

SECOND GRADE CURRICULUM

A.S. 2020-2021



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MATHEMATICS:

MENTAL MATHS: NUMBERS TO 1000

OVERALL EXPECTATIONS

By the end of second grade, students should:

- immediately recognize quantities to 100 without counting
- recognize the 'place' of each number up to 100
- indicate, represent, and recognize numbers to 1000 based on quantity
- count forward and backward from a given number within 100
- solve operations involving addition and subtraction using own strategies

SPECIFIC EXPECTATIONS

- 'read' quantities up to 1000 based on their position within a set structure
- compare and order whole numbers to 100
- read and write in words and digits whole numbers to one thousand
- develop mental strategies to solve addition and subtraction operations
- identify numbers as even or odd
- use comparison vocabulary when talking about numbers (greater than, smaller than, 1/10/100 more than, 1/10/100 less than, equal to), and relate it to the symbols $>$, $<$, and $=$

WRITTEN OPERATIONS: NUMBERS TO 100

OVERALL EXPECTATIONS

By the end of second grade, students should:

- master written operations involving the addition and subtraction of numbers to 100, developing own strategies
- solve problems involving addition and subtraction using carrying and borrowing



SPECIFIC EXPECTATIONS

- learn how to correctly set out and complete written operations in their notebooks following established guidelines
- understand the importance of lining up tens and units in column addition and subtraction equations
- start from the units column when performing operations
- confidently carry out written operations requiring 'carrying'
- confidently carry out written operations requiring 'borrowing'
- transform horizontal equations into column equations and vice versa

MULTIPLICATION AND DIVISION

OVERALL EXPECTATIONS

By the end of second grade, students should:

- **recognize and identify multiplication (symbol 'x') as the process of repeated addition**
- **recognize and identify division (symbol ':') as the process of repeated subtraction**
- **become familiar with the times tables 1-10**
- **identify number patterns and relationships in the 1, 2, 3, 4, 5, and 10 times tables**

SPECIFIC EXPECTATIONS

- represent and explain multiplication as the combining of equal groups (repeated addition) using materials, pictures, and drawings
- represent and explain division as taking away the same amount from a given total several times (repeated subtraction) using materials, pictures, and drawings
- solve multiplication and division equations using repeated addition/subtraction
- be familiar with the 1-10 times tables, using aids to help
- recall multiplication facts of the 1-10 times tables
- skip-count to 100 by twos, threes, fours, fives, and tens
- write multiplication and division number sentences using the appropriate symbols (x , :)



- learn how to correctly set out and complete written operations in their notebooks following established guidelines
- learn the procedure for simple column multiplication using the times tables charts for support (*2 digit multiplied by 1 digit*)
- learn the procedure for division with remainder, using aids to help (*2 digit divided by 1 digit*)

PROBLEM SOLVING

OVERALL EXPECTATIONS

By the end of second grade, students should:

- understand the meaning of key words found in word problems
- interpret wording and pictures accurately
- choose an appropriate operation (+, -, x, :) to solve a problem

SPECIFIC EXPECTATIONS

- become familiar with the terms: one, each one, all, every, every single one, per, difference, left, in total,
- carry out written instructions
- answer written questions based on pictures
- choose appropriate operations to complete word problems, developing own problem-solving strategies
- represent given information in a chart or table to help identify the missing information and recognize what operation should be used
- solve word problems using previously learned mental math strategies
- solve word problems using drawings

MEASUREMENT

OVERALL EXPECTATIONS

By the end of second grade, students should:

- estimate, measure, and record length, mass, and capacity



using standard units (m, cm, kg, l)

- **compare, describe, and order objects using attributes measured in standard units**

SPECIFIC EXPECTATIONS

- identify the metre (m) as a standard unit of measure, and identify objects which are longer or shorter than 1 m
- identify the centimetre (cm) as a standard unit of measure, and identify objects which can be measured in cm
- compare the lengths/heights of objects using appropriate vocabulary (longer than/shorter than/the longest, etc.)
- identify the kilogram (kg) as a standard unit of measure, and identify objects which are heavier or lighter than 1 kg
- read a scale to determine if an object weighs more or less than 1 kg
- compare the masses of objects using appropriate vocabulary (heavier than/lighter than/the lightest, etc.)
- understand and explain that volume is the amount of liquid in a container
- identify the litre (l) as a standard unit of measure, and identify objects which contain more or less than 1 l

MONEY

OVERALL EXPECTATIONS

By the end of second grade, students should:

