

THIRD GRADE CURRICULUM

2020-2021



MATHEMATICS:

NUMBERS TO 10.000

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand and recognise the place value of numbers up to 10.000
- read, write, order, and compare whole numbers up to 10.000
- master and carry out the four operations with numbers up to 10.000
- understand a written problem and resolve it selecting the appropriate operation and utilizing problem-solving skills

SPECIFIC EXPECTATIONS

- understand and recognise the place value of numbers up to 10.000
- use and apply number bonds of 10 to multiples of 10, 100 and 1000
- read, write, compare and order whole numbers up to 10.000
- carry out addition operations up to 10.000 using a variety of methods
- carry out subtraction operations up to 10.000 using a variety of methods
- carry out mental methods of addition and subtraction making use of the properties and laws of operations and a variety of methods
- analyse and resolve 'real life' problems using a variety of techniques and methods
- read, interpret and explore problematic situations and begin to put forward strategic proposals for how to resolve them
- identify and select the relevant and usable 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, redundant or contradictory data within a word problem

MULTIPLICATION AND DIVISION

OVERALL EXPECTATIONS

By the end of third grade, students should:

- master the 1-12 times tables
- master and carry out multiplication and division operations with numbers up to 10.000
- understand a written problem and resolve it selecting the appropriate operation and utilizing problem-solving skills

SPECIFIC EXPECTATIONS

- carry out multiplication operations up to 1000 using a variety of methods
- master a range of multiplication methods employing knowledge of times tables
- carry out division operations up to 1000 using a variety of methods
- master the 'long multiplication' and 'long division' method
- carry out mental methods of multiplication and addition making use of the properties and laws of operations and a variety of methods
- apply problem solving skills to multiplication and division

MEASUREMENT AND MONEY

OVERALL EXPECTATIONS

By the end of third grade, students should:

- know and use the standard units of measurement for length, mass and capacity
- express measurements and equivalent measurements of length, mass and capacity using multiples and submultiples

SPECIFIC EXPECTATIONS

- carry out measurements of length, weight/mass and capacity using

- conventional standard units
- express measurements and equivalent measurements of length, mass and capacity using multiples and submultiples
 - carry out practical investigations to record measurements of length, capacity, and mass
 - solve real-life money problems using common monetary units of measurement and equivalents

FRACTIONS AND DECIMALS

OVERALL EXPECTATIONS

By the end of third grade, students should:

- identify and represent fractions of shapes
- develop an awareness of decimal fractions
- relate a given situation to fractions and decimals

SPECIFIC EXPECTATIONS

- use the concepts of half, double, triple, quadruple
- represent and name fractions of a shape
- calculate fractions of amounts
- understand the relationship between fractions and parts of a whole number, making initial references to decimal numbers and equivalents
- recognise and understand the relationships between whole numbers

GEOMETRY

OVERALL EXPECTATIONS

By the end of third grade, students should:

- draw, name and describe the following 2D and 3D geometric shapes: polygons with three and four sides, cuboid, prism, pyramid
- recognise, represent and realise reflective symmetry
- calculate the perimeter and area of simple polygons
- identify different types of lines
- identify and classify a range of angles

SPECIFIC EXPECTATIONS

- understand, read and use terminology associated with geometry
- recognise and name common 2D and 3D geometric shapes
- distinguish between polygons and non-polygons
- analyse, describe and classify 2D and 3D geometric shapes according to their properties
- identify the lines of symmetry on a given shape
- recognise, represent and realize reflective symmetry
- understand the significance of a line as a border or confine of space
- identify curved, straight, intersecting, perpendicular and parallel lines
- recognise, classify and describe angles
- use partition and composition of simple and complex shapes to recognise that different 2D shapes may have the same surface area
- calculate the perimeter and area of simple polygons

DATA HANDLING

OVERALL EXPECTATIONS

By the end of third grade, students should:

- classify objects, shapes and numbers according to one or more property and be able to represent them graphically
- collect, organize, represent and interpret data in raw format and tables, graphs and charts

