Smiling International School

5th GRADE

CURRICULUM TOPICS

A.S.2025-2026

Mathematics

DEVELOPING REASONING, LOGIC AND PROBLEM SOLVING SKILLS

- solve expressions with one or more sets of brackets following the order of operations
- explore effective strategies and useful steps to help read, understand and solve multi-step word problems
- use mathematical thinking and processes to solve increasingly complex multi-step word problems (e.g. diagrams, tables, drawings)
- identify and select relevant and useful data in a word problem in order to resolve it
- identify numerical data within a problem that is implied or expressed only in words
- identify missing, useless or contradictory data within a word problem
- use mathematical knowledge to make logical estimations about the expected answer when solving problems

PLACE VALUE

Main objectives:

- recognise place value up to millions and billions
- understand and work with powers and roots of a number
- work with relative numbers (positive and negative numbers)
- review decimal place value to thousandths
- round numbers to a given unit
- apply understanding of Roman Numerals to solve problems

THE FOUR OPERATIONS

Main objectives:

- work with whole numbers up to 1.000.000 with increasing confidence in the four operations
- work with decimal numbers up to thousandths with increasing confidence in the four operations
- understand and apply properties of operations
- develop effective mental strategies in the four operations
- double and half numbers up to 1000 with increasing fluency.

FRACTIONS, DECIMALS, AND PERCENTAGES

Main objectives:

- recognise and name different types of fractions (proper, improper, mixed number) and be able to convert from a mixed number to an improper fraction
- add and subtract fractions with the same denominator
- compare fractions with the same and different denominator
- simplify fractions using knowledge of factors and multiples
- identify and make equivalent fractions using the multiplication and division of the numerator and denominator by the same factor or multiple
- find the fraction of an amount and vice versa (e.g. ½ of 50 = ?; 25 is ½ of what amount?)
- understand percentages and how they relate to fractions and decimals
- solve real-life money problems related to discounts and sales using percentages
- learn effective strategies to convert between fractions, decimals and percentages

MULTIPLES AND FACTORS

Main objectives:

- find factors and multiples of given numbers, including common factors and multiples
- use knowledge of factors and multiples to solve problems
- understand that a prime number has only two factors
- understand that a composite number can be broken down into more than two factors

MEASUREMENT AND MONEY

Main objectives:

- carry out measurements of length, capacity, weight and area using standard units
- perform estimations and practical investigations to record and compare measurements of length, capacity and mass
- use measurement data to calculate length, capacity, mass, time and area
- solve real-life money problems related to buying and selling (e.g calculating cost, sale, profit, discounts and interest)
- convert between different units of time
- solve word problems involving calculating time and elapsed time

GEOMETRY

Main objectives:

- describe, classify and determine the properties of a range of 2D and 3D shapes
- calculate the height, area and perimeter of 2D shapes
- calculate the area, diameter and circumference of a circle
- extend understanding of coordinates and carry out the translation and rotation of a range of geometric shapes on coordinate grids

STATISTICS AND PROBABILITY

Main objectives:

- interpret and draw information from a range of graphs, charts and tables
- calculate the probability of simple events using maths
- find the average, mode and median of a range of given numbers
- tackle and solve word problems in a range of contexts

English

SPEAKING AND LISTENING

Main objectives:

- be able to adapt the pace and loudness of speaking when performing or reading aloud
- listen attentively, and evaluate what is heard giving reasons for agreement or disagreement, learning to deal politely with opposing points of view
- describe events and opinions with increasing clarity and confidence, shaping and organising ideas clearly when speaking

GRAMMAR AND PUNCTUATION

Main objectives:

- correctly use commas and apostrophes in speech, contractions and to show possession
- identify uses of the colon, semi-colon, dashes and brackets
- use relative, reflexive, demonstrative, possessive, subject and object pronouns accurately and consistently
- use countable and uncountable nouns correctly
- explore abstract and concrete nouns
- apply subject-verb agreement consistently
- correctly use the present and past continuous tense

- confidently form regular and irregular simple past tense verbs
- know the conventions and proper usage of the Past Simple, Present Perfect, and the Future tenses
- identify and use modal verbs
- explore active and passive verbs within sentences
- investigate clauses (relative, main and subordinate) within complex sentences
- understand the difference between direct and indirect speech
- correctly use adverbs and adverbial phrases to modify verbs and adjectives
- use a range of prepositions and prepositional phrases
- accurately use a variety of coordinating and subordinating conjunctions
- explore and correctly use the conditional tense
- accurately use articles, quantifiers and determiners

