



NPS International School

CURRICULUM GUIDES

* These guides provide a synopsis. More details can be obtained from the School

CURRICULUM GUIDES FOR EARLY YEARS

(KINDERGARTEN & MONTESSORI)

NPS International School offers two programmes in the Early Years - Kindergarten and Montessori.

KINDERGARTEN

Course Objectives

The kindergarten provides a homogenous atmosphere for 3, 4 and 5 year olds. The activities planned give the child opportunities to work alone as well as in a group. The programme is directed towards developing creativity, curiosity and divergent thinking.

Course Description

Literacy: The language programme helps the child develop phonological awareness and alphabet knowledge, advanced reading, book appreciation and writing. Apart from this, the child develops abilities to understand conversations, stories, songs and poems and is able to engage in meaningful conversations with peers and adults with confidence.

Numeracy: The school believes that it is important to learn to navigate back and forth within a small range rather than learn to count up to high numbers. The students learn to recognize, quantify and manipulate numbers, handle data, learn about measurement of time, length, capacity and weight and understand two and three dimensional shapes.

Unit of Study: The Unit of Study is a unique combination of topics from science and social science which engages the child to explore and widen his/her awareness of the world. Various topics of child's interest such as aquatic life, dinosaurs, tropical rainforests etc. are taken up. The learning outputs are achieved in the classroom through teachers' use of open ended questions which encourage students to consider multiple views, reflect on their thinking and the thinking of co-learners.

Physical Development: The programme helps the child develop his/her gross motor skills. Based on the sensory feedback children learn to judge situations and respond with appropriate muscle movements. This means gross motor memory, which helps the child recall steps involved in performing muscular activities. Simple grasps and pincer controls contribute to finer motor development.

Social Development: Children at this stage develop skills to play alongside, cooperate, recognize the necessity to take turns, manage space and their response to others, form friendships and respect rules of a game.

Course Methodology

The kindergarten programme involves a variety of child-centered activities that help in attaining the course objectives. The phonic and sight word training lays the foundation for early reading and writing. In numeracy students do hands-on activities and record observations for quantifying numbers, number manipulative, measurement, patterns and two and three dimensional shapes.

The topics under Unit of Study are approached through experiments, group discussions, observations, field trips and guest speakers are invited to enhance the child's knowledge. Outdoor and indoor activities like jumping, hopping, carrying, balancing, playing with building blocks, cutting, threading and lacing enhance the finer muscle coordination.

Unit of Instruction: The lessons are planned and presented based on Howard Gardner's theory of multiple intelligences to allow for students' strengths and differences. The content is cross disciplinary. It is valid across time and cultures and is developmentally appropriate for the targeted age group. It encourages students to continue to observe, explore, inquire and experiment.

Course Materials

Recording sheets, information and picture books.

MONTESSORI

Course Objectives

Montessori educational practice helps children develop their creativity, problem solving, critical thinking and time management skills. The environment provides the child freedom to choose work and reach a high level of concentration. When a child's work is respected and not interrupted, it helps the child not only academically but also emotionally. A Montessori child cares deeply about other people and the world; he/she works to discover a unique and individual way to contribute. Thus, the Montessori Method promotes respect, love for the environment, an orderly approach to work, independent approach to learning and self discipline.

Course Description

The child works in a mixed age group (3 years to 6 years of age) environment in the following areas:

The Exercises of Practical Life: These are focused around care of self and environment, grace and courtesy.

Sensorial: The materials help the child to refine his/her five senses as well as his/her stereognostic ability. The child learns to discriminate, order and classify sensory impressions in relation to size, shape and colour.

Numeracy: The child's mind has a natural tendency for counting, comparing and calculating. The child is given opportunity to exercise his mathematical mind moving him/her towards a gateway to abstraction.

Literacy: Vocabulary is continually enriched by spoken words and the child is guided and given opportunity to experiment actively with new ways of expressing ideas.

Cultural Area: The child engages in an interdisciplinary study of life of man on earth throughout time and in all geographic regions. It includes study of geography, history, music, art, zoology, language and mathematics.

Course Methodology

Montessori follows the method of observing and supporting the natural development of the child.

Unit of Instruction: The activities are presented to the child based on his/her readiness to undertake the tasks. Thus each child will be given time and space to develop his/her competence and confidence for the given activities.

Course Materials

Extensive materials as prescribed by the Montessori Method are used complemented with activities developed in-house.

CURRICULUM GUIDES FOR PRIMARY SCHOOL

(GRADES I to V)

ENGLISH

Course Objectives

Language plays a crucial role in the development of children where they learn to understand, analyze, and communicate with and to build relationships with the world around them. The English curriculum at NPS International School aims to create independent lifelong readers who communicate effectively and to foster a love of reading and writing. In view of this crucial relationship between language and learning, students are expected to:

1. Communicate effectively in any situation in and for different purposes.
2. Create impressive presentations that are delivered with confidence and poise.
3. Write clearly, concisely and convincingly.

Course Description

Proficiency in oral and written language is the focus of our language development programme. Discussion and debate are encouraged in every curriculum area. Through oral language activities, children develop their ability to communicate fluently with many different audiences. They develop cognitive skills that aid comprehension and develop reading and writing skills, which enrich their imagination. They are encouraged to listen critically with the purpose of understanding key ideas. The curriculum focuses on reading, both for information and pleasure

Course Methodology

Children are encouraged to conduct research using books in all subject areas. They also read to enjoy various writing styles and genres. From the earliest years, children at NPS International School experience a print-rich environment in which they have easy access to books.

Reading - Students read books selected for age appropriateness that forms an important part of the School Reading programme. The school has a Recommended Reading list for all grades. Students are encouraged to read a wide range of text, such as fiction and poetry, including real life stories, myths and legends and non-fiction text which includes letters, reports, book reviews, instructions and reference books.

Writing – Children learn a range of techniques to write a variety of genres for different audiences. Through the year, they progress through the different stages of the writing process such as drafting, revising and editing. The goal is to gain a command over the conventions of grammar, spelling and punctuation and to progressively become independent writers. As they grow more confident, students are encouraged to write a commentary on an issue, and to set out and justify a personal view. They also learn to make notes for different purposes and to write in their own words.

