● Our responsibilities as users of media

<p><i>How the world works</i></p> <p>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.</p>	<p><i>How we organize ourselves</i></p> <p>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.</p>	<p><i>Sharing the planet</i></p> <p>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.</p>
<p>Central idea Understanding the forms and transfer of energy helps scientists to innovate and create.</p> <p>Lines of Inquiry:</p> <ul style="list-style-type: none"> ● Different forms and sources ● Ways energy can be transformed ● How people use energy in their everyday lives ● How people use their knowledge to innovate and create 	<p>This unit is rich in content and falls under both Transdisciplinary Themes.</p> <p>Central idea Our economic activities impact people and the environment.</p> <p>Lines of Inquiry:</p> <ul style="list-style-type: none"> ● How an economy functions ● Impacts of economic activities ● Our responsibility as consumers 	

The PYP Exhibition

In the final year of the PYP, students participate in a culminating project, the PYP Exhibition. This is the final unit in the year and can fall under any of the Transdisciplinary Themes. Students work collaboratively on a chosen topic of investigation, and are required to identify, investigate, and offer solutions to real-life issues or problems. Students present their Exhibition to the whole school community.

The Exhibition has multiple purposes, including:

- To give students the opportunity to demonstrate independence and responsibility
- For students to reflect on their learning in the PYP and to demonstrate how they have developed in the Learner Profile
- As a summative assessment task of the PYP
- To demonstrate how students can take action as a result of their learning
- To celebrate the transition of learners from Primary to Secondary School

Languages

Language

English is our shared language of instruction and communication. In a PYP school the focus is not just on learning language in isolation, but also on the application of language skills across the subject areas and throughout the Programme of Inquiry. Some language is taught as 'stand-alone', while other aspects of language are taught in the context of our Units of Inquiry. We believe students learn best when they have opportunities to learn within meaningful contexts, and when the teaching is in response to students' needs, interests and previous experiences. Students at BIS come from a wide range of language and cultural backgrounds, which we view as a major asset to our learning community.

In a PYP language classroom:

- Students and teachers appreciate language diversity
- All students feel supported in taking risks in language learning
- There are close connections with the Media Centre, other classrooms and single subject teachers
- Students connect to the broader world through technology
- Students have many opportunities to engage with high-quality literature

Students develop skills in the following strands of language learning:

- Written Language: Reading and Writing
- Oral Language: Listening and Speaking

Our English programme encompasses a readers' and writers' workshop model, as well as offering opportunities to develop speaking and listening skills within an integrated programme.

Students develop skills and understandings across the four areas of language learning.

Reading	<ul style="list-style-type: none"> ● Effective stories have a deliberate structure and sequence of events that link with a particular genre ● Authors structure stories and poems around significant themes ● 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
Writing	<ul style="list-style-type: none"> ● Effective stories have a purpose and structure that help to make the author's intention clear ● Stories that people want to read are built around themes to which they can connect ● Synthesizing ideas enable 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, conferring, refining and publishing, our writing improves over time
Speaking and Listening	<ul style="list-style-type: none"> ● Spoken language can be used to persuade and influence people ● People draw on what they already know in order to infer new meaning from what they hear ● Metaphorical language creates strong visual images in our imagination ● Listeners identify key ideas in spoken language and synthesize them to create their own understanding

Readers and Writers Workshop:

We work with the Readers and Writers Workshop model, based on the resources developed by the Columbia University Teacher's College Reading and Writing Project. The workshop model consists of several components each day, allowing for teachers to teach specific skills and for students to have lots of time to practice and apply the skills taught. The workshop model also allows teachers to support and challenge all students, no matter their level of competence. Each year, we teach four Writing Units of Study and four Reading Units of Study.

Writing Units of Study in Grade 5:

- 'Narrative Craft' - writing personal narratives
- 'Opinion Writing' – Research based argument essays
- 'The Lens of History' – Research reports
- 'Memoirs' – Shaping texts

Reading Units of Study in Grade 5:

- 'Tackling Complexity' – moving up levels on non-fiction
- 'Book Clubs' – interpreting themes
- 'Argument and Advocacy' – researching debatable issues
- 'Book Clubs' - reading fantasy

Spelling:

We work with the spelling programme 'Read Write Inc.'. Students take part in short, focused sessions which are based on structured and cumulative activities exploring rules and concepts, enabling the students to become confident at spelling familiar and unfamiliar words.

German

All students at BIS study the German Language. Students enter either German Language and Literature (for students who speak German at a native language level) or German Language Acquisition (for students learning German as an additional language). The German Language Acquisition programme is further divided into 4 phases of language development. Students are carefully assessed and monitored to ensure accurate grouping of students. As in the English language, students work on written and oral communication skills in German. Aspects of German culture are explored through our host country celebrations such as St. Martin in November and Carnival in February.

Students in Grade 5 will have four units throughout the school year. Students on each level of German start off the school year with integrating into the „Who We Are“ Unit of Inquiry.