SPECIFIC EXPECTATIONS

- classify a set of raw data according to common fixed characteristics
- collect data through questionnaire and survey methods
- collect, sort, organize, interpret and represent information in a variety charts and graphs and tables
- begin to sort, interpret and qualify raw data using numerical and statistical averages

ENGLISH:

SPEAKING and LISTENING

OVERALL EXPECTATIONS

By the end of third grade, students should:

- speak clearly and confidently in a range of contexts and when reading aloud
- listen and respond appropriately to other views and take turns in discussion

SPECIFIC EXPECTATIONS

- speak clearly and confidently in a range of contexts
- practise to improve performance when reading aloud
- choose and prepare poems or stories for performance, identifying appropriate expression, tone, volume and use of voices and other sounds
- develop and use specific vocabulary in different contexts
- adapt tone of voice and use of vocabulary for different audiences
- take turns in discussion, building on what others have said
- listen and respond appropriately to other views and opinions
- follow up others' points and show whether they agree or disagree in whole-class discussion
- sustain conversation, explain or give reasons for views or choices
- actively include and respond to all members of the group
- use the language of possibility to investigate and reflect on feelings, behaviour or relationships
- listen to and remember a sequence of instructions

GRAMMAR, PUNCTUATION and WRITING

OVERALL EXPECTATIONS

By the end of third grade, students should:

- know examples of nouns, verbs and adjectives, and use the terms appropriately
- use tenses correctly and consistently
- know that the simple past tense is made with *-ed*
- know groups of irregular past tense verb forms
- understand how to form and use regular and irregular comparative and superlative adjectives
- know how to use the imperative verb
- know the basic conventions of sentence and speech punctuation and use question, exclamation and speech marks appropriately
- write with a consistency in the size and proportion of letters and the spacing of words
- organize writing in paragraphs in extended stories and texts
- be able to select and compare appropriate words to strengthen the impact of writing

SPECIFIC EXPECTATIONS

- collect example of nouns, verbs adjectives and adverbs, and use the terms appropriately
- understand that verbs are necessary for meaning in a sentence
- develop consistency in the use of tenses
- use verbs with increasing accuracy and use the past tense for narration
- know that the simple regular past tense is made with *-ed*
- memorize groups of irregular past tense verb forms
- understand how to form and use regular comparative adjectives using *-er* and *-r*
- understand how to form and use regular superlative adjectives using *-est* and *-st*
- learn how to form comparative and superlative adjectives from adjectives ending in *-y*
- learn how to form irregular comparative and superlative adjectives using *more* and *most*
- identify pronouns and understand their function in a sentence
- ensure grammatical agreement of pronouns and verbs in using standard English

- understand pluralisation and use the terms 'singular' and 'plural'
- maintain accurate use of capital letters and full stops in demarcating sentences
- use question marks, exclamation marks, and commas and bullet points in lists
- learn the basic conventions of speech punctuation and use speech marks
- use the apostrophe to mark omission in contractions (e.g. can't, don't)
- use the apostrophe to mark singular and plural possession
- show relationships of time, reason and cause through subordination, conjunctions and causal and contrastive connectives
- ensure consistency in the size and proportion of letters and the spacing of words
- build up handwriting speed, fluency and legibility and practise joining letters in handwriting
- plan main points as a structure for story writing
- develop descriptions of settings in stories
- use beginning, middle and end to write narratives in which events are sequenced logically and conflicts resolved
- signal sequence, place and time to give coherence
- write portraits of characters
- begin to organise writing in paragraphs in extended stories
- write first-person accounts and descriptions based on observation
- write and perform poems, attending to the sound of words
- choose and compare words to strengthen the impact of descriptive writing
- write book reviews summarising what the book is about
- make a record of information drawn from a text (e.g. by filling a chart)
- write non-narrative texts using structures of different text-type including letters, notes and messages
- use layout, format graphics and illustrations for different purposes
- use IT to write, edit and present work
- develop accuracy and speed when using keyboard skills to type, edit and re-draft