Time Frame

This is applicable to students in grades I through V.

Strands / Focus Topics:

Fiction, Non-Fiction, Poetry, Usage, Reading Comprehension and Creative Writing

HINDI

Course Objectives

Hindi is offered as a second language at NPS International School. The language has a script that is different from English and students are introduced to it only in primary school. Thus the learning journey for the students encompasses learning to read, write and speak Hindi. Students are expected to learn to read and comprehend Hindi texts, write grammatically correct sentences and passages, speak grammatically correct Hindi and comprehend Hindi in the spoken form.

Course Description

The Hindi curriculum at NPS International School aims to create a love for the language which links the students to their cultural roots. Proficiency in oral and written language is the focus of our language development programme. Discussion and debate are encouraged in every curriculum area. Through oral language activities, children develop their ability to communicate with many different audiences. They develop cognitive skills that aid comprehension and develop reading and writing skills, which enrich their imagination.

Course Methodology

The curriculum has a high textual content. The teachers select a lot of interesting stories, non-fiction articles and poems to introduce vocabulary in various contexts. Grammar drills and exercises also form a large part of the course content. Listening and speaking exercises are also emphasized on so that students are able to use the language beyond the classroom.

Reading – Students are introduced to various texts in their study materials and textbooks. Reading with the proper diction is taught and simultaneously the comprehension of the text is tested both orally and in written form.

Writing – The skill of writing with correct grammar is developed by answering questions based on the texts and also through creative writing exercises. Students begin by writing paragraphs based on pictures and then move on to writing imaginative compositions.

Listening – Listening exercises are conducted from the initial stage of the learning process. Students are taught to distinguish similar sounding letters and words. For the older learners, there are exercises where they need to comprehend the content of a passage that is read out to them.

Speaking – Students are given a lot of practice in speaking the language. Picture descriptions, poetry recitations, oral discussions and role plays are used regularly to encourage the students to speak the language correctly and confidently.

Time Frame

This is applicable to students in grades I through V.

Strands / Focus topics:

Literacy, Fiction, Non-fiction, Poetry and Usage

FRENCH

Course Objectives

This programme aims to provide children with a set of oral and writing skills, linked with their age and their interests, allowing them to communicate in French through activities. Our teaching methods are based on a communicative approach of French as a foreign language.

Course Description

At NPS International School, we start building your child's vocabulary by introducing words in French that are different than in English and slowly expanding to entire short sentences when the child is ready. Our curriculum is especially designed for children using communicative games and primary school techniques for a practical and fun introduction to French. Your child will learn linguistic structures, vocabulary and culture through various recreational activities. The program invites the students to express themselves through practical situations of communication, sensorial activities, games, songs and stories to act out.

The program provides your child a lifelong advantage by exposing them to a foreign language at an early age. Besides providing a head start for their future language learning, they benefit from a proven boost in scholastic performance in other subject areas.

Course Methodology

The curriculum has a higher pictorial content. The teachers select a lot of interesting stories, non-fiction articles and poems to introduce vocabulary in various contexts. Grammar drills and exercises also form a large part of the course content. Listening and speaking exercises are also emphasized so that students are able to use the language beyond the classroom.

Reading – Students are introduced to various texts in their study materials and textbooks. Reading with the proper diction is taught and simultaneously the comprehension of the text is tested both orally and in written form.

Writing – The skill of writing with correct grammar is developed by answering questions based on the texts and also through creative writing exercises. Students begin by writing paragraphs based on pictures and then move on to writing imaginative compositions.

Listening – Listening exercises are conducted from the initial stage of the learning process. Students are taught to distinguish similar sounding letters and words. For the older learners, there are exercises where they need to comprehend the content of a passage that is read out to them.

Speaking – Students are given a lot of practice in speaking the language. Picture descriptions, poetry recitations, oral discussions and role plays are used regularly to encourage the students to speak the language correctly and confidently.

Time Frame

This is applicable to students in grades I through V.

Strands / Focus topics:

Literacy, Fiction, Non-Fiction, Poetry, Usage, Reading Comprehension and Creative Writing.

MATHEMATICS

Course Objectives

Mathematics can be described as a science of numbers which enables a child to think in a quantitative manner and handle mathematical problems which require accuracy and precision. It can also be thought of as a language that provides clear means to organize information and communicate the results for comprehensive understanding of others. This makes mathematics an essential tool for the children to master in order to intricately understand the higher-level complicated ideas later in their life.

The ultimate goal of our curriculum is to strengthen students' understanding of the above topics and help them make connection between mathematics theory and real life. The students will acquire understanding of numbers, develop skills in measurement and knowledge of spatial concepts. They will also learn techniques of collecting, representing and interpreting data and problem solving approaches, while also developing a positive attitude towards Mathematics along the way.

Course Description

Mathematics curriculum at NPS International School in primary grades aims at providing the students with knowledge and skills so that they are able to comprehend and make quantitative sense of the world around them. Our goal is to equip our students with tools that will help them become proficient problem solvers along with expert mental math abilities. In the process, we believe that their learning should be enjoyable, engaging, and creative that will nurture the love for the subject as the students move up the grades. Since acquisition of knowledge takes place in a child centered environment where the students create and develop their own learning, the understanding of the topics is deeper and long lasting.

Due care has been taken to ensure there is continuity of the curriculum from grade I to grade V. Our curriculum at NPS International primary school aims to provide the children with a mathematical education that is developmentally appropriate as well as socially relevant.

Course Methodology

The students in primary school are encouraged to conduct investigations, solve problems and communicate the results using accurate mathematical language. The students develop flexible problem solving approaches through reasoning and learn to make decisions about which operations to use and which strategies to implement.

We believe that activities are an excellent way to introduce a lesson as it seizes students' attention right away and sparks the curiosity that is much required for the success of the lesson. As the lesson progresses, activities are conducted from time to time, where we test the depth of understanding of our students, which then defines the path of the lesson. Practice time and discussions are planned to consolidate the learning of the students.

Time Frame:

The primary Mathematics curriculum is applicable to the students from grades I to V.

