ST. THOMAS SCHOOL, LONI

MIDDLE STAGE CURRICULUM

ENGLISH

Teaching Objectives:

- speak English fluently and accurately; speak freely. They should think in English and speak it with ease and frequently;
- express their ideas in English in the classroom at school, at home and in society;
- respond and react to situations actively and not remain only a passive listener;
- acquire the ability to understand the native speakers and also be able to respond to them;
- compose freely and independently in speech and writing;
- read books, newspapers and periodicals with understanding;
- develop sufficient command over vocabulary that should include frequent and choicest
- English phrases and idioms;
- use reference material like encyclopedia, dictionaries, reference books, etc.

HINDI

शिक्षण के उद्देश्य

- व्याकरण का ज्ञान देना ताकि विद्यार्थी भाषा की शुद्धता समझ सकें।
- छात्रों को इस योग्य बना कि वे निर्धारित पाठ्यक्रम की शब्दावली व समकक्ष स्तर की शब्दावली को समझ सके।
- छात्रों को वर्ण, शब्द, वाक्य रचना आदि व्याकरण विषयों का गहन ज्ञान देकर उनका व्यावहारिक प्रयोग सिखाना।
- छात्रों को यति, गति, तथा लय से निपुणतापूर्वक पठन के योग्य बनाना ।
- मौखिक और लिखित अभिव्यक्ति में कुशलताओं का विकास करना।
- छात्रों में सौन्दर्यानुभूति की भावना का विकास करना तथा बालकों में पाठ के रस भावों को समझने एवं ग्रहण करने की क्षमता पैदा करना।
- विद्यार्थियों में स्वाध्याय की प्रवृति का विकास।
- छात्रों के शब्द कोष एवं सूक्ति भण्डार में वृद्धि करना।
- साहित्य की विभिन्न विधाओं का अध्ययन व समीक्षा करने की क्षमता का विकास।

- लेखक के गूढ़ विचारों को समझने की क्षमता का विकास करना ।
- सत्साहित्य से चारित्रिक विकास की ओर अग्रसर करना।

MATHEMATICS

Teaching Objectives-

- Solve problems involving large numbers by applying appropriate operations (addition, subtraction, multiplication and division).
- Apply HCF or LCM in a particular situation.
- Solve problems on daily life situations involving addition and subtraction of fractions, decimals and integers
- Use variable with different operations to generalise a given situation. For example, perimeter of a rectangle with sides x units and 3 units is 2(x+3) units.
- Compare quantities using ratios in different situations and use unitary method in solving various word problems.
- Describe geometrical ideas like line, line segment, open and closed figures, angle, triangle, quadrilateral, circle, etc., with the help of examples in surroundings.
- Demonstrate an understanding of angles by identifying examples of angles in the surroundings and classifying angles according to their measure.
- Demonstrate an understanding of line symmetry by identifying symmetrical 2-
- Dimensional (2-D) shapes which are symmetrical along one or more lines and creating symmetrical 2-D shapes.
- Classify triangles into different groups/types on the basis of their angles and sides.
- Classify quadrilaterals into different groups/types on the basis of their sides/angles.
- Identify various (3-D) objects like sphere, cube, cuboid, cylinder, cone from the surroundings.
- Arrange given/collected information such as expenditure on different items in a family in the last six months, in the form of table, pictograph and bar graph and interpret them.
- Interpret the division and multiplication of fractions and decimals.
- Use exponential form of numbers to simplify problems involving multiplication and division of large numbers.
- Represent daily life situations in the form of a simple equation and solve it.
- Adds/subtract algebraic expressions.
- Solve problems related to conversion of percentage to fraction and decimal and vice-versa.
- Calculate profit/loss per cent and rate per cent in simple interest.
- Classify pairs of angles based on their properties as linear, supplementary, complementary, adjacent and vertically opposite and finds value of the one when the other is given.
- Verify the properties of various pairs of angles formed when a transversal cuts two lines.
- Find unknown angle of a triangle when its two angles are known.