Mathematics

We believe that students learn best through purposeful, structured inquiry. The aim of our Mathematics Programme is to develop students into confident mathematical thinkers, with a sound knowledge of number and the creativity to apply this knowledge to solve problems in many ways. Our main resource for teaching Mathematics is the New Zealand Numeracy Framework. This framework involves a clear outline of progression in number knowledge and strategies, as well as rigorous assessment tools for tracking students' development. Mathematics lessons are usually differentiated, with students working on a variety of tasks in various different flexible groupings, in order to challenge and support all students, regardless their level of competency or experience. For more information on the NZ Numeracy Framework, you may consult: <http://nzmaths.co.nz/families>. Please note that Grade 5 at BIS is the equivalent of Year 6 in New Zealand.

The different strands of Mathematics are:

- Number (addition and subtraction, multiplication and division, proportion and ratios)
- Geometry and Measurement
- Statistics and Probability

In Grade 5, students work within the number strand for about 60-70% of the Mathematics teaching time. Students in Grades 4 and 5 typically work through Stage 6 of the Numeracy Framework, though of course some students may work in a higher or lower stage. The expectation is that students have mastered all outcomes within stage 6 at the end of Grade 5. The strategies and knowledge in this phase will take about two years to develop completely, and some aspects might be consolidated earlier or later than other aspects.

Specific outcomes in Grade 5 are:

Number Knowledge

- Recall multiplication to 10×10 and the corresponding division facts
- Recall groupings of twos, threes, fives and tens that are in numbers to 100 and the resulting remainders
- Identify all of the numbers in the range 0 - 1 000 000
- Say the forwards and backwards whole number word sequences by ones, tens, hundreds and thousands in the range 0 – 1 000 000, including finding numbers that are 10, 100 or 1000 more or less than a given number
- Order whole numbers in the range 0 -1 000 000
- Read and order decimals with tenths and hundredths, count forwards and backwards in tenths and hundredths
- Recall groupings within 1000 (eg $270 + 730$)
- Round whole numbers to 10, 100 or 1000, and decimals to the nearest tenth or hundredth
- Find out how many ones, tens, hundreds and thousands there are in all of a whole number
- Find the number of tenths and hundredths in decimals to two places
- Round decimals with up to two places to the nearest whole number
- Identify symbols for any fraction, including tenths, hundredths, thousandths and those greater than 1
- Say the forwards and backwards word sequences for different fractions
- Order and compare fractions with like and unlike denominators
- Rename improper fractions as mixed numbers and position improper fractions on a number line
- Convert simple fractions to decimals and percentages

Number Strategies

- Solve addition and subtractions problems by going back through tens
- Solve addition and subtraction problems by using place value
- Solve addition problems by looking for compatible numbers

- Solve addition and subtraction problems by compensating with tidy numbers
- Solve subtraction problems by using reversing
- Solve addition and subtraction problems using decomposition, leading to a written algorithm
- Choose critically from a range of mental strategies to solve addition and subtraction problems with whole numbers and decimals
- Change the order of factors to make a multiplication problem easier
- Multiply and divide by 10s, 100s, 1000s and other multiples of 10
- Solve multiplication and division problems by using multiplication facts
- Solve problems using a combination of addition, subtraction, multiplication and division mental strategies
- Interpret remainders in division problems
- Use a range of mental strategies to solve multiplication and division problems
- Use standard written methods to solve multi digit multiplication and to multiply decimals
- Use short division with single digit divisors and write remainders as decimals
- Add and subtract fractions with unlike denominators
 - Find fractions of a set using multiplication and division
- Find fractions of regions

Geometry in Grade 5

- Draw and interpret simple scale maps
- Use maps of plans to propose actions
- Understand the use of a compass to specify and find directions
- Find and describe the location of objects using coordinates
- Follow and give directions using turns and compass directions
- Follow and give instructions involving distances by interpreting simple scales
- Create regular tessellations
- Demonstrate why a given tessellation will cover the plane

Measurement in Grade 5

- Recognize the need for a standard unit of volume
- Measure volume using tablespoons and teaspoons
- Convert between units of volume
- Construct three dimensional objects using cubic cm and state their volume
- Construct a model of one cubic metre
- Estimate and measure to the nearest litre and millilitre
- Estimate the volume/mass of objects using appropriate standard units
- Design an investigation to find the average volume/mass of a collection of the same objects (eg marshmallows)
- Estimate and measure using grams and kilograms
- Measure angles using degrees
- Identify and construct right, acute and obtuse angles

- Know the degree values of angles that are simple fractions of a whole turn
- Know that the angle at a point is 360 degrees

Statistics and Probability in Grade 5

- Make predictions based on data collected
- Identify all possible outcomes of an event
- Assign probability to events using fractions
- Determine an experimental estimate of the probability of simple events using frequency tables
- Determine the theoretical probability of simple events using percentages, fractions and decimals
- Compare theoretical and experimental probabilities
- Make predictions based on spinners
- Interpret information from graphs
- Make statements based on data shown on graphs
- Identify the most suitable graph to show survey results

Personal, Social and Physical Education (PSPE)

Personal and Social Education

The development of a student's well-being is addressed through all areas of the PYP curriculum. Therefore students' social, personal and emotional development is the shared responsibility of all teachers at BIS. Children are given guidance to help develop positive attitudes and behaviours in order to meet challenges, make healthy lifestyle choices, and become successful learners.