- **recognize the coins and banknotes of the Euro**
- **read the amount of money in words and write the corresponding amount in numeric notation**
- **state the total value of the banknotes and coins given**

SPECIFIC EXPECTATIONS

- identify the Euro as the monetary unit used in Italy and parts of Europe
- recognize that different countries have different monetary units
- identify the value of the Euro coins as 'cents'
- identify the value of the Euro banknotes as 'Euro'
- show different ways of making up a value with different banknotes and/or coins

- match up the numeric notation with the coins/banknotes that make up that amount

SHAPES AND PATTERNS

OVERALL EXPECTATIONS

By the end of second grade, students should:

- **identify two-dimensional shapes and three-dimensional figures and sort and classify them by their properties**
- **compose and decompose two-dimensional and three-dimensional shapes and figures**
- **create sequential patterns, and symmetrical patterns**

SPECIFIC EXPECTATIONS

- identify and describe various polygons (triangles, quadrilaterals, pentagons) and sort and classify them by their properties (number of sides/vertices) using concrete materials and pictures
- identify and describe three-dimensional figures (cubes, prisms, cones, spheres, cylinders, pyramids) and sort and classify them by their properties number of faces/edges/vertices, face shape, stack/roll) using concrete materials
- create models and skeletons of 3D shapes using cardboard/straws and modelling clay, and describe their properties
- locate the line of symmetry in a two-dimensional shape
- compose and describe pictures, designs, and patterns by combining two-dimensional shapes
- compose and decompose two-dimensional shapes (make a rectangle from two triangles)
- create patterns by combining two or more attributes

FRACTIONS

OVERALL EXPECTATIONS

By the end of second grade, students should:

- understand that a fraction is an equal part of a whole
- use materials, drawings, and pictures to represent fractions
- understand relationship between fraction parts and the whole

SPECIFIC EXPECTATIONS

- identify if a shape has been cut into equal fraction parts or not
- represent fractions with model drawings (halves, thirds, and quarters)
- use shapes to represent one whole and fractions up to quarters
- write fractions up to quarters from a given shape divided into equal parts
- read and write fractions in words and numbers
- write fractions that represent parts of a whole from a given situation (eg. 3 out of 12 animals are frogs)



ENGLISH:

SPEAKING AND LISTENING

OVERALL EXPECTATIONS

By the end of second grade, students should:

- show confidence in speaking to a group and begin to make use of and recognise a more formal tone of voice
- listen carefully and respond appropriately, asking questions of others

SPECIFIC EXPECTATIONS

- show confidence in speaking to a group
- articulate clearly so that others can hear
- speak with clarity and use appropriate intonation when reading and reciting texts
- tell real and imagined stories using the conventions of familiar story language
- explain ideas and processes using imaginative and adventurous vocabulary and non-verbal gestures to support communication
- listen to others in class, ask relevant questions and follow instructions
- listen to talk by an adult, remember some specific points and identify what they have learned
- begin to be aware of the use of more formal vocabulary and tone of voice
- explain plans and ideas, extending them in the light of discussion
- listen carefully and respond appropriately when asking questions of others

PHONICS, SPELLING AND VOCABULARY

OVERALL EXPECTATIONS

By the end of second grade, students should:

- **secure spelling of high frequency/common irregular words**

SPECIFIC EXPECTATIONS

- apply knowledge of phonemes effectively in reading and spelling
- read independently and with increasing fluency longer and less familiar texts
- build and use collections of interesting and significant words
- secure the spelling of high frequency words and common irregular words
- read high and medium frequency words independently and automatically
- identify syllables and split familiar compound words into parts
- learn the different spellings of long vowel phonemes
- spell with increasing accuracy and confidence, drawing on word recognition and knowledge of word structure, spelling patterns and use of double letters
- spell words with common prefixes and suffixes (e.g. un-, dis-, -ful,-ly)
- know how to tackle unfamiliar words that are not completely decodable
- read and spell less common alternative graphemes including trigraphs

GRAMMAR, PUNCTUATION and WRITING

OVERALL EXPECTATIONS

By the end of second grade, students should:

- use verbs with increasing accuracy and use the past tense for narration
- compose and write sentences using the past tense of the verbs to have and to be
- know that the simple past tense is made with *-ed*
- memorize common irregular past tense verbs
- develop a good understanding of the use of adverbs
- understand how to form and use comparative adjectives using *-er* and *-r*
- build up a confident use of pronoun and verb contractions
- know how to make regular noun plurals by adding *-s* and *-es*
- write in clear sentences using full stops and capital letters
- form letters correctly and consistently
- understand time and sequence in story narratives
- develop stories with a setting, characters and a sequence of events
- make simple notes from a section of non-fiction text and learn to write lists and instructions