WRITING

Main objectives:

- enhance writing by using varied synonyms for verbs, adjectives, and adverbs
- strengthen descriptive writing with powerful, impactful vocabulary
- re-read and edit work for punctuation, grammar, and overall improvement
- use paragraphs to clearly organise ideas, information, or events
- take notes, write reviews, and summarise texts within a word limit
- plan and write extended stories across different genres
- explore and experiment with alternative story openings and endings
- write coherent narratives with clear structure, logical sequencing, and conflict resolution
- use setting, dialogue, and characterisation to engage the reader
- write short play scripts
- compose issue commentaries with balanced arguments and justified personal views
- write structured arguments with logical, persuasive points
- produce non-chronological texts (e.g. leaflets, instructions, reports, letters)
- write persuasive and explanatory texts effectively
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SPELLING AND VOCABULARY

Main objectives:

- spell words ending in -ing that require the doubling of consonants
- correctly use spelling rules for plurals
- recognise common letter strings in words pronounced differently (e.g. tough, through, trough, plough)
- identify and spell words containing unstressed vowels (e.g. carpet, interest)
- learn spelling rules for words ending in 'e' and 'y' (e.g. take/taking, try/tries)
- investigate ways of creating opposites ('un', 'im')

- investigate patterns in the use of sin on prefixes and suffixes (auto- , bi-, trans-, im-, ir-, -cian)
- identify word roots and double consonants (e.g. full/ful)
- use different synonyms for verbs and adjectives and investigate shades of meaning
- correctly use and spell homophones

READING AND COMPREHENSION

Main objectives:

- explore the features of a variety of texts (poetry and prose) which recount events and experiences
- find and underline key words in texts
- read and evaluate non-fiction texts for purpose, style, clarity and organisation and develop note-taking skills by extracting key points and linking ideas
- understand the use of persuasive devices, words and phrases in print and other media
- analyse a variety of texts in depth to discover meaning and answer increasingly complex text-based questions to show comprehension

Science

CORE SKILLS

- plan investigations, ask relevant questions, design fair tests (controlling variables), predict outcomes based on scientific knowledge, conduct experiments
- use equipment accurately and safely and make systematic observations and measurements, record data, use tables, diagrams, charts, and graphs, interpret results, identify patterns and relationships
- draw conclusions based on evidence, evaluate, consider reliability and suggest improvements, explain results using scientific reasoning.

LIFE CYCLE AND GROWTH OF FLOWERING PLANTS

Main objectives:

- Identify what plants need to grow and explain photosynthesis.
- Compare the structures of flowering and non-flowering plants.
- Name parts of a flower and describe their functions and describe the life cycle of a flowering plant.
- Explain plant reproduction, seed germination and the conditions needed.

- Explain how plants and animals adapt to different environments (hot, cold, wet, dry).

Moonshot
understand what hydroponic germination is

LIFE CYCLE AND GROWTH OF HUMANS AND ANIMALS

Main objectives:

- Describe life processes shared by humans and animals and explain the differences in the life cycles of mammals, amphibians, insects, and birds
- Distinguish between living and non-living things.
- Describe the stages of human development from birth to old age.

THE HUMAN BODY

*underlined objectives are not in the Oxford textbook but should be taught using other resources

Main objectives:

- understand the body as an organisation of cells, tissues, organs and systems
- understand the function of the various body systems, including respiratory, circulatory, excretory, digestive, skeletal, muscular, sensory and reproductive
- identify the body's vital organs and associate the body system to which it belongs

Moonshot!:

- explore how lungs can be damaged (Dust mitigation investigation)
- understand the effects of microgravity on the human body and how astronauts stay fit in space
- explore how osteoporosis makes bones more fragile.Osteoporosis (investigation)
- understand what astronauts eat
- understand what a space suit is, its components and how it allows astronauts to survive in space
- understand the dangers of radiation in space
- understanding what a space suit is, its components and how it allows astronauts to survive in space. 'Moonshot' stem activity: making a life support system (part of the space suit).

EARTH AND SPACE

Main objectives:

- Explore the origins of the universe and know what the universe is and how we observe it. Identify and describe components of the solar system: stars, moons, comets, asteroids, meteoroids.
- Explore the Sun's physical features and its role in the solar system.
- Describe the movement of Earth and other planets around the Sun.

