



MIDDLE SCHOOL

Curriculum Overview

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UNIS Mission

Under the auspices of the United Nations and guided by its ideals, UNIS provides an inclusive and diverse learning environment in which rigorous international programs foster academic excellence, innovation, creativity and cross-cultural communication to educate and inspire its students to become an active force in shaping a better world: peaceful, compassionate and sustainable.

Welcome to UNIS

With over 125 different nations represented within the student body, the curriculum is designed to reflect the mission and guiding principles of the school. Providing an optimal environment for our students is central to teaching and learning at UNIS. As such, our Teaching and Learning Policy further amplifies and directs our educational thinking and practice.

In the formative years, we offer a rigorous age-appropriate, school-designed curriculum, which is based on latest research and expressed through a coherent set of standards and benchmarks in all subject areas: from Kindergarten (JA) to Grade 10 (T2). Our Grade 11 (T3) and Grade 12 students (T4) enroll in the International Baccalaureate Diploma (IBDP) or IB Courses, where the range of subjects offered at UNIS is truly impressive. Within the framework of IB requirements, our students have the possibility of choosing from over 200 courses. Our graduating students leave to attend some of the best universities around the world. As they continue along their journey as learners, we take pride in the individual successes they have achieved at UNIS and celebrate their opportunity for continued growth as life-long learners and informed and active global citizens.

Each divisional booklet provides information on:

- Teaching and learning at UNIS
- Curriculum development process
- Assessment as part of the learning process
- Dissemination of information on student performance
- Learning support systems in place
- Major learning outcomes for all grades in all subjects

We hope you find the information helpful in understanding teaching and learning at UNIS.

Teaching and Learning at UNIS

Teaching and learning is at the heart of a school, and successful schools place the student at the heart of their learning environment. Teachers systematically plan, use evidence to inform their practice and employ a range of teaching strategies and methods to support and improve student learning. Learning involves students making sense of the world. It is not simply about absorbing information, but it is an active process of constructing meaning.

At UNIS we recognize that students making sense of their learning will help them become independent learners. UNIS' learning targets and outcomes, and supportive inclusive environment, foster opportunities for students to develop a lifelong love of learning where skills in critical thinking, communication, collaboration, creativity, and adaptability, are developed and honed as our students move continuously and seamlessly from Junior A through Tutorial House graduation.

Moreover, teaching and learning is most effective when there is commitment to continuous improvement, collective responsibility, and goal alignment. As such, we believe that the learning experience at UNIS offers a unique opportunity for each child to engage in a coherent curriculum that is developmentally appropriate and has clear learning outcomes for each stage of the learning experience. Through integration, innovative and research-proven teaching strategies, modern learning technologies, and real world resources and contexts, the UNIS curriculum goals help students understand their place and role in their learning. Moreover, timely informative feedback on their learning helps students develop the skills, attitudes, and dispositions necessary to systematically improve the quality and understanding of their learning experience in an international context.

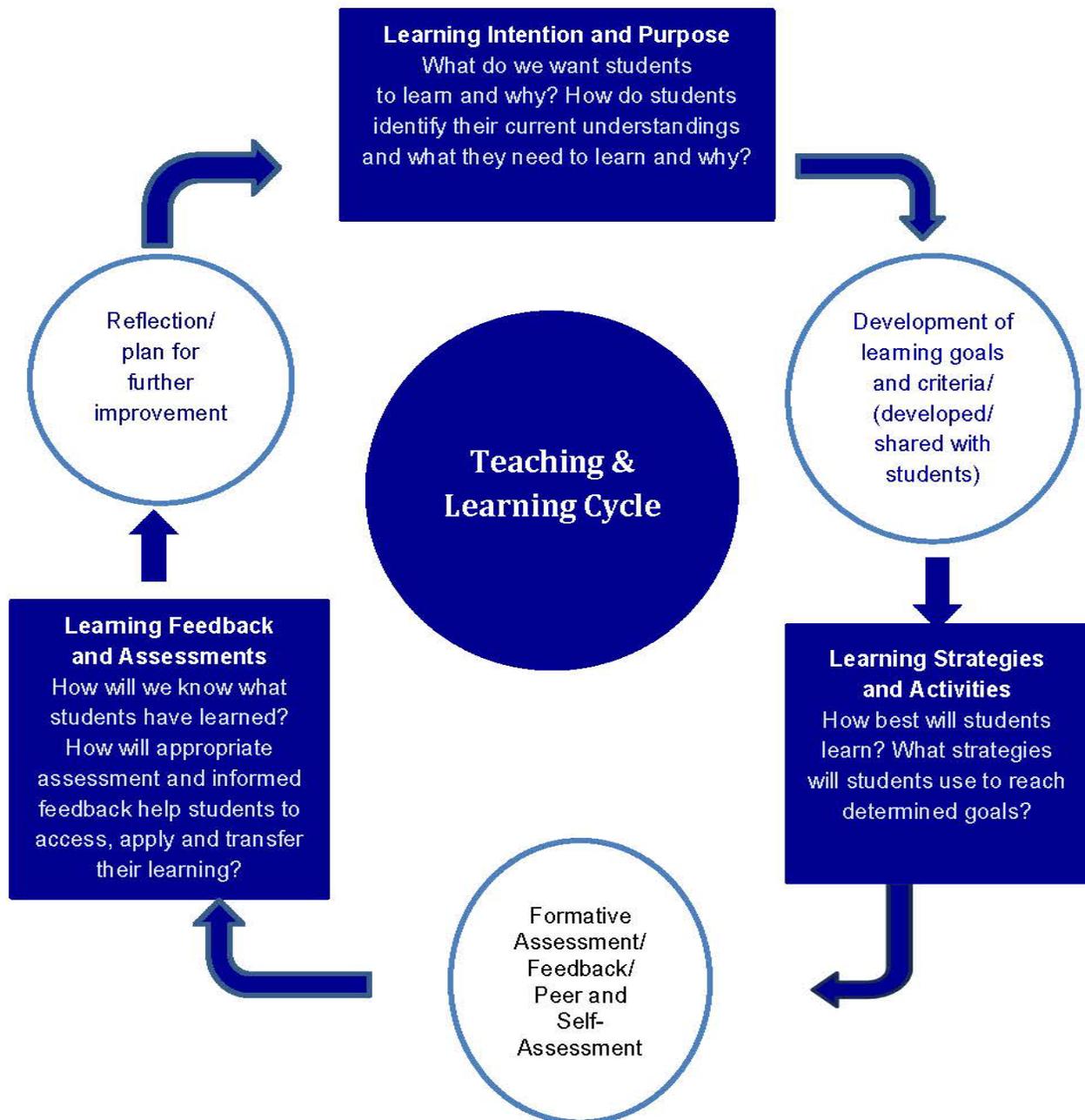
Middle School Overview and Learning Outcomes for Each Subject Area

Middle School is characterized by a time of rapid physical, emotional, and intellectual growth. It is a time where students strengthen their independent learning skills and begin to identify and pursue specific and personal learning styles and interests. The integrated learning that exemplifies school life in the early grades is developed and diversified in the intermediate years. Teachers and students develop meaningful connections within and across the disciplines, where a rigorous, but flexible and broad-based platform for learning is maintained in order to embrace the acquisition of knowledge, the development of skills and attitudes and their complex application in an international setting.

An outline of major skills and student outcomes for each subject area by grade level can be found on the following pages of this booklet.

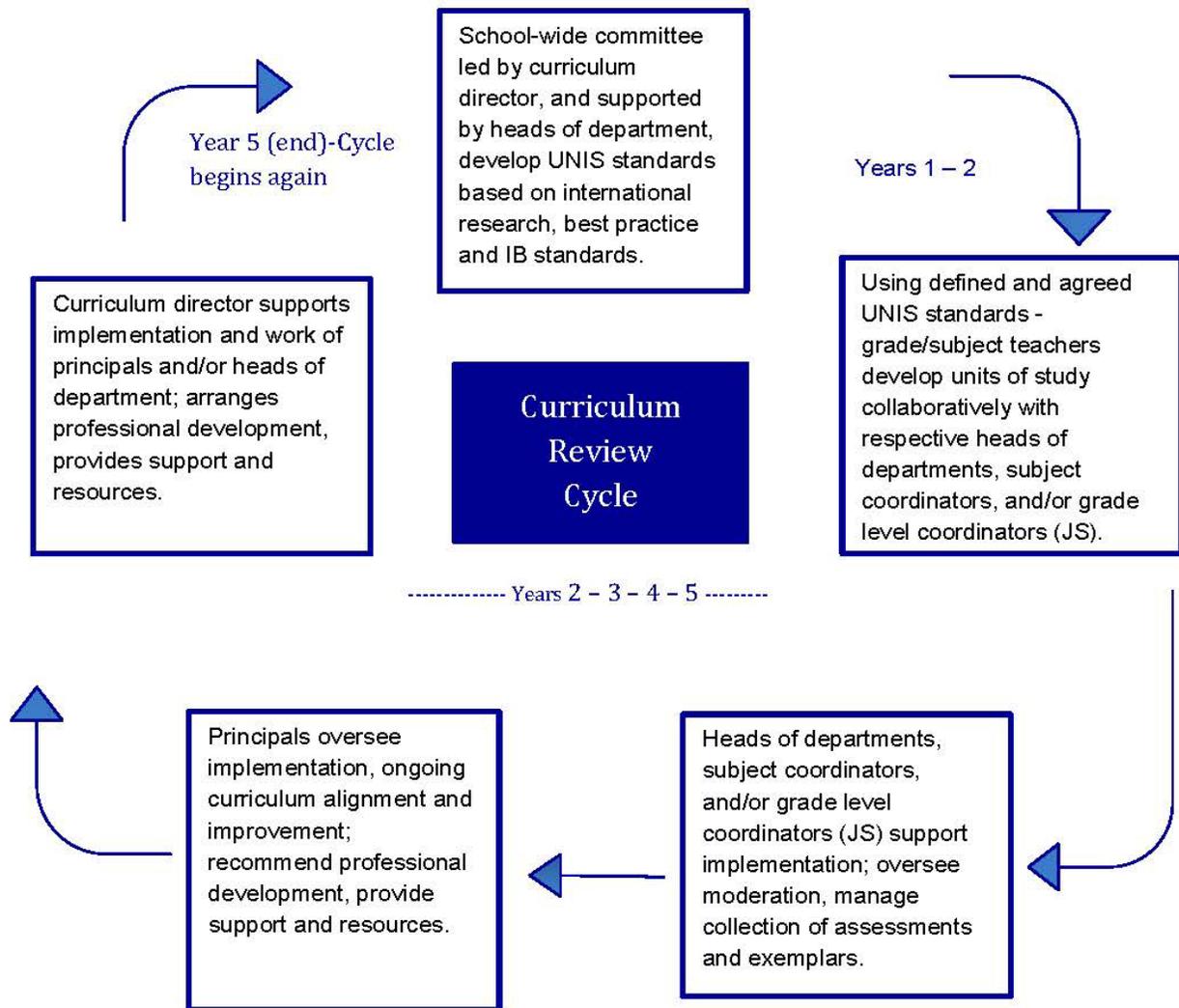
Teaching and Learning at UNIS

In a student-centered approach to teaching, UNIS teachers become facilitators of learning; students are encouraged to take more responsibility for their own learning. We look at ways to help students construct meaning from their learning, monitor their progress, and reflect on the process.



Curriculum Development at UNIS

UNIS' curriculum (K – 10) is developed by the UNIS faculty and based on a comprehensive review of researched-based best practices and recognized standards for each subject area, including International Baccalaureate (IB) standards. Written subject curricula are reviewed on a five-year cycle in order to ensure that they are relevant, demonstrate an international perspective, and reflect the latest research related to teaching, learning, and assessment in that given area. Professional development and selection of related resources are part of the review process.



Assessment at UNIS

Assessment is an ongoing process of systematically gathering, analyzing, interpreting, and reflecting on evidence of students' understanding as they develop concepts and skills, in order to inform instruction and support learning. A comprehensive assessment program includes a variety of assessment components and processes that align with expectations for teaching and learning and meet the needs of all users (student, teacher, department, school).

Furthermore, it informs both the teacher and the learner about what the learner understands, knows, and is able to do. The teacher uses assessment to monitor student progress toward the learning target, to provide feedback to the student, and to guide further instruction. Additionally, providing students with opportunities to assess their thinking and that of their peers gives them practice in the skills they need to become independent and self-directed learners.

At UNIS we believe:

Assessment should be authentic and seen as an integral part of the learning process. It allows opportunities for students to demonstrate their understanding of the content and skills that they have acquired as a result of instruction. It is a pathway that leads to deeper conceptual understanding and allows for sophisticated growth in practiced higher order thinking skills. Crucial to the role that assessment plays in the learning process is timely, supportive and specific feedback. All criteria for success should be clear to students from the onset of the learning.

Dissemination of Information on Student Performance

The reporting of student progress is an essential part of the dialogue that takes place between parents and the school. It is designed to give regular and specific feedback on a student's progress spanning both semesters. It is hoped that parents contact the respective teacher, head of department, and/or principal to set up a conference to ask questions, or if you have a concern.

Curriculum Information Evenings:

At the beginning of the first semester, the school hosts curriculum evenings on both campuses (Manhattan and Queens) for the different grade levels. These evenings allow for opportunity to visit classrooms, meet the teachers and hear specifics about the year's program, the class procedures, resources and expectations. This will also be a forum to hear about the school-wide goals and campus initiatives for the current academic year.

Parent/Teacher Conferences:

Mid-way through each semester parent conferences are held. The focus of the each conference is to discuss a child's progress toward grade level learning outcomes. This time spent with the teachers is important in establishing a home-school partnership to support a child's success. Conferences provide an opportunity to participate in the dialogue with a child's teacher.

Interim Report Cards:

Middle School and Tutorial House - October and March

Interim reports are issued (October) to all new students transitioning into UNIS. They show academic progress and performance in all subject areas and identify those areas that might be in need of special attention.

Interim reports are circulated (October and March) to all students who are not attaining expected levels of performance and where there is concern of underachieving and/or poor progress.

Individual Student Reports:

At the end of both semesters (January and June) students receive a written report. Each of the core subject and specialist areas will report on the development of a child's learning skills and understanding of the subject. After parents have a chance to discuss the report card with their children, they are encouraged to contact the appropriate teacher if they would like further discussion.

Report cards are accessed via the UNIS portal.

Report Descriptors JA to Tutorial Two (Kindergarten to Grade 10)

Learning to Learn Skills	
In this section of the report, skills that support learning across subject areas are listed.	
Developing	The student's work habits are still developing. At this time, these practices are inconsistent.
Succeeding	The student demonstrates fairly consistent, positive work habits.
Exceeding	The student demonstrates consistent, mature and independent work habits.

Report Descriptors (JA through Grade 10)

Subject Skills	
In this section of the report, each subject has identified key, over-arching skills for that discipline, which remain constant from grade to grade, JA-Tut 2, as well as indicators describing how those skills are specifically demonstrated within each grade.	
Working towards grade level	The student is still developing an understanding of the related skills and a concept described by the indicators, and is not yet able to apply these in familiar situations consistently or without support.
Working at grade level	The student has demonstrated a good understanding of the related concepts and skills described by the indicators and can generally apply these in familiar situations independently.
Working above grade level	The student has a thorough understanding of the related concepts and skills described by the indicators and can apply and extend these in both familiar and new situations independently.

M3-T4 students receive a numerical grade from 1 to 7 for each subject, based on the International Baccalaureate scheme.

Supporting a safe and secure inclusive environment for learning

Guidance counselors provide support to students, parents and caregivers in need of advice and direction in social, emotional, and academic matters. The counselors provide a confidential space that students, parents or faculty can use to explore issues of concern. The emphasis is on the social, emotional growth of the children of UNIS and how this ties into their academic progress. Students are given the opportunity to explore the changing social and emotional feelings they experience in a safe space with proper guidance. The guidance section of the student support services serves as a resource for parents in the UNIS community who seek help in making decisions about their children.

The Junior A to Junior Four learning specialists provide individual and small group instruction to students who might be experiencing difficulty accessing the curriculum. The learning specialists work with students to build and strengthen skills and to help them understand their own learning styles so that they can find strategies and techniques that will enable them to be more successful. These skills and strategies are taught through instructional level materials and then applied to classroom curriculum and assignments. The learning specialists also work with teachers to develop and implement individualized learning plans designed to meet the specific academic needs of students with learning differences. The learning specialists work with teachers to help meet the needs of all learners.

The school psychologists at UNIS supports students throughout Junior, Middle and Tut House divisions in Manhattan as well as Queens. The School psychologists help students succeed academically, socially, behaviorally, and emotionally. Collaboration with faculty, parents, and other professionals helps create a safe, healthy, and supportive learning environment strengthening connections between home, school, and the UNIS community.

Expected Learning Outcomes – Middle One to Middle Four (Grade 5 to Grade 8)

An overview of academics for all grade levels can be found on the UNIS website, with each subject area taught described in general terms. The remainder of this booklet delves more deeply into teaching and learning at UNIS through identifying major skills and learning outcomes for students for each subject area by grade level.



Middle One

Students are provided with a rich experience in the visual arts. They use a variety of materials, tools, techniques and approaches to express their ideas, observations and feelings. Activities help students understand concepts, engage their imaginations and work together. Over time, students acquire a sense of their own style, as they develop practical skills. Students are encouraged to use Art vocabulary as they discuss their own and others' work. By interpreting and evaluating works of art, they begin to understand Art as a process emerging from their own aesthetic decisions. Projects are linked to other areas of the curriculum when opportunities for meaningful connections exist. Students learn to appreciate the role and importance of art in different cultures.

OBSERVING

Drawing

- Illustrate space and objects from different viewpoints
- Practice skills in observation drawing

Designing

- Interpret images, forms, and their compositions

Observing Art, Process, and Context

- Identify and express an understanding of a demonstrated process and/or the application of a specific technique
- Discuss and consider art concepts in relation to contexts presented
- Distinguish and use media intentionally

INVESTIGATING

Developmental Sketchbook

- Explore ideas in different contexts through the sketchbook
- Derive solutions to problems through consideration and formulation
- Formulate more than one solution and develop a plan

Technique and Concepts

- Employ media, techniques, and/or composition to express specific ideas or solutions

CREATING

Realizing Finished Projects

- Solve technical problems with some assistance and devise a plan of action
- Organize and manage art creation in a sequential procedure
- Choose appropriate media and apply it using techniques demonstrated

Presentation

- Organize, revise, refine, and complete projects according to guidelines
- Demonstrate they value their work

English is the first language of the school, and as such, it serves multiple purposes, as a means of communication for the community, as the medium of instruction in most other core subjects, and as a discrete discipline with its own curriculum.

The strands of reading, writing, listening, and speaking are at the heart of all of the work our children do in all of their classes, in school and at home, individually and in groups. These components are not separate but rather in constant interaction and reflect the changing demands of literacy today.

Our goal is to help students attain their highest possible levels in all areas of English. We want them to gain a sophisticated command of the language, develop their capacity for self-expression, and use language as a means to clarify thinking, unleash their imaginations, and construct meaning from the world around them through participation in oral activities, writing in different genres, and reading of fine literature.

READING

Read examples of and discuss characteristics of different text types

- Read a variety of text types
- Recognize and identify various features of fiction including author, audience, plot, setting, character, theme, poetic devices
- Recognize and identify the various features of non-fiction including author, audience, fact, opinion, main idea, supporting points
- Identify the main features of poetry and plays
- Discuss how a text form they are reading has influenced a piece of their own writing

Use a range of strategies, including rereading, skimming, scanning, interpreting graphics, and drawing on background knowledge to read, comprehend, and extract information from texts

- Use word parts and context clues in vocabulary development
- Draw on experience or knowledge of the topic or context to work out the meaning of words
- Paraphrase, explain, or summarize the literal level of key passages of text
- Make inferences about text more independently
- Recognize themes and issues and provide supporting evidence from the text

Recognize the literary features of assigned texts

- Explain techniques the author uses to create plot, develop character, and suggest themes
- Identify a greater variety of figures of speech and explain their figurative levels of meaning
- Identify elements of content that help to date a work in a time, place, culture, and/or language
- Recognize different styles of favorite authors

Choose, read independently, and interpret a range of texts, demonstrating a breadth and depth of reading choices

- Read texts from different times and places silently and aloud for meaning and purpose
- Choose personal reading books with some guidance
- Discuss, write about, and recommend personal reading

Appreciate that multi-media sources can enrich reading

- Use audio, visual, and electronic sources to augment reading
- Read and conduct research using print, multi-media, and electronic resources

WRITING

Understand the process of modeling, planning, organizing, and composing texts by retrieving, recording, and organizing information appropriate to purpose and audience

- Plan and organize ideas and information, with guidance, prior to writing
- Write in a variety of styles to suit a particular purpose, for example, to entertain, recount, socialize, inquire, describe, persuade, explain, or instruct
- Write to define, clarify, and develop ideas and express creativity
- Identify and record print and non-print bibliographic sources

Make choices about the composition of a text to suit different purposes and influence audiences

- Write stories and poems on assigned and original topics
- Express a well-reasoned point of view in writing
- Write about one topic from different points of view
- Develop topics fully and logically to form a cohesive text
- Write with conviction, using a strong personal voice

Draft, revise, proofread, and publish well-structured texts that are more demanding in terms of topic, audience, and written language features

- Understand the purpose and stages of the organization of texts
- Identify the audience of a text and adjust writing accordingly
- Discuss the choice of words, clauses, or phrases and their impact on style
- Select vocabulary for its shades of meaning and effect
- Use knowledge of grammar, punctuation, and spelling to proofread and edit their own and others' writing
- Select appropriate strategies for editing to use throughout the writing process

Present legible and neat handwriting in their own style

- Present legible work at all writing stages, at draft and formal publishing levels
- Choose appropriate combinations of written text, image, and color to publish text, whether handwritten or computer generated

Use computer technology to present text in a variety of ways

- Use computer software programs and associated technology to format texts
- Locate and use the online thesaurus
- Vary font and layout to suit a particular audience and purpose
- Choose appropriate graphics to accompany text

- Use word processing programs to design books
- Produce a variety of texts with attention to design, layout, and graphics
- Experiment with computer technology to produce different texts
- Acknowledge print and Internet sources used in assignments

LISTENING

Listen for different purposes in different situations

- Use listening strategies, including taking notes and following procedures, to extract information from oral reports
- Listen to stories read aloud or on computer or CDs
- Identify the characteristics of an oral procedure, including goals, materials, steps, and reasons for listening

Learn how and why to listen attentively while others speak

- Acquire information and further knowledge through attentive listening
- Follow teacher directions to stay focused, engaged, and involved in oral presentations and discussion

Listen and respond to instructions, readings, and oral presentations

- Listen to a presentation or idea or argument and respond by commenting on, defending, or refuting a point made
- Report on the content of a presentation

SPEAKING

Participate in different types of oral presentations and discussions

- Give brief reports and presentations
- Explain procedures, report factual information, and present ideas for discussion
- Persuade others to a point of view by giving considered reasons for opinions

Develop skills for dramatic presentations

- Improvise and act out dramatic situations
- Join in group or individual recitations of a variety of poems

Communicate more effectively in class and group interactions

- Engage in productive group, pair, whole class, and assembly presentations and discussions
- Make an oral presentation using technology

Know and understand audience and purpose when involved in oral activities

- Experiment with appropriate ways to prepare and deliver a presentation to a given audience

Use a speaking style appropriate to the activity

- Speak with clarity, and use appropriate intonation, volume, and pauses when presenting

The program in the Middle School encourages active investigation and discussion of ideas, of similarities and differences, of connections between the past and the present. Students follow a common course of study integrating the five strands of world history, geography, social sciences, host country and United Nations. Class work emphasizes active inquiry. We have a strong commitment to learning beyond the classroom, drawing on the diversity and resources of the UN, New York City and our parent body.