- Explain congruency of triangles, on the basis of the information given about them like (SSS, SAS, ASA, and RHS).
- Find various representative values for simple data from daily life contexts like mean, median and mode.
- Interpret data using bar graph, such as consumption of electricity is more in winters than summer, runs scored by a team in first 10 overs, etc.
- Generalise properties of addition, subtraction, multiplication and division of rational numbers.
- Find squares, cubes and square roots and cube roots of numbers using different methods.
- Solve problems with integral exponents.
- Use various algebraic identities in solving problems of daily life.
- Apply the concept of per cent in profit and loss situation in finding discount, VAT and compound interest, for example, calculates discount per cent when marked price and actual discount are given or finds profit per cent when cost price and profit in a transaction are given.
- Solve problems based on direct and inverse proportions
- Solve problems related to angles of a quadrilateral using angle sum property.
- Verify properties of parallelograms and establishes the relationship between them through reasoning.
- Find surface area and volume of cuboidal and cylindrical object.
- Draw and interpret bar charts and pie charts.
- Make hypotheses on chances of future events on the basis of its earlier occurrences or available data like, after repeated throws of dice and coins

SCIENCE

Teaching Objectives-

- identify materials and organisms, such as, plant fibres, flowers, on the basis of observable features i.e. appearance, texture, function, aroma, etc.
- differentiate materials and organisms, such as, fibre and yarn; tap and fibrous roots; electrical conductors and insulators; on the basis of their properties, structure and functions.
- classify materials, organisms and processes based on observable properties, e.g., materials as soluble, insoluble, transparent, translucent and opaque; changes as can be reversed and cannot be reversed; plants as herbs, shrubs, trees, creeper, climbers; components of habitat as biotic and abiotic; motion as rectilinear, circular , periodic.
- conduct simple investigations to seek answers to queries, e.g., What are the food nutrients present in animal fodder? Can all physical changes be reversed? Does a freely suspended magnet align in a particular direction?
- relate processes and phenomenon with causes, e.g., deficiency diseases with diet; adaptations of animals and plants with their habitats; quality of air with pollutants, etc

- .• explain processes and phenomenon, e.g., processing of plant fibres; movements in plants and animals; formation of shadows; reflection of light from plane mirror; variations in composition of air; preparation of vermin-compost, etc.
- measure physical quantities and expresses in SI units, e.g., length.
- draw labelled diagrams/flow charts of organisms and processes, e.g., parts of flowers, joints, filtration, water cycle, etc.
- construct models using materials from surroundings and explains their working, e.g., pinhole camera, periscope, electric torch, etc.
- apply learning of scientific concepts in day-to-day life, e.g., selecting food items for a balanced diet; separating materials; selecting season appropriate fabrics; using compass needle for finding directions; suggesting ways to cope with heavy rain/ drought, etc.
- make efforts to protect environment, e.g., minimising wastage of food, water, electricity and generation of waste; spreading awareness to adopt rain water harvesting; care for plants, etc.
- identify materials and organisms, such as, animal fibres; types of teeth; mirrors and lenses, on the basis of observable features, i.e., appearance, texture, functions, etc.
- differentiate materials and organisms such as, digestion in different organisms; unisexual and bisexual flowers; conductors and insulators of heat; acidic, basic and neutral substances; images formed by mirrors and lenses, etc., on the basis of their properties, structure, and function.
- classify materials and organisms based on properties/characteristics, e.g., plant and animal fibres; physical and chemical changes.
- conduct simple investigations to seek answers to queries, e.g., Can extract of coloured flowers be used as acid-base indicator? Do leaves other than green also carry out photosynthesis? Is white light composed of many colours?
- relate processes and phenomenon with causes, e.g., wind speed with air pressure; crops grown with types of soil; depletion of water table with human activities, etc.
- explain processes and phenomenon, e.g., processing of animal fibres; modes of transfer of heat; organs and systems in human and plants; heating and magnetic effects of electric current, etc.
- write word equation for chemical reactions, e.g., acid-base reactions; corrosion; photosynthesis; respiration, etc. • measures and calculates e.g., temperature; pulse rate; speed of moving objects; time period of a simple pendulum, etc.
- draw labelled diagrams/flow charts e.g., organ systems in humans and plants; electric circuits; experimental set ups; lifecycle of silk moth, etc.
- plot and interprets graphs e.g., distance-time graph.
- construct models using materials from surroundings and explains their working, e.g., stethoscope; anemometer; electromagnets; Newton's colour disc, etc.
- discuss and appreciates stories of scientific discoveries.
- apply learning of scientific concepts in day-to-day life, e.g., dealing with acidity; testing and treating soil; taking measures to prevent corrosion; cultivation by vegetative propagation; connecting two or more electric cells in proper order in devices; taking measures during and after disasters; suggesting methods for treatment of polluted water for reuse, etc.