- Describe the Moon's movement around Earth and model the solar system.
- Understand Earth's place in the solar system and the basics of stellar evolution.
- Explain day and night and the Sun's apparent movement in the sky and understand Earth's movement

Moonshot

- Learn about NASA, the Artemis mission, and the Moonshot program.
- Understand how the Moon formed and basic lunar geology.
- Design a solar system

FORCES IN ACTION

Main objectives:

- Explain gravity as the force pulling unsupported objects toward Earth
- Explore balanced and unbalanced forces.
- Recognise how levers, pulleys, and gears can amplify force

Moonshot.

- Investigate gravity through a "Moonshot" experiment.
- introduce Newton's Laws
- Investigate aerodynamics and principles of flight.
- Learn what a lunar lander is; design and test model landers.
- Understand mass, acceleration, and velocity through impact crater investigations.
- Understand how rockets work, including a brief history of rocketry
- Investigate air resistance, water resistance, and friction (e.g., parachute drops).
- Explore how water and air can generate force by building water rockets.

ICT

TYPING, DOCUMENT CREATION AND ONLINE SAFETY

- create and format documents using Google Docs, Slides, and Sheets
- insert, resize, and wrap text around images from the web or computer
- apply formatting tools: font styles, headings, bold, italics, underline
- organise content with bullet points, numbered lists, and tables
- share documents via Google Drive; comment and respond using the "Suggestions" tool
- collaborate on shared files respectfully and in real-time
- design structured presentations in Google Slides or Canva with transitions and simple animations
- present work clearly using speaker notes or visual prompts

- enter and organise data in Google Sheets; use formatting and basic formulas (=SUM, =AVERAGE, etc.)
- identify hardware components (keyboard, monitor, mouse, etc.)
- distinguish between hardware and software with real-life examples
- understand basic software types: word processors, presentations, spreadsheets, web browsers
- practise online safety: protect personal information and recognise unsafe content

INTRODUCING PROGRAMMING

Main objectives:

- use block-based coding platforms (e.g., Code.org) to apply key concepts like sequencing, loops, conditionals, variables, and events.
- plan programs with flowcharts, diagrams, or pseudocode before coding.
- translate multi-step flowchart instructions into block-based code.
- build creative Scratch projects with multiple sprites, scenes, and interactive features, including sound, motion, and animation.
- represent algorithms via flowcharts and convert them into code.
- identify, test for, and fix program errors (bugs) using problem-solving strategies such as logic checks, breakpoints, and peer feedback.
- break complex problems into smaller steps (decomposition).
- create stories, animations, or games by connecting code blocks in Scratch.
- design 3D objects using Tinkercad (Moonshot program).

History

CORE SKILLS

- read and interpret historical maps and timelines, summarise events and reconstruct the way of life of a people through the most important aspects of their civilisation
- understand and use the conventional system of periodisation used in the West with confidence
- make mind maps, charts and timelines, understand cause and effect and be able to order events, understanding how one event influences another, recognise and interpret the physical effects of the passage of time
- identify primary and secondary sources, understanding their advantages and disadvantages, use them to gather information about the past, asses sources in terms of their usefulness and reliability

CLASSICAL GREECE

Main objectives:

- explore how geographical features have shaped greek civilisation
- understand the development of the polis, its main features and its importance to the history of the greek civilisation
- develop understanding of some of the main differences between prominent greek city states, for example athens and sparta develop understanding of greek contributions to art, maths, science, philosophy, literature and drama
- learn how democracy functioned in ancient greece and how it has influenced modern democracies
- explore the religious beliefs of the ancient greeks and the structure of society in ancient greece
- discover what we can learn from greek literature and legends
- look at the greek olympics and compare them with modern olympics
- learn about greek colonies, the wars with persia and the peloponnesian wars

THE HELLENIC WORLD

Main objectives:

- identify and explain connections between different historical events across different time

periods and geographical locations

- know the significant economic, political, cultural and religious contexts, events and features of the Hellenic civilisation
- compare and contrast ancient Macedonia with Greece, see how they were similar and how they differed
- investigate and map the Macedonian expansion under Philip II
- look closely at Alexander the Great and explore his conquests and the consequences of these
- investigate what happened to the Hellenistic world after Alexander's death
- investigate scientific discoveries and other important intellectual contributions made during the Hellenistic period

PRE-ROMAN ITALY

Main objectives:

- identify the causal relationship between the physical and environmental features of a territory and the historical events which take place there
- understand the relationship between the historical, geographical and religious context of a civilisation and its population's way of life
- understand the diversity of peoples who inhabited pre-Roman Italy
- investigate early Italic tribes and map different populations