PHONICS, SPELLING and VOCABULARY

OVERALL EXPECTATIONS

By the end of third grade, students should:

- know and use a variety of spelling patterns

SPECIFIC EXPECTATIONS

- spell high and medium frequency words with confidence
- use effective strategies to tackle unfamiliar words
- use analogy in working out the likely spelling of words
- practise new spellings and write them correctly in own work
- identify mis-spelt words in own writing and keep individual spelling lists
- use independent spelling strategies (e.g. sounding out, visual skills)
- use a dictionary to find the spelling and meaning of words
- extend knowledge and use of spelling patterns (e.g. vowel phonemes, double consonants, silent letters, common prefixes and suffixes)
- recognise a range of prefixes and suffixes, understanding how they modify meaning and spelling, and how they assist in decoding long complex words
- use and spell compound words
- explore words that have the same spelling/sound but different meanings (e.g. form, wave [homonyms] or plain, plane [homophones])
- organise words or information alphabetically using first two, three letters
- consider how the choice of words can heighten meaning
- generate synonyms for high frequency words (e.g. big, little, good)
- infer the meaning of unknown words from the context
- spell unfamiliar words using known conventions including grapheme-phoneme correspondences and morphological rules

READING and COMPREHENSION

OVERALL EXPECTATIONS

By the end of third grade, students should:

- read a range of story, poetry and information books, playscripts

and dialogue, with awareness of different voices

- read aloud with expression to engage the listener
- understand and use the terms 'fact', 'fiction' and 'non-fiction'

SPECIFIC EXPECTATIONS

- read a range of story, chapter, poetry and information books
- read playscripts and dialogue, with awareness of different voices
- identify different types of stories and typical story themes
- infer characters' feelings in fiction texts
- empathise with characters and debate moral dilemmas portrayed in texts
- identify features that writers use to provoke readers' reactions
- share and compare reasons for reading preferences, extending the range of books read
- read aloud with expression to engage the listener
- practise reading and reciting poems with features of alliteration, assonance and rhyme
- consider words that make an impact (e.g. adjectives and powerful verbs)
- begin to infer meanings in figurative language
- understand and use the terms 'fact', 'fiction' and 'non-fiction'
- scan a passage to find specific information and answer comprehension questions
- identify and make notes about the main points of section(s) of text
- identify how different texts are organised, including reference texts, magazines and leaflets, on paper and on screen
- locate information in non-fiction texts using contents page and index
- locate books by classification and find information using IT sources

SCIENCE:

SCIENTIFIC METHOD

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand how to make a fair test and plan a scientific experiment
- use appropriate scientific language and terms to communicate ideas and explain the behaviour of living things, materials, phenomena and processes

SPECIFIC EXPECTATIONS

- begin to ask questions that can be investigated scientifically and decide how to find answers
- recognise that it is important to test ideas using evidence from observation and measurement
- understand how to make a fair test or comparison by changing one factor while keeping other factors the same
- plan and carry out a range of experiments
- make estimations, hypotheses and be able to recount the stages of an experiment
- use appropriate science and technology vocabulary
- follow established safety procedures during science and technology investigations

STATES OF MATTER

OVERALL EXPECTATIONS

By the end of third grade, students should:

- recognise differences between solids, liquids and gases, in terms of ease of flow and maintenance of shape and volume
- describe changes that occur when materials are mixed

SPECIFIC EXPECTATIONS

- investigate and describe the properties of liquids, solids, and gases
- observe and understand the principal characteristics of the different states of matter
- observe the ‘behaviour’ of solids, and liquids, and gases through experimentation (e.g. compare the rate at which different liquids flow, find out ways in which solids can be changed)
- identify objects in the natural and built environment as solids, liquids, and gases
- identify conditions in which the states of solids, liquids, and gases remain constant (e.g., solids remain solid when broken; liquids remain liquid when poured, etc.) and conditions that can cause their states to change
- investigate, through experimentation, interactions that occur as a result of mixing and/or dissolving liquids and solids, liquids and liquids, and solids and solids