Strands:

Numbers, Geometry, Mensuration, Data Handling

UNITS OF STUDY

Course Objectives

This programme aims at inculcating scientific approach, Scientific temper and Scientific attitude in children during these formative years as they help them relate to events and things around them. This scientific perspective also prepares them to reason, analyse and synthesise apart from preparing them to take up International Science Aptitude tests and be on par with the scientific community of comparative ages.

Course Description

The Units of Study is a unique combination of science and social science which functions in an explorative manner to widen the students' awareness of the world. The curriculum encompasses a wide range of spectrum in sciences which include: Physical sciences, Environmental sciences, Life sciences, Geological science, Social Sciences and Technology. Through a series of themes, the students are introduced to the world around to understand the people, their environment and the natural phenomena. There is scope for scientific inquiry, research, argumentation, reflective thinking, reasoning and drawing inferences. The varying degrees of complexity of topics and subtopics in the subsequent years pave way for inclusive and intensive learning along with reinforcement throughout the primary years.

Course Methodology

Scientific Literacy at the primary level happens with the intersection of learning of theoretical science and observation of practical science in everyday life. This serves as the core purpose of engaging students in project based learning, research and presentation of data. Field trips and hands-on activities contribute to our instructional framework which aims at transformative approach towards science learning. The students are encouraged to take charge of their learning. They share their learning with the target group through posters, exhibitions and project presentations. The focus is on strengthening concepts, reasoning and application skills rather than mastery over content.

Strands / Focus topics:

<p><i>Science</i></p> <p>Living and Non Living Things States of Matter Electricity Birds and Fish Human Respiratory and Skeletal Systems Human Circulatory and Nervous Systems Amphibians, Reptiles and Mammals Magnetic Force Diseases (Infectious and deficiency diseases) Matter Light and Sound Forms of Energy Human body systems (Respiratory, Circulatory, Digestive and Skeletal) Push and Pull Mixtures and Solutions</p>
<p><i>Social Science</i></p> <p>People Around Us Systems and Services in the City Shelter Maps and Globes</p>

Settlement and Civilizations
Biomes
Inca empire
Rocks, Soil and Erosion
Structures and Monuments
Landforms
Media and Advertising
<i>Environmental Science</i>
Needs and Environment
Natural Disasters
Rainforests and Endangered Species
Resources and Materials
Air and Atmosphere
Weather and Climate
Market Place
Saving the Environment

CURRICULUM GUIDES FOR MIDDLE SCHOOL

(GRADES VI, VII & VIII)

ENGLISH

Course Objectives

This course exposes students to receptive skills such as Reading and Listening as well as productive skills like Spoken and Written. Students also get to study different genres of writing, appreciate the beauty of language and identify how writers achieve effects. They also understand the styles suitable for different purpose and audiences.

Course Description

Writing : Students will learn to use grammatical and mechanical conventions in written compositions, stylistics and rhetorical aspects of writing and general skills and strategies of the reading and writing process. Students will learn to write in a wide range of forms such as written compositions, summary and directed writing, letter writing, stories and play scripts. They will also learn to structure their writing, using paragraphs and sequencing events, details and ideas within the paragraphs.

Reading : Students will learn to use reading skills and strategies to deduce meaning and interpret a variety of texts and understand the use of language to convey moods, images and meaningful dialogue. They will also be able to use general reading skills to recognise and comment on opinions expressed by a writer. The students will a be able to recognise implicit/explicit meaning, select, collate and summarise facts and figures, using their own words where appropriate to demonstrate understanding

Speaking and listening: Students of middle school will be able to speak for a variety of purposes, such as to explain, describe, narrate, explore, analyse, imagine, discuss, argue and persuade. They will participate in speaking and listening activities and make significant contributions to group discussions or to give group presentations. They will practise speaking fluently and clearly at an appropriate pace and volume and use a range of vocabulary and sentence structure to make speech interesting and convincing.

Course Methodology

Students will engage in reading different genres followed by discussion and brainstorming about the various interpretations. They will write about their experiences, gain insight into human nature and empathize with the characters. Role play and dramatization are tools used to enhance deeper understanding of the literary texts. Students hone their listening skills while listening to texts and while conversing. Learning to appreciate the impact of the writer's intent and strategies are other skills the students imbibe.

Time Frame

Grade VI, Grade VII and Grade VIII

Strands/Focus topics

Listening, Speaking, Reading and Writing

LANGUAGES

Course Objectives

The focus of learning languages (Hindi/French) at the middle school is to develop core linguistic skills. It caters to individual learning styles and is learner centric. The curriculum will help students to develop strategies that improve their reading and writing and speaking abilities. These include the ability to express themselves in different situations.

Course Description

The focus of learning at the middle school is to develop core linguistic skills. It is designed for the students who have already studied Hindi/French as a second language during their primary years. The curriculum will help students to develop strategies that improve their reading and writing ability. Students will also learn to speak and listen in situations where Hindi/French is commonly used. The course will enhance the ability to communicate by expressing and presenting their thoughts in a given situation.

Course Methodology

Independent research work helps to develop analytical and application skills of students. They will develop an understanding and awareness towards global concerns. The focus is on developing four essential skills to master a language; reading, writing, speaking and listening. Multiple Intelligence tasks are used as a support to provide an entry point to students with different learning skills. Students are taught to collect information, analyze, edit and present them through different formats. These tasks are designed to enable them to become independent learners and increase their language proficiency.

Time Frame

Grade VI, VII, VIII

Strands/Focus topics

Reading, Writing, Grammar, Oral and Listening

MATHEMATICS

Course Objectives

Through the Mathematics programme, students will be enabled to develop their abilities to manipulate and solve a range of numerical problems. They will interpret charts and tables. They will be exposed to the language of numbers, sets, algebra and to the concept of shapes. They will develop an awareness of international situations by using appropriate problem solving techniques.

Course Description

The focus of learning Mathematics at the middle school is to develop core mathematical skills. The course provides an opportunity for students to think logically and creatively by applying abstract principles to particular situations. In recognising patterns, in forming and proving a general result or in constructing and interpreting a model of a real situation the student will be following in a long tradition of mathematics worldwide. The students will learn a new language, notation and terminology, leading them to a deeper understanding of the elegance, power and potential of mathematics and to a greater confidence in their powers of communication. Integral to the course will be the application of appropriate technology as a tool to help solve genuine problems. We have chosen text books which emphasise the international nature of mathematics.