SPECIFIC EXPECTATIONS

- begin to use of a range of words and phrases to link sentences
- begin to write in clear sentences using full stops and capital letters
- develop awareness of other punctuation, including speech marks
- use verbs with increasing accuracy and use the past tense for narration
- compose sentences using tense consistently (present and past)
- know that the simple past tense is made with *ed*
- memorize some groups of irregular past tense verb forms
- re-read own writing for sense and accuracy



- begin to use a variety of simple organisational devices (e.g. headings, captions)
- read and respond to question words (e.g. what, where, when, who, why)
- use question marks
- form letters correctly and consistently
- write legibly, using upper and lower case letters appropriately within words, and observing correct spacing within and between words
- practise handwriting patterns and the joining of letters
- spell accurately the common words that can be read on sight
- apply knowledge of phonemes and spelling patterns in writing independently
- choose interesting words and phrases (e.g. in describing people and places)
- find alternatives to and/then in developing a narrative and connecting ideas
- begin to use the language of time (e.g. suddenly, after that)
- use the structures of familiar poems and stories in developing own writing
- draw on knowledge and experience of texts in deciding and planning what and how to write
- sustain form in narrative, including use of person and time
- use planning to establish clear sections for writing
- structure a story with a beginning, middle and end
- develop stories with a setting, characters and a sequence of events
- begin to use dialogue in stories
- make adventurous word and language choices appropriate to the style and purpose of the text



READING AND COMPREHENSION

OVERALL EXPECTATIONS

By the end of second grade, students should:

- read and respond to question words (e.g. what, where, when, who, why)
- analyse small sections of text and answer questions to show comprehension

SPECIFIC EXPECTATIONS

- extend the range of common words recognised on sight
- apply knowledge of phonemes and word parts in tackling unfamiliar words
- use context and sentence structure to help establish meaning
- understand time and sequence in story narratives
- identify and describe story settings and characters
- give some reasons why things happen or characters change
- predict story endings
- read poems and comment on words and sounds, rhyme and rhythm
- explore how particular words are used, including words and expressions with similar meanings
- make simple inferences from the words on the page (e.g. about feelings)
- read and follow simple instructions (e.g. in a recipe)
- explain organisational features of texts, including alphabetical order, diagrams, captions and bullet points
- locate words by initial letter in simple dictionaries, glossaries and indexes
- find answers to questions by reading a section of text
- draw together ideas and information from across a whole text, using simple signposts in the text
- find factual information from different formats (e.g. charts, labelled diagrams)
- scan a page to find where information is located
- read simple fiction and non-fiction books independently
- read whole books on their own, choosing and justifying selections

SCIENCE:

WATER IN OUR ENVIRONMENT

OVERALL EXPECTATIONS

By the end of second grade, students should:

- assess ways in which the actions of humans have an impact on the quality water, and ways in which the quality of water has an impact on living things
- investigate the characteristics of water and the effects of water in the environment
- demonstrate an understanding of the ways in which water is used by living things to help them meet their basic needs

SPECIFIC EXPECTATIONS

- identify water as a clear, colourless, odourless, tasteless liquid that exists in three states and that is necessary for the life of most animals and plants
- recognize sources of water in the natural and environment
- investigate the characteristics of water (e.g., water takes up space, flows or moves when not contained, has mass) and its uses
- understand the stages of the water cycle (evaporation, condensation, and precipitation) and how they are linked to one another
- name the three states of water, and explain how water can transform from one state to another
- identify states of water in the environment and show how they fit into the water cycle when the temperature of the surrounding environment changes (rain, snow, hail, etc.)
- study cloud formation and different weather linked to the water cycle
- assess personal and family uses of water as responsible or wasteful, and create a plan to reduce the amount of water used where possible
- state reasons why clean water is an increasingly scarce resource in many parts of the world

ANIMALS IN OUR ENVIRONMENT

OVERALL EXPECTATIONS

By the end of second grade, students should:

- investigate similarities and differences in the characteristics of various animals
- demonstrate an understanding that animals grow and change and have distinct characteristics
- assess ways in which animals have an impact on society and the environment