HABITATS & COMMUNITIES

OVERALL EXPECTATIONS

By the end of third grade, students should:

- know about the different plants and animals found in different habitats
- understand how animals and plants in different habitats are suited to their environment
- use food chains to show feeding relationships in a habitat

SPECIFIC EXPECTATIONS

- recognise that animals and plants are suited to the environment in which they are found
- learn that animals can be subdivided into vertebrates and invertebrates
- understand that the life processes common to animals and plants include nutrition and respiration
- recognize the different habitats found across the globe (e.g. desert, polar, mountain, taiga, grassland, ocean, etc.)
- demonstrate an understanding of a community as a group of interacting species sharing a common habitat
- identify factors (e.g., availability of water or food, amount of light, type of

weather) that affect the ability of plants and animals to survive in a specific habitat

- demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life (e.g., food, water, air, space, and light)
- demonstrate an understanding of food chains as systems in which energy from the sun is transferred to producers (plants) and then to consumers (animals)
- build food chains consisting of different plants and animals, including humans
- classify organisms, including humans, according to their role in a food chain (e.g., producer, consumer, decomposer)
- identify animals that are carnivores, herbivores, or omnivores
- describe structural adaptations that allow plants and animals to survive in specific habitats (e.g., the thick stem of a cactus stores water for the plant; a duck's webbed feet allow it to move quickly and efficiently in water)

STRUCTURES & SIMPLE MACHINES

OVERALL EXPECTATIONS

By the end of third grade, students should:

- recognize materials that are used to build everyday structures and simple machines
- identify properties of materials (e.g., strength, flexibility, durability) that need to be considered when building structures and simple machines
- assess the impact on society and the environment of simple machines and mechanisms
- investigate mechanisms that include simple machines and enable movement
- demonstrate an understanding of movement and ways in which simple machines help to move objects

SPECIFIC EXPECTATIONS

- define a structure as a supporting framework, with a definite size, shape,

- and purpose, that holds a load (e.g., a running shoe, a house, a bicycle)
- identify structures in the natural environment (e.g., a tree, a bees' nest) and in the built environment (e.g., a building, a fence, a pyramid) and analyze what material they are made of and why
 - describe ways in which different forces can affect the shape, balance, or position of structures (e.g., a load may cause a cardboard box to buckle)
 - investigate how various materials can be used to add strength to structures
 - understand that movement is a change in position of an object
 - investigate how simple machines help objects to move
 - learn that mechanisms are up of one or more simple machines
 - explain ways in which simple machines and mechanisms make life easier and/or more enjoyable for humans
 - use appropriate science and technology vocabulary, including push, pull, beside, above, wheel, axle, and inclined plane
 - identify the six basic types of simple machines – **lever; inclined plane; pulley; wheel and axle, including gear; screw; and wedge** – and give examples of ways in which each is used in daily life to make tasks easier
 - investigate and describe different kinds of movement (e.g., by observing how toys and other everyday objects move)
 - investigate the structure and function of simple machines (e.g., by building a wheel and axle for a toy car; by exploring the effects of changing the slope of a ramp)

HISTORY:

HISTORIAN'S SKILLS

OVERALL EXPECTATIONS

By the end of third grade, students should:

- recognise that events in the past can be reconstructed through the interpretation of historical sources
- recognise and use temporal indicators to locate facts and events in time
- place events and experiences on a timeline
- read and gather historical information from a range of texts and sources
- classify and organize historical information in sequential charts and be able to relay progression, evolution and cause and effect in visual format