- differentiate materials and organisms, such as, natural and human-made fibres; contact and non-contact forces; liquids as electrical conductors and insulators; plant and animal cells; viviparous and oviparous animals, on the basis of their properties, structure and functions.
- •classify materials and organisms based on properties/characteristics,e.g., metals and non-metals; kharif and rabi crops; useful and harmful microorganisms; sexual and asexual reproduction; celestial objects; exhaustible and inexhaustible natural resources, etc.
- •conduct simple investigations to seek answers to queries, e.g., What are the conditions required for combustion? Why do we add salt and sugar in pickles and murabbas? Do liquids exert equal pressure at the same depth?
- relate processes and phenomenon with causes, e.g., smog formation with the presence of pollutants in air; deterioration of monuments with acid rain, etc.
- •explain processes and phenomenon, e.g., reproduction in human and animals; production and propagation of sound; chemical effects of electric current; formation of multiple images; structure of flame, etc.
- •write word equations for chemical reactions, e.g., reactions of metals and non-metals with air, water, and acids, etc.
- •measure angles of incidence and reflection, etc.
- prepare slides of microorganisms; onion peel, human cheek cells, etc. and describes their microscopic features.
- draw labelled diagram/flow charts, e.g., structure of cell, eye, human reproductive organs; experimental set ups, etc.
- construct models using materials from surroundings and explains their working, e.g., ektara, electroscope, fire extinguisher, etc.
- •apply learning of scientific concepts in day-to-day life, e.g., purifying water; segregating biodegradable and non-biodegradable wastes; increasing crop production; using appropriate metals and non-metals for various purposes; increasing/reducing friction; challenging myths and taboos regarding adolescence, etc.
- discuss and appreciate stories of scientific discoveries.
- •make efforts to protect environment, e.g., using resources judiciously ;making controlled use of fertilizers and pesticides; suggesting ways to cope with environmental hazards, etc.
- exhibit creativity in designing, planning, making use of available resources, etc.
- exhibit values of honesty, objectivity, cooperation, freedom from fear and prejudices.

SOCIAL SCIENCE

Teaching Objectives:

- To help the children acquire right knowledge about the need to study the subject in three different categories of History, Geography and Political Science and its relevance in the society.
- To make the children understand about the human civilization and the common roots of mankind.
- To promote an understanding the process of changes and development through which the human societies have evolved to their present stage of development.

