

Grade 9 and Grade 10 – Learning Area specific course descriptions (ICSE)

ENGLISH

The English curriculum is an integration of the language's four skills –Listening, Speaking, Reading and Writing. Students of Grade 9 and Grade 10 are taught and encouraged to develop and integrate the use of these skills for the purpose of effective communication. They develop a functional understanding of the grammar, structure and idiom of the language. Students acquire the skill to read efficiently and access information effectively. They are able to appreciate good literature and experience the thoughts and feelings of the people of the world through it. The curriculum offers them the opportunity to stretch their imaginations in writing, become proficient in speaking and impel them to read.

Students are to focus on two papers:

Paper 1: English Language

Paper 2: English Literature

MATHEMATICS

The ICSE Mathematics curriculum for Grade 9 and Grade 10 helps students to develop a mathematical mind-set, build their curiosity, enhance their problem solving skills and hook them onto mathematical challenges. Students acquire knowledge and understanding of the terms, symbols, concepts, principles, processes, proofs, etc. of Mathematics. They develop an understanding of mathematical concepts and their applications in their further studies in Mathematics and Science. Students apply attained mathematical knowledge to solve real life problems, to work with modern technological devices such as calculators and computers in real life. The course helps the students to acquire drawing skills, skills of reading tables, charts and graphs.

SECOND LANGUAGE - HINDI / KANNADA

The Second Language curriculum for Grade 9 and Grade 10 helps students to appreciate language as an effective means of communication. They develop an understanding of the basic structural patterns of the language, vocabulary and constructions. Students are able to use Hindi / Kannada to communicate effectively in familiar settings. They read, understand and appreciate Prose, Poetry and Non-Fiction. Students plan, draft, re-draft and write compositions. The curriculum aims to enhance their speaking skills through declamation; impromptu speech / debate / discussion; report / interview; role play/general conversation on selected topics.

SCIENCE – PHYSICS, CHEMISTRY, BIOLOGY

The Science program of Grade 9 and Grade 10 helps the students to cultivate a mind-set of scientific enquiry helps the students to develop scientific temper, attitude and problem solving skills. They develop an understanding of the inter relationship between sustainability and environmental adaptations, capacities and limitations of all the scientific and economic activities so as to be able to use them for a better quality of life. Students acquire the ability to observe, experiment, hypothesise and make correct inferences.

SOCIAL SCIENCE – HISTORY, CIVICS AND GEOGRAPHY

The Social Science curriculum in Grade 9 and Grade 10 provides an opportunity for the students to explore the past, present and future of India and the world. It enriches the understanding of the aspects of Indian historical development which are crucial to the understanding of contemporary India. Students understand the working of the Indian government and how necessary it is to grow into a responsible, enlightened citizen in a secular democracy. They explore the various streams that have contributed to the development and growth of the India and its civilisation and culture. They develop a world historical perspective of the contributions made by various cultures to the total heritage of mankind. Students question, analyse and communicate the significance and sustainability of social, economic and political practices.

COMPUTER APPLICATIONS (Grade 9)

By the end of Grade 9, students get an introduction to BlueJ IDE for Java. They learn about features of BlueJ, and history and types of Java programs. Students learn about basic elements of a Java program: keywords, character set, literals, identifiers, operators, punctuators. Students learn about primitive and non-primitive data types in Java. They learn to declare and initialize variables and understand the meaning of dynamic initialization. They understand the concept of implicit and explicit data conversions. Students learn about different types of operators and their functions. They learn to use Scanner class to read user input. Students learn about mathematical functions present in the Math package. They write programs to solve specific problems using Scanner class and math functions. Students learn to use StreamReader class to read data. They learn conditional statements using IF and SWITCH CASE. They learn about FOR loops, DO-WHILE loops and WHILE loops in Java. They apply sequential, conditional and loop program constructs to write solutions to programming problems. They learn about character and string functions in Java. They define and describe arrays. Students learn to declare, instantiate and initialize arrays. They implement searching and sorting operations on Java arrays. They define and classify Exceptions and identify situations where Exception handling should be used. They use try-catch-finally blocks in their programs. They write programs to demonstrate the use of these functions. Students learn to debug different kinds of errors in Java programs. They use their Java knowledge to complete projects.

Practical Skills:

- Use Google apps to create and share information and collaborate with peers.
- Design, create, build, and debug Java programs.
- Apply algorithmic thinking to solve programming problems.
- Implement syntax rules in Java.
- Use appropriate variables and data types during program development.
- Demonstrate the use of various operators in Java.
- Use methods in Math class to perform numerical calculations.
- Apply decision structures in Java programs.
- Compare SWITCH-CASE with IF-ELSEIF statements.
- Apply loop structures to perform repetitive tasks.
- Identify errors and debug programs.
- Apply concepts in Java to design and implement a solution for a real life problem.
- Write programs to manipulate strings using character and string functions in Java.
- Identify and implement single dimensional and multidimensional arrays.
- Implement searching and sorting algorithms using arrays.
- Manipulate arrays to solve specific programming questions.

COMPUTER APPLICATIONS (Grade 10)

By the end of Grade 10, students understand the need for Java functions. They learn about function headers, access modifiers and return types. Students differentiate between void and non-void methods. They identify actual and formal parameters and understand the difference between passing arguments by value and passing arguments by reference. They learn about basic OOP concepts: Object, Class, Data Abstraction, Inheritance, Encapsulation, Polymorphism. Students learn to declare, instantiate and initialize objects. They understand about Private, Public and Protected Access Specifiers and learn how to invoke methods of a class. Students learn about Static data members and member methods. Students learn to apply the concept of function overloading in Java. They build Java projects using OOP concepts.

Practical Skills:

- Use Google apps to create and share information and collaborate with peers.
- Write and invoke functions to solve specific programming questions.
- Demonstrate the use of Function overloading.

LIFESKILLS

The life-skills curriculum in Senior School is modelled off habits of the mind and heart, used by both students and teachers. This helps students develop a realistic sense of their personal abilities, qualities, strengths and the factors that influence and affect their emotional responses. Students participate in discussions on real life situations and understand how to tackle such instances – learning how to deal with roles and responsibilities, importance of team work, etc. Students are able to express themselves freely in a positive and safe environment.

Through role plays and activities, they learn to show respect for and understand others' perspectives. As learners, they manage and monitor their own emotional responses, and persist in completing tasks and overcoming hurdles. Students are exposed to problem solving and decision making skills that teach them how to use particular strategies to manage themselves in a range of situations. Students reflect on and evaluate their learning, identify personal characteristics and learn from success and failure.

OTHER

Students in Grade 9 and Grade 10 also attend weekly sessions in Yoga, Physical Education and quiet reading time at the school library.

As per ICSE syllabus - March 2019