SPECIFIC EXPECTATIONS

- master use of terminology of time and calendars
- create timelines to show the past and future
- use calendars to understand elapsed time in weeks, months etc.
- create and use timelines to show life experiences
- discover the people who study the past (e.g. historian, librarian, archaeologist, palaeontologist)
- create posters and charts to show the development of different technologies, for example the computer or types of transport.
- compare changes over time at **three or more** intervals (e.g. schools in the 19th century/1950's/today, or how a street changes over time)
- analyse what things stay the same over the three periods, and what changes. Offer explanations for these changes
- investigate how we know about the past (examining historical sources)
- evaluate different sources according to their type and usefulness
- differentiate between primary and secondary sources and their usefulness
- begin to conduct own research into the past, using books or ICT (e.g. research about a famous historical person)
- understand and use conventional system for dating (AD, not BC)

HISTORY OF THE EARTH

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand the relationship between cause and effect through an exploration of the changes produced by the passage of time
- recognise relationships of evolution, sequence and simultaneity
- understand commonly accepted accounts of the formation of the universe, solar system and planets
- recognise alternative cultural explanations for the formation of the universe, solar system and planets
- classify and organize historical information in sequential charts and be able to relay progression, evolution and cause and effect in visual format

SPECIFIC EXPECTATIONS

- know and be able to recount the first stages of the history of the universe
- know and be able to recount the first stages of the history of the earth
- know and be able to recount the first stages of life on earth
- explore some different culture's creation myths
- investigate the origins of the continents, and the super continent Pangea.
- investigate the development of early life forms
- understand the basic concept of the evolution of life
- understand that the history of life on earth can be broken down into different eras
- produce visual and sequential charts, diagrams and timelines to illustrate the above information

DINOSAURS

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand the relationship between cause and effect through an exploration of the changes produced by the passage of time
- recognise relationships of evolution, sequence and simultaneity
- understand what dinosaurs were and the evolutionary and environmental contexts in which they lived
- understand the eras into which dinosaurs are sorted and basic chronology of their evolution

SPECIFIC EXPECTATIONS

- understand what early land-based life was like, and identify some precursors to the dinosaurs
- recognise the principal features of some well-known dinosaurs – their diet, physical features, habitat, etc.
- explore the world and environment that dinosaurs inhabited, and understand how it differed from the world today
- investigate how we know about dinosaurs – e.g. understand the process of fossil formation, where and how fossils are found and what fossils can tell us, and what they can't.
- find out who palaeontologists are and what they do.
- create maps to show dinosaur distributions.
- create scale models / drawings of different dinosaurs.
- investigate different theories for why dinosaurs disappeared.

THE PALEOLITHIC PERIOD

OVERALL EXPECTATIONS

By the end of third grade, students should:

- have a basic understanding of different stages of human evolution, and of different hominid species.

- understand and describe the contexts of prehistoric life, identifying changes and things which remain the same.
- understand the daily life, inventions and culture of early humans.
- place events and experiences on a timeline

SPECIFIC EXPECTATIONS

- understand the basic stages and events in the evolution of early mammals and primates
- create timelines and sequential diagrams to show human development.
- trace and map the movement of different hominid species.
- understand how the environment influenced early humans.
- identify anatomical changes in early humans and investigate reasons for these
- investigate how palaeontologists know about the past, and how they draw conclusions
- compare physical features of different hominids, e.g. Australopithecus, homo habilis, homo erectus, Neanderthals
- explore different milestones, such as tool use, art, use of fire. Establish which homids first did these things and understand the sequence in which they occurred
- understand ways in which prehistoric humans obtained food, find out what evidence there is for this
- understand the key features of our species (homo sapiens sapiens) and what unique features it had/has
- investigate art, technology, habitation and everyday life for homo sapiens sapiens
- compare and contrast different hominid species using a range of different sources

THE NEOLITHIC PERIOD

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand what makes the Neolithic period different from earlier periods.
- attempt to reconstruct the Neolithic period through the interpretation of historical sources.
- understand the significance and consequences of changes in the Neolithic period.
- classify and organise historical information in sequential charts and be able to relay progression, evolution and cause and effect in a visual format