- To help the children to explore through the past of their social and cultural environment.
- To foster an attitude to understand the need to study about the relevance of the past of the society.
- To help students understand about the distribution of the physical factors on the surface of the Earth.
- To make the children understand about the need to become active and intelligent citizens.
- To make them understand about the civic competence of India and need to participate in the community affairs of the country.
- To make them understand about India's Unity and respect for the law and government
- To promote an understanding of the processes of change and development through which the human societies have evolved to their present stage of development.
- To develop an appreciation of the contributions made by various cultures to the total heritage of the mankind.
- To build intelligent democratic citizenship.
- To help the children gain an insight into spiritual and political values as forces in human behavior and human relationships.
- To promote the understanding of all historical changes as a process of human experience and development.
- To understand about the rich and composite culture of the country and the contribution of various people of different faith, religions and linguistic groups.
- To develop an appreciation of interdependence of various geographical regions.
- To help students realize and analyze the ways of the life of the people around in the world, in the light of their varying problems in the environment, and the different stages of social and technological development.
- To acquaint the children with their past and present geographical and social environment.
- To build social competence and an intelligent democratic citizenship.
- To help the children acquire right knowledge and understand the various methods required for a proper competence which he will need in the interaction with his social environment.
- To provide a pattern of experience and study which will serve as a foundation for
- specialization later.
- To develop a feeling in children to respect all the religions as well as make them understand the need for Equality in all aspects.
- To understand the nature of India, as well as the historical phases through which the present society in the country has evolved.
- To help children make generalizations with the geographical concepts and understanding the values in evaluating and reaching about the world problems.
- To develop an intelligent understanding of the structure and working of the civic and the political institutions of India.

COMPUTER

Teaching Objectives-

- To learn the principle of computational thinking which will improve their problem-solving skills. They should know by real life examples how they can use computational thinking in their day-to-day life.
- By learning animations, they can become imaginative and expressive. Advance software, like Animate CC, makes learning animations easy and fun.
- Perform calculations and manipulations on data in an organized way using spread sheet software like MS-Excel.
- An emphasis in computer education will also be on the development of attitudes, knowledge, and skills for entrepreneurship and self-employment.
- Helps the student to explore the new medium of education like the internet which provide illustrative and engrossing study material.
- Helps the student to explore the new medium of educations like the internet which provide illustrative and engrossing study material.
- Perform calculations and manipulations on data in an organized way using spread sheet software like MS-Excel.
- Learn about the advance features of MS-Excel like formula, functions, charts etc. to perform mathematical and statistical calculations easily.
- programming basic should be inculcated in the students from this level.
- emphasis on computer education will also be on the development of attitudes, knowledge, and skills for entrepreneurship and self-employment.
- give opportunities for professional growth, career improvement and lateral entry into courses of general, technical and professional education.
- Computer education also helps the student to explore the new medium of educations like the internet which provide illustrative and engrossing study material.
- Know programing basics so that they can learn advance programming.
- Programming skills should be inculcated in the students by this level.
- An emphasis in computer education will also be on the development of attitudes, knowledge, and skills for entrepreneurship and self-employment.
- Identify the terminology and functions common to most database management systems. They should be able to create and manage databases in software like MS-Access.
- Perform basic formatting and editing in video and image editing software like- Movie maker, Photoshop etc.

- To give opportunities for professional growth, career improvement and lateral entry into courses of general, technical and professional education.

SANSKRIT

शिक्षण के उद्देश्य-

- संस्कृत पढ़ाने का मुख्य उद्देश्य बच्चों को संस्कृत भाषा से अवगत करवाना है।
- अपनी संस्कृति से अवगत करवाना है।
- बच्चों को यह समझना है कि संस्कृत अनेक भाषाओं की जननी है।
- एक नई भाषा का विकास करना है।
- छात्रों की पठन कला का विकास करना।
- उन्हें व्याकरण का ज्ञान देना जिससे वे भाषा के शुद्ध रूप का प्रयोग कर सकें।

FRENCH

Teaching Objectives-

- Communicate effectively in French using the listening, speaking, viewing, reading, and writing modes (communication)
- Demonstrate a better understanding of their own and others' cultural heritage and identity with particular emphasis on "French-speaking communities" (citizenship)
- Respond to simple spoken statements and questions and respond to classroom commands (singular and plural).
- Spell in target language and pronounce words correctly
- Apply proper intonation in statements and questions
- Apply unit vocabulary through activities emphasizing oral communication
- Create a paragraph using correct grammar and appropriate vocabulary. Read and comprehend simple written text