It caters to individual learning styles and is learner and learning centric. The curriculum will help students to develop strategies that improve their logical thinking and analytical ability. These include the ability to approximate and estimate to use trial and improvement techniques, look for patterns and make hypothesis.

Course Methodology

Projects are done to facilitate independent research work and to develop analytical and evaluation skills of students will develop an awareness of international situations by using appropriate problem solving techniques. The focus is on analysis, discovery and experimental learning. Through investigation the students will develop confidence in solving problems. Multiple Intelligence tasks are used in classrooms to provide an entry point to students with different learning skills. Hands-on activities are done in the mathematics laboratory to present abstract concepts in a concrete manner. Students are taught to collect data, analyse and present them through field trips. These trips also help them to hone their estimation skills.

Time Frame

Grade VI, VII, VIII

Strands/Focus Topics

Numbers, Algebra, Geometry and Data Handling

SCIENCES

Course Objectives

Through the Sciences programme, students will develop their abilities to inquire, analyse, frame hypothesis. They will learn to interpret information given in different forms like a graph, a table or a documentary. They will develop curiosity, interest and enjoyment in the various sciences and their methods of enquiry. They will develop attributes that will enable them to make informed decisions in everyday life that are related to science, technology and environment.

The programme will encourage students to be reflective and lifelong learners and to keep up with the new developments in the field of science and technology.

Course Description

The focus of learning in Biology is to acquire understanding and knowledge of the concepts, principles and applications of biology. The curriculum is inquiry-based and will help students to develop the skills, strategies, scientific reasoning and to relate science to technology and the environment.

Physics syllabus at the middle school is a continuation and development of the Primary science syllabus. The topics of study are Physical Quantities and Units, Kinematics, Dynamics, Energy and Interactions, Thermal Physics, Waves, Electricity and Magnetism. The course focuses on three areas – knowledge with understanding, skills development and application and development of ethics in the practice of science.

In Chemistry students learn basic concepts such as matter and its physical and chemical changes, atomic structure, periodic table, basic forms of energy and the energy transformations as they relate to atoms, through scientific investigation.

Course Methodology

The science subjects are learnt with laboratory work and hands on activities that would encompass a significant range of multiple intelligences. Projects which are research based are done to develop self learning and going beyond the text book. Students are taught to collect data, analyse and present them through field trips. Safe and ethical practice of Science and academic honesty are instilled in the student through these activities. Multiple Intelligence tasks are used in classrooms to provide an entry point to students with different learning skills.

Time Frame

Grades VI, VII, VIII

Strands/Focus Topics

Biology: Human Biology, Plant Biology, Cell Biology, Environmental Biology and Genetics

Physics: Physical quantities and measurement, Forces and Motion, Energy, Waves, Electricity and Magnetism

Chemistry: Theoretical Chemistry, Analytical Chemistry, Inorganic Chemistry and Physical Chemistry

GEOGRAPHY

Course Objectives

Through the Geography programme, students will be enabled to develop their abilities to understand the world around us better. They will analyze and interpret different physical, human, economic and regional geographical conditions. They will be exposed to the reading and interpretation of topographical maps, map scales and to the concept of describing routes. They will also develop an awareness of international situations by using appropriate problem solving techniques.

Course Description

The focus of learning Geography at the middle school is to develop core concepts in physical and human Geography. The course will deal with natural phenomena as well as human habits and highlight the consequences of the interface between nature and man. The study of different countries will be used only as an example. They will use maps to interpret and understand as well as draw them. .

Course Methodology

Independent research to develop analytical and evaluation skills of students in the realm of different aspects of Geography viz. Human, Economic, Physical and Regional. The focus is on analysis, discovery and experiential learning. Students get to gather data through field trips and research. Sometimes they have to do surveys as well. They make presentations in groups and draw up action plans to address environmental concerns.

Time Frame

Grade VI, VII, VIII

Strands/Focus Topics

Physical, Human/Economic and Regions/Countries

HISTORY

Course Objectives

Students will learn to use historical evidences to understand the past and to gain a broad understanding about their past and help them to trace growth and developments from the beginning of civilization. They will gain a sense of values to actualize himself as an individual to play a useful part in society and will learn to appreciate art and life.

Course Description

The history course follows an integrated curriculum- a balanced mix of World and Indian History. History is taught chronologically starting from Early Man to Modern History. Each year students will explore an era. In grade VI students study Stone Age and the start of civilizations. Grade VII students focus on Medieval History which includes the Muslim invasions in India and Christendom. Grade VIII students study the period of colonization and exploration.

Course Methodology

Lively discussions and debates conducted in class where we attempt to go beyond the text are part of our teaching methodology. We draw parallels from environments and current happenings that students are familiar with by encouraging them to work on newspaper articles. Making models gives them hands on experience and concepts are clarified.

Field trips to places like the museum train students in data collection. We arrange guest speakers for connecting with topics. Reading includes print materials in our library apart from the study material. Students are encouraged to refer to newspapers as well. The classroom is interactive and role-plays and dramatization extend what is taught. The typical History class exploits the group activities where interactions lend to perspectives in History. Such activities teach them life skills.

Time Frame

Grades VI, VII, VIII

Strands/Focus Topics

Civilizations & Dynasties, Religious Life and Civics

CURRICULUM GUIDES FOR CBSE-i (GRADES IX & X)

ENGLISH

Course Objectives

CBSE-i aims to develop the skills of listening, speaking, reading and writing in a variety of contexts and train students to be able to adapt language to suit different tasks, audience and purpose.

Course Description

The course has been designed to help students develop critical abilities and evaluate diverse texts and equip learners with the language to question ideas and articulate their point of view.

Course Methodology

Study materials prescribed by the board will be used as parameters for teaching the skills required in English Language and Literature. Seminars, debates, group activities, discussions, creative writing, answering questions based on material from audio and visual media will be used. Different print materials will also be used for study.