SPECIFIC EXPECTATIONS

- understand the main features of daily life in the Neolithic period
- investigate the reasons for, process of, advantages of and disadvantages of the move from hunting to agriculture
- investigate the environment necessary to allow the development
- investigate the reasons for and consequences of the domestication of animals
- investigate the advantages and disadvantages of settled vs nomadic life.
- explore Neolithic innovations such as pottery, metalwork, art and fabric weaving
- compare and contrast life in the Neolithic with earlier periods
- sequence events, showing changes throughout the evolution of humans (discuss what has changed and what has stayed the same)

GEOGRAPHY:

MAPPING AND ORIENTATION

Some objectives in this unit can be completed as part of later units.

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand what constitutes the study of geography
- represent objects in space using plans and symbols
- collect and use geographical information
- represent territories, plans, and routes cartographically
- orientate him/herself in a given setting, space or represented space making use of a range of reference points.
- give and understand directions
- plot routes

SPECIFIC EXPECTATIONS

- study the different elements of geography: the study of the world and how people interact with it.
- investigate how we learn about the world, for example through maps, plans, photographs, surveys, physical evidence, economic information, environmental evidence
- know the cardinal points on a map, and use them when giving directions
- identify a compass rose and describe its function
- realize a map is a bird's eye perspective of a place
- understand and use map keys
- understand how maps of the same place can give different information
- read, interpret and make physical/political/thematic maps.
- collect and sort different map types
- create fun and interactive maps of different countries / continents, displaying information about them
- read and create maps using simple scale
- navigate by use of reference points, and describe the positions of objects
- understand how objects can look, and identify them, from various points of view

- make use of co-ordinates when describing locations
- describe and follow routes using both oral descriptions and maps
- draw routes and follow them using maps

LANDSCAPES

OVERALL EXPECTATIONS

By the end of third grade, students should:

- recognise the defining features and functions of a setting, space or landscape.
- know and be able to describe the physical and man-made features of different landscapes and environments.
- know and explore local territory through direct and indirect observation

SPECIFIC EXPECTATIONS

- identify the main physical features of different environments and landscapes
- explore the differences between man-made and natural features
- use direct observation, maps and other geographical sources to identify different landscape features
- categorise different natural landscape features (for example hydrological, topographic, organic)
- describe different landscapes with reference to their physical geographical features
- build up a particular knowledge of the local territory (The Po Plain) and its major geographical features.
- Mountains: investigate their formation, analyse their natural and man-made features, investigate how erosion can alter mountainous landscapes
- Hills: investigate their formation, analyse their natural and man-made features, investigate how erosion can alter hilly landscapes
- Plains: investigate their formation, analyse their natural and man-made features, investigate how man can alter plains landscapes
- Cities: investigate their formation, analyse their natural and man-made features, investigate how man can alter city landscapes
- Rivers: investigate their formation, analyse their natural and man-made features, investigate how erosion can alter river landscapes

- Lakes: investigate their formation, analyse their natural and man-made features, investigate how man can alter lake landscapes
- Seaside: investigate their formation, analyse their natural and man-made features, investigate how man and erosion can alter seaside landscapes
- identify whether human impacts on the landscape have been negative or positive

WORLD HERITAGE SITES

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand what a world heritage site is, and why some places are considered particularly important to protect and preserve

SPECIFIC EXPECTATIONS

- investigate the different classifications of world heritage sites
- investigate some of the main World Heritage Sites in Italy (including Ferrara)
- explore some other important world heritage sites across the world

FOOD FROM AROUND THE WORLD

OVERALL EXPECTATIONS

By the end of third grade, students should:

- understand that our food comes from many different places
- investigate the way that foods are produced in different countries, and how food gets to Italy

SPECIFIC EXPECTATIONS

- investigate where the food we eat comes from, produce maps and other work to show this
- investigate how different physical features (e.g. mountains) are used in different countries
- investigate a specific example, such as bananas, and see the journey the

food makes

- contrast the ways of life in the country where the food is produced, to the country where it is consumed (Italy)