Students examine the early civilizations of Mesopotamia, Egypt and the pastoral and nomadic society of the Hebrews of the same period, focusing on rivers as physical systems and how humans have used them. This includes the influence of location and environment on settlement patterns, and economic and social systems, as well as natural and human problems created by (resulting from) the interrelation between humans and river systems today. Students explore the relation between economic systems, social and political systems, and cultural ideas and beliefs as an introduction to GSPEC. Finally students examine through primary sources, the Civil Rights movement in the U.S. (1954-1968). As an extension to the study of Ancient Hebrews and in correlation with the English program, students explore the causes and outcomes of WWII, focusing on the Holocaust.

Archaeology and History

- Describe the differences between Paleolithic and Neolithic life
- Describe the emergence and characteristics (social, economic, political and cultural) of river valley civilizations (Mesopotamia, Egypt, Hebrews)
- Describe the chronological sequence of early river valley civilizations
- Describe the historical origins and teachings of Judaism
- Identify and describe the achievements of river valley civilizations

Early Civilizations of Mesopotamia, Egypt and the Hebrews

- Describe the connections between economic, social, political and cultural activities and emergence of centers of culture and power

GEOGRAPHY

River Systems

- Define key terms and concepts
- Describe how humans used and altered river systems (Nile, Euphrates and Tigris Rivers)
- Describe how physical features and climate contributed to different settlement patterns and economic and social systems

SOCIAL SCIENCE

Technology, Agriculture, Trade

- Describe the relationship between specialization, trade and surplus
- Identify the development of urban center and complex social, political and cultural systems
- Define and describe polytheism and monotheism
- Describe government and citizenship of early civilizations

HOST COUNTRY

Civil Rights Movement

- Identify the causes of inequality through the study of the history of discrimination in the US
- Identify and discuss the goals and strategies of the Civil Rights Movement in the US through the use of primary sources
- Research various Civil Rights leaders, organizations and strategies

Current Events

- Explain why a particular current event has national importance

UNITED NATIONS

UN and Water

- Functions and role of UN in alleviating river and fresh water pollution and scarcity of water

SKILLS

Investigation - Identifying, selecting and ordering what is relevant as evidence from a range of sources and materials

- Find information and recognize what is relevant to a given topic
- Distinguish between primary and secondary sources

Analysis - Recognizing, connecting, interpreting and evaluating, drawing conclusions and/or problem solving to demonstrated understanding of a topic or question

- Compare and contrast different kinds of sources and points of view
- Make interpretations and inferences based on cause and effect

Communication - Creating, speaking, using media and writing for a specific purpose

- Demonstrate relevant knowledge and understandings in a coherent and meaningful way: diagrams/charts, paragraphs, reports - spoken and written first person narratives, video and other electronic media and debate
- Use simple referencing conventions to identify sources

English is the primary language of instruction at UNIS. Close to 1,500 students, speaking seventy different languages may be represented at any one time.

Some students arrive at UNIS with little or no knowledge of English. On a regular basis, about ten percent of the student body benefits from additional instruction in English.

The UNIS ELL teachers are responsible for the teaching and curriculum design of the K-12 program. The goal is to ensure successful integration of ELL students into the UNIS community both academically and socially.

Upon entering UNIS, students who speak or write a language other than English at home or are not fluent in English, are assessed by the ELL teachers. Evaluation results place a student in beginning, intermediate or advanced ELL classes, or in a full mainstream program.

From the first day of school, the ELL students are assigned to a homeroom with their peers. The placement into homerooms ensures their constant exposure to English and allows for an early integration into the UNIS community.

For the complete ELL beginner, the focus is on verbal communication skills to enable the student to function in the new environment. Reading and writing are used to reinforce grammatical structures and vocabulary. The intermediate ELL student works on expanding vocabulary, increasing reading comprehension, and refining writing skills, facilitating participation in mainstream classes. The advanced ELL student moves towards fluency in spoken and written English to approximate grade level competency. Full integration into the UNIS mainstream curriculum takes place when a student masters the advanced level ELL materials for the appropriate grade level and can comprehend content material used in the mainstream classroom.

LANGUAGE SKILLS

Reading skills

Beginner

- Identify English letters and numbers, both printed and cursive forms
- Recognize sounds of the English alphabet in oral reading
- Use basic English sight words
- Practice beginning reading and comprehension skills, both silent and oral
- Adapt content material for all subject areas
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Intermediate

- Compare and contrast vocabulary for reading in varied contexts
- Identify vocabulary and concepts to follow mainstream classes with support
- Practice intermediate reading and comprehension skills, both silent and oral

- Move towards independent comprehension of mainstream materials
- Recognize importance of reading independently for pleasure in English and their mother tongue

Advanced

- Compare and contrast grade level vocabulary and comprehension with authentic texts, in both fiction and non-fiction
- Use vocabulary and concepts to follow all mainstream classes independently
- Read with clear pronunciation, intonation, and fluency
- Read in order to compare, contrast, and analyze texts
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Writing Skills

Beginner

- Write letters and numbers using correct form

- Write simple words with ease and fluency
- Write accurate simple sentences
- Use spelling rules
- Write early stage narratives
- Present work neatly and clearly

Intermediate

- Use compound sentences
- Develop creative and factual writing
- Identify and use basic writing skills for mainstream courses
- Demonstrate intermediate spelling skills
- Present work neatly and clearly
- Use writing as a communicative tool

Advanced

- Use advanced vocabulary, concepts, and structures to write for all mainstream classes
- Develop creative and factual writing
- Compare, contrast, and analyze texts
- Demonstrate writing fluency for communication
- Proofread and edit own work
- Present work neatly and clearly

Listening Skills

Beginner

- Follow one or two-step classroom instructions
- Recognize and use basic English vocabulary
- Communicate socially appropriate responses
- Use basic communicative and functional language
- Demonstrate basic English sentence structure

Intermediate

- Follow multi-step classroom instructions
- Identify and use appropriate vocabulary in a variety of subject areas
- Demonstrate knowledge of social registers
- Use communicative and functional language skills necessary for classroom and social situations
- Recognize and use more complex English sentence structures

Advanced

- Explore and use a variety of grammatically correct and appropriate idiomatic structures with ease
- Demonstrate near native understanding of communicative and functional language
- Demonstrate academic language necessary to function in all mainstream classes

Speaking skills

Beginner

- Use a variety of grammatically correct and appropriate idiomatic structures with ease
- Begin to show near native understanding of communicative and functional language

- Begin to use academic language necessary to function in all mainstream classes

Intermediate

- Explore and use communicative and functional language skills in social and academic settings
- Discuss and compare vocabulary in order to discuss subjects in content area classes
- Demonstrate a command of intermediate rules of grammar and syntax
- Use basic verb tenses correctly
- i) Present tense - simple and continuous
- ii) Past tenses - simple and continuous
- iii) Simple future
- Use compound/complex sentences
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

Advanced

- Demonstrate communicative and functional language both social and academic at near native fluency
- Explore and use academic vocabulary to function in all mainstream classes
- Demonstrate the rules of grammar and syntax
- Demonstrate correct usage of complex verb tenses
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

LEARNING SKILLS

Responsibility

- Fulfill commitments
- Complete and submit class work, homework, assignments on time
- Manage his/her behavior

Organization

- Manage learning materials and equipment
- Establish priorities and manage time
- Use class time appropriately

Independent work

- Follow instructions
- Seek assistance when required
- Show resourcefulness in carrying out independent work

Collaboration

- Respond constructively to the ideas and opinions of others
- Work as part of a group to achieve goals

Initiative

- Demonstrate curiosity and a willingness to take on new ideas, concepts, and experiences
- Approach new tasks positively
- Assess and reflect critically on his/her strengths and areas for improvement

CONTENT SUPPORT

In addition to teaching academic English skills and providing individualized support, ELL teachers also offer lessons and resources to support students' work for their mainstream classes. ELL teachers stay in close touch with the M1 Math and Science teachers and the M1 English and Humanities teachers to help support all ELL students. Whenever possible, we teach our students to advocate for their own learning, and work to give them an increased understanding of all the social and emotional aspects of studying and living in an English-speaking environment.

The integration of ICT skills into all subject areas creates a rich teaching and learning environment in which technology skills are used in real life contexts, enabling UNIS students to learn the necessary 21st century skills they need in Middle School, Tutorial House and beyond. ICT teachers work closely with subject area teachers to develop collaborative units that include meaningful technology components.

TECHNOLOGY OPERATIONS AND CONCEPTS

Use technology appropriately

- Use a word processor to edit, create and format documents and check spelling
- Demonstrate a basic understanding of terminology in discussing technology hardware and software
- Demonstrate basic troubleshooting of systems and applications
- Organize and manage files on computers, external drives and servers
- Use operating systems at a basic level

DIGITAL CITIZENS

Understand issues related to the safe and responsible use of technology

- Demonstrate an understanding of online safety and of the responsibility associated with using online tools
- Discuss basic issues related to responsible use of technology
- Discuss and use digital communication ethics in communicating online

- Demonstrate proper respect for copyright and ethical guidelines

CREATIVITY AND INNOVATION

Demonstrate creative thinking, build knowledge, and develop products using technology

- Use Web 2.0 tools to demonstrate creative thinking, build knowledge, and develop products
- Use appropriate software to demonstrate creative thinking, build knowledge, and develop products
- Work towards becoming independent learners
- Use graphics software to create and manipulate images

COMMUNICATIONS AND COLLABORATION

Use digital media (email, blogs, chats, and Moodle) to support learning and contribute to the learning of others

- Create digital presentations using multiple technology tools and programs
- Use multiple Web 2.0 tools to collaborate with peers and teachers

RESEARCH AND INFORMATION

Use digital tools to gather, evaluate, and make use of information

- Create spreadsheets and graphs to depict information gathered
- Locate and use learning resources
- Use Web 2.0 tools to gather, evaluate and organize information
- Discuss the guidelines for proper respect of copyright and ethical use of materials

CRITICAL THINKING, PROBLEM SOLVING AND DECISION MAKING

Use critical thinking skills to plan and conduct research, manage projects, and solve problems

- Use technology resources for solving problems and making informed decisions
- Use software to develop understanding of problem solving
- Use technology tools to plan, research and manage projects to solve real world problems
- Use technology to organize group work to solve problem

As information centers of UNIS, our libraries promote learning within and beyond the library walls by fostering the school's mission through:

- Providing access to global information and literature resources in a wide variety of formats
- Teaching library skills, critical thinking and the ethical use of ideas and information to achieve academic excellence
- Encouraging reading and literature appreciation to promote an understanding of cultural diversity

READING

Locate books in the library independently (spine labels including the concept of call number and special location for various types of material)

- Find books according to spine labels
- Locate books in the different areas of the library (fiction, nonfiction, reference, modern language)
- Articulate effectively which types of books they wish to read

Know what types of books they enjoy (for example: series, novels, poetry, biographies, and myths)

- Explain why they like or dislike them
- Identify and propose books for the end of year reading list

Select books for book talks and/or reviews

- Select a book they enjoy and/or think other students will enjoy

Give a book talk

- Give an oral presentation using predetermined criteria
- Analyze the elements of fiction
- Communicate their thoughts, feelings and opinions about a book through discussion

Explore different novels and a variety of genres

- Identify the elements of different genres
- Distinguish between different genres

Select appropriate fiction and nonfiction for class projects and personal interests

- Articulate their information needs in the form of keywords to search the catalog and online

Identify books appropriate to reading level and interest

- Engage in meaningful dialogue with the librarian or teacher
- Examine material to identify appropriate reading level
- Explore book displays
- Listen to and contribute to book talks and reviews (student and librarian)

Select and read from a range of authors

- Use the catalog to choose books by a variety of authors
- Appreciate works of literature from various authors

Select and read resources from and about different countries and cultures

- Follow librarian and teacher recommendations to select books about different countries and cultures
- Appreciate different cultures through reading

INFORMATION LITERACY AND RESEARCH

Apply a systematic process to find information

- Define the research questions as guided by the teacher

Use keywords to find information

- Generate keywords and phrases associated with their topic

Conduct more focused electronic searches

- Use keywords to search table of contents and index to locate information
- Use keywords to search the library catalog
- Use keywords to search online databases and websites

Use reference materials efficiently

- Use general encyclopedias for background information
- Utilize specialized reference materials for specific topics

Access recommended web sites for information

- Select appropriate and valid information from a variety of recommended web sites

Extract information for meaning and to create new knowledge

- Read and take relevant notes
- Organize and evaluate information

Understand the difference between a website, a database and an e-reference

- Use one of the basic subscription databases (i.e. World Book Online)

Write a simple bibliography

- Identify and record basic parts of bibliographic entry using a given template

Organize and present information in a systematic manner

- Write or present information cohesively following classroom protocol

Build on previous knowledge

- Apply previous knowledge to connect with new information

Select useful and appropriate sources from a wide range of media for units of study or personal interests

- Evaluate the relevance of a limited set of books in order to select the most appropriate source(s)
- Use keyword searches to look for relevant information in subscription databases
- Be aware of evaluation tools for websites

Make inferences and draw conclusions related to text meaning

- Begin to identify information that is embedded in the text
- Categorize and record relevant information in note form

Produce research projects or assignments in a variety of formats

- Present research conclusions, in various forms, following classroom protocol and rubric

INDEPENDENT LEARNING

Identify, find, and use complex resources for personal interest and units of study

- Use keywords in searching the electronic catalog
- Browse the electronic catalog and collection to select relevant materials
- Search the internet for appropriate information
- Begin to determine the best sources for their purposes based on currency, relevance, authority, etc.

Understand how the classification system works

- Understand that there are different ways of organizing materials
- Find resources using Dewey Decimal numbers

Follow instructions and take initiative for their own learning

- Listen to, read and follow directions
- Apply previously learned instructions independently

Select the most informative sources independently

- Begin to apply the previously learned processes (keyword searching, use of index, etc.) to determine the best sources

SOCIAL RESPONSIBILITY

Use proper library procedures

- Use student IDs to check out books
- Follow the rules of the library (noise level, movement, food, respectful attitude)

Be responsible for library materials

- Handle materials with care including electronic devices
- Check out and return materials in a timely manner

Recognize what constitutes plagiarism

- Gain an understanding of the meaning of plagiarism

- Record information from a given source in their own words
- Identify sources and parts of a bibliographic entry
- Cite a source
- Understand that copying and using material without citation is unethical
- Recognize the importance of giving credit to the author

Begin to identify what constitutes an authoritative source

- Recognize that quality of sources can vary
- Use recommended sources for school purposes

LIBRARY SERVICES

The 3rd floor school library hours are from 8 am to 5 pm, Monday to Thursday, and from 8 am to 4 pm on Friday. Students may come to the library on their own time before morning registration, during short break, lunch and after school to do school-related activities and personal reading.

The Queens Campus library is open from 8:30 am to 3 pm. Students may come to the library during their free periods if the library is not in use by a class. Students may come to the library after school if accompanied by an adult.

Students and families may access both the library catalog and the external databases from home. At home, go to the UNIS homepage (www.unis.org). From the drop-down menu under the *community* tab at the top, select *library*. Login and you will be able to use the Online Catalogs and Resources. The necessary username and password for individual databases are listed next to each icon or name. Click on the icon for the database using the saved username and password. *Internet access* is provided on computer stations and

laptops in the library, in addition to student's personal laptop. Students are allowed to do school-related work on these computers, following the UNIS Acceptable Use Policy.

Students must log in to the electronic catalog in order to access their library

accounts. This allows them to see what materials they have checked out and which might be overdue, write book reviews of titles we own, and create personal book lists. Library materials must be brought to the library in order to be renewed; this service is not available on the web.

For research and leisure reading outside the UNIS library, we encourage students to obtain a public library card.

Mathematical learning builds on the curiosity and enthusiasm of children through developmentally appropriate experiences that challenge children to explore ideas and to take risks in their learning. We believe that mathematics learning must be active, rich in language, and filled with problem-solving opportunities. Our mathematics program is one where mathematics is taught for understanding. Students acquire mathematical concepts and skills through practical tasks, real-life problems and investigations of mathematical ideas. Embedded into each strand of the UNIS math curriculum are process standards that cover mathematical reasoning, contextualization, problem solving and computational fluency.

As students deepen their mathematical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply mathematical knowledge and skills in context.

NUMBER SENSE AND OPERATIONS

The Concepts of Numbers

- Read, write, identify, compare, and round and order whole numbers, fractions, mixed numbers and decimals
- Identify the place value in decimals (tenths, hundredths, thousandths) and whole numbers to trillions
- Explore numbers less than zero by extending the number line and through familiar applications (temperature, sea level, etc.)
- Recognize improper fractions and convert to mixed numbers (vice versa)

Representing Numbers

- Demonstrate understanding of exponential notation
- Apply divisibility rules
- Identify and find multiples and factors

Relationships among Numbers

- Perform prime factorization, least common multiple, greatest common factor (double digits)

Choose Computational Method

- Select appropriate methods and tools for computing (mental computation, estimation, calculators, paper and pencil, etc.)
- Estimate and compute using the four basic operations with whole numbers, fractions (without

division), mixed numbers, and decimals

- Identify and apply whole numbers, fractions, and decimals in word problems
- Use inverse relationships of addition and subtractions, multiplication and division, to simplify computations and solve problems
- Explore simplifying expressions using order of operations
- Explore associative, commutative, and distributive properties to simplify computations

STATISTICS AND PROBABILITY

Organizing and Interpreting Data

- Collect, tally, sort, analyze, and display their own data using appropriate graphs
- Read, interpret, tally, and create graphs: pie, bar, double-bar, line, and double line graphs
- Find measures of central tendency including: mean, median, mode, and range

Make Predictions

- Analyze and describe the likelihood of events (impossible, unlikely, likely, certain)
- Draw conclusions from graphs

MEASUREMENT

Use Appropriate Measuring Devices

- Use metric and customary systems of measurement
- Use a ruler to draw and measure
- Use a protractor to draw and measure angles

Write and Interpret Formulas

- Substitute numerals into the given formula

Calculate Quantities

- Find and label appropriately area, volume, mass, temperature, perimeter, time, etc.
- Convert from one unit to another within the same system

The Need for Measurement

- Use practical methods to find perimeter, circumference and area of shapes
- Develop strategies to find the area and perimeter of irregular shapes

Identify Appropriate Units of Measurement

- Select and apply appropriate units of measurement

Convert Units of Measurement

- Calculate simple unit conversions i.e. from centimeters to meters, within a system of measurement

ALGEBRA

Patterns and Relationships

- Recognize the concept and meaning of a variable as an unknown quantity that is represented by a letter or symbol
- Substitute a given set of values for a variable to determine possible values of an expression

Algebraic Expressions

- Translate phrases into one step algebraic expressions and vice-versa using addition and subtraction
- Solve one-step equations using addition and subtraction
- Solve simple formulae through substitution
- Model equations and find solutions for unknown quantities in one-step equations

GEOMETRY

Geometric Models

- Identify, differentiate, and draw angles, points, lines, line segments, and rays
- Identify and draw intersecting, perpendicular, and parallel lines
- Identify acute, right, obtuse, and straight angles
- Introduce reflex angles
- Describe and classify two and three-dimensional objects using their defining characteristics (triangles, quadrilaterals, cubes, etc.)
- Identify, measure, and draw angles using a protractor
- Draw circles using a compass
- Draw simple 2D geometric shapes with specified properties, such as side length, radii, or angle measures

Coordinate Geometry

- Identify the first quadrant of the coordinate plane

- Plot points on the plane in the first quadrant
- Introduce transformations such as flips, slides, and turns of 2D shapes
- Identify and describe lines of symmetry

Problem Solving and Modeling

- Use spatial visualization to recognize geometric shapes and structures in an environment
- Relate ideas in geometry to number and measurement problems
- Find perimeter and area of triangles, quadrilaterals, and simple irregular shapes

PROCESS STANDARDS

- Problem Solving
- Reasoning and Proof
- Communication
- Connections
- Representation

The Modern Language curriculum is a key component of the UNIS instructional program. Students develop strong communication skills in one language from Kindergarten and begin a second language in the Middle Three Year. UNIS also fosters Mother Tongue instruction at all levels for all languages within the educational program.

UNIS believes that learning additional languages and supporting Mother Tongue and/or Heritage Language instruction contributes to the holistic development of students. The program fosters the enhancement of language skills necessary to succeed in different communicative situations. It exposes students to a broad cultural environment that helps promote understanding of world societies through languages.

UNIS benchmarks have been designed to reflect the European Framework skills set (reading, writing, speaking and listening) through, where appropriate, the lens of Communication, Comparisons, Communities, Culture and/or Connections.

COMMUNICATION

Effective communication

- Establish formal contact: formal greetings and farewells, introductions, giving thanks, and asking people how they are
- Use sufficient vocabulary to express basic needs
- Initiate and respond to simple statements on familiar topics
- Ask for and provide personal information (physical characteristics, name, birth place, hobbies, etc. (written and oral)
- Make and respond to invitations
- Ask for and give simple directions
- Read aloud and present a short text
- Order a meal in target language
- Describe people, places, and possessions in simple terms
- Write short descriptive notes conveying basic information
- Write brief reports on various topics
- Extract and use information from short written passages
- Use the most frequently occurring connectors to link sentences (oral and written)

CONNECTIONS

Content & Language Integrated Learning (CLIL)

- Access and use a variety of media to familiarize themselves with the target language
- Formulate short texts on familiar topics
- Draw on and use information from other subject areas (CLIL) to enhance their knowledge of everyday situations
- Share and present information about themselves and their environment
- Use simple phrases to request and provide information in different situations
- Share viewpoints (likes, dislikes etc.) in the target language (oral and written)
- Give short basic descriptions of events and activities (oral and written)
- Recognize names, words and phrases, used in everyday situations, in the target language

COMPARISONS

Mutual understanding

- Demonstrate control of basic grammatical structures and sentence patterns
- Share opinions on daily experiences and cultural differences
- Present facts about global issues relevant to their daily lives
- Participate in short skits and/or role plays on topics of interest

COMMUNITIES & CULTURE

- Communicate needs and feelings with their community
- Gather and present basic information on familiar topics (museums, and restaurants etc.)
- Research and talk about the role of different organizations at the UN
- Exchange ideas on language, culture and traditions
- Develop an awareness of cultural codes
- Find and use information from a variety of sources to complete oral and written assignments (postcards, short text, simple presentations, class discussions)

The UNIS music program offers students the opportunity to function as skilled and literate performers, active listeners, passionate creators and informed critics. Participants become part of a group dynamic, developing an understanding of their unique role as an individual in that group. Music making enriches the mind, the body, and the spirit, and motivates students to go beyond their comfort zone, find solutions, and explore the full range of human emotion which ultimately provides the model for participation in a global community.