Physical Education

Physical Education at BIS is about more than just student participation in sports and games. Its purpose is to develop a combination of transferable skills promoting physical, intellectual, emotional and social development. During the PYP, we endeavor to provide meaningful opportunities for learning about movement and through movement in a range of contexts.

Students in Grade 5 have PE lessons in the Sports Hall two periods per week. Depending on the time of year, some lessons take place outside on our fields.

PE units in Grade 5 include:

- Components of fitness
- Indigenous games
- Net games
- Dance
- Track and Field
- Olympics (the Right to Play)

The Arts

Learning about and through the Arts is fundamental to the development of the whole child. It promotes creativity, critical thinking, problem-solving skills and social interactions. Through our Arts Programme students develop attitudes such as appreciation, empathy and Learner Profile attributes such as being a communicator and a risk-taker.

At BIS students have three periods of Visual Arts and three periods of Music over a ten-day cycle. Lessons take place in the Primary Art Room and the Primary Music Room in the Agora building.

Visual Art units in Grade 5 include:

- Comic Art
- Photo Manipulation (Photoshop)
- Painting Space
- Symbolism in Religious Artwork
- Exhibition Art Piece - using visual arts to communicate an idea or a message

Music units in Grade 5 include:

- Class Bands - student chosen instrument
- Singing (as part of the Upper Primary School Choir)
- Composition Studies
- Classical Music

iPads

iPads are used as a tool for learning from Early Learning to Grade 10, including a 1-to-1 iPad Programme from Grade 4. Students are allocated iPads, which remain in school and are used in many different ways to enhance and extend students' learning. Students use iPads as research tools, to create animations, to record observations and to present their learning. We encourage students to be 'balanced', so learning with technology is part of a broad range of activities and approaches to learning. We also recommend to parents to balance 'screen-time' with other age appropriate activities.

Seesaw

Students are involved in learning how to assess, and reflect on, their own and others' work. Seesaw is an online assessment, journal and portfolio tool. Seesaw is used to record student progress, to plan for their next steps in learning and to document the learning journey. Parents log on to see and respond to examples of their children's learning.

Assessment and Reporting

In the PYP, assessment is integral to all teaching and learning. We use assessment data to inform our planning. This enables us to differentiate our programme so that each student is included, engaged and challenged at their own level.

Teachers use a range of assessment strategies and tools for formative (assessment FOR learning) and summative (assessment OF learning) assessments.

We also use a range of standardized assessment tools to keep track of children's progress, in Grade 2 these include:

- Developmental Reading Assessment (DRA) - administered at least twice a year to give an indication of reading level
- Spelling/Phonics assessments linked to our programmes
- GloSS (Global Strategy Stage) Mathematics Assessment - administered at least twice a year to track student progress through the New Zealand Numeracy Framework

Annual Reporting Cycle

There are several opportunities each year for parents to be informed about their child's progress at school. In addition to the scheduled conferences, parents are encouraged to engage in open conversations with their child's teachers throughout the year, and can make appointments to speak with the teachers whenever they wish. Teachers may also request additional meetings with parents if needed. Parents are also kept up to date through regular posts on the digital portfolios, Seesaw and Tapestry.

Scheduled reporting times are:

September	Students in Grade One - Grade Five will participate in a three-way meeting with the teacher and parent to establish learning goals for the year.
January	Parent/teacher conferences are scheduled where you can discuss the progress your child is making.
March	Parents are invited in for a student-led conference whereby each student will talk through their learning progress with their parents.
June	At the end of the year, parents receive a formal written report for the academic year.

Students in Grades 3 - 5 will carry out the International Schools Assessment. This is mainly used by the school to document growth and to track patterns across time.

Student Support

We believe that sound relationships between teachers, support staff and students, as well as between students, are vital to ensure a good learning environment. Our aim is for all our students to feel safe, to feel accepted, to feel included and to feel cared about. We have a Primary School Counselor, who works with those students who might need some additional emotional or social support. She also works with whole classes on issues that might impact all children, such as bullying or safety issues.

The philosophy of our Learning Support Department (LS) is to empower students with learning differences to become confident, independent, well-balanced, responsible learners who can self-advocate and find their own path to success. LS is designed for students with mild to moderate learning difficulties. The LS teachers work in collaboration with homeroom teachers and parents to ensure that these students can make progress and show academic growth.

Transition to the Secondary School and the MYP

During the students' final year in the PYP, there are several ways we ensure that our students are well prepared for their transition to the Secondary School and the MYP. Our aim is for the students to feel well prepared and confident as they make this transition.

Transition related activities include:

- Transition day in June - Grade 5 students spend a whole day in the Secondary School
- Grade 5 and Grade 6 teachers plan together and discuss student issues as they prepare for handover
- Grade 6 teachers volunteering as mentors during the PYP Exhibition