The teaching techniques promote habits of self-learning and reduce over-dependence on the teacher. A multi-skill, learner-centered, activity based approach with variations, is used in classroom teaching. The core classroom activity is silent reading of prescribed/selected texts for comprehension, which leads to other forms of language learning activities such as role play, dramatization, group discussion, writing, etc. although such activities could also be carried out without the preliminary use of textual material. Students are trained to read independently and intelligently, interacting actively with texts, with the use of reference materials (dictionaries, thesauruses, etc.) where necessary. Some pre-reading activity is generally required, and the course books suggest suitable activities, leaving teachers free to devise other activities when desired. The reading of texts is followed by post reading activities.

Time frame: Grades IX, X

Strands / Focus topics:

Grade IX themes	Grade X themes
1. Living in Peace	1. The Supernatural
2. Metamorphosis.	2. The Butterfly Effect
3. Relationships	3. Archeology
4. Cross – cultural understanding	4. Myths of the World.
5. Striving for Excellence.	5. Other Worlds-other culture.
6. Science Fiction	6. Crime/Mystery
7. Ordinary Heroes	7. Environment Crusaders
8. World of Animals	8. Sporting Achievements
	9. The Arts, Music, Theatre, Dance

HINDI

Course Objectives

The objective of the course is to enable students read and comprehend texts, text-based writing, understand and respond to lectures, write expository and persuasive essays, use written and oral communication effectively and understand the use of language and its effective usage.

Course Description

The focus of learning Hindi at the CBSE-i level is to help students gain in-depth knowledge of the appropriate use of vocabulary, sentence structure, so as to be able to use in varied purposes like academic and everyday use. Students will also be able to understand the rules of the language. The curriculum helps students to improve their logical thinking and analytical ability and caters to individual styles.

Course Methodology

Learning of the second language will cater to the learning of the four skills, viz., listening, speaking, reading and writing. Activities and learning in classroom will cater to these four skills. Learning will be learner centric and hence students will be encouraged to develop awareness and application of the skill for various purposes through unseen text, audio-visual, news, projects, presentations, quizzes, individual and group activities.

Time frame

Grades IX, X

Strands / Focus topics:

Grammar, Unseen Text, Writing, Textual Studies

MATHEMATICS

Course Objectives

The Mathematics programme will allow students to develop their abilities to manipulate and solve a range of numerical problems. Students will learn to interpret charts and tables. They will be exposed to the sets, algebra, coordinate geometry, trigonometry, areas and volumes of solids and number sequences. They will develop an awareness of various situations by using appropriate problem solving techniques.

Course Description

The CBSE-i for classes IX- X at Secondary recommends the study of five learning areas in addition to the core. One area of learning is Mathematics and Technology in classes IX-X. The students have the option of taking higher level of Mathematics or Elective Mathematics in class IX leading to class X. The Mathematics Curriculum helps students develop strategies that improve their logical thinking and analytical ability. These include the ability to approximate and estimate, to use trial and improvement techniques, look for and analyse patterns and make hypotheses.

Course Methodology

Independent research work is carried out to develop analytical and evaluation skills of students. The focus is on analysis, discovery and experimental learning. The Mathematics Lab activities are an integral and a compulsory part of the Mathematics curriculum. The focus of the CBSE– i Secondary program is to help students understand and use common software applications as well as use technology to enhance their ability to access, evaluate and research information.

Time Frame

Grades IX and X

Focus topics:

Numbers, Algebra, Coordinate Geometry, Trigonometry, Geometry, Transformations, Probability and Statistics

SCIENCE

Course Objectives

Teaching of science at high school aims to portray Science as a set of ideas and processes, to help students develop a coherent knowledge and understanding of the environment around them and to develop scientific attitudes and help students appreciate the implications of scientific study and its limitations. The study also aims to encourage students use scientific methods and learn scientific skills to evaluate ideas and make choices/decisions, develop an understanding about the evolving nature of science and assist students in their understanding of the need to make responsible decisions on the use of science and technology. The high school science study also aims to develop appropriate scientific ideas for use in choosing careers and to make a strong foundation for further studies, to develop curiosity and give students an opportunity to explore the magic of science.

Course Description

The Science course is standards-based study of the fundamental concepts of Physics, Chemistry and Biology. Concepts and skill are reinforced by a strong emphasis on hands-on laboratory experiences and integration of all the branches of science. The implication to society, individual and utilization of technology form an important part of the curriculum.

Course Methodology

The Science curriculum objectives are realized through a number of processes and activities like enquiry based learning, experiential learning, activity based learning, projects, researches, hands-on-activities, continuous and comprehensive evaluation and use of multiple intelligence tasks, besides lectures.

Time Frame

Grades IX and X

Focus topics

Grade-IX

01. Kinematics	12. Sound
02. Force and Motion	13. Work, Energy and Power
03. Gravitation	14. Thermal Physics
04. Floating bodies	15. Compounds
05. All About Matter	16. Mixtures
06. Materials	17. Chemical calculations
07. Elements	18. Why do we fall ill?
08. The Fundamental unit of life	19. Biogeochemical cycles
09. Cell Division	20. Human influences on environment and repair
10. Tissues	21. Improvement of food resources
11. Diversity in living organisms	

Grade –X

01. Electric Circuits 02. Magnetism 03. Acids Bases and Salts 04. Metals 05. Life processes 06. Control and Coordination	07. Electromagnetic induction 08. Light 09. Electricity and Chemistry 10. Carbon and its compounds 11. How do organisms reproduce? 12. Heredity and Evolution
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GEOGRAPHY

Course Objectives

The study of Geography enables the students to demonstrate knowledge and understanding of physical, economic, social, political and cultural environments and their associated effects on the landscape; spatial patterns and the inter-relationships between people's activities. Students will analyse and interpret geographical data, use and apply their geographical knowledge and understanding to maps, use geographical data to recognise patterns and show understanding of techniques for observing and collecting data. They will learn to make judgements (including evaluation and conclusions) which demonstrate sensitivity to, and a concern for the environment and the need for sustainable development. The curriculum which forms part of the Social Sciences will help students improve their logical thinking and analytical ability.

Course Description

The focus of learning Geography at the CBSE-i level in high school is to develop the knowledge and understanding of physical and human environments together with the skills to critically evaluate and communicate on environmental issues. It caters to individual learning styles and is learner and learning centric.