SPECIFIC EXPECTATIONS

- identify and describe major physical characteristics of the main animals groups (mammals, reptiles, birds, amphibians, fish, insects)
- describe an adaptation as a characteristic body part, shape, or behaviour that helps an animal survive in its environment
- investigate behaviours in which animals adapt to their environment (migration, hibernation, nocturnal, diurnal, etc.)
- observe and compare the physical characteristics (e.g., fur or feathers; two legs or no legs) and the behavioural characteristics (e.g., predator or prey) of a variety of animals, including insects,
- investigate the life cycle of a variety of animals (e.g., butterflies, frogs, chickens), using a variety of methods and resources
- observe and compare changes in the appearance and activity of animals as they go through a complete life cycle
- use scientific inquiry/research skills and knowledge acquired from previous lessons to research the basic needs, characteristics, behaviour, and adaptations of an animal of their choice

PLANTS IN OUR ENVIRONMENT

OVERALL EXPECTATIONS

By the end of second grade, students should:

- assess ways in which plants are important to humans and other living things
- investigate similarities and differences in the characteristics of various plants, and ways in which the characteristics of plants relate to the environment in which they grow
- demonstrate an understanding that plants grow and change and have distinct characteristics

SPECIFIC EXPECTATIONS

- describe the basic needs of plants, including air, water, light, warmth, and space
- identify the major parts of plants, including root, stem, flower, stamen, pistil, leaf, seed, and fruit, and describe how each contributes to the plant's survival within the plant's environment
- describe how most plants get energy to live directly from the sun (e.g., plants turn the energy from the sun into food for themselves) and how plants help other living things to get energy (e.g., Other living things, cannot "eat" sunshine, so they eat the plants to get the energy. They also get energy when they eat the animals that eat the plants.)
- describe ways in which humans use plants for food, shelter, medicine, and clothing
- describe ways in which plants and animals depend on each other (e.g. pollination from insects resulting in production of fruits to eat)
- understand that we can eat different parts of the plant (fruit, seeds, roots, leaves, etc.) and identify which part of the plant certain foods come from
- identify examples of environmental conditions that may threaten plant and animal survival
- germinate seeds and record similarities and differences as seedlings develop
- observe and compare the parts of a variety of plants

HISTORY:

ORGANIZATION OF TIME

OVERALL EXPECTATIONS

By the end of second grade, students should:

- locate facts and events in time and order them based on when they happened
- master the terminology associated with chronology: day, month, week, season, year
- become familiar with the analogue clock and use it to tell time

SPECIFIC EXPECTATIONS

- understand the different parts of the day (morning, afternoon, evening, and night), and the relative times related to them
- use different units of time (e.g. days of the week, seasons, months) with accuracy in order to convey information
- know the sequence of hours, days, months and years
- answer simple questions like ‘how many days from Monday to Friday?’
- understand the cyclical nature of days, months, years, and seasons
- write the date in different formats
- use monthly calendars and weekly planners
- understand the correlation between seasons and months
- understand, use and make instruments for measuring time (e.g. sand timers, water timers)
- read and use a clock using hours and minutes
- distinguish between a.m. and p.m. (daytime activities vs. night time activities)
- estimate how long it takes to perform certain actions, e.g. eating lunch
- explore some of the different (international) festivals which take place throughout the year (e.g. Chinese New year, Christmas, Easter, Thanksgiving), place these on calendar.



ACTIONS IN TIME

OVERALL EXPECTATIONS

By the end of second grade, students should:

- recognise sequences and simultaneous events
- place personal events and experiences in sequential order
- understand cause and effect

SPECIFIC EXPECTATIONS

- understand the difference between past, present and future
- understand the difference between sequential and contemporaneous events
- put simple stories into correct narrative order
- understand simple animal life cycles and put them in order
- give accounts of events using appropriate vocabulary (such as: while, after, during, before, later, at the same time, meanwhile)
- use the past tense when describing past events
- order events from own life chronologically
- use, understand and create simple flow charts and simple instructions
- understand cause and effect, and how this differs from coincidence
- understand what possible future consequences there could be to an event (e.g. it is snowing, so.....)
- understand that things can change over time – be able to explain why and how
- be able to give accounts of what events may have caused a present situation. (e.g., the toy is broken, because.....)