We believe that a rich musical experience involves the exploration, study and performance of music from diverse cultures. The curriculum includes the extensive study of various musical styles and techniques, the study of music notation, as well as the tradition of music making and performance. As students deepen their musical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply musical knowledge and skills in context.

ACTIVE MUSIC MAKING

Perform in a musical ensemble (strings, winds, voice)

- Develop a healthy playing/singing position and posture
- Demonstrate fundamentals of tone production
- Play/Sing together while following a conductor

Learn the collaborative skills necessary to participate as a positive member of the group

- Being prepared for class
- Follow teacher/conductor's gestures and cues
- Demonstrate attentive listening, proper rest and performance posture
- Perform in concerts with appropriate demeanor, focus, etiquette
- Establish regular home practice routine

LISTENING AND ANALYZING

Listen analytically to themselves and others

- Identify timbre of orchestral instruments and voice types
- Understand basic principles of sound production
- Identify qualities of excellence in professional performances (live or recorded)
- Develop language with which to assess music and performance qualitatively
- Articulate and support their own thoughts and opinion

INTERPRETING WRITTEN AND AURAL PERCEPTION

Develop an understanding of the skills to become independent music learners

- Transition to traditional notation reading and writing

- Recognize and define basic musical symbols and terminology
- Distinguish and describe musical elements (melodic, rhythmic) in listening examples
- Recall and notate musical patterns, phrases, rhythms (dictation)
- Sight-read simple melodies and rhythmic patterns
- Follow line or part in a musical score
- Identify pulse and meter in simple time

INTERDISCIPLINARY PROCESS STANDARDS

- Self-expression
- Abstract and creative thinking
- Communication and collaboration
- Community building
- Working through challenges
- Working toward a common goal

The Mission of UNIS' Physical Education program is to engage students' interest in physical development and competence through lifelong fitness, recreational and competitive activities. The curriculum aims to promote students' acquisition and application of movement, skills and knowledge. It provides a diversified program allowing for opportunities to think critically, to collaborate and to reflect, as each student creates an awareness and ability to define their personal growth and physical wellbeing.

During Physical Education at this grade, students enjoy being active and using their creativity and imagination in physical activity. They learn new skills, find out how to use them in different ways, and link them to make actions, phrases and sequences of movement. They enjoy communicating, collaborating and competing with each other. They develop an understanding of how to succeed in different activities and learn how to evaluate and recognize their own success.

The UNIS scheme of work draws together parts of the programs of study to create a framework that shows how students might be helped to progress. In PE, this includes progression in:

- Acquiring and developing skills
- Selecting and applying skills, tactics and compositional ideas
- Evaluating and improving performance
- Knowledge and understanding of fitness and health

These four aspects are closely linked and are developed through the physical activity pupil's carry out. For example, the evaluating and improving of performance will take into account the relationship between developing, selecting and applying skills, tactics and compositional ideas, and fitness and health. The quality of a performance and the selection of skills, tactics and compositional ideas are affected by the range and level of skills, the type and degree of fitness and the understanding of the concept of the activity.

GAMES ACTIVITIES

Invasion Games e.g. Basketball

Net/Wall Games e.g. Table Tennis

Striking/Fielding Games e.g. Softball

Acquire and develop skills

- Adapt and develop personal skills
- Choose, combine, and perform skills more fluently, and effectively in games

Select and apply skills, tactics and compositional ideas

- Understand, choose and apply a range of tactics and strategies for defense and attack
- Use tactics and strategies more consistently in similar games

Apply knowledge and understanding of fitness and health

- Recognize why exercise is good for general fitness, health, and wellbeing
- Understand the need to prepare properly for games

Evaluate and improve performance

- Develop and evaluate personal and peer performance and suggest ways to improve

DANCE AND CREATIVE MOVEMENT

Gymnastics

Dance

Acquire and develop skills

- Combine and perform gymnastic actions, shapes and balances more fluently and effectively across the activity areas

- Develop gymnastic sequences by understanding, choosing and applying a range of compositional principles

Apply knowledge and understanding of fitness and health

- Understand why warming up and cooling down are important
- Carry out warm ups safely and effectively

Evaluate and improve performance

- Evaluate personal performance
- Suggest ways of making improvements

SWIMMING ACTIVITIES AND WATER SAFETY

Swimming

Acquire and developing Skills

- Improve linking movements and actions

Select and apply skills, tactics and compositional ideas

- Choose, use and vary strokes and skills, according to the task and the challenge

Apply knowledge and understanding of fitness and health

- Know and describe the short-term effects of exercise on the body, and how it reacts to different types of activity

Evaluate and improve performance

- Describe and evaluate the quality of swimming and recognize what needs improving

ATHLETIC ACTIVITIES

Fitness for Life

Track and Field

Acquire and develop skills

- Develop and improve the consistency of actions in a number of events
- Increase the number of techniques used

Select and apply skills, tactics and compositional ideas

- Choose appropriate techniques for specific events

Apply knowledge and understanding of fitness and health

- Understand the basic principles of warming up

Evaluate and improve performance

- Understand the nature of athletic activities and make effective evaluations of strengths and weaknesses of performance

An understanding of science is an essential component of modernity. Science is both an activity for generating knowledge about the natural world and a set of ideas – the mental models of chemists, physicists and biologists – about the origin and content of that world, and the interactions that take place in it. While only a small number of individuals will become professional scientists, all our lives are being transformed by technology i.e. the application of these ideas. Challenging ethical issues arise with each new scientific discovery, and changing scientific ideas shape and reshape our thinking about who we are.

The UNIS science program seeks to establish a climate of learning in which students feel that asking questions and evaluating the answers to those questions is the legitimate business of science. Students learn that only ideas that can be tested experimentally are scientific ideas, and that science proceeds by making predictions based on these ideas and testing them. The program is designed to develop in students the practice of critical thinking and logical argument, and to encourage, recognize and value creativity in finding solutions to scientific and technological problems.

BIOLOGY

Structure and function

- Know that all living organisms are composed of one or more cells that carry out the functions necessary for life
- Understand that viruses, bacteria, fungi and parasites may infect the human body and interfere with normal body functions

The interdependence of living organisms

- Classify organisms into kingdoms according to characteristics that they share
- Understand that food webs are models showing how matter and energy are transferred between producers, consumers and decomposers in an ecosystem
- Know that size is limited for any population of organisms, and the maximum size is dependent on the organisms' environment

CHEMISTRY

The nature of matter

- Know that matter has observable properties that can be measured
- Know that all matter is made of small particles called atoms, and

different substances are made of a limited number of atoms arranged in different ways

- Understand the relationship between energy, molecular motion, temperature, and states of matter
- Know that solids, liquids and gases are states of matter that have different properties
- Understand that melting and dissolving are different

PHYSICS

The forces that act on matter to produce changes in motion

- Understand that forces have magnitude and direction and affect the motion of objects

EARTH & SPACE

The place of the Earth in the universe

- Know that the Sun, the Earth and the moon move relatively to each other, and are part of a larger system of bodies called the solar system
- Explain how their movements are responsible for how we divide up time
- Know that the solar system is one of billions that together make up the

galaxy, and the galaxy is one of trillions in the known universe

- Understand that gravity holds the arrangement of moons, planets, stars and galaxies together

SCIENCE SKILLS

Experimental Work

- Formulate questions
- Identify variables
- Make testable predictions
- Design experimental procedures

Analysis

- Classify objects/processes by shared properties
- Interpret data to identify relationships
- Draw conclusions based on the agreement between predictions and experimental data

Communication

- Communicate ideas, understandings, procedures and findings in written, spoken and media-based modes
- Use scientific language correctly
- Construct tables and graphs, both bar and line, by hand and/or with computer software



Middle School

Middle Two

Middle Two students use their imagination to create art works in response to personal experiences and cultural study. They develop new skills in different media and learn approaches to problem solving through their projects. Focused activities and skill building help students understand and apply the principles of design to communicate ideas and expression. Students expand their awareness of cultural differences and learn to appreciate art from these perspectives. Students learn how to use and appreciate the art classroom as a studio where the social, intellectual and practical aspects of artistic study take place.

OBSERVING

Drawing

- Compose space and objects from different viewpoints
- Identify the act of drawing with seeing and observing objects in space

Designing

- Describe, compare and interpret images, forms, and their compositions

Observing Art, process, and context

- Recognize works of art, objects for drawing, and the environment in relationship to art concepts and assigned projects
- Identify connections between personal, cultural, or interdisciplinary contexts in activities and projects
- Support art concepts in relation to contexts presented

- Use media intentionally, employing a demonstrated process or the application of a specific technique

INVESTIGATING

Using a Developmental Sketchbook

- Formulate ideas and solutions to project guidelines during the creative process
- Explore possibilities in media, techniques, and composition
- Experiment with ideas in different contexts through the sketchbook
- Solve problems thoughtfully
- Distinguish various solutions and develop a plan

Technique and Concepts

- Use media, techniques, and/or composition to express specific ideas or solutions

CREATING

Realizing Finished Projects

- Apply unit concepts through projects, exercises and assessments
- Use demonstrated media and techniques with imagination and intention
- Solve technical problems with some assistance
- Organize art creation in a sequential procedure
- Choose and apply media and techniques using methods demonstrated

Presentation

- Compose, construct, revise, and complete projects according to guidelines
- Prepare and present thoughtful, completed artwork
- Value personal work

English is the first language of the school, and as such, it serves multiple purposes, as a means of communication for the community, as the medium of instruction in most other core subjects, and as a discrete discipline with its own curriculum.

The strands of reading, writing, listening, and speaking are at the heart of all of the work our children do in all of their classes, in school and at home, individually and in groups. These components are not separate but rather in constant interaction and reflect the changing demands of literacy today.

Our goal is to help students attain their highest possible levels in all areas of English. We want them to gain a sophisticated command of the language, develop their capacity for self-expression, use language as a means to clarify thinking, unleash their imaginations, and construct meaning from the world around them through participation in oral activities, writing in different genres, and reading of fine literature.

READING

Read examples of and discuss characteristics of different genres

- Read a range of texts which include novels, stories, myths, and poems
- Recognize and discuss various features of fiction including author, audience, plot, setting, character, theme, poetic devices
- Recognize and discuss various features of non-fiction including author, audience, fact, opinion, main idea, supporting points
- Identify and explain the various features of poetry and plays

Use a comprehensive range of strategies to read, comprehend, extract, and present information from text

- Use word parts, contextual clues, and dictionary and thesaurus skills for vocabulary development
- Develop a knowledge of key text-based vocabulary and idiom usage
- Draw on knowledge of word origins and word-building strategies to work out new words
- Attempt several strategies, including rereading, reviewing, and making notes about key features of text, when reading more difficult works
- Apply and integrate creatively the techniques of questioning, connecting, previewing, skimming

- and scanning, paraphrasing, and summarizing to their reading
- Adjust reading strategies for different texts and different purposes
- Make inferences and predictions about plot, character, and theme

Use a range of skills and strategies when reading and interpreting texts

- Use strategies, such as making predictions, graphing information, and creating lists to make sense of text, both written and visual
- Paraphrase, explain, or summarize the literal level of passages of text
- Find and discuss examples of figurative language from literary texts
- Discuss plot, character, and simple themes, and provide supporting evidence from text to illustrate
- Make comparisons and identify differences between texts produced in different media, periods, and cultures

Increase the breadth and depth of reading choices

- Choose personal reading books from the library and annotated lists
- Critique and appraise reading choices
- Report on and recommend personal reading

Appreciate that multi-media sources can enrich reading

- Learn how to read and conduct research using conventional texts and information technology resources
- Use audio, visual, and electronic sources to augment reading
- Read and conduct research using print, multi-media, and electronic resources

WRITING

Understand the process of modeling, planning, organizing, composing, and critiquing texts by retrieving, recording, organizing, and evaluating information appropriate to purpose and audience

- Plan and organize their ideas and information, with some guidance and more independence, prior to writing
- Write in a variety of styles to suit a particular purpose, for example, to entertain, recount, socialize, inquire, describe, persuade, explain, or instruct
- Write to define, clarify, and develop ideas using a strong voice and expressing some intellectual depth

Make critical choices about the composition of a text based on an analysis of the purpose and the intended audience

- Write stories and poems on assigned and original topics

- Write with conviction, using a strong personal voice when presenting a point of view
- Present different points of view through the representation of characters, events, and ideas in literary and informational texts
- Develop topics independently and fully
- Develop an overall logical organization in a text, focusing on paragraph arrangement and cohesion

Use a range of processes to plan, draft, and refine writing and start to select specific devices appropriate to purpose and audience

- Select and synthesize relevant information and plan text sequence
- Extend, refine, and use new vocabulary
- Select, consciously, words, clauses, or phrases to achieve impact
- Consolidate strategies used throughout the writing process
- Use knowledge of grammar, punctuation, and spelling to proofread and edit their own and others' writing

Present legible and neat handwriting

- Present legible work at all writing stages, at draft and formal publishing levels
- Choose appropriate combinations of written text, image, and color to publish text, whether handwritten or computer generated

Use computer technology to present text in a variety of ways

- Use computer software programs and associated technology to format texts
- Use the online thesaurus

- Vary font and layout to suit a particular audience and purpose
- Choose appropriate graphics to accompany text
- Use the library databases for school assignments
- Produce a variety of texts and projects with attention to design, layout, and graphics
- Acknowledge print and Internet sources used in assignments

LISTENING

Listen for a range of purposes and in a variety of situations

- Listen to more involved procedures and explanations such as instructions or investigations or outlines of a more complex task
- Listen to and note key ideas and information from guest speakers, recordings, films, and dramatic presentations

Learn how and why to listen attentively while others speak or read aloud

- Acquire information and further knowledge through attentive listening
- Follow teachers directions to stay focused, engaged, and involved in oral presentations and discussion
- Recognize the required elements of different types of oral and dramatic presentations
- Respond to oral presentations dealing with more challenging topics
- Listen to the opinions of others and give considered reasons for their own opinions

SPEAKING

Participate in different forms of oral presentations for a variety of purposes, on both familiar and new topics, in formal and informal classroom activities

- Give sustained information reports on generalized research topics, offer opinions, and justify a point of view

Take part in formal and informal discussions

- Discuss and reflect upon a variety of responses and views, and challenge a point of view with supporting evidence

Perform in dramatic presentations

- Make dramatic presentations in individual and group settings
- Join in group or individual recitations of a variety of poems

Begin to communicate more effectively for a range of purposes and with a variety of audiences to express well-developed, well-organized ideas dealing with more challenging topics

- Engage in productive groups, pairs, whole class, and assembly presentations and discussions
- Speak with clarity, and use persuasive language to debate given topics
- Make an oral presentation using technology

Use a speaking style appropriate to the activity

- Experiment with varying voice tone, volume, and pace
- Speak clearly and convey meaning to peers

The program in the Middle School encourages active investigation and discussion of ideas, of similarities and differences, of connections between the past and the present. Students follow a common course of study integrating the five strands of world history, geography, social sciences, host country and United Nations. Class work emphasizes active inquiry. We have a strong commitment to learning beyond the classroom, drawing on the diversity and resources of New York City and our parent body.

M2 students examine the importance of government, values and beliefs in shaping the lives of individuals and groups in classical societies. This includes the historical origins and teachings of major world religions. Students explore the achievements and legacies of India, China, Greece and Rome. Students examine the concept of region as a geographical, political, cultural and historical space, and the interaction between geographical characteristics and human activities. Additionally, the relationship between economic systems, social and political systems, and cultural ideas and beliefs are explored. With reference to the United Nations, students examine the rights of women in world societies.

This course is offered in French for Francophone students.

HISTORY

India, China, Athens

- Identify, describe and compare the achievements and legacies of Gupta India, Han China, Classical Athens and Republican Rome
- Identify and describe the ways in which religions shaped these societies

Origins and Teachings of Hinduism, Buddhism, Confucianism and Daoism

- Identify, describe and compare the beliefs, practices and spread of religions

Democracy and Citizenship

- Identify and describe the achievements of government, law, technology and language

GEOGRAPHY

Location, Topography, Climate and Vegetation (India, China, Greece)

- Define and describe regions in terms of geographical features
- Identify and describe regions in terms of human characteristics (political, economic, cultural, historical)
- Identify and describe regions and characteristics as represented on different maps
- Explain how geographical factors influenced economic, political and cultural development of regions

SOCIAL SCIENCE

Democracy: Political systems of Athens

- Identify similarities and differences

Participatory Citizenship (Athens and Sparta)

- Compare the rights, qualifications and responsibilities of citizens
- Compare the rights and responsibilities of subjects

Social Structures

- Define and compare egalitarian and hierarchical social systems

HOST COUNTRY

Current Events

- Identify and discuss national current events linked to U.S. government and citizenship

UNITED NATIONS

Gender inequality

- Describe examples of the work of the UN in reference to women's status in specific societies
- Compare and evaluate the status of women in contemporary and historical societies
- Describe examples of current world events which have been significant for women, or where women have made a difference

SKILLS

Investigation - Identifying, selecting and ordering what is relevant as evidence from a range of sources and materials

- Find information and recognize what is relevant to a given topic
- Distinguish between primary and secondary sources

Analysis - Recognizing, connecting, interpreting and evaluating, drawing conclusions and/or problem solving to demonstrate an understanding of a topic or question

- Compare and contrast different kinds of sources and points of view
- Make interpretations and inferences based on cause and effect

Communication - Creating, speaking, using media and writing for a specific purpose

- Demonstrate relevant knowledge and understandings in a coherent and meaningful way: diagrams/charts, paragraphs, reports - spoken and written first person narratives, video and other electronic media and debate
- Use simple referencing conventions to identify sources

English is the primary language of instruction at UNIS. Close to 1,500 students, speaking seventy different languages may be represented at any one time.

Some students arrive at UNIS with little or no knowledge of English. On a regular basis, about ten percent of the student body benefits from additional instruction in English.

The UNIS ELL teachers are responsible for the teaching and curriculum design of the K-12 program. The goal is to ensure successful integration of ELL students into the UNIS community both academically and socially.

Upon entering UNIS, students who speak, or write in, a language other than English at home, or are not fluent in English, are assessed by the ELL teachers. Evaluation results place a student in beginning, intermediate or advanced ELL classes, or in a full mainstream program.

From the first day of school, the ELL students are assigned to a homeroom with their peers. The placement into homerooms ensures their constant exposure to English and allows for an early integration into the UNIS community. S

For the complete ELL beginner, the focus is on verbal communication skills to enable the student to function in the new environment. Reading and writing are used to reinforce grammatical structures and vocabulary. The intermediate ELL student works on expanding vocabulary, increasing reading comprehension and refining writing skills, facilitating participation in mainstream classes. The advanced ELL student moves towards fluency in spoken and written English to approximate grade level competency. Full integration into the UNIS mainstream curriculum takes place when a student masters the advanced level ELL materials for the appropriate grade level and can comprehend content material used in the mainstream classroom.

LANGUAGE SKILLS

Reading skills

Beginner

- Identify English letters and numbers, both printed and cursive forms
- Recognize sounds of the English alphabet in oral reading
- Use basic English sight words
- Practice beginning reading and comprehension skills, both silent and oral
- Adapt content material for all subject areas
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Intermediate

- Compare and contrast vocabulary for reading in varied contexts
- Identify vocabulary and concepts to follow mainstream classes with support
- Practice intermediate reading and comprehension skills, both silent and oral

- Move towards independent comprehension of mainstream materials
- Recognize importance of reading independently for pleasure in English and their mother tongue

Advanced

- Compare and contrast grade level vocabulary and comprehension with authentic texts, in both fiction and non-fiction
- Use vocabulary and concepts to follow all mainstream classes independently
- Read with clear pronunciation, intonation, and fluency
- Read in order to compare, contrast, and analyze texts
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Writing Skills

Beginner

- Write letters and numbers using correct form

- Write simple words with ease and fluency
- Write accurate simple sentences
- Use spelling rules
- Write early stage narratives
- Present work neatly and clearly

Intermediate

- Use compound sentences
- Develop creative and factual writing
- Identify and use basic writing skills for mainstream courses
- Demonstrate intermediate spelling skills
- Present work neatly and clearly
- Use writing as a communicative tool

Advanced

- Use advanced vocabulary, concepts, and structures to write for all mainstream classes
- Develop creative and factual writing
- Compare, contrast, and analyze texts
- Demonstrate writing fluency for communication
- Proofread and edit own work
- Present work neatly and clearly

Listening Skills

Beginner

- Follow one or two-step classroom instructions
- Recognize and use basic English vocabulary
- Communicate socially appropriate responses
- Use basic communicative and functional language
- Demonstrate basic English sentence structure

Intermediate

- Follow multi-step classroom instructions
- Identify and use appropriate vocabulary in a variety subject areas
- Demonstrate knowledge of social registers
- Use communicative and functional language skills necessary for classroom and social situations
- Recognize and use more complex English sentence structures

Advanced

- Explore and use a variety of grammatically correct and appropriate idiomatic structures with ease
- Demonstrate near native understanding of communicative and functional language
- Demonstrate academic language necessary to function in all mainstream classes

Speaking skills

Beginner

- Use a variety of grammatically correct and appropriate idiomatic structures with ease
- Begin to show near native understanding of communicative and functional language

- Begin to use academic language necessary to function in all mainstream classes

Intermediate

- Explore and use communicative and functional language skills in social and academic settings
- Discuss and compare vocabulary in order to discuss subjects in content area classes
- Demonstrate a command of intermediate rules of grammar and syntax
- Use basic verb tenses correctly
- i) Present tense - simple and continuous
- ii) Past tenses - simple and continuous
- iii) Simple future
- Use compound/complex sentences
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

Advanced

- Demonstrate communicative and functional language both social and academic at near native fluency
- Explore and use academic vocabulary to function in all mainstream classes
- Demonstrate the rules of grammar and syntax
- Demonstrate correct usage of complex verb tenses
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

LEARNING SKILLS

Responsibility

- Fulfill commitments
- Complete and submit class work, homework, assignments on time
- Manage his/her behavior

Organization

- Manage learning materials and equipment
- Establish priorities and manage time
- Use class time appropriately

Independent work

- Follow instructions
- Seek assistance when required
- Show resourcefulness in carrying out independent work

Collaboration

- Respond constructively to the ideas and opinions of others
- Work as part of a group to achieve goals

Initiative

- Demonstrate curiosity and a willingness to take on new ideas, concepts, and experiences
- Approach new tasks positively
- Assess and reflect critically on his/her strengths and areas for improvement

CONTENT SUPPORT

In addition to teaching academic English skills and providing individualized support, ELL teachers also offer lessons and resources to support students' work for their mainstream classes. ELL teachers stay in close touch with the M2 Math and Science teachers and the M2 Core (English and Humanities) teachers to help the M2 ELL students. Whenever possible, we teach our students to advocate for their own learning, and work to give them increased understanding of all the social and emotional aspects of studying and living in an English-speaking environment

The integration of ICT skills into all subject areas creates a rich teaching and learning environment in which technology skills are used in real life contexts, enabling UNIS students to learn the necessary 21st century skills they need in Middle School, Tutorial House and beyond. ICT teachers work closely with subject area teachers to develop collaborative units that include meaningful technology components.