- look at the Terramara and Villanovan people who inhabited the Emilia Romagna area
- explore and map the expansion of the Etruscan peoples from the 7th to 5th centuries BC
- consider what we can learn about the role of women in Etruscan society
- analyse Etruscan society and explore its connections with ancient Greece
- look at the artistic and architectural traditions of the Etruscans
- gather information from a range of different sources about the Etruscans and use this to better understand their society and its religion, culture and politics

THE ROMAN KINGDOM TO REPUBLIC

Main objectives:

- identify how physical and environmental features of a territory influence historical events.
- understand how historical, geographical, and religious contexts shape a civilisation's way of life.
- recognise key economic, political, cultural, and religious aspects of ancient Rome.
- examine the geography of Rome's founding and why it was ideal for a civilisation.
- compare Rome's founding myth with archaeological and historical evidence.
- study the early Roman monarchy and its functioning.
- investigate Roman social classes and daily life for Plebeians, Patricians, and slaves.
- explore Rome's rise in relation to the Greeks and Etruscans.
- understand the shift from monarchy to republic.
- examine the Republic's structure: government, laws, and class tensions.
- learn about the Punic Wars.
- analyse the structure and significance of the Roman army.
- explore Roman architecture and infrastructure (e.g. baths, roads, aqueducts).
- understand the core features of Roman religion.

THE ROMAN REPUBLIC TO EMPIRE

Main objectives:

- identify how geography and environment influenced historical events.
- understand how historical, geographical, and religious contexts shaped a civilisation's way of life.
- learn key economic, political, cultural, and religious aspects of the late Roman Republic and early Empire.
- explore the social effects of Roman expansion (e.g. poverty, population shifts, land reform, rise of populism).
- examine the causes and course of the Social War and Sulla's Civil War.
- study Julius Caesar's rise—his Gallic campaigns, rivalry with Crassus and Pompey, and the crossing of the Rubicon.

- analyse Caesar's dictatorship and the causes and impact of his assassination.
- investigate the final civil war between Mark Antony and Octavian.
- examine Augustus's reforms and compare the Republic with the Empire.
- map the Empire's expansion and explore its cultural and social changes.
- study the rise of Christianity—its spread, persecution, and adoption as a state religion.
- investigate the Pax Romana and the concept of a unified Europe.

Geography

CORE SKILLS

- use a compass to navigate and orient oneself in real space and on maps, represent spaces and objects using scale, plans, and symbols, collect and interpret geographical information from multiple sources (e.g. maps, graphs, charts)
- understand the purpose and scope of geographical study, recognise map features and their uses, including digital maps, analyse and compare various types of maps (physical, political, thematic)
- use keys and symbols, use historical and modern maps to explore past and present geographies, locate places using longitude and latitude, interpret and create scale maps and graphs to represent geographical data

THE GEOGRAPHY OF ITALY

Main objectives:

- observe and analyse Italy's territory, landscapes, climate, and environment
- locate and describe the characteristics of Italian regions and major cities
- explore the local area through direct and indirect observation
- study physical maps of italy and identify major features (e.g. seas, mountain ranges)
- examine the climate, physical and human features of mountains, hills, plains, rivers, lakes, and coasts
- understand Italy's main climate zones and the factors influencing them
- recognise Italy's administrative divisions: nation, region, province, commune
- explore the main features of each italian region
- compare aspects of rural and urban life
- analyse Italy's economic sectors: primary, secondary, tertiary
- examine the significance of tourism in Italy

CITIZENSHIP, ITALY AND THE EU

Main objectives:

- explore Italy's government and its role within the EU
- investigate the purpose and functions of the EU
- understand rights and responsibilities as EU citizens

- learn key history of European integration and member countries
- be aware of important national and international days (e.g. World Water Day, Holocaust Remembrance Day, Anniversario della Liberazione)
- grasp the aims of the EU and how it protects citizens' rights
- understand rights and duties as Italian citizens and EU members
- evaluate the EU's role in promoting peace and cooperation in Europe
- recognise Italy's position within the European Union
- know the EU member states and compare Italy with others using geographic data and maps

Italiano

Ascolto e oralità

- Interagire in modo collaborativo in dialoghi, discussioni o conversazioni su esperienze dirette, ponendo domande, dando risposte e facendo esempi.
- Comprendere il tema e le informazioni principali di esposizioni orali e messaggi trasmessi dai media.
- Porre domande pertinenti per chiarire o approfondire durante o dopo l'ascolto.
- Comprendere istruzioni e consegne per attività scolastiche ed extrascolastiche.
- Cogliere le opinioni espresse in una discussione ed esprimere la propria in modo chiaro e pertinente.
- Raccontare esperienze personali o storie inventate seguendo un ordine logico e cronologico, includendo elementi descrittivi e informativi.
- Organizzare un discorso o un'esposizione su un argomento di studio seguendo una scaletta.