Course Methodology

Independent research work to develop analytical and evaluation skills of students are an important part. Through investigation the students will develop confidence in solving problems related to issues like migration, population growth, plate tectonics and various others. Multiple Intelligence tasks are used in classrooms to provide an entry point to students with different learning skills. Hands-on activities are done to present abstract concepts in a concrete manner.

Time Frame – Grades IX and X

Focus topics:

Grade IX	Grade X
The Earth: Origin & Interior of the Earth. Wegner's Theory and Plate Tectonics.	Population and its distribution in the world
Landforms: Evolution and geomorphic processes.	Population Change and Growth
Climate: Atmosphere & World Climate.	Population Composition
Global Warming: Climate Change and Global Warming. Case Study.	Primary Activities
	Secondary Activities Tertiary Activities

HISTORY

Course Objectives

The objective of the course is to enable students understand change and continuity, cause and consequence, similarity and difference, motives, emotions, intentions and beliefs of people in the past. Students should be able to recall, select, organise and deploy knowledge of history. It also aims at the students' understanding, interpretation, evaluation and use of a range of sources as evidence in their historical context.

Course Description

The course caters to individual learning styles and is learner and learning centric. The History syllabus offers students the opportunity to study some of the major international issues of the 19th and 20th centuries, as well as looking in greater depth at the history of a particular region or regions. The emphasis within the syllabus is as much on developing lifelong historical analytical skills as on acquiring knowledge.

Course Methodology

Independent research work to develop analytical and evaluation skills of students is a key part of the methodology. Students will develop an awareness of international situations by debating the issues involved. The focus is on analysis, discovery and experimental learning.

Time Frame

Grades IX, X

Focus Topics

French Revolution	Evolution of Democracy	The World After the World War II	Power Sharing
Russian Revolution	Facets of Democracy	Post-Cold War Scenario and the Contemporary Global Challenges	Rise of Popular Movements: Types and Case Studies
The World War I	Understanding Rights	Path to Modernisation	Unit III Outcomes of Democracy
Inter-War Period	Citizenship and Participation	Work, Life and Leisure	Environment and Natural Resources in Global Politics
Rise of Fascism and Nazism			
The World War-II			

CURRICULUM GUIDES FOR HIGHER SECONDARY (GRADES XI & XII CBSE)

ENGLISH

Course Objective

To enable students appreciate different genres of literature, text types set by the board for study during the two years of study. Students are expected to learn different communicative writing skills that help them in their examinations as well as continue to be of use when they enter the real world.

Course Description

Students will learn from the prescribed texts / syllabus, writing tasks set by the board. Reading skills will be developed through exposure to newspaper and other articles.

Course Methodology

Students will be taught using multi-skilled, learner- centred activity based approach to understand and critically evaluate the texts prescribed by the board. Silent reading for comprehension will be a part of learning in the classroom. Group activities, discussion, debates will be a part of teaching/ learning practice. Students will be encouraged to interpret the texts using different perspectives.

Time frame: Grades XI and XII

MATHEMATICS

Course Objectives

Senior Secondary stage is a launching stage from where students go either for higher academic education in Mathematics or for professional courses like engineering, physical and bioscience, commerce or computer applications. In the Mathematics programme, students will acquire knowledge and critical understanding, particularly the motivation and visualization, of basic concepts, terms, principles, symbols and mastery of underlying processes and skills. They develop aptitude to think, analyze and articulate logically. The course aims to develop an interest in students to study mathematics as a discipline.

Course Description

Motivating the topics from real life situations and other subject areas, greater emphasis is laid on application of various concepts. Students will be exposed to the different aspects of Calculus, Functions and their graphs, advanced trigonometric functions and its techniques, Vectors and its applications, sets, Statistics and Probability, Algebra of Matrices and Determinants, Coordinate geometry and Conics

Course Methodology

The techniques used for teaching promotes habits of self-learning and students are encouraged to practice more from the reference books. More emphasis is given to understanding the concepts and the practice exercises reinforce their learning. These are supplemented by lectures, discussions, investigative assignments and presentations.

Time Frame

Grades XI and XII

Focus Topics

Sets and functions, Algebra, Coordinate geometry, Mathematical reasoning, Statistics and probability, Vectors and three dimensional geometry, Linear programming.

PHYSICS

Course Objectives

The objective of learning Physics is to strengthen the concepts developed at the secondary school stage to provide firm foundation for further learning in the subject; to expose the learners to different processes used in Physics-related industrial and technological applications and to develop experimental, observational, manipulative, decision making and investigative skills in the learners

Course Description

The Physics course at the CBSE Senior Secondary stage lays emphasis on basic conceptual understanding of concepts as well as on the use of units, nomenclature of physical quantities and formulations as per international standards. The course promotes problem solving skills and application of the concepts of Physics.

Course Methodology

The curriculum is imparted through practical and hands-on activities. Practical experiments cater to reinforce the content learned by students in class rooms. Discussions and seminars are encouraged to instill self reliance and wider thinking. Students are encouraged to work out problems and exercises provided in the text books to learn applications of the theoretical concepts discussed in class.

Time Frame

Grades XI and XII

Focus Topics

Physical World & Measurement	Electrostatics
Kinematics	Current Electricity
Laws of Motion	Magnetic effect of current & Magnetism
Work, Energy & Power	Electromagnetic Induction and Alternating current
Motion of System of particles & Rigid Body	Electromagnetic Waves
Gravitation	Optics
Properties of Bulk Matter	Dual Nature of Matter
Thermodynamics	Atoms and Nuclei
Behaviour of Perfect Gas & Kinetic Theory of gases	Electronic Devices
Oscillations & Waves	Communication Systems

CHEMISTRY

Course Objectives

The broad objectives of teaching Chemistry at Senior Secondary Stage are to help the learners to understand the basic facts and concepts in chemistry even while retaining the excitement for the subject. It allows students to study chemistry in academic and professional courses (such as medicine, engineering, technology) at the tertiary level. It exposes students to emerging new areas of chemistry and appraises them with their relevance in their future studies. It equips students to face various changes related to health, nutrition, environment, population, weather, industries and agriculture. The study of chemistry develops problem solving skills and exposes students to different processes used in industries and their technological applications as well as acquainting them with different aspects of chemistry used in daily life. Students also become aware of the interface of chemistry with other disciplines of science such as physics, biology, geology and engineering.