TECHNOLOGY OPERATIONS AND CONCEPTS

Use technology appropriately

- Use a word processor to edit, create and format documents and check spelling
- Demonstrate a basic understanding of terminology in discussing technology hardware and software
- Demonstrate basic troubleshooting of systems and applications
- Organize and manage files on computers, external drives and servers
- Use operating systems at a basic level

DIGITAL CITIZENS

Understand issues related to the safe and responsible use of technology

- Demonstrate a basic understanding of online safety and of the responsibilities associated with using online tools
- Discuss basic issues related to responsible use of technology
- Discuss and use digital communication ethics when communicating online

- Demonstrate proper respect for copyright and ethical guidelines

CREATIVITY AND INNOVATION

Demonstrate creative thinking, build knowledge, and develop products using technology

- Use Web 2.0 tools to demonstrate creative thinking, build knowledge, and develop products
- Use appropriate software to demonstrate creative thinking, build knowledge, and develop products
- Work towards becoming independent learners
- Use graphics software to create and manipulate images

COMMUNICATIONS AND COLLABORATION

Use digital media (email, blogs, and chats, and Moodle) to support learning and contribute to the learning of others

- Create digital presentations using multiple technology tools and programs
- Use multiple Web 2.0 tools to collaborate with peers and teachers

RESEARCH AND INFORMATION

Use digital tools to gather, evaluate, and make use of information

- Create spreadsheets and graphs to depict information gathered
- Locate and use learning resources
- Use Web 2.0 tools to gather, evaluate and organize information
- Discuss the guidelines for proper respect of copyright and ethical use of materials

CRITICAL THINKING, PROBLEM SOLVING AND DECISION MAKING

Use critical thinking skills to plan and conduct research, manage projects, solve problems

- Use technology resources for solving problems and making informed decisions
- Use software to develop understanding of problem solving
- Use technology tools to plan, research and manage projects to solve real world problems
- Use technology to organize group work to solve problem

As information centers of UNIS, our libraries promote learning within and beyond the library walls by fostering the school's mission through:

- Providing access to global information and literature resources in a wide variety of formats
- Teaching library skills, critical thinking and the ethical use of ideas and information to achieve academic excellence
- Encouraging reading and literature appreciation to promote an understanding of cultural diversity

READING

Locate books in the library independently (spine labels including the concept of call number and special location for various types of material)

- Find books according to spine labels
- Locate books in the different areas of the library (fiction, nonfiction, reference, modern language)

Know what types of books they enjoy (for example: series, novels, poetry, biographies, and myths)

- Articulate effectively which types of books they wish to read
- Explain why they like or dislike a particular book
- Identify and propose books for the end of year reading list

Select books for book talks and/or reviews

- Select a book they enjoy and/or think other students will enjoy

Give a book talk

- Give an oral presentation using predetermined criteria

Analyze elements of fiction and read for detail

- Analyze the elements of fiction in more detail
- Communicate their thoughts, feelings and opinions about a book

Explore different novels and variety of genres

- Identify the elements of different genres

- Distinguish between different genres
- Narrow preferences

Select appropriate fiction and nonfiction for class projects and personal interests

- Articulate their information needs in the form of keywords to search the catalog and online

Select books appropriate to reading level and interests

- Engage in meaningful dialogue with the librarian or teacher
- Examine material to identify appropriate reading level
- Explore book displays
- Listen to and contribute to book talks and reviews (student and librarian)

Choose challenging materials

- Explore more advanced materials

Select and read from a range of authors

- Use the catalog to choose books from a variety of authors
- Appreciate works of literature from various authors

Select and read resources from, and about, different countries and cultures

- Follow librarian and teacher recommendations to select books about different countries and cultures
- Appreciate different cultures through reading

INFORMATION LITERACY AND RESEARCH

Apply a systematic process to find information

- Define the research questions as guided by the teacher

Use keywords to find information

- Generate keywords and phrases associated with their topic
- Use keywords to search table of contents and index to locate information

Conduct more focused electronic searches through the library catalog and databases using keywords

- Use keywords to search the library catalog
- Use keywords to search online encyclopedias

Use reference materials

- Use general encyclopedias for background information
- Utilize specialized reference materials for specific topics

Recognize useful websites for a variety of projects

- Select information from a group of recommended web sites

Understand the difference between a website, a database and e-reference

- Use one of the basic subscription databases (i.e. World Book Online)

Extract information for meaning and to create new knowledge

- Read and take relevant notes
- Organize and evaluate information

Write a simple bibliography

- Identify and record basic parts of bibliographic entry using a given template

Organize and present information in a systematic manner

- Write or present information cohesively following classroom protocol

Build on previous knowledge

- Apply previous knowledge to connect with new information

Select useful and appropriate sources from a wide range of media for units of study or personal interest

- Evaluate the relevance of a limited set of books in order to select the most appropriate source(s)
- Use keyword searches to look for relevant information in subscription databases
- Begin to evaluate and select websites according to established criteria

Make inferences and draw conclusions related to text meaning

- Begin to identify information that is embedded in the text
- Categorize and record relevant information in note form

Produce research projects or assignments

- Present research conclusions, in various forms, following classroom protocol and rubric

INDEPENDENT LEARNING

Identify, find, and use complex resources for personal interest and units of study

- Use keywords in searching the electronic catalog
- Browse the electronic catalog and collection to select relevant materials
- Search the internet for appropriate information

Select and evaluate a greater variety of resources for research

- Begin to determine the best sources based on currency, relevance, authority, etc.

Understand how the classification system works

- See that there are different ways of organizing materials
- Find resources using Dewey Decimal numbers

Follow instructions and take initiative for their own learning

- Listen to, read and follow directions
- Apply previously learned instructions independently

Select the most informative sources independently

- Begin to apply the previously learned processes (keyword searching, use of index, etc.) to determine the best sources

SOCIAL RESPONSIBILITY

Use proper library procedures

- Use student IDs to check out books
- Follow the rules of the library (noise level, movement, food, respectful attitude)

Be responsible for library materials

- Handle materials with care, including electronic devices
- Check out and return materials in a timely manner

Respect the different needs of students in the library setting

- Show respect for the learning needs of others

Recognize what constitutes plagiarism

- Understand the meaning of plagiarism
- Record information from a given source in their own words
- Identify sources and parts of a bibliographic entry
- Cite a source
- Understand that copying and using material without citation is unethical
- Recognize the importance of giving credit to the author

Begin to identify what constitutes an authoritative source

- Recognize that quality of sources can vary
- Use recommended sources for school purposes

LIBRARY SERVICES

The 3rd floor school library hours are from 8 am to 5 pm, Monday to Thursday, and from 8 am to 4 pm on Friday. Students may come to the library on their own time before morning registration, during short break, lunch and after school to do school-related activities and personal reading.

The Queens Campus library is open from 8:30 am to 3 pm. Students may come to the library during their free periods if the library is not in use by a class. Students may come to the library after school if accompanied by an adult.

Students and families may access both the library catalog and the external databases from home. At home, go to the UNIS homepage (www.unis.org). From the drop-down menu under the *community* tab at the top, select *library*. Login and you will be able to use the Online Catalogs and Resources. The necessary username and password for individual databases are listed next to each icon or name. Click on the icon for the database using the saved username and password.

Internet access is provided on computer stations and laptops in the library in addition to student's personal laptop. Students are allowed to do school-related work on these computers, following the UNIS Acceptable Use Policy.

Students must log in to the electronic catalog in order to access their library accounts. This allows them to see what materials they have checked out and which might be overdue, write book reviews of titles we own, and create personal book lists. Library materials must be brought to the library in order to be renewed; this service is not available on the web. For research and leisure reading outside the UNIS library, we encourage students to obtain a public library card.

Mathematical learning builds on the curiosity and enthusiasm of children through developmentally appropriate experiences that challenge children to explore ideas and to take risks in their learning. We believe that mathematics learning must be active, rich in language, and filled with problem-solving opportunities. Our mathematics program is one where mathematics is taught for understanding. Students acquire mathematical concepts and skills through practical tasks, real-life problems and investigations of mathematical ideas. Embedded into each strand of the UNIS math curriculum are process standards that cover mathematical reasoning, contextualization, problem solving and computational fluency.

As students deepen their mathematical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply mathematical knowledge and skills in context.

NUMBER SENSE AND OPERATIONS

The Concepts of Numbers

- Read, write, compare, and order integers, fractions, percentages, mixed numbers and decimals. Round to given decimal places and to 1 significant figure
- Identify the place value in decimals (to ten thousandths) and whole numbers to trillions
- Explore numbers less than zero by extending the number line and through familiar applications (debt, temperature, altitude, etc.)

Representing Numbers

- Convert from improper fractions to mixed numbers (vice versa)
- Represent large numbers using exponential, scientific, and calculator notation
- Recognize equivalent representations between fractions, decimals, and percentages, including terminating and repeating decimals

Relationships among Numbers

- Apply divisibility rules (2, 3, 4, 5, 6, 8, 9, and 10)
- Identify and find multiples and factors
- Perform prime factorization, least common multiple, greatest common factor (triple digits)

Choose Computational Method

- Select appropriate methods and tools for computing (mental computation, estimation, calculators, paper and pencil, etc.)

Compute Fluently and Make Reasonable Estimates

- Use whole numbers, fractions, and decimals to represent different situations
- Find the percent of a number
- Estimate and compute using the four basic operations with whole numbers, fractions, mixed numbers, and decimals
- Use inverse relationships of addition and subtraction, multiplication and division, to simplify computations and solve problems
- Simplify expressions using order of operations
- Identify and use associative, commutative, and distributive properties to simplify computations
- Solve word problems involving ratios, rates, and percent

STATISTICS AND PROBABILITY

Graphically Represent Data

- Draw an appropriate graph (line, bar, circle, etc.) using proper scale and intervals
- Draw a stem and leaf diagram to represent data

- Draw scatterplots and recognize trends (positive, negative, no trend)

Measures of Central Tendency

- Find measures of central tendency including: mean, median, mode, and range

Simple Probability

- Compute probability for simple events
- Represent probability as a ratio, decimal, and percent

MEASUREMENT

Use Appropriate Measuring Devices

- Use metric and customary systems of measurement
- Use a ruler to draw and measure
- Use a protractor to draw and measure angles

Write and Interpret Formulas

- Substitute numerals into the given formula
- Translate phrases into formulas

Calculate Quantities

- Find the area, volume, mass, temperature, perimeter, time, etc. and label with appropriate units of measure
- Convert from one unit to another within the same system
- Use formulae to find the circumference and area of circles, the perimeter and area of quadrilaterals and triangles
- Use formulae to find volume of regular prisms

The Need for Measurement

- Find the perimeter, circumference and area of shapes
- Find the area and perimeter of irregular shapes
- Select and apply appropriate units of measure to find perimeter, area, and volume
- Apply the concepts of perimeter and area to solve real life problems

Convert Units of Measurement

- Convert and calculate from one unit to another within the same system
- Perform conversions from metric to customary units and vice versa

ALGEBRA

Concept and Meaning of a Variable

- Substitute values for a variable
- Distinguish between a variable and a constant

Numerical Patterns

- Recognize patterns in a table to find the relationship between two variables (formula)
- Describe, analyze, and make generalizations about numerical patterns
- Write a formula with two variables to represent numerical patterns

Algebraic Expressions

- Translate phrases into algebraic expressions and vice-versa

- Solve one-step and two-step equations using inverse operations

The Concept of Modeling

- Find the value of a variable in a formula by substitution
- Use mathematical models to solve problems

GEOMETRY

Characteristics of Plane Figures

- Describe symbolically points, lines, line segments, and rays
- Identify intersecting, perpendicular, and parallel lines
- Precisely name angles
- Classify acute, right, obtuse, straight, and reflex angles
- Find the complement and the supplement of an angle
- Describe and classify two and three-dimensional objects using their defining characteristics (triangles, quadrilaterals, prisms, pyramids, etc.)

How to Draw Geometric Shapes

- Measure and draw angles using a protractor
- Construct angle and line segment bisectors
- Draw circles using a compass
- Draw geometric objects with specified properties, such as side length, radii, or angle measures

Coordinate Geometry

- Identify the four quadrants of the coordinate plane (Cartesian plane)
- Plot points and use proper notation to name points on the coordinate plane

How to Transform Shapes

- Describe sizes, positions, and orientations of shapes under rigid transformations such as reflections, translations, and rotations
- Identify lines of symmetry in two and three-dimensional designs

Problem Solving and Modeling

- Recognize geometric shapes and structures in real life situations
- Use spatial visualization to create mental images of geometric shapes
- Relate ideas in geometry to ideas in number and measurement
- Find perimeter and area of triangles, quadrilaterals, and compound shapes
- Find the volume of cubes and rectangular prisms

PROCESS STANDARDS

- Problem Solving
- Reasoning and Proof
- Communication
- Connections
- Representation

The Modern Language curriculum is a key component of the UNIS instructional program. Students develop strong communication skills in one language from Kindergarten and begin a second language in the Middle Three Year. UNIS also fosters Mother Tongue instruction at all levels for all languages within the educational program, as well as in the after-school program.

UNIS believes that learning additional languages and supporting Mother Tongue and/or Heritage Language instruction contributes to the holistic development of students. The program fosters the enhancement of language skills necessary to succeed in different communicative situations. It exposes students to a broad cultural environment that helps promote understanding of world societies through languages.

UNIS benchmarks have been designed to reflect the European Framework skills set (reading, writing, speaking and listening) through, where appropriate, the lens of Communication, Comparisons, Communities, Culture and/or Connections.

COMMUNICATION

Effective communication

- Participate in conversations in routine context on topics of interest
- Make and respond to invitations
- Ask for and give directions
- Order a meal in target language
- Ask for and provide personal information (name, birth place, and hobbies etc.)
- Ask and give opinions on familiar topics
- Summarize and give opinions (articles, talks, discussion, and interviews etc.)
- Describe people places and possessions in simple terms
- Write notes conveying simple information
- Write brief reports on various topics (journal, and summaries, etc.)
- Extract essential information from short recorded or written passages
- Give a short description or presentation (likes, dislikes, daily and routines etc.)
- Articulate and organize basic concepts (written and oral)
- Identify and use important connectors to form sentences and paragraphs (oral and written)

- Read and understand simple text from a variety of genres (street signs, and comic books etc.)

CONNECTIONS

Content & Language Integrated Learning (CLIL)

- Understand main point/idea of TV news items with visual support
- Formulate short text on familiar topics
- Access and apply information from one discipline to another (CLIL)
- Share information about themselves and their environment
- Adapt and transfer information and terminology from one discipline to another
- Use simple phrases to request and provide information in different situations
- Share various viewpoints (likes, dislikes etc.) in the target language (oral and written)
- Give short descriptions of events and activities (oral and written)

- Share opinions on daily experiences and cultural differences
- Present simple facts about global issues relevant to their daily lives
- Identify and use appropriate grammar structures
- Participate in short conversations on topics of interest

COMMUNITIES & CULTURE

Communicate needs and feelings with their community

- Gather and present basic information on familiar topics (museums, restaurants, and cinemas, etc.)
- Recognize and understand main messages in real life situations (oral, written, and multimedia etc.)
- Identify and talk about different perspectives on UN related issues
- Discuss how languages influence culture and traditions (film, music, and news etc.)
- Develop an awareness of cultural codes
- Research, gather and use information from a variety of sources (oral, visual, and written)

COMPARISONS

Mutual understanding

The UNIS music program offers students the opportunity to function as skilled and literate performers, active listeners, passionate creators and informed critics. Participants become part of a group dynamic, developing an understanding of their unique role as an individual in that group. Music making enriches the mind, the body and the spirit and motivates students to go beyond their comfort zone, find solutions, and explore the full range of human emotion which ultimately provides the model for participation in a global community.

We believe that a rich musical experience involves the exploration, study, and performance of music from diverse cultures. The curriculum includes the extensive study of various musical styles and techniques, the study of music notation, as well as the tradition of music making and performance. As students deepen their musical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply musical knowledge and skills in context.

ACTIVE MUSIC MAKING

Perform in a musical ensemble (strings, winds, voice)

- Establish weekly private lessons and practice routines
- Advance individual technique through scales, solo and ensemble repertoire
- Maintain independence in individual parts

Learn the collaborative skills necessary to participate as a positive member of the group

- Being prepared for class
- Follow teacher/conductor's gestures and cues
- Demonstrate attentive listening, proper rest and performance posture
- Participate with increasing awareness of the rehearsal process leading to performance
- Perform in concerts with appropriate demeanor, focus, etiquette

- Establish regular home practice routine

LISTENING AND ANALYZING

Listen analytically to music and performances by themselves and others

- Use simple music terminology to describe musical features (melody, rhythm, expressive and structural elements)
- Identify elements of musical styles
- Develop simple rubrics to assess their own and others performances
- Articulate and support their thoughts and opinions respectfully

INTERPRETING (WRITTEN AND AURAL PERCEPTION)

Develop an understanding of the skill to become independent music learners

- Read and understand traditional notation and musical terminology

- Memorize and notate musical patterns, phrases, rhythms from aural examples
- Perform simple rhythms and melodic passages at sight

ADDITIONAL ACTIVITIES TO SUPPORT STUDENT GROWTH

- Perform simple rhythms and melodic passages at sight
- Attend live theatrical and musical performances
- Check in with private lesson teacher regularly
- Encourage and support home practice

INTERDISCIPLINARY PROCESS STANDARDS

- Self-expression
- Abstract and creative thinking
- Communication and collaboration
- Community building
- Working through challenges toward a common goal.
- Cross-cultural understanding

The Mission of UNIS' Physical Education program is to engage students' interest in physical development and competence through lifelong fitness, recreational and competitive activities. The curriculum aims to promote students' acquisition and application of movement, skills and knowledge. It provides a diversified program allowing for opportunities to think critically, to collaborate and to reflect, as each student creates an awareness and ability to define their personal growth and physical wellbeing.

During Physical Education at this level, students become more expert in their skills and techniques, and learn how to apply them in different activities. They start to understand what makes an effective performance and how to apply these principles to their own and others' work. They learn to take the initiative and make decisions for themselves about what to do to improve performance. They start to identify the types of activity they prefer, and take a variety of roles, such as leader and official.

The UNIS scheme of work draws together parts of the programs of study to create a framework that shows how students might be helped to progress. In PE, this includes progression in:

- Acquiring and developing skills
- Selecting and applying skills, tactics and compositional ideas
- Evaluating and improving performance
- Knowledge and understanding of fitness and health

These four aspects are closely linked, and are developed through the physical activities pupils carry out. For example, the evaluating and improving of performance will take into account the relationship between developing, selecting and applying skills, tactics and compositional ideas, and fitness and health. The quality of a performance and the selection of skills, tactics and compositional ideas are affected by the range and level of skills, the type and degree of fitness and the understanding of the concept of the activity.

GAMES ACTIVITIES

Invasion Games e.g. Basketball

Net/Wall Games e.g. Table Tennis

Striking/Fielding Games e.g. Softball

Acquire and developing skills

- Adapt and develop appropriate skills
- Choose, combine and perform skills more fluently, consistently and with greater accuracy and quality

Select and apply skills, tactics and compositional ideas

- Use basic principles of play when selecting and applying tactics for defending and attacking
- Adapt strategies and tactics used in one game and apply them to a different one

Apply knowledge and understanding of fitness and health

- Understand the basic principles of warming up and cooling down
- Know how performance and safety are improved when preparation is carried out properly

Evaluate and improve performance

- Suggest areas for improvement
- Evaluate their personal and peer strengths and weaknesses in the different games

DANCE & CREATIVE MOVEMENT

Gymnastics

Dance

Acquire and develop skills

- Select, combine and perform a range of movement patterns and

dance ideas, using dance styles and music from different eras

Select and apply skills, tactics and compositional ideas

- Select and develop a range of personal compositional principles
- Perform dances showing an understanding of style, artistic intention and accompaniment

Apply knowledge and understanding of fitness and health

- Understand the basic principles of preparing for dance
- Comprehend how performance is improved when preparation is carried out properly
- Take responsibility for warming up and cooling down safely

Evaluate and improve performance

- Describe, analyze, interpret and evaluate choreographic form

SWIMMING ACTIVITIES & WATER SAFETY

Swimming

Acquire and Develop skills

- Improve the consistency and quality of personal skills
- Adapt personal skills acquired and extend the range of techniques applied

Select and apply skills, tactics and compositional ideas

- Plan basic strategies in swimming, apply basic principles, and adapt them to different situations more effectively

Apply knowledge and understanding of fitness and health

- Comprehend what they need to do in order to improve fitness in swimming

- Know how to prepare themselves for swimming
- Know why physical activity is good for health

Evaluate and improve performance

- Understand the nature of the swimming task and make effective evaluations of strengths and weaknesses in personal performances

ATHLETIC ACTIVITIES

Fitness for Life

Track and Field

Acquire and develop skills

- Improve the consistency of personal sprinting, sustained running, jumping and throwing techniques
- Adapt skills to the needs of the event

Select and apply skills, tactics and compositional ideas

- Apply strategies for effective competitive performance
- Adapt strategies to the needs of an event

Apply knowledge and understanding of fitness and health

- Prepare and recover from exercise safely and effectively and know the principles used
- Recognize that different types of activity require different types of fitness

Evaluate and improve performance

- Understand the nature of athletic activities and make effective evaluations of personal strengths and weaknesses

An understanding of science is an essential component of modernity. Science is both an activity for generating knowledge about the natural world and a set of ideas - the mental models of chemists, physicists and biologists - about the origin and content of that world and the interactions that take place in it. While only a small number of individuals will become professional scientists, all our lives are being transformed by technology, the application of these ideas. Challenging ethical issues arise with each new scientific discovery, and changing scientific ideas shape and reshape our thinking about who we are.