Lettura

- Utilizzare tecniche di lettura silenziosa e ad alta voce in modo consapevole.
- Applicare strategie adeguate per analizzare il contenuto di testi di diversa tipologia.
- Sfruttare titoli, immagini e didascalie per anticipare il contenuto di un testo.
- Confrontare informazioni provenienti da testi differenti per comprendere un argomento o trarne spunti per la produzione orale o scritta.
- Cercare informazioni in testi diversi per scopi pratici o conoscitivi, usando tecniche di supporto alla comprensione (sottolineature, mappe, schemi).
- Seguire istruzioni scritte per svolgere attività o regolarsi in un comportamento.

- Leggere testi narrativi e descrittivi, realistici o fantastici, distinguendo tra invenzione e realtà.

- Leggere testi narrativi e semplici poesie, cogliendone il significato, le caratteristiche principali e formulando un'opinione motivata.

Scrittura

- Raccogliere e organizzare le idee, pianificando una scaletta per la stesura di racconti o esperienze.
- Scrivere racconti di esperienze personali o altrui includendo luoghi, persone, tempi, situazioni e azioni rilevanti.
- Scrivere lettere (personali o aperte) e brevi articoli giornalistici.
- Esprimere emozioni, esperienze o stati d'animo in testi riflessivi o diari.
- Riassumere, trasformare o completare testi dati.
- Scrivere testi regolativi semplici per attività scolastiche o quotidiane.
- Realizzare testi collettivi su argomenti di studio o esperienze comuni.
- Produrre testi creativi a partire da modelli forniti.
- Sperimentare diverse forme di scrittura adattando lessico e struttura, anche integrando elementi multimediali.
- Redigere testi corretti sul piano ortografico, morfosintattico e lessicale, usando con consapevolezza la punteggiatura.

Lessico

- Arricchire il lessico attraverso attività orali, di lettura e scrittura, riconoscendo relazioni di significato tra le parole.
- Comprendere che le parole possono avere più accezioni e saper identificare quella corretta nel contesto.
- Comprendere e distinguere il significato letterale e figurato delle parole.
- Apprendere e usare nuovi termini legati a specifici ambiti disciplinari.
- Dedurre il significato delle parole dal contesto e dalla radice.
- Riconoscere parole simili distinguendole per significato e accento.

Elementi di grammatica esplicita e riflessione linguistica

- Riconoscere le parti del discorso e i tratti grammaticali in una frase o in un testo.
- Individuare la struttura della frase minima e le sue espansioni.
- Applicare le regole ortografiche nelle proprie produzioni scritte e usarle per l'autocorrezione.
- Riconoscere e analizzare le nove parti del discorso.
- Applicare le regole grammaticali in contesti noti e in situazioni nuove.
- Conoscere la sintassi della frase minima (soggetto, predicato, complemento oggetto) e dei complementi indiretti.
- Usare in modo consapevole ortografia e punteggiatura per migliorare la chiarezza dei testi.

Citizenship

THE CONSTITUTION

Main objectives:

- know the key traits of the Italian Constitution
- understand that the Constitution must be upheld and protected for the common good
- develop inclusive and empathetic behaviours
- show care for personal health and safety
- understand the roles of State, Region, Metropolitan City, Municipality and local councils
- know the origin and purpose of the European Union and other major international organisations
- recognise the value of cultural and artistic heritage and the importance of respecting public services and shared spaces

SUSTAINABLE DEVELOPMENT

Main objectives:

- identify behaviours and actions to safeguard the Earth
- formulate ideas and solutions to address environmental issues
- understand the importance of individual and collective responsibility regarding the

protection of the environment for ourselves and future generations
- understand the need to take action on sustainable development in relation to the goals of Agenda 2030

DIGITAL CITIZENSHIP

Main objectives:

- know and use digital tools to improve knowledge and communication
- be able to distinguish between real life and virtual life
- understand the use of different methods of communication, using these appropriately in a variety of situations