Course Description

The study of Chemistry at the Senior Secondary level allows for an understanding of the basic facts and concepts of Chemistry. It exposes students to various areas of Chemistry and appraises them with the relevance in their future courses of study. The course also includes scientific investigations involving laboratory testing, collecting information and presenting them logically.

Course Methodology

The curriculum is imparted through lectures, practical and hands-on activities. Practical experiments cater to reinforce the content learned by students in class rooms. Discussions and seminars are encouraged to help attain self reliance and wider thinking. Students are encouraged to work out problems and exercises provided in the text books to learn applications of the theoretical concepts discussed in class.

Time Frame

Grades XI and XII

Focus Topics

Basic Concepts of Chemistry	Solid State
Structure of Atom	Solutions
Classification of Elements and Periodicity in Properties	Electrochemistry
Chemical Bonding and Molecular Structure	Chemical Kinetics
States of Matter: Gases and Liquids	Surface Chemistry
Thermodynamics	General Principles and Processes of Isolation of Elements
Equilibrium	p -Block Elements
Redox Reactions	D -and f -Block Elements
Hydrogen	Coordination Compounds
Block Elements	Haloalkanes and Haloarenes
Some p -Block Elements	Alcohols, Phenols and Ethers
Organic Chemistry: Some basic Principles and Techniques	Aldehydes, Ketons and Carboxylic Acids
Hydrocarbons	Organic Compounds containing Nitrogen
Environmental Chemistry	Biomolecules
Chemistry in Everyday Life	Polymers

BIOLOGY

Course Objectives

Through the Biology programme, students will be expected to understand the basic principles of Biology and are encouraged to learn emerging knowledge and its relevance to individual and society; promote rational/specific attitude to issues related to population, environment and development. Students will enhance awareness about environmental issues and problems and the appropriate solutions and learn to appreciate the variations amongst the living, while developing respect for the diversity.

Course Description

It provides the students with new concepts along with an extended exposure to contemporary areas of the subject. The syllabus also aims at emphasizing on the underlying principles that are common to both animals and plants as well as highlighting the relationship of biology with other areas of knowledge. The format of the syllabus allows a simple, clear, sequential flow of concepts without any jarring jumps. The syllabus also stresses on making connections among biological concepts. It relates the study of biology to real life through the use of technology. It links the discoveries and innovations in biology to everyday life, such as environment, industry, health and agriculture.

Course Methodology

Through investigations the students will develop confidence in solving problems. Multiple Intelligence tasks are used in classrooms to provide an entry point to students with different learning skills. Students are taught to collect data, analyse and present them through field trips. These trips also help them to hone their estimation skills. These are supplemented with lectures and discussions.

Time Frame – Grades XI and XII

Focus Topics

Strands		Strands	
Diversity in the Living World	1. The Living World 2. Biological Classification 3. Plant Classification 4. Animal Classification	Reproduction	1. Reproduction in organisms 2. Sexual Reproduction in Flowering Plants 3. Human Reproduction 4. Reproductive Health
Structural Organisation in Plants and Animals	1. Morphology of Flowering Plants 2. Anatomy of Flowering Plants 3. Structural Organisation in Animals	Genetics and Evolution	1. Principles of Inheritance and Variation 2. Molecular basis of Inheritance 3. Evolution
Cell : Structure and Functions	1. Cell : The unit of life 2. Biomolecules 3. Cell cycle and Cell division	Biology in Human Welfare	1. Human health and Disease 2. Strategies for enhancement in Food Production 3. Microbes in Human Welfare
Plant	1. Transport in plants	Bio-technology	1. Bio-technology :

Physiology	<ol style="list-style-type: none"> 2. Mineral Nutrition 3. Photosynthesis in higher plants 4. Respiration in plants 5. Plant Growth and Development 		<p>Principles and Processes</p> <ol style="list-style-type: none"> 2. Bio-technology and its applications
Human Physiology	<ol style="list-style-type: none"> 1. Digestion and Absorption 2. Breathing and Exchange of gases 3. Body Fluids and Circulation 4. Excretory Products and their Elimination 5. Locomotion and Movement 6. Neural Control and Coordination 7. Chemical Coordination and Integration 	Ecology	<ol style="list-style-type: none"> 1. Organisms and Populations 2. Ecosystem 3. Biodiversity and Conservation 4. Environmental Issues

ACCOUNTANCY

Course Objectives / Description

The course in Accountancy is introduced at +2 stage of Senior Secondary education, as formal commerce education is provided after ten years of schooling. Its syllabus content should give students a firm foundation in basic accounting principles and methodology and also acquaint them with the changes taking place in the presentation and analysis of accounting information, keeping in view of the development of accounting standards and use of computers.

The Accountancy course enables students to familiarize themselves with accounting as an information system and with basic concepts of accounting and accounting standards. It enables learners to develop the skills of using accounting equation in processing business transactions and understanding about recording of business transactions and preparation of financial statements and accounting for reconstitution and dissolution of partnership firms. It also helps students familiarize themselves with the fundamentals of computerized system of accounting.

Course Methodology

The emphasis is placed on basic concepts and process of accounting leading to the preparation of accounts for a sole proprietorship firm. Projects are done to facilitate independent research work and to develop analytical and evaluation skills of students. They will develop an awareness of international situations by using appropriate problem solving techniques. The focus is on analysis, discovery and experimental learning. Through investigation the students will develop confidence in solving problems. Multiple Intelligence tasks are used in classrooms to provide an entry point to students with different learning skills. Students are taught to collect data, analyse and present them through field trips. These trips also help them to hone their estimation skills.