The UNIS science program seeks to establish a climate of learning in which students feel that asking questions and evaluating the answers to those questions is the legitimate business of science. Students learn that only ideas that can be tested experimentally are scientific ideas, and that science proceeds by making predictions based on these ideas and testing them. The program is designed to develop in students the practice of critical thinking and logical argument, and to encourage, recognize and value creativity in finding solutions to scientific and technological problems.

BIOLOGY

Complex organ systems

- Know that organ systems consist of organs that work together to serve the needs of the organisms
- Explain that the circulatory system carries materials from the surface to the inside of the body and vice versa, and from one place in the body to another
- Know that the digestive system breaks down foodstuffs into smaller molecules and absorbs these molecules into the body
- Understand that everything, including cells and organisms are made of atoms, and that atoms form different molecules depending on which atoms are involved and how they are arranged
- Know that certain molecules are found in all living things and are necessary for life

CHEMISTRY

The Periodic Table as a means of representing relationships between elements in the form of an ordered system

- Know that all known elements are listed in the Periodic Table of the

Elements, where they are arranged according to various criteria

- Know that the structure of an element's atoms determines chemical properties of that element
- Understand how the Periodic Table is a powerful predictive device for the physical and chemical properties of elements

Chemical reactions between substances

- Explain that atoms can combine to create new substances with new characteristic properties
- Know that acids and bases are two types of substances that react with each other and with other substances in distinctive ways

PHYSICS

The behavior of light when light and matter interact

- Know that reflection is one of the ways light behaves when light and matter interact
- Know that refraction is one of the ways light behaves when light and matter interact

Static and current electricity and the forces of magnetism

- Observe that charged stationary objects attract or repel each other
- Understand that charged moving particles move in predictable and quantifiable ways, transfer energy, and can perform work
- Explain that magnetism is a force that can be generated in more than one way, and acts at a distance on materials made only of certain elements

EARTH & SPACE

The cosmological prerequisites for life

- Explain that only some planets and/or moons in the solar system may have had the capacity to sustain life, and then only at specific cosmological times
- Know that data is actively being sought to determine the places and times where this might have been possible

SCIENCE SKILLS

Experimental Work

- Formulate questions
- Identify variables
- Make testable predictions
- Design experimental procedures

Analysis

- Classify objects/processes by shared properties

- Interpret data to identify relationships
- Draw conclusions based on the agreement between predictions and experimental data

Communication

- Communicate ideas, understandings, procedures and

findings in written, spoken and media-based modes

- Use scientific language correctly
- Construct tables and graphs, both bar and line, by hand and/or with computer software



Middle Three

The Middle Three Drawing unit is designed to build understanding and practice of spatial representation. Artworks are examined to see how spatial and temporal concepts are portrayed. Contour drawing, tonal gradients and uses of color are developed in the application of perspective. Painting, Collage and computer graphics are studied in the Two Dimensional Design unit. Three-dimensional work focuses on modeling, construction or carving techniques in different media. Styles and traditions of art making relevant to projects and other subject units are examined and discussed. Interdisciplinary projects are developed in conjunction with English and Humanities themes.

OBSERVING

Drawing

- Develop more refined skills in hand eye coordination in drawing objects
- Construct structured means for representing space and making 3D forms
- Understand and use drawing media qualities mindfully

Designing

- Recognize elements and forces of design
- Connect how design informs ideas and content

Observing Art, Process, and Context

- Look closely at works of art, objects or the environment - in relation to art concepts and assigned projects
- Describe, analyze and interpret art
- Attend closely to a demonstrated process or the application of a specific technique
- Recognize connections between personal, cultural, or

interdisciplinary contexts, in projects

- Discuss and consider art concepts in relation to contexts presented

INVESTIGATING

Using a Studio Workbook

- Engage workbook effectively for brainstorming and idea development
- Develop personal ideas to project guidelines during the creative process
- Show successful solutions to presented problems in the design of a project
- Explore at least one alternative approach in the use of media, design, and composition
- Show evidence of cultural investigation in workbook

Technique and Concepts

- Demonstrate improvement in technical and conceptual skills studied through workbook exercises and projects

CREATING

Realizing Finished Projects

- Organize art creation in a sequential procedure
- Select and apply media and techniques using methods demonstrated with a personal approach
- Resolve technical problems that arise by applying concepts independently

Presentation

- Revise, refine, and complete projects according to guidelines
- Demonstrate understanding of unit concepts through projects, exercises and assessment
- Work to the best of their ability
- Show attachment to work

English is the first language of the school, and as such, it serves multiple purposes, as a means of communication for the community, as the medium of instruction in most other core subjects, and as a discrete discipline with its own curriculum

The strands of reading, writing, listening, and speaking are at the heart of all of the work our children do in all of their classes, in school and at home, individually and in groups. These components are not separate but rather in constant interaction and reflect the changing demands of literacy today.

Our goal is to help students attain their highest possible levels in all areas of English. We want them to gain a sophisticated command of the language, develop their capacity for self-expression, use language as a means to clarify thinking, unleash their imaginations, and construct meaning from the world around them through participation in oral activities, writing in different genres, and reading of fine literature.

READING

Read a variety of texts and study characteristics of narrative poetry, fantasy, mystery, science fiction novels, stories, tales, plays, poems, and non-fiction

- Read full-length and short works written in English and in translation
- Read selected texts for performance, personal meaning, writing models, pleasure, and research
- Demonstrate comprehension of reading through written responses, group work, class discussion, quizzes, and other formats

Draw on learned reading strategies to read and interpret more advanced texts

- Apply knowledge of word parts, contextual cues, and sentence structures to expand vocabulary and understand and interpret text
- Find etymologies, meanings, and usage of selected words
- Discern which part of speech and which variant meaning from the dictionary fit a target word
- Explain literal and interpretive meanings of increasingly more difficult texts
- Use strategies, such as making predictions, graphing information, and creating lists, to make sense of the text

- Identify, explain, and reflect upon the plot, character development, and themes
- Explore intent or purpose, use of language, and structure of texts through classroom discussion, individual written response, and group work
- Make connections with texts to other texts, their lives, and the world
- Identify and discuss elements of content and style that help to date a work in a time, place, culture, and/or language

Increase the breadth and depth of reading choices

- Select independent reading titles and expand their selections
- Share reactions and ideas about their personal reading in oral, written, and electronic responses

Appreciate that multi-media sources can enrich reading

- Use audio, visual, and electronic sources to augment reading
- Consult and interpret appropriate print, visual, and electronic sources for research

WRITING

Understand the process of modeling, planning, organizing, composing, and critiquing texts by retrieving, recording, organizing, and

evaluating information appropriate to purpose and audience

- Plan and organize their ideas and information in writing
- Write in a variety of styles to suit a particular purpose, for example, to entertain, recount, socialize, inquire, describe, persuade, explain, or instruct
- Write to define, clarify, and develop ideas using a strong voice and expressing some intellectual depth

Use a range of processes to plan, draft, and refine writing and use specific devices appropriate to purpose, text type, and audience

- Write original poems and poems in imitation
- Use key elements such as plot, dialogue, and character development in imaginative writing, and include components of a specific genre
- Develop the ability to show rather than just tell through image, dialogue, etc. in creative writing
- Follow the process and techniques of writing a simple analytic essay with text support and appropriate citations
- Develop more sophisticated vocabulary and syntax for meaning and style through writing activities and practice of specific writing strategies
- Reflect on their reading and learning as well as develop their

own opinions and analyses in exercises such as focused writing

- Develop more accurate spelling, punctuation, capitalization, and usage skills
- Follow, with guidance, the conventions of written English, to edit and proofread their own work and that of others with precision

Recognize the importance of clear presentation in written communication

- Present typed and written work of an acceptable standard for a given task
- Present legible and neat handwritten and computer generated work

Understand the usefulness of Information Technology as a tool

- Use word processing, spelling and grammar check, and electronic dictionaries and thesauruses as a support for writing, editing, and proofreading
- Use computer software programs and associated technology in support of projects and presentations
- Know when and if they should use secondary sources for assignments
- Select reliable Internet sources for information
- Acknowledge print and Internet sources used in assignments

LISTENING

Listen for a range of purposes and in a variety of situations

- Listen to lengthy and more involved procedures and explanations such

as instructions or investigations or outlines of a complex task

- Listen to and note key ideas and information from guest speakers, recordings, films, and dramatic presentations

Listen attentively while others speak, read aloud, give oral presentation, or express opinions

- Listen to extract important information for oral, dramatic, and written responses
- Follow directions to stay focused, engaged, and involved in class and group activities
- Recognize and use the required elements for different types of oral and dramatic presentations
- Respond to even more varied types of oral presentations
- Listen to and respond in detail in discussions in both small and large groups

SPEAKING

Participate in different forms of oral presentations for a variety of purposes, on both familiar and new topics, in formal and informal classroom activities

- Read and recite work aloud with appropriate volume, pace, gesture, and expression for clarity and vividness

Take part in formal and informal discussions

- Discuss and reflect upon a variety of responses and views, and challenge a point of view with supporting evidence

Perform oral interpretations of texts and dramatic presentations with increasing style and flair

- Memorize, recite, read, and perform in oral presentations and dramatic performances occurring regularly throughout the year

Analyze and explain briefly text passages and poetry, and defend their own opinions

- Present their personal interpretation and text analysis in oral presentations and informal discussions

Respond to each other's writing in specific oral activities designed for that purpose

- Follow teacher guidelines for appropriate and constructive oral response to other students' written work

Know how to communicate more effectively for a range of purposes and with a variety of audiences to express well-developed ideas dealing with more challenging topics

- Participate appropriately in small group work, classroom discussions, presentations, and dramatic performances
- Speak with clarity, and use persuasive language to debate given topics

Use a style of speech appropriate to the activity

- Experiment with varying diction, voice, tone, volume, and pace
- Speak clearly and convey meaning to peers

The program in the Middle School encourages active investigation and discussion of ideas, of similarities and differences, of connections between the past and the present. Students follow a common course of study integrating the five strands of world history, geography, social sciences, host country and United Nations. Class work emphasizes active inquiry. We have a strong commitment to learning beyond the classroom, drawing on the diversity and resources of New York City and our parent body.

M3 students examine the emergence of empires and expanding trade networks through case studies from Asia, Africa and Europe in the period of 500-1500CE. Students explore the social, political, economic and cultural aspects of multiple societies including the Islamic Empire, West African Kingdoms and Medieval Europe. In addition, students define and describe the geography of these regions and examine how geographic features influenced the development and interdependence of these societies. Students complete the year with a primary source study of American immigration and its impact, past and present.

This course is offered in French for Francophone students.

HISTORY

Islamic Empire, West African Kingdoms, medieval Europe

- Describe the historical origins and teachings of Islam and explain connection to Judaism and Christianity
- Describe the beliefs and practices of Christianity and Islam
- Describe the relationship between religion and forms of government in Islamic Empire, West African Kingdoms and medieval Europe
- Describe how religion created both unity and conflict
- Identify and describe the contributions and achievements of the Islamic Empire, West African Kingdoms and medieval Europe
- Trace and locate trade routes linking Asia, Africa and Europe, identifying the goods and ideas exchanged

GEOGRAPHY

Location, Topography, Climate and Vegetation (Asia, Africa, Europe)

- Define and describe regions in terms of geographical features
- Identify and describe regions in terms of human characteristics (political, economic, cultural, historical)

- Identify and describe regions and characteristics as represented on different maps
- Explain how geographical factors influenced economic, political and cultural development of regions
- Analyze thematic maps to explain population growth

SOCIAL SCIENCE

Economic surplus, Specialization and Trade (Islamic Empire, West Africa Kingdoms, Medieval Europe)

- Explain the relation between social, economic, political and cultural features in societies
- Identify similarities and differences in social, political, economic and cultural features of societies
- Explain how surplus of resources made specialization possible
- Explain how surplus and specialization led to trade within and between regions

Encounters between different societies

- Describe and explain the cultural and commercial significance of the trans-Eurasian Silk Road and other trade routes
- Describe and compare the ways in which different groups responded to encounters with other societies

HOST COUNTRY

Immigration

- Identify and compare the push and pull factors that shaped migration at the end of the 19th Century
- Select and interpret primary sources, print and electronic census data and use technology to present findings
- Describe the life of an immigrant in terms of assimilation and/or integration, identifying both obstacles and opportunities, past and present
- Describe and analyze the influences and impacts of immigrants on their new environment

UNITED NATIONS

Role of the UN in human rights

- Identify and describe specific examples of inequalities within and between regions
- Identify and describe specific UN projects to reduce inequalities and secure human rights and access to basic resources
- Explain why specific events are of global significance

SKILLS

Investigation - Identifying, selecting and ordering what is relevant as evidence from a range of sources and materials

- Find information from different sources relevant to a particular topic
- Evaluate primary and secondary sources as evidence

Analysis - Recognizing, connecting, interpreting and evaluating, drawing conclusions and/or problem solving to

demonstrated understanding of a topic or question

- compare and contrast different sources and identify/recognize perspectives
- make interpretations and inferences based on cause and effect
- draw conclusions/propose solutions based on evidence

Communication - Creating, speaking, using media and writing for a specific purpose

- demonstrate relevant information and understanding in a coherent and meaningful way: diagrams/charts, paragraphs, research reports - spoken and written, first person narratives, video and other electronic media, debate and essay form
- use simple referencing conventions to identify sources and develop a bibliography

English is the primary language of instruction at UNIS. Close to 1,500 students, speaking seventy different languages may be represented at any one time.

Some students arrive at UNIS with little or no knowledge of English. On a regular basis, about ten percent of the student body benefits from additional instruction in English.

The UNIS ELL teachers are responsible for the teaching and curriculum design of the K-12 program. The goal is to ensure successful integration of ELL students into the UNIS community both academically and socially.

Upon entering UNIS students who speak or write a language other than English at home or are not fluent in English are assessed by the ELL teachers. Evaluation results place a student in beginning, intermediate or advanced ELL classes, or in a full mainstream program.

From the first day of school, the ELL students are assigned to a homeroom with their peers. The placement into homerooms ensures their constant exposure to English and allows for an early integration into the UNIS community.

For the complete ELL beginner, the focus is on verbal communication skills to enable the student to function in the new environment. Reading and writing are used to reinforce grammatical structures and vocabulary. The intermediate ELL student works on expanding vocabulary, increasing reading comprehension and refining writing skills, facilitating participation in mainstream classes. The advanced ELL student moves towards fluency in spoken and written English to approximate grade level competency. Full integration into the UNIS mainstream curriculum takes place when a student masters the advanced level ELL materials for the appropriate grade level and can comprehend content material used in the mainstream classroom.

LANGUAGE SKILLS

Reading skills

Beginner

- Identify English letters and numbers, both printed and cursive forms
- Recognize sounds of the English alphabet in oral reading
- Use basic English sight words
- Practice beginning reading and comprehension skills, both silent and oral
- Adapt content material for all subject areas
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Intermediate

- Compare and contrast vocabulary for reading in varied contexts
- Identify vocabulary and concepts to follow mainstream classes with support
- Practice intermediate reading and comprehension skills, both silent and oral

- Move towards independent comprehension of mainstream materials
- Recognize importance of reading independently for pleasure in English and their mother tongue

Advanced

- Compare and contrast grade level vocabulary and comprehension with authentic texts, in both fiction and non-fiction
- Use vocabulary and concepts to follow all mainstream classes independently
- Read with clear pronunciation, intonation, and fluency
- Read in order to compare, contrast, and analyze texts
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Writing Skills

Beginner

- Write letters and numbers using correct form

- Write simple words with ease and fluency
- Write accurate simple sentences
- Use spelling rules
- Write early stage narratives
- Present work neatly and clearly

Intermediate

- Use compound sentences
- Develop creative and factual writing
- Identify and use basic writing skills for mainstream courses
- Demonstrate intermediate spelling skills
- Present work neatly and clearly
- Use writing as a communicative tool

Advanced

- Use advanced vocabulary, concepts, and structures to write for all mainstream classes
- Develop creative and factual writing
- Compare, contrast, and analyze texts
- Demonstrate writing fluency for communication
- Proofread and edit own work
- Present work neatly and clearly

Listening Skills

Beginner

- Follow one or two-step classroom instructions
- Recognize and use basic English vocabulary
- Communicate socially appropriate responses
- Use basic communicative and functional language
- Demonstrate basic English sentence structure

Intermediate

- Follow multi-step classroom instructions
- Identify and use appropriate vocabulary in a variety subject areas
- Demonstrate knowledge of social registers
- Use communicative and functional language skills necessary for classroom and social situations
- Recognize and use more complex English sentence structures

Advanced

- Explore and use a variety of grammatically correct and appropriate idiomatic structures with ease
- Demonstrate near native understanding of communicative and functional language
- Demonstrate academic language necessary to function in all mainstream classes

Speaking skills

Beginner

- Use a variety of grammatically correct and appropriate idiomatic structures with ease
- Begin to show near native understanding of communicative and functional language
- Begin to use academic language necessary to function in all mainstream classes

Intermediate

- Explore and use communicative and functional language skills in social and academic settings
- Discuss and compare vocabulary in order to discuss subjects in content area classes

- Demonstrate a command of intermediate rules of grammar and syntax
- Use basic verb tenses correctly
- i) Present tense - simple and continuous
- ii) Past tenses - simple and continuous
- iii) Simple future
- Use compound/complex sentences
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

Advanced

- Demonstrate communicative and functional language both social and academic at near native fluency
- Explore and use academic vocabulary to function in all mainstream classes
- Demonstrate the rules of grammar and syntax
- Demonstrate correct usage of complex verb tenses
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

LEARNING SKILLS

Responsibility

- Fulfill commitments
- Complete and submit class work, homework, assignments on time

Organization

- Manage learning materials and equipment
- Establish priorities and manage time
- Use class time appropriately

Independent work

- Follow instructions
- Seek assistance when required
- Show resourcefulness in carrying out independent work

Collaboration

- Respond constructively to the ideas and opinions of others
- Work as part of a group to achieve goals

Initiative

- Demonstrate curiosity and a willingness to take on new ideas, concepts, and experiences
- Approach new tasks positively
- Assess and reflect critically on his/her strengths and areas for improvement.

CONTENT SUPPORT

In addition to teaching academic English skills and providing individualized support, ELL teachers also offer lessons and resources to support students' work for their mainstream classes. ELL teachers stay in close touch with the math, science, English, and humanities subject programs at their grade levels and help teachers differentiate for UNIS ELL students. Whenever possible, we teach our students to advocate for their own learning and work to give them increased understanding of all the social and emotional aspects of studying and living in an English-speaking environment.

Highlights of the UNIS student's M3 year include, but are not limited to:

- Advisory or homeroom classes
- All grade outdoor camp experience in the fall
- Math topics and projects such as Integers, Variables, Data and Statistics, Geometry, Ratio, Percent, and Inequalities
- Scientific concepts of Measurement, Density, Heat, Light and Sound, Evolution and Ecology, Plate Tectonics, Electricity, and the Reproductive System
- Humanities program study of the Middle Ages around the world from time along the Silk Road to the Islamic Empire, West African Kingdoms, and Europe
- English study of story genres such as science fiction and mystery, poetry, short novels, and non-fiction as well as the development of paragraphs and the introduction to the essay

- Health topics and activities such as communication, body image, and prevention of substance abuse
- Musical ensemble learning in chorus or band or strings
- Art experiences in drawing, design media, and art as message
- Mother Tongue and/or Third Language programs

The integration of ICT skills into all subject areas creates a rich teaching and learning environment in which technology skills are used in real life contexts, enabling UNIS students to learn the necessary 21st century skills they need in Middle School, Tutorial House and beyond. ICT teachers work closely with subject area teachers to develop collaborative units that include meaningful technology components.

**TECHNOLOGY OPERATIONS
 AND CONCEPTS**

Use technology appropriately

- Use a word processor to edit, create and format documents by using advanced shortcuts
- Demonstrate an intermediate understanding of terminology in discussing technology hardware and software
- Demonstrate troubleshooting of systems and applications
- Organize and manage files on computers, external drives and servers in a proficient manner
- Use operating systems proficiently

DIGITAL CITIZENSHIP

Understand issues related to the safe and responsible use of technology

- Demonstrate an understanding of the responsibilities associated with using online tools, becoming a member of a social networking sites, cyber-bullying and netiquette
- Demonstrate understanding of advantages and disadvantages of technology in daily life
- Model ethical behavior related to security, privacy, passwords and personal information
- Demonstrate proper respect for copyright and ethical guidelines

**CREATIVITY AND
 INNOVATION**

Demonstrate creative thinking, build knowledge, and develop products using technology

- Choose appropriate Web 2.0 tools to demonstrate creative thinking, build knowledge, and develop products
- Choose appropriate software to demonstrate creative thinking, build knowledge, and develop products
- Develop strategies to become independent learners
- Create basic graphics using layers and graphics tools

**COMMUNICATION AND
 COLLABORATION**

Use digital media (email, blogs, chats, and Moodle) to support learning and contribute to the learning of others

- Evaluate which technology tools are most appropriate for specific digital presentations and confidently create those presentations
- Use multiple Web 2.0 tools to effectively collaborate with peers, teachers and the world

**RESEARCH AND
 INFORMATION**

Use digital tools to gather, evaluate, and make use of information

- Create spreadsheets and graphs using basic formulas to depict information gathered
- Choose and use appropriate tools to locate, evaluate and use learning resources
- Choose and use appropriate Web 2.0 tools to gather, evaluate and organize information
- Discuss the guidelines for proper respect of copyright and ethical use of materials

**CRITICAL THINKING,
 PROBLEM SOLVING AND
 DECISION MAKING**

Use critical thinking skills to plan and conduct research, manage projects, solve problems

- Select and use software for problem solving
- Employ technology in the development of strategies for problem solving
- Choose technology tools to plan, research and manage projects to solve real world problems
- Choose and use appropriate technology to organize group work to solve problems

As information centers of UNIS, our libraries promote learning within and beyond the library walls by fostering the school's mission through:

- Providing access to global information and literature resources in a wide variety of formats
- Teaching library skills, critical thinking and the ethical use of ideas and information to achieve academic excellence
- Encouraging reading and literature appreciation to promote an understanding of cultural diversity

READING

Locate books in the library independently (spine labels including the concept of call number and special location for various types of material)

- Find books according to spine labels
- Locate books in the different areas of the library (fiction, nonfiction, reference, modern language), often independently

Know what types of books they enjoy (for example: series, novels, poetry, biographies, and myths)

- Articulate effectively which types of books they wish to read; sometimes seek these books independently
- Explain why they choose a particular genre
- Identify and propose books for the end of year reading list

Select books for book talks and/or reviews

- Select a book they enjoy and/or think other students will enjoy
- Write a short review on a social media website

Give a book talk

- Give an oral presentation using more detailed predetermined criteria

Analyze elements of fiction and read for detail

- Analyze the elements of fiction in more depth

- Communicate thoughts, feelings and opinions about a book

Explore different novels and variety of genres

- Identify the elements of different genres
- Distinguish between different genres
- Narrow preferences

Select appropriate fiction and nonfiction for class projects and personal interests

- Articulate their information needs in the form of keywords to search the catalog and online more often

Explore books appropriate to their reading level and their interests

- Engage in meaningful dialogue with the librarian, teacher or peers
- Examine material to identify appropriate level
- Explore book displays
- Listen to and contribute meaningfully to book talks and reviews (student and librarian)

Choose challenging materials

- Explore more advanced materials

Select and read from a range of authors

- Use the catalog to choose books from a variety of authors
- Appreciate works of literature from various authors

Select and read resources from and about different countries and cultures

- Follow librarian and teacher recommendations to select books

about different countries and cultures

- Appreciate different cultures through reading

INFORMATION LITERACY AND RESEARCH

Apply a systematic process to find information

- Define the research questions as guided by the teacher
- Recognize the different requirements of the research project guided by assignment or the rubric

Use keywords to find information.