CHANGES THROUGH TIME

OVERALL EXPECTATIONS

By the end of second grade, students should:

- use a timeline to record personal events and experiences
- recognise that events in the past can be reconstructed through the interpretation of historical sources (objects, documents, photographs, pictures, film, the spoken word)
- locate facts and events in time

SPECIFIC EXPECTATIONS

- find evidence for changes over time in the natural environment (e.g. fallen leaves, seeds, etc.)
- look at evidence for changes, how do we know that things are old or new?
- create timelines to show life events (ordered according to age)
- collect and sort out sources which show information about own life and sort them chronologically to form a timeline
- investigate what we can learn about our history from material/physical/photographic/oral sources
- sort sources into different types (oral, visual, material, written)
- begin to understand what sources can tell us e.g. 'what can you see that is different from your life in this photograph?'
- investigate old photos of their family as children and themselves, how have they changed?
- think about what things in our lives will tell people in the future about us
- create time capsules about us for people in the future
- investigate family history further back in time, collect sources of information about an older family member, see what can be learned about childhood in earlier times. How does life now differ from grandparents' days?
- investigate which sources are most useful, what tells us the 'most' about the past
- collect and evaluate sources about Ferrara in 'the old days' (c.100 years ago), and investigate what can be learned from them.
- reconstruct past times in Ferrara in various different ways, drawing on information in different sources.

GEOGRAPHY:

SPACES IN OUR COMMUNITY

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

OVERALL EXPECTATIONS

By the end of second grade, students should:

- develop a strong sense of spatial awareness and orientate themselves within a space.
- understand and use appropriate terminology to describe locations and indicate relative positions and directions.
- recognize the elements that make up a community

SPECIFIC EXPECTATIONS

- describe the position of objects in spaces using appropriate vocabulary (behind, in front, between, near, far, under, left, right)
- locate objects by following directions.
- use reference points to describe the location of objects.
- use directions to navigate on online games
- recognise the differences between different spaces (e.g. indoor and outdoor) and the uses of those spaces
- describe the location of some significant places in their community, using relative location
- classify spaces into different types (e.g. public, private)
- investigate different public services and the key features of a town – what services do we need?
- identify different members of the community, the jobs they perform, and where they work
- distinguish between goods and services offered by community workers
- create physical models of urban environments, including different spaces and services and be able to describe these features and their locations.

MAPS AND GRAPHS

OVERALL EXPECTATIONS

By the end of second grade, students should:

- represent known spaces in plans using symbols and different points of view.
- use and create map keys to draw information from maps
- recognise the representation of borders and boundaries
- read and use graphs to extract and present data

SPECIFIC EXPECTATIONS

- understand what a map is and identify information given
- investigate what elements go on a map (fixed vs. mobile)
- represent an area using bird's eye perspective
- draw and represent objects and spaces from different points of view.
- make maps of known areas (e.g. classroom, bedroom, school, house, etc.)
- read maps of known locations (e.g. Ferrara) in order to extract information.
- draw maps of created spaces (e.g. route followed by character in a story)
- describe and follow routes using maps.
- use, interpret and make keys when using maps.
- use grid squares and coordinates
- understand the importance of landmarks as reference points for directions
- examine famous landmarks in Italy and abroad
- read, understand and interpret information found on a picture graph
- use the given information on a picture graph to answer questions and explain thinking
- create their own graph based on information they have collected and present it in a clear way

LANDSCAPES

OVERALL EXPECTATIONS

By the end of second grade, students should:

- recognise a landscape as the defining features and functions of a setting
- distinguish between natural and manmade landscapes
- identify the defining feature of natural landscapes

SPECIFIC EXPECTATIONS

- discuss different known landscapes, collect photographs and other information about places they've visited.
- understand the differences between urban areas and the countryside
- identify and sort different features in a landscape (e.g. natural / manmade or fixed / mobile).
- understand some of the features of a mountainous landscape.
- understand some of the features of a plain landscape.
- understand some of the features of a coastal landscape.
- understand some of the features of a river / lake landscape.
- investigate the main features of the local territory: the city and province of Ferrara.

CHILDREN AROUND THE WORLD

OVERALL EXPECTATIONS

By the end of second grade, students should:

- understand how their experiences are similar too, and different from, children in other countries.
- compare some significant traditions and celebrations among diverse groups and at different times

SPECIFIC EXPECTATIONS



- Investigate life in a different country (for example China), focussing on school/home life, special holidays
- identify ways in which our lives differ or are similar.
- discover different elements of the country's culture (e.g. food, music) and geography
- identify some different groups in their community
- describe some significant traditions and celebrations of their families, their peers, and their own communities, as well as of some other communities
- gather and organize information and data about some communities' locations, climate, and physical features, and the ways of life of people in these communities
- identify basic human needs (e.g. food, water, clothing, transportation, shelter), and describe some ways in which people in communities around the world meet these needs