Time Frame

Grades XI , XII

Focus topics

Part A : Financial Accounting - I	Part A: Accounting for Partnership Firms and Companies
<ol style="list-style-type: none"> 1. Introduction to Accounting 2. Theory Base of Accounting 3. Recording of Transactions 4. Preparation of Ledger, Trial Balance and Bank Reconciliation Statement 5. Depreciation, Provisions and Reserves 6. Accounting for Bills of Exchange 7. Rectification of Errors 8. Financial Statements of Sole Proprietorship 	<ol style="list-style-type: none"> 1. Accounting for Partnership Firms – Fundamentals 2. Accounting for Partnership Firms – Reconstitution and Dissolution 3. Accounting for Share Capital 4. Accounting for Debentures
Part B : Financial Accounting – II	Part B: Financial Statement Analysis
<ol style="list-style-type: none"> 9. Financial Statements of not-for-profit organizations 10. Accounts from incomplete records 11. Computers in Accounting 12. Project Work 	<ol style="list-style-type: none"> 5. Analysis of Financial Statements 6. Cash Flow Statements 7. Project Work
	OR
	Part C: Computerised Accounting

	<ol style="list-style-type: none">8. Overview of Computerised Accounting System9. Accounting Applications of Electronic Spread Sheet10. Using Computerized Accounting System11. Database Management System12. Practical Work
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BUSINESS STUDIES

Course Objectives

The course in Business Studies is introduced at +2 stage of Senior Secondary education, as formal commerce education is provided after first ten years of schooling. Therefore, instructions in these subjects are given in such a manner that students have a good understanding of the principles and practices bearing in business as well as their relationship with the society.

The course will prepare students to analyse, manage, evaluate and respond to changes which affect business. It provides ways of looking at and interacting with the business environment. It recognizes the fact that business influences and is influenced by social, political, legal and economic forces. It allows students to appreciate that business is an integral component of society and develops an understanding of many social and ethical issues.

Course Description

Business is a dynamic process that brings together technology, natural resources and human initiative in a constantly changing global environment. To understand the framework in which a business operates, a detailed study of the organization and management of business processes and its interaction with the environment is required. Globalisation has changed the way firms transact their business. Information Technology is becoming a part of business operations in more and more organizations. Computerised systems are fast replacing other systems. E-business and other related concepts are picking up fast which need to be emphasized in the curriculum.

Course Methodology

The students are introduced to the basic concepts, principles and tools of Business organization and environment, Human Resources etc. The application of tools and techniques of analysis facilitates an appreciation of complex business activities. The method of instruction integrates a combination of case study analyses and presentations.

Time Frame – Grades XI, XII

Focus Topics

Part A : Foundations of Business	Part A: Principles and functions of Management
1. Nature and Purpose of Business 2. Forms of Business Organisations 3. Public, Private and Global enterprises 4. Business Services 5. Emerging modes of business 6. Social Responsibility of Business and Business Ethics	13. Introduction to Management 14. Principles of Management 15. Business Environment 16. Planning 17. Organising 18. Staffing 19. Directing 20. Controlling
Part B : Finance and Trade	Part B: Financial Statement Analysis
7. Sources of Business Finance 8. Small business 9. Internal Trade 10. International business 11. Project Work	21. Financial Management 22. Financial Markets 23. Marketing Management 24. Consumer Protection
	Part C: Project

ECONOMICS

Course Objectives

The Economics course enables students -

- To understand basic concepts and development of economic reasoning which the learners can apply in their day to day life as citizens, workers and consumers.
- To realize their role in nation building and acquire sensitivity to the economic issues that the nation is facing today.
- To equip themselves with tools of economics and statistics to analyse economic issues.
- To develop an understanding that there can be more than one views on any economic issue and necessary skills to argue logically with reasoning.

Course Description

As economic life and the economy go through changes, the need to ground education in children's own experience becomes essential. While doing so, it is imperative to provide them opportunities to acquire analytical skills to observe and understand the economic realities.

At senior secondary stage, the learners are in a position to understand abstract ideas, exercise the power of thinking and to develop their own perception. It is at this stage, the learners are introduced to the rigour of the discipline of economics in a systematic way.

Course Methodology

The Economics course contains many projects and activities. These will provide opportunities for the learners to explore various economic issues both from their day-to-day life and issues that are broader and invisible in nature. These are supplemented with lectures, discussions and presentations.

Time Frame

Grades XI, XII

Focus topics

Part A : Statistics for economics	Part A: Introductory Microeconomics
<ol style="list-style-type: none"> 1. Introduction 2. Collection, Organisation and Presentation of Data 3. Statistical Tools and Interpretation 4. Developing Projects in economics 	<ol style="list-style-type: none"> 1. Introduction 2. Consumer Equilibrium and Demand 3. Producer Behaviour and Supply 4. Forms of Market and Price Determination 5. Simple Application of Tools of Demand and Supply
Part B : Indian Economic Development	Part B: Macroeconomics
<ol style="list-style-type: none"> 5. Development Policies and Experience(1947-1990) 6. Economic reforms since 19991 7. Current Challenges facing Indian Economy 8. Development experience of India- A comparison with neighbours 	<ol style="list-style-type: none"> 6. National income and Related Aggregates 7. Money and Banking 8. Determination of income and Employment 9. Government Budget and the Economy 10. Balance of Payments

COMPUTER SCIENCE

Course Objectives

The course aims to develop logic for problem solving and understand the concept of Object Oriented Methodology; implement Object Oriented Programming using C++; understand the concept of working with Relational Database; understand the basic concept of Boolean Logic; understand the basic concepts of Communication and Networking technologies; understand Open Source Concepts. Application of the concepts learned is an integral

Course Description

The subject focuses on concepts of Computer Science and the basics of an Object Oriented Programming language C++. The academic course in Computer Science includes one Project in each year. The purpose behind this project is to consolidate the concepts and practices imparted during the course and to serve as a record of competence.

Course Methodology

Beginning with an introduction to the language and its Object Oriented Programming features, the concepts of learning by example and number of solved examples for practice will guide them through the two year course.

The course methodology prepares the student in presenting imaginative projects and to test application of programming skills.

Time Frame

Grades XI, XII

Focus Topics:

Grade XI CBSE Computer Science	Grade XII CBSE Computer Science
Unit I Computer Fundamentals	Unit I Programming in C++
Unit II Programming Methodology	Unit II Data structures
Unit III Introduction to Programming in C++	Unit III Database and SQL
Unit IV Computer System Organisation	Unit IV Boolean Algebra
	Unit V Communication and Open Source Concepts