- Generate keywords and phrases associated with their topic

Conduct more focused electronic searches through the library catalog and databases using keywords

- Use keywords to search the library catalog
- Use keywords to search online encyclopedias and other databases

Use reference materials

- Use general encyclopedias for background information
- Utilize specialized reference materials for specific topics

Recognize useful websites for a variety of projects

- Use the domain name to determine the origin of the source
- Read and extract appropriate information in order to complete an assignment

Understand the difference between a website, a database and e-reference.

- Use some of the subscription databases (i.e. World Book Online) and recommended websites

Extract information for meaning and to create new knowledge

- Read and take relevant notes using traditional and/or electronic tools (Noodletools)
- Organize and evaluate information

Take notes

- Take notes following classroom protocol and/or using electronic tools (Noodletools)
- Develop personal strategies for note-taking

Write a detailed bibliography

- Identify and record various parts of a bibliographic entry using a given paper or electronic template

Organize and present information in a systematic manner

- Write or present information cohesively following classroom protocol
- Present information on a variety of media

Build on previous knowledge

- Apply previous knowledge to connect with new information

INDEPENDENT LEARNING**Select useful and appropriate sources from a wide range of media for units of study or personal interest**

- Evaluate the relevance of a selection of books in order to choose the most appropriate source(s)
- Use keyword searches to look for relevant information in subscription databases and/or recommended websites or e-books
- Begin evaluating the authority of a website (domain name, organization and author)

Make inferences and draw conclusions related to text meaning

- Identify and use information that is embedded in the text

- Categorize and record information in note form using classroom protocol

Produce research projects or assignments

- Present research conclusions, in various forms, following classroom protocol and rubrics

Identify, find, and use complex resources for personal interest and units of study

- Use keywords efficiently when searching the electronic catalog
- Browse the electronic catalog and collection to select relevant materials
- Search the internet for appropriate information

Select and evaluate a greater variety of resources for research

- Determine the best sources for their purposes based on currency, relevance, authority, etc.

Understand how the classification system works

- Find resources using Dewey Decimal numbers

Follow instructions and take initiative for their own learning

- Listen to, read and follow directions
- Apply previously learned instructions independently

Select the most informative sources independently

- Apply the previously learned processes (keyword searching, use of index, etc.) to determine the best sources

SOCIAL RESPONSIBILITY**Use proper library procedures**

- Use student IDs to check out books
- Follow the rules of the library (noise level, movement, food, respectful attitude)

Be responsible for library materials

- Handle materials with care
- Check out and return materials in a timely manner

Respect the different needs of students in the library setting

- Show respect for the learning needs of others

Recognize what constitutes plagiarism

- Understand the meaning of plagiarism
- Record information from a given source in their own words
- Identify sources and parts of a bibliographic entry
- Cite a source
- Understand that copying and using material without citation is unethical
- Recognize the importance of giving credit to the author

Begin to identify what constitutes an authoritative source

- Recognize that quality of sources can vary
- Use recommended sources for school purposes

LIBRARY SERVICES

The 3rd floor school library hours are from 8 am to 5 pm, Monday to Thursday, and from 8 am to 4 pm on Friday. Students may come to the library on their own time before morning registration, during short break, lunch and after school to do school-related activities and personal reading.

The Queens Campus library is open from 8:30 am to 3 pm. Students may come to the library during their free periods if the library is not in use by a class. Students may come to the library after school if accompanied by an adult.

Students and families may access both the library catalog and the external databases from home. At home, go to the UNIS homepage (www.unis.org). From the drop-down menu under the *community* tab at the top, select *library*. Login and you will be able to use the Online Catalogs and Resources. The necessary username and password for individual databases are listed next to each icon or name. Click on the icon for the database using the saved username and password

Internet access is provided on computer stations and laptops in the

library in addition to student's personal laptop. Students are allowed to do school-related work on these computers, following the UNIS Acceptable Use Policy

Students must log in to the electronic catalog in order to access their library

accounts. This allows them to see what materials they have checked out and which might be overdue, write book reviews of titles we own, and create personal book lists. Library materials must be brought to the library in order to be renewed; this service is not available on the web. For research and

leisure reading outside the UNIS library, we encourage students to obtain a public library card.

Mathematical learning builds on the curiosity and enthusiasm of children through developmentally appropriate experiences that challenge children to explore ideas and to take risks in their learning. We believe that mathematics learning must be active, rich in language, and filled with problem-solving opportunities. Our mathematics program is one where mathematics is taught for understanding. Students acquire mathematical concepts and skills through practical tasks, real-life problems and investigations of mathematical ideas. Embedded into each strand of the UNIS math curriculum are process standards that cover mathematical reasoning, contextualization, problem solving and computational fluency.

As students deepen their mathematical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply mathematical knowledge and skills in context.

NUMBER SENSE AND OPERATIONS

The Concepts of Number

- Read, write, identify, compare and order integers (directed numbers), fractions, mixed numbers, percentages and decimals
- Round to given decimal places and to any number of significant figures
- Use all four operations involving integers (directed numbers) and absolute values
- Identify and use directed numbers in real life situations (debt, temperature, altitude, etc.)
- Develop meaning for percentages greater than 100 and less than 1
- Locate real numbers on the number line

Representing Numbers

- Represent large and small numbers using exponential, scientific and calculator notation
- Recognize equivalent representations between fractions, decimals and percentages including terminating and repeating decimals

Relationships among Numbers

- Differentiate between rational and irrational numbers
- Use the inverse relationships of squaring and finding square roots.
- Convert from improper fractions to mixed numbers (vice versa)

- Apply divisibility rules (2, 3, 4, 5, 6, 8, 9 and 10)
- Identify and find multiples and factors
- Perform prime factorization, least common multiple, greatest

Choose Computational Method

- Select appropriate methods and tools for computing (mental computation, estimation, calculators, paper and pencil, etc.)

Compute Fluently and Make Reasonable Estimates

- Use strategies to estimate the results of rational and irrational computations and justify the reasonableness of the result
- Estimate and compute using the four basic operations with whole numbers, fractions, mixed numbers, and decimals
- Use inverse relationships of addition and subtraction, multiplication and division, to simplify computations and solve problems
- Simplify expressions using order of operations
- Identify and use associative, commutative, and distributive properties to simplify computations.
- Work flexibly with fractions, decimals, ratios, proportions and percentages to solve problems

STATISTICS AND PROBABILITY

Forms of Data Representation

- Investigate and record various forms of data representation including stem-and-leaf, histogram, scatterplots, and box and whisker diagrams
- Formulate a question, design a survey, collect data, and display the results using appropriate graph

Measures of Central Tendency

- Apply measures of central tendency in various situations

Types of Trends

- Draw trend lines and make predictions

Data Analysis

- Collect (e.g. using a survey), record, and organize data to represent and analyze information

MEASUREMENT

The Concept of Scale

- Apply metric and customary systems of measurement using appropriate tools
- Solve problems involving scale factors, using ratios and proportions

Write and Interpret Formulas

- Substitute numerals into the given formula
- Translate phrases into formulas

Calculate Quantities

- Select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision
- Develop strategies to determine the surface area and volume of selected prisms, pyramids, and cylinders
- Use the Pythagorean Theorem to determine missing length of sides in a right triangle
- Derive measurement for such attributes as velocity and density

The Need for Measurement

- Find the perimeter, circumference and area of shapes (including triangles, parallelograms, and trapezoids)
- Find the area and perimeter of compound shapes
- Select, apply and convert appropriate units of measurement (word problems)

Convert Units of Measurement

- Convert and calculate from one unit to another within the same system
- Perform conversions from metric to customary units and vice versa

ALGEBRA

Concept and Meaning of a Variable

- Substitute values for a variable
- Distinguish between a variable and a constant

Numerical Patterns

- Recognize patterns in a table to find the relationship between two variables (formula)
- Describe, analyze, and make generalizations about numerical patterns

Concept of Mathematical

Relationships (Formula)

- Write a formula for graphs of linear functions

Concept of Like Terms

- Simplify algebraic expressions by combining like terms

- Use the distributive property to simplify algebraic expressions

Equations and Expressions

- Translate phrases into algebraic expressions and vice-versa
- Solve multi-step equations using inverse operations
- Solve a system of linear equations graphically

Inequalities

- Solve and graph linear inequalities

The Concept of Modeling

- Find the value of a variable in a formula by substitution
- Use mathematical models to solve problems

Concept of Linear Relationship

- Use various representations, such as graphs, tables, and equations

Concept of Variation

- Investigate how a change in one variable relates to a change in a second variable

Slope

- Explore the meaning of slopes.
- Find the slope of a line using rise over run
- Identify the slope and y-intercept in the coordinate plane and in a given equation

GEOMETRY

Characteristics of Plane Figures

- Describe symbolically points, lines, line segments, and rays
- Identify corresponding, vertical and alternate angles
- Solve problems involving angle relationships when parallel lines are crossed by a transversal
- Precisely name angles
- Classify acute, right, obtuse, straight, and reflex angles
- Find the complement and the supplement of an angle

How to Draw Geometric Shapes

- Measure and draw angles using a protractor

- Construct angle and line segment bisectors
- Draw circles using a compass
- Draw geometric objects with specified properties, such as side length, radii, or angle measures

Coordinate Geometry

- Identify the four quadrant of the coordinate plane (Cartesian plane)
- Plot points and use proper notation to name points on the coordinate plane
- Graph lines using a table of values for x and y

Concept of Slope

- Describe the slope of a line using rise over run

How to Transform Shapes

- Describe sizes, positions, and orientations of shapes under rigid transformations such as reflections, translations, and rotations
- Identify lines of symmetry in two and three-dimensions and describe rotational symmetry in two dimensional figures

Problem Solving and Modeling

- Recognize geometric shapes and structures in real life situations
- Use spatial visualization to create mental images of geometric shapes
- Relate ideas in geometry to ideas in number and measurement
- Find perimeter and area of triangles, quadrilaterals, and compound shapes
- Find the area and circumference of a circle
- Find the volume of cubes and rectangular prisms

PROCESS STANDARDS

- Problem Solving
- Reasoning and Proof
- Communication
- Connections
- Representation

The Modern Language curriculum is a key component of the UNIS instructional program. Students develop strong communication skills in one language from Kindergarten and begin a second language in the Middle Three Year. UNIS also fosters Mother Tongue instruction at all levels for all languages within the educational program.

UNIS believes that learning additional languages and supporting Mother Tongue and/or Heritage Language instruction contributes to the holistic development of students. The program fosters the enhancement of language skills necessary to succeed in different communicative situations. It exposes students to a broad cultural environment that helps promote understanding of world societies through languages.

UNIS benchmarks have been designed to reflect the European Framework skills set (reading, writing, speaking and listening) through where appropriate, the lens of Communication, Comparisons, Communities, Culture, and/or Connections.

COMMUNICATION

Effective communication

- Participate in structured conversations on varied topics
- Discuss past events and future plans
- Ask and give opinions on routine topics
- Summarize and give opinions (articles, talks, discussion, interviews)
- Write short personal letters
- Write notes conveying simple information (formal and informal)
- Write brief reports on various topics
- Extract essential information from short recorded or written passages
- Give a description presentation (likes, dislikes, daily routines etc.)
- Articulate and organize concepts (written and oral)
- Interpret text from a variety of genres

CONNECTIONS

Content & Language Integrated Learning (CLIL)

- Identify the main point/idea of TV news items with visual support

- Formulate short texts on various topics
- Adapt and transfer information from one discipline to another (CLIL)
- Impart information about themselves and their environment
- Compare and contrast knowledge from other subjects in the target language
- Adapt and transfer information and terminology from one discipline to another
- Use phrases to request and provide information in different situations
- Identify and share various viewpoints in the target language
- Give short descriptions of events and activities
- Use linguistic structures of the target language appropriately

COMPARISONS

Mutual understanding

- Discuss and compare cultural differences (oral and written)
- Identify similarities and differences between viewpoints on global issues
- Compare and contrast grammar structures

- Participate actively in discussions and debates
- Research and present in a simple way, alternative solutions to global issues (oral and written)

COMMUNITIES & CULTURE

Communicate needs and feelings with their community

- Gather and present information on familiar topics (museums, restaurants, cinemas etc.)
- Recognize and understand main messages in real life situations (oral, written, multimedia etc.)
- Identify and discuss different age appropriate UN issues
- Compare and contrast how languages influence culture and traditions (film, music, news etc.)
- Discuss and Develop strategies to deal with routine and unexpected situations.
- Develop an awareness of cultural codes (formal and informal)
- Research, gather and use information from a variety of sources (oral, visual, written, etc.)

The UNIS music program offers students the opportunity to function as skilled and literate performers, active listeners, passionate creators and informed critics. Through the study of music, students develop skills necessary in belonging to a larger group and they also explore their own unique personal function within that group. These two different roles encourage them to realize their own openness, honesty, potential and vulnerability while creating an object of beauty. On a practical level, the study of music educates the mind, the body and the spirit. At the same time, it motivates students to go beyond their comfort zone, shows the full range of human emotion and ultimately provides a model of hope for our global community.

We believe that a rich musical experience involves the exploration, study and performance of music from diverse cultures. The curriculum includes the extensive study of various musical styles and techniques, the study of music notation, as well as the tradition of music making and performance. As students deepen their musical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply musical knowledge and skills in context.

ACTIVE MUSIC MAKING

Perform in a musical ensemble (strings, winds, voice)

- Develop increasing dexterity and technical security through scales, solo and ensemble repertoire
- Perform with greater range of expression and style (blend, articulation, dynamics, phrasing)

Students learn the collaborative skills necessary to participate as a positive member of the group

- Maintain weekly lesson (strings and band)
- Maintain home practice routine
- Anticipate and follow conductor's cues
- Contribute actively in rehearsal activities leading toward performance
- Maintain weekly lesson (strings and band)

LISTENING AND ANALYZING

Listen analytically to themselves and others

- Compare and evaluate different performances (solo and group)
- Describe musical features of pulse, rhythm, structural elements
- Compare and contrast elements of musical style

INTERPRETING (WRITTEN AND AURAL PERCEPTION)

Developing the skills necessary to become independent music learners

- Identify dynamics, articulations, tempo and expression markings present in the repertoire
- Sight-read melodies and rhythms of increasing complexity
- Echo and notate melodic and rhythmic patterns in a variety of keys and meters

ADDITIONAL ACTIVITIES TO SUPPORT LEARNING

- Parent involvement: taking your child to live music, theater and other performances; encourage regular home practice routines; communicate with private lesson teacher regularly; attend their student concerts and recitals
- Student involvement: in extracurricular ensembles, (jazz band, MS musical); practice with other students; participation in ABRSM, RACE, NYSSMA or other external adjudications

INTERDISCIPLINARY PROCESS STANDARDS

- Self-expression
- Abstract and creative thinking
- Communication and collaboration
- Community building
- Working through challenges
- Cross-cultural understanding

The Mission of UNIS' Physical Education program is to engage students' interest in physical development and competence through lifelong fitness, recreational and competitive activities. The curriculum aims to promote students' acquisition and application of movement, skills and knowledge. It provides a diversified program allowing for opportunities to think critically, to collaborate and to reflect, as each student creates an awareness and ability to define their personal growth and physical wellbeing.

During Physical Education at this level, students become more expert in their skills and techniques, and learn how to apply them in different activities. They start to understand what makes an effective performance and how to apply these principles to their own and others' work. They learn to take the initiative and make decisions for themselves about what to do to improve performance. They start to identify the types of activity they prefer, and take a variety of roles, such as leader and official.

The UNIS scheme of work draws together parts of the programs of study to create a framework that shows how students might be helped to progress. In PE, this includes progression in:

- Acquiring and developing skills
- Selecting and applying skills, tactics and compositional ideas
- Evaluating and improving performance
- Knowledge and understanding of fitness and health

These four aspects are closely linked and are developed through the physical activity pupils carry out. For example, the evaluating and improving of performance will take into account the relationship between developing, selecting and applying skills, tactics and compositional ideas, and fitness and health. The quality of a performance and the selection of skills, tactics and compositional ideas are affected by the range and level of skills, the type and degree of fitness and the understanding of the concept of the activity.

GAMES ACTIVITIES

Invasion Games e.g. Basketball

Net/Wall Games e.g. Table Tennis

Striking/Fielding Games e.g. Softball

Acquire and Develop skills

- Adapt and develop personal skills
- Apply more specific techniques in the activities undertaken

Select and apply skills, tactics and compositional ideas

- Organize themselves as a team and select and apply strategies consistently and effectively
- Adapt strategies and tactics used in one game and apply them to a different one

Apply knowledge and understanding of fitness and health

- Recognize the benefits of their health of regular exercise and good hygiene and the benefit of being active in games

Evaluate and improve performance

- Make suggestions to improve play e.g. attack and defense tactics

DANCE & CREATIVE MOVEMENT

Gymnastics

Dance

Acquire and develop skills

- Improve consistency, quality and the use of personal skills
- Adapt personal gymnastic skills and develop specific techniques that suit the style of gymnastics used

Select and apply skills, tactics and compositional ideas

- Understand and apply compositional ideas more effectively
- Create gymnastic sequences in response to set compositional tasks

Apply knowledge and understanding of fitness and health

- Understand and apply the principles used to prepare and recover from exercise

Evaluate and improve performance

- Understand the concepts of gymnastic activity and make effective evaluations of strengths and weaknesses in performance

SWIMMING ACTIVITIES & WATER SAFETY

Swimming

Personal Survival

Acquire and develop skills

- Improve the consistency and quality of skills
- Adapt skills and extend the range of techniques

Select and apply skills, tactics and compositional ideas

- Plan basic strategies in swimming, apply basic principles, and adapt them to different situations more effectively

Apply knowledge and understanding of fitness and health

- Understand what they need to do in order to improve their fitness in swimming

- Explain the importance of good preparation when participating in swimming activities
- Explain why physical activity is good for their health

Evaluate and improve performance

- Understand the nature of the swimming task and make effective evaluations of personal strengths and weaknesses

ATHLETIC ACTIVITIES

Fitness for Life

Track and Field

Acquire and develop skills

- Improve personal performance and consistency in sprinting, sustained running, jumping and throwing techniques

- Adapt skills to the needs of the event

Select and apply skills, tactics and compositional ideas

- Apply strategies for effective competitive performance

Apply knowledge and understanding of fitness and health

- Prepare and recover from exercise safely and effectively and to know the principles used
- Recognize that different types of activity require different types of fitness

Evaluate and improve performance

- Understand the nature of athletic activities and make effective evaluations of performance strengths and weaknesses

An understanding of science is an essential component of modernity. Science is both an activity for generating knowledge about the natural world and a set of ideas – the mental models of chemists, physicists and biologists – about the origin and content of that world and the interactions that take place in it. While only a small number of individuals will become professional scientists, all our lives are being transformed by technology, the application of these ideas. Challenging ethical issues arise with each new scientific discovery, and changing scientific ideas shape and reshape our thinking about who we are.

The UNIS science program seeks to establish a climate of learning in which students feel that asking questions and evaluating the answers to those questions is the legitimate business of science. Students learn that only ideas that can be tested experimentally are scientific ideas, and that science proceeds by making predictions based on these ideas and testing them. The program is designed to develop in students the practice of critical thinking and logical argument, and to encourage, recognize and value creativity in finding solutions to scientific and technological problems.

BIOLOGY

How the organs in the nervous and reproductive systems interact to serve the needs of animals

- Understand that information about the external world is essential for an organism's survival, and sound is an important source of this information
- Know that sexual reproduction involves two complementary organ systems.

The means by which information is passed from generation to generation, and how this information is expressed, or not expressed, in successive generations

- Know that hereditary information is contained in genes, which are inherited through asexual or sexual reproduction
- Know that hereditary information is encoded in DNA
- Explain that genetic information contained in a cell tells the cell which proteins to make
- Understand that genes pass from generation to generation and this allows us to predict which traits will appear in each successive generation

How organisms changed over geological time, and the mechanism by which this is accomplished

- Understand that natural selection is a scientific model that provides a mechanism for evolution
- Know that the evolution-by-natural selection model is based on evidence
- Explain that human activity and new technologies can affect the way organisms evolve in the future

CHEMISTRY

Physical change and chemical change

- Know that changes of state are examples of physical change
- Understand that density is a physical property that changes with temperature

The nature of chemical change

- Observe that chemical change changes the properties but not the total mass of all the substances involved
- Know that a chemical reaction describes a change in which one or more reactants are transformed into one or more products
- Know that chemical reactions always involve the gain or loss of energy in the form of heat

PHYSICS

Density

- Calculate a values for density for solids, liquids and gases
- Understand that density will vary under different conditions and the values will determine the behavior of solids, liquids and gases in specific situations

The transfer, transformation and conservation of energy

- Know that energy appears in different forms and passes from object to object by different means

Wave phenomena such as light and sound

- Explain that waves are oscillations that can be characterized by a small number of variables, and involve the transfer of energy without the transfer of matter
- Know that a sound wave is a propagated disturbance in some medium, which conveys both energy and information
- Know that a light wave is a propagated disturbance in a force field, which conveys both energy and information

EARTH & SPACE

The contribution of the sun's energy to events on the earth's surface

- Know that the sun is the principal external energy source for the Earth
- Explain that heating of Earth's surface by the sun drives convection within the atmosphere and hydrosphere, producing winds and ocean currents, as well as cycling water between land and lakes and oceans

The contribution of the Earth's internal energy to constant restructuring of the Earth's surface

- Understand that the movement of tectonic plates results from the exchange of energy between the crust, mantle, and core, and accounts for episodic disruptive events at the Earth's surface
- Know that there is evidence from multiple disciplines supporting the scientific model of plate tectonics

The many interacting factors responsible for the evolution of the surface of the Earth's surface and the organisms that live on it

- Explain how present day landforms are the result of constructive and destructive processes
- Know that geological processes can result in the creation of fossil fuels
- Know that there is strong evidence that meteor impact has profoundly affected the direction of evolution of life on the Earth

SCIENCE SKILLS

Experimental Work

- Formulate questions
- Develop scientific models
- Identify variables: independent, dependent, controlled
- Make testable predictions
- Design experimental procedures, including selecting appropriate

equipment and specifying number of trials

Analysis

- Classify objects/processes by shared properties
- Interpret data to identify relationships
- Draw conclusions based on the agreement between predictions and experimental data, to say whether the data supports or does not support a scientific model

Communication

- Communicate ideas, understandings, procedures and findings in written, spoken and media-based modes, including writing formal lab reports
- Use scientific language correctly
- Construct tables and graphs, both bar and line, by hand and/or with computer software



Middle Four

In Middle Four the curriculum emphasizes process, color theory and drawing. Perspective skills learned in Middle Three are reviewed, expanded and applied to new media. Printmaking as an extended process through different stages of production is practiced. Ways of perceiving works of art and contextual investigation are developed through discussion and the developmental sketchbook. Sculptural work includes construction and modeling in ceramics and occasionally other media. Students learn different ways of using forms from nature to develop compositional skills. Specific Art movements are explored to expand awareness of different types of art making and the potential of visual symbols to communicate narratives and personal ideas. Later, students research an artist of their choice and create an independent project that is inspired by or responds to the artist's work.

OBSERVING

Drawing

- Represent with closely observed contours and observes fine detail in objects
- Construct more elaborate means for representing space and 3D forms in a new spatial system
- Select and uses media intentionally

Designing

- Observe two dimensional and 3 dimensional design concepts in Art, studies and projects
- Recognize how design informs ideas and content

Observing Art, Process, and Context

- Support interpretations with observations when looking at works of art, objects or the environment
- Describe, analyze and interpret art using relevant Art vocabulary
- Attend to and understand a demonstrated process or the application of a specific technique
- Recognize connections between personal, cultural, or interdisciplinary contexts, in projects

- Discuss and consider art concepts in relation to contexts presented

INVESTIGATING

Using a Studio Workbook

- Engage workbook effectively for brainstorming and idea development
- Attend to composition of workbook pages
- Develop several ideas and solutions to project guidelines during the creative process
- Explore several alternatives in media, design elements, and composition
- Demonstrate successful solutions to presented problems in design of project
- Arrive at more than one solution and develops a plan
- Show evidence of more than one cultural investigation in workbook

Technique and Concepts

- Show refinement and imagination in technical and conceptual skills through exercises and projects

CREATING

Realizing Finished Projects

- Organize art creation in a sequential procedure
- Select and apply media and techniques through the use of workbook studies
- Resolve technical problems that arise by applying concepts independently
- Apply demonstrated media and techniques with imagination and intention

Presentation

- Revise, refine, and complete projects according to assessment criteria
- Demonstrate understanding of unit concepts through projects, exercises and assessment
- Work to the best of ability
- Show attachment to work

English is the first language of the school, and as such, it serves multiple purposes, as a means of communication for the community, as the medium of instruction in most other core subjects, and as a discrete discipline with its own curriculum.

The strands of reading, writing, listening, and speaking are at the heart of all of the work our children do in all of their classes, in school and at home, individually and in groups. These components are not separate but rather in constant interaction and reflect the changing demands of literacy today.

Our goal is to help students attain their highest possible levels in all areas of English. We want them to gain a sophisticated command of the language, develop their capacity for self-expression, use language as a means to clarify thinking, unleash their imaginations, and construct meaning from the world around them through participation in oral activities, writing in different genres, and reading of fine literature.

READING

Read a variety of texts and explain the elements of form and content that distinguish the different genres

- Read full-length and short works written in English and in translation
- Use text features and knowledge of conventions of fiction, nonfiction, and written drama to understand the ways narrative is used in a work
- Discuss the poetic elements used in different poetry forms and styles
- Read, discuss, and evaluate texts in terms of structure, content, themes, and level of sophistication
- Discuss the choices authors make in constructing their works

Choose appropriate strategies to understand and interpret increasingly more sophisticated, adult, and challenging literature

- Use context clues, prefixes, suffixes, word derivations, syntactical knowledge, and foreign language knowledge to understand unfamiliar words and constructions
- Learn etymologies, meanings, and usage of selected words
- Discern which part of speech and which variant meaning from the dictionary fit a target word
- Distinguish the literal from the interpretive meaning
- Identify memorable passages and devices in texts

- Identify, explain, and reflect upon the plot, character development, themes, and symbols
- Compare the content, scope, style, and language of different books of the same genre
- Identify the similarities and differences between the circumstances, emotions, and events in an author's work and in their own lives
- Find and discuss aspects of a work that locate it as a piece with a cultural, artistic, or linguistic signature
- Adjust reading strategies for different texts and different purposes
- Read texts aloud using appropriate stress, pause, and intonation

Increase the breadth and depth of reading choices

- Choose personal reading books from the library and annotated lists
- Begin to move beyond adolescent literature to more adult selections
- Report on, recommend, and rate personal reading

Appreciate that multi-media sources can enrich reading

- Use audio, visual, and electronic sources to augment reading
- Consult, interpret, and incorporate appropriate print, visual, and electronic resources for research of

topics, including controversial social issues

WRITING

Recognize, respond to, and craft different types of creative and expository writing

- Compose informal and formal reader's responses to literature
- Craft fiction and nonfiction texts on assigned and free-choice topics
- Write poems in imitation of published works and in a variety of authentic forms
- Write in response to reading and their own experience

Use a range of processes to plan, draft, and refine writing and use specific devices appropriate to purpose and audience

- Use journal assignments, free writing, and pre-writing strategies to clarify thinking
- Improve their skills in organizing and developing analytic essays on literature
- Identify and employ the basic characteristics of news style in writing
- Write an extended memoir of personal experiences for an audience
- Use more sophisticated and varied vocabulary and syntax
- Experiment with style, voice, and structure in extended writing

- Evaluate their own work and give constructive feedback on the work of others
- Use peer editing and self-analysis to prepare to write second drafts
- Write with greater accuracy in applying the conventions of English grammar, syntax, and mechanics
- Work consciously to eliminate errors in English

Know the importance of presentation for its impact on its audience

- Present typed and written work of an acceptable standard for a given task, purpose, and audience
- Present legible and neat handwritten and computer generated work

Understand the usefulness of Information Technology as a tool

- Use word processing, spelling and grammar check, and electronic dictionaries and thesauruses as a support for writing, editing, and proofreading
- Use computer software programs and associated technology in support of projects and presentations
- Know when and if they should use secondary sources for assignments
- Select reliable Internet sources for information
- Acknowledge print and Internet sources used in assignments

LISTENING

Listen actively and for sustained periods in a variety of situations

- Listen for information from adults and students and show consideration for others in group discussions, debates, and presentations
- Be sensitive and attentive to the various dialects and accents of spoken English

- React and respond to new ideas raised in discussions
- Take notes for future use
- Accept constructive feedback on their work

Listen attentively and purposefully while others speak

- Acquire information and further knowledge through attentive listening
- Follow directions and work more independently to stay focused, engaged, and involved in oral presentations and discussion

Listen and respond in discussions, presentations, debates, and reports

- Listen for and extract important information from a variety of sources
- Take notes for future use

Understand the importance of verifying the reliability of sources

- Distinguish between fact and fiction and hearsay and evidence
- Use and cite appropriate sources for information and ideas

SPEAKING

Participate in different forms of oral presentation for a variety of purposes, on both familiar and new topics, in formal and informal classroom activities

- Prepare focused and specific speeches and presentations
- Adhere to the requirements for length and timing in formal presentations

Take part in formal and informal discussions

- Contribute ideas and examples during class discussions
- Strike an appropriate balance between speaking and listening in a group discussion

Present dramatic readings, games, and scenes

- Participate in improvisations, scenes, and dramatic recreations in the classroom

Analyze literature and defend their opinions

- Present their personal interpretation and analysis, using specific argument and evidence, in oral presentations and informal discussions

Respond to each other's writing in specific oral activities designed for that purpose

- Give constructive oral feedback on other students' written work

Communicate effectively for a variety of audiences and purposes

- Participate appropriately and confidently in small group work, classroom discussions, presentations, and dramatic performances
- Share and discuss ideas about literature from reader's journals and texts

Understand the value of practice as a means to improve performance and establish confidence

- Recognize that things can go wrong in performance and will improve through practice

Recognize the differences between formal and informal diction

- Adjust speech style to fit the purpose and audience in class activities
- Explore interpretations of characters whose diction and dialect are specific to time and place

The program in the Middle School encourages active investigation and discussion of ideas, of similarities and differences, of connections between the past and the present. Students follow a common course of study integrating the five strands of world history, geography, social sciences, host country and United Nations. Class work emphasizes active inquiry. We have a strong commitment to learning beyond the classroom, drawing on the diversity and resources of New York City and our parent body.

M4 students are introduced to the concepts of continuity and change, authority and dissent, and exploration and colonization over the course of the year. The focus of study includes the early modern era (1350-1750 CE) in Europe, The Americas and Asia with historical case studies from each of these regions. As part of the United Nations strand, students examine the historical and contemporary status of indigenous people, with particular attention to the issues of exploitation and advocacy.

This course is offered in French for Francophone students.

HISTORY

European Renaissance

- Identify art, architecture, science, medicine and revival of trade as key changes in Renaissance Europe
- Explain significance and connections between Renaissance, humanism, the Reformation, Reconquista and Scientific Revolution
- Describe role of key people in Renaissance (e.g. Da Vinci, Michelangelo), Reconquista (Isabella & Ferdinand), Reformation (Luther, Calvin), Scientific Revolution (e.g. Galileo, Copernicus, Newton)

European Exploration and colonial expansion

- Analyze major social, economic, political and cultural features of Europe that stimulated exploration and overseas conquest
- Research political, economic, social and cultural achievements of pre-Columbian peoples of the Americas (Aztecs, Incas)
- Describe political, military and cultural collision between Spanish and Aztec and Inca Empires

Mughal India

- Explain circumstances which enabled Mughal Empire (South Asia) to flourish (1400-1750)
- Compare structure, function and power of political systems of colonial Europe, Mughal, Aztec and Inca empires
- Identify and compare cultural and technological achievements of different societies

GEOGRAPHY

Human & Ecological Exchange (Europe, Asia, Africa, the Americas)

- Identify, locate and evaluate geographical features
- Describe and evaluate the forms and consequences of human and ecological exchange (e.g. movement of flora and fauna; goods; cultural exchange; disease; migration; human exploitation)

SOCIAL SCIENCE

Building an Empire: centralized government, identity, colonizer and colonized (Spain, Mughal India)

- Explain the concept of empire, monarchy and nation and how governments use religion for political ends
- Compare political leaderships

Colonizers and Colonized (Spain, Aztec, Inca Empires)

- Describe and compare tribute and taxation
- Identify and compare encounters and responses between pre-Columbian American societies and European colonizers

HOST COUNTRY

Current Events

- Explain why current events are of local, regional, national and global significance

UNITED NATIONS

Indigenous Movements

- Describe and explain the present circumstances of specific indigenous groups
- Research the UN's role in drafting and approving the 2007 Declaration of the Rights of Indigenous Peoples
- Identify and describe why these rights are important
- Identify UN organizations and their role in working with specific indigenous groups in achieving specific goals

SKILLS

Investigation - Identifying, selecting and ordering what is relevant as evidence from a range of sources and materials

- Find information from different sources relevant to a particular topic

- Evaluate primary and secondary sources as evidence

Analysis - Recognizing, connecting, interpreting and evaluating, drawing conclusions and/or problem solving to demonstrated understanding of a topic or question

- compare and contrast different sources and identify/recognize perspectives

- make interpretations and inferences based on cause and effect
- draw conclusions/propose solutions based on evidence

Communication - Creating, speaking, using media and writing for a specific purpose

- demonstrate relevant information and understanding in a coherent and meaningful way:

diagrams/charts, paragraphs, research reports - spoken and written, first person narratives, video and other electronic media, debate and essay form

- use simple referencing conventions to identify sources and develop a bibliography

English is the primary language of instruction at UNIS. Close to 1,500 students, speaking seventy different languages may be represented at any one time.

Some students arrive at UNIS with little or no knowledge of English. On a regular basis, about ten percent of the student body benefits from additional instruction in English.

The UNIS ELL teachers are responsible for the teaching and curriculum design of the K-12 program. The goal is to ensure successful integration of ELL students into the UNIS community both academically and socially.

Upon entering UNIS, students who speak or write a language other than English at home or are not fluent in English are assessed by the ELL teachers. Evaluation results place a student in beginning, intermediate or advanced ELL classes, or in a full mainstream program.

From the first day of school, the ELL students are assigned to a homeroom with their peers. The placement into homerooms ensures their constant exposure to English and allows for an early integration into the UNIS community.

For the complete ELL beginner, the focus is on verbal communication skills to enable the student to function in the new environment. Reading and writing are used to reinforce grammatical structures and vocabulary. The intermediate ELL student works on expanding vocabulary, increasing reading comprehension and refining writing skills, facilitating participation in mainstream classes. The advanced ELL student moves towards fluency in spoken and written English to approximate grade level competency. Full integration into the UNIS mainstream curriculum takes place when a student masters the advanced level ELL materials for the appropriate grade level and can comprehend content material used in the mainstream classroom.

LANGUAGE SKILLS

Reading skills

Beginner

- Identify English letters and numbers, both printed and cursive forms
- Recognize sounds of the English alphabet in oral reading
- Use basic English sight words
- Practice beginning reading and comprehension skills, both silent and oral
- Adapt content material for all subject areas
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Intermediate

- Compare and contrast vocabulary for reading in varied contexts
- Identify vocabulary and concepts to follow mainstream classes with support
- Practice intermediate reading and comprehension skills, both silent and oral

- Move towards independent comprehension of mainstream materials
- Recognize importance of reading independently for pleasure in English and their mother tongue

Advanced

- Compare and contrast grade level vocabulary and comprehension with authentic texts, in both fiction and non-fiction
- Use vocabulary and concepts to follow all mainstream classes independently
- Read with clear pronunciation, intonation, and fluency
- Read in order to compare, contrast, and analyze texts
- Recognize the importance of reading independently for pleasure in English and their mother tongue

Writing Skills

Beginner

- Write letters and numbers using correct form

- Write simple words with ease and fluency
- Write accurate simple sentences
- Use spelling rules
- Write early stage narratives
- Present work neatly and clearly

Intermediate

- Use compound sentences
- Develop creative and factual writing
- Identify and use basic writing skills for mainstream courses
- Demonstrate intermediate spelling skills
- Present work neatly and clearly
- Use writing as a communicative tool

Advanced

- Use advanced vocabulary, concepts, and structures to write for all mainstream classes
- Develop creative and factual writing
- Compare, contrast, and analyze texts
- Demonstrate writing fluency for communication
- Proofread and edit own work
- Present work neatly and clearly

Listening Skills

Beginner

- Follow one or two-step classroom instructions
- Recognize and use basic English vocabulary
- Communicate socially appropriate responses
- Use basic communicative and functional language
- Demonstrate basic English sentence structure

Intermediate

- Follow multi-step classroom instructions
- Identify and use appropriate vocabulary in a variety subject areas
- Demonstrate knowledge of social registers
- Use communicative and functional language skills necessary for classroom and social situations
- Recognize and use more complex English sentence structures

Advanced

- Explore and use a variety of grammatically correct and appropriate idiomatic structures with ease
- Demonstrate near native understanding of communicative and functional language
- Demonstrate academic language necessary to function in all mainstream classes

Speaking skills

Beginner

- Use a variety of grammatically correct and appropriate idiomatic structures with ease
- Begin to show near native understanding of communicative and functional language
- Begin to use academic language necessary to function in all mainstream classes

Intermediate

- Explore and use communicative and functional language skills in social and academic settings
- Discuss and compare vocabulary in order to discuss subjects in content area classes

- Demonstrate a command of intermediate rules of grammar and syntax
- Use basic verb tenses correctly
- i) Present tense - simple and continuous
- ii) Past tenses - simple and continuous
- iii) Simple future
- Use compound/complex sentences
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

Advanced

- Demonstrate communicative and functional language both social and academic at near native fluency
- Explore and use academic vocabulary to function in all mainstream classes
- Demonstrate the rules of grammar and syntax
- Demonstrate correct usage of complex verb tenses
- Demonstrate appropriate rhythm, intonation, and accurate pronunciation

LEARNING SKILLS

Responsibility

- Fulfill commitments
- Complete and submit class work, homework, assignments on time

Organization

- Manage learning materials and equipment
- Establish priorities and manage time
- Use class time appropriately

Independent work

- Follow instructions
- Seek assistance when required
- Show resourcefulness in carrying out independent work

Collaboration

- Respond constructively to the ideas and opinions of others
- Work as part of a group to achieve goals

Initiative:

- Demonstrate curiosity and a willingness to take on new ideas, concepts, and experiences
- Approach new tasks positively
- Assess and reflect critically on his/her strengths and areas for improvement

CONTENT SUPPORT

In addition to teaching academic English skills and providing individualized support, ELL teachers also offer lessons and resources to support students' work for their mainstream classes. ELL teachers stay in close touch with the math, science, English, and humanities subject programs at their grade levels and help teachers differentiate for UNIS ELL students. Whenever possible, we teach our students to advocate for their own learning and work to give them increased understanding of all the social and emotional aspects of studying and living in an English-speaking environment.

Highlights of the UNIS student's M4 year include, but are not limited to:

- Advisory or homeroom classes
- Math topics and projects such as Equations and Inequalities, Exponents, Geometry, Algebra, Probability
- Scientific concepts of Chemical Reactions, Forces and Motion, Waves, Photosynthesis and Respiration, Carbon Cycle and Climate Change and Science Fair.
- Humanities program study of the Early Modern Era including Renaissance and Reformation in Europe, Aztec and Incas in South America, The Mughal Empire in India
- English reading and writing of short memoirs, novels,
- Shakespeare, haiku, debates and journalism
- Health topics and activities such as group dynamics, stress,
- Team-Work, gender and stereotypes

- Musical ensemble learning in chorus or band or strings
 - Art experiences in drawing and perspective, 3D design, and art as message
- Mother Tongue and/or Third Language learning programs and an Immersion Camp Experience in French or Spanish

The integration of ICT skills into all subject areas creates a rich teaching and learning environment in which technology skills are used in real life contexts, enabling UNIS students to learn the necessary 21st century skills they need in Middle School, Tutorial House and beyond. ICT teachers work closely with subject area teachers to develop collaborative units that include meaningful technology components. Every student is issued a MacBook Air as of the academic year 2013-14.

TECHNOLOGY OPERATIONS AND CONCEPTS

Use technology appropriately

- Use a word processor to edit, create and format documents by using advanced shortcuts
- Demonstrate an intermediate understanding of terminology in discussing technology hardware and software
- Demonstrate troubleshooting of systems and applications
- Organize and manage files on computers, external drives and servers in a proficient manner
- Use operating systems proficiently

DIGITAL CITIZENSHIP

Understand issues related to the safe and responsible use of technology

- Demonstrate an understanding of the responsibilities associated with using online tools, becoming a member of a social networking sites, cyber- bullying and netiquette
- Demonstrate understanding of advantages and disadvantages of technology in daily life
- Model ethical behavior related to security, privacy, passwords and personal information
- Demonstrate proper respect for copyright and ethical guidelines

CREATIVITY AND INNOVATION

Demonstrate creative thinking, build knowledge, and develop products using technology

- Choose appropriate Web 2.0 tools to demonstrate creative thinking, build knowledge, and develop products
- Choose appropriate software to demonstrate creative thinking, build knowledge, and develop products
- Develop strategies to become independent learners
- Create basic graphics using layers and graphics tools

COMMUNICATION AND COLLABORATION

Use digital media (email, blogs, chats, and Moodle) to support learning and contribute to the learning of others

- Evaluate which technology tools are most appropriate for specific digital presentations and confidently create those presentations
- Use multiple Web 2.0 tools to effectively collaborate with peers, teachers and the world

RESEARCH AND INFORMATION

Use digital tools to gather, evaluate, and make use of information

- Create spreadsheets and graphs using basic formulas to depict information gathered
- Choose and use appropriate tools to locate, evaluate and use learning resources
- Choose and use appropriate Web 2.0 tools to gather, evaluate and organize information
- Discuss the guidelines for proper respect of copyright and ethical use of materials

CRITICAL THINKING, PROBLEM SOLVING AND DECISION MAKING

Students use critical thinking skills to plan and conduct research, manage projects, solve problems

- Select and use software for problem solving
- Employ technology in the development of strategies for problem solving
- Choose technology tools to plan, research and manage projects to solve real world problems
- Choose and use appropriate technology to organize group work to solve problems

As information centers of UNIS, our libraries promote learning within and beyond the library walls by fostering the school's mission through:

Providing access to global information and literature resources in a wide variety of formats

Teaching library skills, critical thinking and the ethical use of ideas and information to achieve academic excellence

Encouraging reading and literature appreciation to promote an understanding of cultural diversity

READING

Locate books in the library independently (spine labels including the concept of call number and special location for various types of material)

- Find books according to call numbers and spine labels
- Locate books in the different areas of the library (fiction, nonfiction, reference, modern language) independently

Know what types of books they enjoy (for example: series, novels, poetry, biographies, and myths)

- Articulate effectively which types of books they wish to read; seek these books independently
- Explain why they choose a particular genre
- Identify and propose books for the end of year reading list

Select books for book talks and/or reviews.

- Choose a book they enjoy and think other students will enjoy
- Write a review on a social media website
- Create another format of review for the electronic catalog (e.g. podcast)

Analyze elements of fiction and read for detail.

- Identify elements of fiction
- Give an oral presentation following detailed teacher criteria
- Communicate effectively thoughts, feelings and opinions about a book

Explore different novels and a variety of genres

- Identify the elements of different genres
- Distinguish between different genres
- Make selection based on responses to a variety of genre

Select appropriate fiction and nonfiction for class projects and personal interest

- Demonstrate through class assignments and personal choice their understanding of different forms of literature

Select books appropriate to their reading level and their interests

- Engage in meaningful dialogue with peers
- Take reading advice from librarian and teacher for "classic" literature
- Examine material to identify appropriate level
- Explore book displays
- Listen to and contribute meaningfully to book talks and reviews (student and librarian)

Choose challenging materials

- Explore more advanced materials and unfamiliar topics
- Begin exploring "classic" literature

Select and read from a range of authors

- Appreciate and enjoy works of literature from various authors
- Appreciate different cultures through reading

Select and read resources from and about different countries and cultures

- Select books in another modern language with the guidance of the librarians and/or language teachers

INFORMATION LITERACY AND RESEARCH

Apply a systematic process to find information

- Define the research questions as guided by the teacher
- Generate keywords and phrases associated with their topic

Conduct more focused electronic searches through the library catalog and databases using keywords

- Use keywords to search the library catalog
- Use keywords to search online encyclopedias and other databases
- Use keywords to search websites

Use reference materials

- Use databases and general encyclopedias for background information
- Utilize specialized reference materials for specific topics

Recognize and use appropriate and authoritative websites for a variety of projects

- Use the domain name to determine the origin of the source
- Begin to look for authority in a website with librarian assistance

- Read and extract appropriate information to complete an assignment

Understand the difference between a website, a database and e-reference

- Know the difference between a database and e-reference

Extract information for meaning and to create new knowledge

- Utilize information found in databases and e-reference for research projects
- Read and take relevant notes
- Organize and evaluate information systematically

Take notes

- Take notes following classroom protocol

Write a detailed bibliography

- Identify and record bibliographic entries using a given template

Organize and present information in a systematic manner

- Write or present information cohesively following classroom protocol

Apply previous knowledge to evaluate sources

- Apply previous knowledge to connect with new information

Select useful and appropriate sources from a wide range of media for units of study or personal interests

- Evaluate the relevance of a selection of books in order to choose the most appropriate source(s)
- Use keyword searches to look for relevant information in electronic resources (databases, e-reference, websites)
- Discriminate between the validity of a variety of websites with minimal assistance

Make inferences and draw conclusions related to text meaning

- Identify and use information that is embedded in the text
- Categorize and record information in note form

Produce research projects or assignments

- Present research conclusions, in various forms, following classroom protocol and rubric

INDEPENDENT LEARNING

Identify, find, and use complex resources for personal interest and units of study

- Use keywords in online (electronic catalog, e-reference, websites, and a wide range of databases)
- Browse the electronic catalog and collection to select relevant materials
- Browse the internet for appropriate information

Select and evaluate a greater variety of resources for research

- Recognize the best sources for their purposes based on currency, relevance, authority, etc.

Understand how the classification system works

- Understand that there are different ways of organizing materials
- Find resources using Dewey Decimal numbers

Follow instructions and take initiative for their own learning

- Listen to, read and follow directions
- Apply previously learned instructions independently

Select the most informative sources independently

- Apply the previously learned processes (keyword searching, use of index, etc.) to determine the best sources

SOCIAL RESPONSIBILITY

Use proper library procedures.

- Use student IDs to check out books

Be responsible for library materials

- Handle materials with care.
- Check out and return materials in a timely manner

Respecting the different needs of students in the library setting

- Follow rules of the library re. noise level, movement, food, attitude)

Recognize what constitutes plagiarism

- Know the meaning of plagiarism
- Record information from a given source in their own words
- Identify sources and parts of a bibliographic entry
- Cite a source
- Know that copying and using material without citation is unethical
- Recognize the importance of giving credit to the author

Begin to identify what constitutes an authoritative source

- Recognize that quality of sources can vary
- Use recommended sources for school purposes

LIBRARY SERVICES

The 3rd floor school library hours are from 8 am to 5 pm, Monday to Thursday, and from 8 am to 4 pm on Friday. Students may come to the library on their own time before morning registration, during short break, lunch and after school to do school-related activities and personal reading.

The Queens Campus library is open from 8:30 am to 3 pm. Students may come to the library during their free periods if the library is not in use by a class. Students may come to the library after school if accompanied by an adult.

Students and families may access both the library catalog and the external databases from home. At home, go to the UNIS homepage (www.unis.org). From the drop-down menu under the *community* tab at the top, select *library*. Login and you will be able to use the Online Catalogs and Resources. The necessary username and password for individual databases are listed next to each icon or name. Click on the icon for the database using the saved username and password.

Internet access is provided on computer stations and laptops in the library in addition to student's personal laptop. Students are allowed to do school-related work on these computers, following the UNIS Acceptable Use Policy.

Students must log in to the electronic catalog in order to access their library accounts. This allows them to see what materials they have checked out and which might be overdue, write book reviews of titles we own, and create personal book lists. Library materials must be brought to the library in order

to be renewed; this service is not available on the web. For research and leisure reading outside the UNIS library, we encourage students to obtain a public library card

Mathematical learning builds on the curiosity and enthusiasm of children through developmentally appropriate experiences that challenge children to explore ideas and to take risks in their learning. We believe that mathematics learning must be active, rich in language, and filled with problem-solving opportunities. Our mathematics program is one where mathematics is taught for understanding. Students acquire mathematical concepts and skills through practical tasks, real-life problems and investigations of mathematical ideas. Embedded into each strand of the UNIS math curriculum are process standards that cover mathematical reasoning, contextualization, problem solving and computational fluency.

As students deepen their mathematical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply mathematical knowledge and skills in context.

NUMBER SENSE AND OPERATIONS

The Concepts of Number

- Compare and contrast the properties of number sets (such as real, whole, counting (natural), rational, irrational)
- Use all four operations involving integers (directed numbers) and absolute values
- Identify and use directed numbers in real life situations (debt, temperature, altitude, etc.)
- Locate real numbers on the number line

Representing Numbers

- Represent large and small numbers using exponential, scientific and calculator notation
- Convert fractions to decimals and percentages including terminating and repeating decimals and vice versa

Relationships among Numbers

- Differentiate between rational and irrational numbers
- Use the inverse relationships of squaring and finding square roots to simplify computations and solve problems
- Identify and find multiples and factors
- Perform prime factorization, least common multiple, greatest common factor (triple digits)

Choose Computational Method

- Select appropriate methods and tools for computing (mental computation, estimation, calculators, paper and pencil, etc.)
- Develop and use strategies to estimate the results of rational and irrational computations and justify the reasonableness of the result

Compute Fluently and Make Reasonable Estimates

- Rationalize the denominator of irrational numbers
- Estimate and compute using the four basic operations with whole numbers, fractions, mixed numbers, and decimals
- Use inverse relationships of addition and subtraction, multiplication and division, to simplify computations and solve problems
- Simplify expressions using order of operations
- Identify and use associative, commutative, and distributive properties to simplify computations
- Work flexibly with fractions, decimals, ratios, proportions, percentages and scale factors to solve problems

STATISTICS AND PROBABILITY

Basic Concepts of Data Collection and Analysis of Probability

- Demonstrate an understanding of sample space and construct sample space using tree diagrams
- Demonstrate an understanding of experimental and empirical probability
- Use the counting principle, permutations and combinations to calculate probabilities
- Use simulations to calculate empirical probability
- Use basic understanding of probability to make and test conjectures about the results of experimental simulations

MEASUREMENT

The Concept of Scale

- Apply metric and customary systems of measurement using appropriate tools
- Solve problems involving scale factors, using ratios and proportions

Write and Interpret Formulas

- Substitute numerals into the given formula
- Translate phrases into formulas

Calculate Quantities

- Select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision
- Develop strategies to determine the surface area and volume of selected prisms, pyramids, cylinders and cones

- Convert from one unit to another within the same system
- Use the Pythagorean Theorem to determine missing length of sides in a right triangle
- Use the Pythagorean Converse Theorem to determine whether a triangle is right or not
- Use the 45-45-90 and 30-60-90 triangles to find lengths of the sides in the triangles

The Need for Measurement

- Find the perimeter, circumference and area of shapes; lateral area, surface area and volume of solids

Convert Units of Measurement

- Apply the correct units of measure to different problems
- Perform conversions from metric to customary units and vice versa

ALGEBRA

Concept and Meaning of a Variable

- Distinguish between a variable and a constant

Numerical Patterns

- Recognize patterns in a table to find the relationship between two variables (formula)
- Represent and analyze patterns

Concept of a Formula

- Write a formula for graphs of linear functions
- Solve literal equations (change the subject of a formula)

Equations and Expressions

- Translate phrases into algebraic expressions
- Solve multi-step equations of the first degree
- Factor quadratic expressions
- Solve quadratic equations (factoring and quadratic formula)
- Solve a system of linear equations algebraically and graphically

Concept of Like Terms

- Simplify algebraic expressions by combining like terms
- Use the distributive property to simplify algebraic expressions

Inequalities

- Find the solutions of linear inequalities and graphs them on the

number line and/or the coordinate plane

- Find and graph solutions of compound inequalities

The Concept of Polynomials

- Classify polynomials as monomials, binomials, trinomials, etc.
- Perform all four operations with polynomials; FOIL
- Factor polynomials

The Concept of Radicals

- Simplify radicals and rationalize the denominator
- Perform all four operations with radicals

The Concept of Modeling

- Use algebra to represent situations and to solve problems involving linear and quadratic equations and inequalities
- Solve contextualized problems using various representations, such as graphs, tables, and equations

Concept of Linear Relationships

- Use various representations, such as graphs, tables and equations
- Use graphs to analyze the nature of change in quantities in the linear relationships (rate of change)

Concept of Variation

- Investigate how a change in one variable relates to a change in a second variable
- Explore the meaning of slopes

Slope

- Find the slope of a line given two points on the line
- Identify the slope and the x and y intercepts in the coordinate plane and in a given equation
- Graph linear equations using slope-intercepts form ($y=mx+b$)

GEOMETRY

Shapes and their Properties

- Describe precisely, classify and understand relationships among types of two-dimensional and three-dimensional objects using their definitive properties
- Show the relationships among the angles, side lengths, perimeters,

areas and volumes of similar figures

Congruency and Similarity of Shapes

- Demonstrate understanding of triangle congruency (SSS, SAS, ASA, HL)
- Examine and compare relationships between polygons to prove congruence and similarity based on congruence conditions

Basic Geometric Constructions

- Perform geometric constructions such as: copying a line segment and angle; perpendicular bisector and angle bisector, and a line parallel to another through a given point

Coordinate Geometry

- Plot points and graph lines given their equations

Concept of Slope

- Find the slope of a line given two points on the line
- Use the equation of a line, $y = mx + b$ to determine slope, x- and y-intercepts and whether two lines are parallel or perpendicular
- Determine the equation of a line from a graph
- Determine the equation of a line given two points
- Analyze geometric figures such as those with parallel or perpendicular lines

Using Geometric Models as Representations of Situations

- Use drawing to model geometric situations
- Use two-dimensional representations (nets) of three-dimensional objects to visualize and solve problems involving surface area and volume (prism, cylinder, pyramid, cone)

How to Solve Problems

- Solve problems algebraically involving angle relationships: Vertical, corresponding, co-interior, alternate interior and exterior, complementary, and supplementary angles
- Apply the Pythagorean Theorem to solve problems

Applications in Geometry

- Recognize and apply ideas and relationships in areas outside the mathematics room such as art, science, and everyday life
- Find the measure of interior and exterior angles of a regular polygon
- Apply the Pythagorean Theorem to solve problems

Problem Solving and Modeling

- Recognize geometric shapes and structures in real life situations
- Use spatial visualization to create mental images of geometric shapes
- Relate ideas in geometry to ideas in number and measurement
- Find perimeter and area of triangles, quadrilaterals, and compound shapes
- Find the area and circumference of a circle

- Find the volume of cubes and rectangular prisms

PROCESS STANDARDS

- Problem Solving
- Reasoning and Proof
- Communication
- Connections
- Representation

The Modern Language curriculum is a key component of the UNIS instructional program. Students develop strong communication skills in one language from Kindergarten and begin a second language in the Middle Three Year. UNIS also fosters Mother Tongue instruction at all levels for all languages within the educational program as well as in the after-school program.

UNIS believes that learning additional languages and supporting Mother Tongue and/or Heritage Language instruction contributes to the holistic development of students. The program fosters the enhancement of language skills necessary to succeed in different communicative situations. It exposes students to a broad cultural environment that helps promote understanding of world societies through languages.

UNIS benchmarks have been designed to reflect the European Framework skills set (reading, writing, speaking and listening) through where appropriate, the lens of Communication, Comparisons, Communities, Culture and Connections.

COMMUNICATION

Effective communication

- Interact with reasonable ease in structured situations and conversations
- Express feeling and emotions succinctly
- Interact and take part in routine exchanges without undue effort
- Exchange relevant information and give his or her opinion
- Summarize and give opinions (short stories, article, talk, discussion, interviews)
- Write personal letters
- Write notes conveying simple information (formal and informal)
- Write short essays or brief reports
- Give an elaborate description or presentation (likes, dislikes, daily routines etc.)
- Narrate a story
- Articulate and organize concepts (written and oral)
- Interpret simple text from a variety of genres

CONNECTIONS

Content & Language Integrated Learning (CLIL)

- Impart information about themselves and their environment

- Compare and contrast knowledge from other subjects in the target language
- Adapt and transfer information and terminology from one discipline to another
- Identify different regional variations within the target language
- Identify various viewpoints in the target language
- Explore multiple approaches and viewpoints on various topics in different disciplines (written and oral)
- Compare and discuss variety of cultural life experiences of themselves and others

COMPARISONS

Mutual understanding

- Present alternatives found in the target culture and apply them to their own (oral and written)
- Compare and contrast cultural practices and expressions
- Identify similarities and differences between viewpoints on global issues
- Identify and use the different levels of discourse (oral and written)
- Compare and contrast linguistic structures (cognates, neologism, etc.)

- Participate effectively in discussions and debates
- Discuss and measure the differences between their cultures and those of the target language
- Research and present alternative solutions to global issues (oral and written)

COMMUNITIES & CULTURE

Communicate needs and feelings with their community

- Present information on authentic experiences (museums, restaurants, cinemas etc.)
- Comprehend main messages in real life situations (oral, written, multimedia etc.)
- Identify different perspectives to UN issues from various linguistic and regional groups
- Analyze how language influences the content and form of cultural products (film, music, news etc.)
- Apply appropriate behavior to routine and unexpected situations
- Recognize that the perspective of cultures shapes its practices
- Use cultural codes in different situations (formal and informal)
- Research, gather and use information from a variety of sources (oral, visual, written, etc.)

The UNIS music program offers students the opportunity to function as skilled and literate performers, active listeners, passionate creators and informed critics. Participants become part of a group dynamic, developing an understanding of their unique role as an individual in that group. Music making enriches the mind, the body and the spirit and motivates students to go beyond their comfort zone, find solutions, and explore the full range of human emotion which ultimately provides the model for participation in a global community.

We believe that a rich musical experience involves the exploration, study and performance of music from diverse cultures. The curriculum includes the extensive study of various musical styles and techniques, the study of music notation, as well as the tradition of music making and performance. As students deepen their musical understanding both collaboratively and independently, they are able to demonstrate their abilities to apply musical knowledge and skills in context.

ACTIVE MUSIC MAKING

Performing in a musical ensemble (strings, winds, voice)

- Develop increasing dexterity and technical security through scales, solo and ensemble repertoire
- Perform with greater range of expression and style (blend, articulation, dynamics, phrasing)

Students learn the collaborative skills necessary to participate as a positive member of the group

- Maintain weekly lesson (strings and band)
- Maintain home practice routine
- Anticipate and follow conductor's cues
- Contribute actively in rehearsal activities leading toward performance
- Maintain weekly lesson (strings and band)

LISTENING AND ANALYZING

Students listen analytically to themselves and others

- Compare and evaluate different performances (solo and group)
- Describe musical features of pulse, rhythm, structural elements
- Compare and contrast elements of musical style

INTERPRETING (WRITTEN AND AURAL PERCEPTION)

Developing the skills necessary to become independent music learners

- Identify dynamics, articulations, tempo and expression markings present in the repertoire
- Sight-read melodies and rhythms of increasing complexity
- Echo and notate melodic and rhythmic patterns in a variety of keys and meters

ADDITIONAL ACTIVITIES TO SUPPORT STUDENT GROWTH

- Student involvement: in extracurricular ensembles, (jazz band, MS musical); practice with other students; participation in ABRSM, RACE, NYSSMA or other external adjudications
- Parent involvement: taking your child to live music, theater and other performances; encourage regular home practice routines; communicate with private lesson teacher regularly; attend their student concerts and recitals

INTERDISCIPLINARY PROCESS STANDARDS

- Self-expression
- Abstract and creative thinking
- Communication and collaboration
- Community building
- Working through challenges
- Cross-cultural understanding

The Mission of UNIS' Physical Education program is to engage students' interest in physical development and competence through lifelong fitness, recreational and competitive activities. The curriculum aims to promote students' acquisition and application of movement, skills and knowledge. It provides a diversified program allowing for opportunities to think critically, to collaborate and to reflect, as each student creates an awareness and ability to define their personal growth and physical wellbeing.

During Physical Education at this level, students become more expert in their skills and techniques, and learn how to apply them in different activities. They start to understand what makes an effective performance and how to apply these principles to their own and others' work. They learn to take the initiative and make decisions for themselves about what to do to improve performance. They start to identify the types of activity they prefer, and take a variety of roles, such as leader and official.

The UNIS scheme of work draws together parts of the programs of study to create a framework that shows how students might be helped to progress. In PE, this includes progression in:

- Acquiring and developing skills
- Selecting and applying skills, tactics and compositional ideas
- Evaluating and improving performance
- Knowledge and understanding of fitness and health

These four aspects are closely linked and are developed through the physical activity pupils carry out. For example, the evaluating and improving of performance will take into account the relationship between developing, selecting and applying skills, tactics and compositional ideas, and fitness and health. The quality of a performance and the selection of skills, tactics and compositional ideas are affected by the range and level of skills, the type and degree of fitness and the understanding of the concept of the activity.

GAMES ACTIVITIES

Invasion Games e.g. Basketball

Net/Wall Games e.g. Volleyball

Striking/Fielding Games e.g. Cricket

Acquiring and Developing Skills

- Apply techniques specific to the game effectively, safely and efficiently

Selecting and applying skills, tactics and compositional ideas

- Use principles of performance in planning game tactics and strategies
- Adapt strategies taking account of personal strengths and weaknesses

Knowledge and understanding of fitness and health

- Understand how to continue to improve personal fitness
- Know where and how to become involved in health-enhancing physical activity

Evaluating and improving performance

- Take the initiative and decide how to develop and improve personal and peer progress

DANCE & CREATIVE MOVEMENT

Gymnastics

Dance

Acquiring and Developing Skills

- Perform with technical competence and an understanding of selected dance styles

Selecting and applying skills, tactics and compositional ideas

- Use a range of compositional ideas and principles to compose dances for different choreographic purposes

Knowledge and understanding of fitness and health

- Identify strategies to improve personal fitness and techniques
- fitness for dance and through dance
- Recognize and describe how regular involvement in dance activity affects their fitness

Evaluating and improving performance

- Analyze, interpret and evaluate dances with an understanding of style, context and intention and use

this understanding to improve performance

- Take responsibility for making decisions about how to develop and improve personal performance

SWIMMING ACTIVITIES & WATER SAFETY

Swimming and Personal Survival

Water Polo

Acquiring and Developing Skills

- Apply techniques specific to the task or challenge effectively and efficiently

Selecting and applying skills, tactics and compositional ideas

- Utilize the correct skills adapting them as necessary to a given situation

Knowledge and understanding of fitness and health

- Recognize and describe how swimming regularly affects personal fitness, health and social wellbeing

- Understand how to improve personal fitness
- Identify how and where to get involved in health-enhancing physical activity

Evaluating and improving performance

- Analyze performance and use the information to influence and improve personal progress
- Take responsibility for decisions about how to develop and improve progress and that of others

ATHLETIC ACTIVITIES

Fitness for Life

Track and Field

Acquiring and Developing Skills

- Show precision, control and fluency in a range of chosen events

Selecting and applying skills, tactics and compositional ideas

- Use principles of performance in planning tactics and strategies for the tasks and challenges
- Adapt strategies, taking account of personal strengths and weaknesses and changing conditions and situations

Knowledge and understanding of fitness and health

- Identify strategies to improve personal fitness and techniques
- Understand why regular exercise has a positive effect on their own health, fitness and social wellbeing
- Know where and how to get involved in health-enhancing activity

Evaluating and improving performance

- Use information gained from analysis of a performance to influence and improve personal work and the work of others

An understanding of science is an essential component of modernity. Science is both an activity for generating knowledge about the natural world and a set of ideas - the mental models of chemists, physicists and biologists - about the origin and content of that world and the interactions that take place in it. While only a small number of individuals will become professional scientists, all our lives are being transformed by technology, the application of these ideas. Challenging ethical issues arise with each new scientific discovery, and changing scientific ideas shape and reshape our thinking about who we are.

The UNIS science program seeks to establish a climate of learning in which students feel that asking questions and evaluating the answers to those questions is the legitimate business of science. Students learn that only ideas that can be tested experimentally are scientific ideas, and that science proceeds by making predictions based on these ideas and testing them. The program is designed to develop in students the practice of critical thinking and logical argument, and to encourage, recognize and value creativity in finding solutions to scientific and technological problems.

BIOLOGY

The nature of infection

- Understand that human beings must constantly defend themselves against invading organisms
- Explain the different ways diseases can be transmitted between people

The relationship between life and energy

- Know that cells require energy to perform all life functions, and that the energy required can come from different sources
- Explain how plants and animals are interdependent, both in terms of energy and matter
- Understand the relationship between energy flows in an ecosystem and world food security

CHEMISTRY

Chemical change as a time-dependent process

- Know that chemical reactions take place at different speeds, and these can be measured

PHYSICS

How energy and matter interact through forces that result in changes in motion

- Know that the motion of an object can be described in terms of speed, direction and change of position
- Explain that forces and inertia determine the motion of objects

EARTH AND SPACE

The profound effect human activity can have on the future evolution of the planet Earth

- Understand that the balance of different gases in the atmosphere depends on the activities of organisms, and has changed over time
- Recognize that the future direction of life on planet Earth will depend on decisions made by this generation of its inhabitants

SCIENCE FAIR

The Middle School Science Fair is a one-day event in which teams of M4 students present the results of their investigation of a research question.

- Each team chooses a research question
- Testable predictions are made
- The team devises a method to carry out the investigation
- The necessary equipment is acquired and assembled
- Through a process of experimentation, reflection and

modification of the equipment, a working setup is achieved

- Data is obtained and recorded
- The data is presented as tables and/or graphs
- The data is analyzed, and conclusions are drawn
- A critique of the chosen methodology is presented at the same time as the conclusions
- On the day of the Fair, teams demonstrate their equipment and present a poster summarizing their investigation
- During the Fair, members of the team explain the purpose of their investigation, their equipment, methods, data and conclusions to visitors and judges

SCIENCE SKILLS

Experimental Work

- Formulate questions
- Develop scientific models
- Identify variables: independent, dependent, controlled
- Make testable predictions
- Design experimental procedures, including selecting appropriate equipment and specifying number of trials

Analyzing

- Classify objects/processes by shared properties

- Interpret data to identify relationships
- Draw conclusions based on the agreement between predictions and experimental data, to say whether the data supports or does not support a scientific model

Communicating

- Communicate ideas, understandings, procedures and findings in written, spoken and media-based modes, including writing formal lab reports
- Use scientific language correctly

- Construct tables and graphs, both bar and line, by hand and/or with computer software