

Bloomington Montessori

Learner Outcome Benchmarks

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Rationale

From 2018 to 2020, Bloomington Montessori School worked with Grow Wise Consulting to develop school-wide benchmarks related to our learner outcomes. The goals of this project included:

- clear communication of learner outcomes to parents*
- tools to communicate effectively between teachers and other educational professionals regarding student expectations and progress*
- development of benchmarks that authentically reflect Montessori philosophy and BMS's holistic learner outcomes*
- to aid in the effective collection of data at the student, classroom, and school levels for the purpose of informing instruction and to ensure accountability*
- to help ensure consistency between classrooms and smooth transitions between program levels within the school*

- *to create consensus around goals for typical students and help facilitate discussions around implementation of student services for those who need extra support*

We wanted to reflect holistic benchmarks that represented application opportunities instead of isolated skills, and that honored the complete development of a child (not only academics). Data is collected to help us assess and track benchmark progress. Data sources in a Montessori environment include:

- *Student work (projects, research, work journals, portfolios)*
- *Observation*
- *Teacher records*
- *Cumulative student files*
- *Informal assessments*
- *Standardized tests (annual for grades 3-6)*

It is important to note that these benchmarks are written to represent the classroom goals for a “typical” child in their third year of each program level. It is not cause for alarm if a child is still working on a few of the benchmarks at the end of the three year cycle. It simply informs the next teacher regarding where to focus learning. However, if a child is struggling to demonstrate competency with a significant number of benchmarks, this may be a reason for teachers and parents to begin discussions about the need for additional classroom supports, an Accommodation Plan, or Individualized Service Plan (see Student Services in the BMS Parent Handbook). Please remember that continual teamwork and communication is the best support for the success of any student.

Learner Outcomes

In our effort to offer the highest quality Montessori educational experience, Bloomington Montessori has adopted the following Learner Outcomes (as outlined by the American Montessori Society [Standard 4.2]). These Learner Outcomes serve as a framework with which to discuss our vision for and efforts toward the holistic development of the children we serve.

It is important for our stakeholders to be aware of these Learner Outcomes for many reasons, including:

- To better understand the mission of Bloomington Montessori School and the role it serves in our community
- To prepare families for BMS’s expectation of support by families in the development of these skills and values
- To better understand the context within which teachers will be discussing a child’s progress through our curriculum

These six learner outcomes are complex topics, each involving multiple stages of growth and learning. Our goal, through our spiraling curriculum, is to develop these skills to an age-appropriate level throughout a child's nine year experience here. Graduates of Bloomington Montessori build the tools necessary to continue this developmental journey long after graduation.

Autonomy and Independence

The word "autonomy" finds its roots in the concept of "self-governing". In a Montessori context, this includes the ability to maintain control over one's actions, feel confident making independent choices, and have a strong sense of self.

Confidence and Competence

The self-assurance that comes from recognizing and having faith in one's own abilities and talents is one of the most empowering tools we can offer children. Through a greater sense of ownership of their own achievements, children become energized by their own capability.

Academic Preparation

As in most schools, we have a strong belief in children's need to be prepared with knowledge and skills that will enable them to navigate education and life successfully. This includes a well-rounded curriculum of language, mathematics, biology, physical science, geography, and history. Additionally, we focus on process-centered goals such as the development of critical thinking skills, problem-solving, work habits, and creativity. (See Scope and Sequence for detailed information.)

Intrinsic Motivation

To find the work of life internally satisfying creates a drive that propels children toward productivity and success in all areas as they grow. By avoiding extrinsic motivations (such as rewards and punishments), we leave space for this vital inner development of the child.

Social Responsibility

The idea that we each should strive to benefit society and care for ourselves, each other, and the Earth instills children with a sense of stewardship. Our Cosmic Curriculum explores the interconnection of all living things, encouraging the development of environmentally aware global citizens.

Spiritual Awareness

Spiritual awareness is a process by which we explore our own being and thoughts. We help children develop a sense of mindfulness, purpose, and possibility. This includes development of growth mindset and comfort with self-reflection.

BENCHMARK GUIDES

INTERPERSONAL SKILLS

Lower Elementary

Social Responsibility

After their third year in a BMS Lower Elementary classroom, **students can:**

- address conflicts by using the Giraffe Talk script to communicate observations, feelings, needs, and wants.
- demonstrate sympathy and reflect on empathy (with support as needed) for peers who are upset or hurt.
- identify ways their actions affect their classmates and offer help when needed or asked.
- take turns listening and speaking, including asking questions and responding to comments, in conversations with peers.

- follow agreements of the classroom intended to respect ourselves, each other, and the physical environment.
- discuss pros and cons of media use.

Social Justice

After their third year in a BMS Lower Elementary classroom, **students can:**

- read, listen to, and discuss stories about people from a variety of backgrounds, races, ethnicities, religions, family structures, etc. and with themes of historical or current injustice or inequality.
- participate in a service learning project to help people in the community.
- participate in anti-bias activities and discussion as part of a community Peace Circle.
- identify ways that people have been persecuted for their skin tone, religion, sexuality, etc. in the past and prejudices that continue today; empathize through naming the emotions they believe victims feel.
- define the term “bias”.

Global Citizenship

After their third year in a BMS Lower Elementary classroom, **students can:**

- read, listen to and discuss stories about people from a variety of geographic, religious, and political backgrounds.
- research another country, including aspects of the cultures within that country.

Environmental Stewardship

After their third year in a BMS Lower Elementary classroom, **students can:**

- spend focused attention in nature, recording detailed observations.
- work to care for the environment by cleaning up after themselves and completing communal tasks to care for the classroom without reminders.
- learn about environmental issues and discuss consequences and possible solutions.
- help care for classroom plants or pets and classroom gardens and outdoor spaces.
- identify where foods grow or come from and describe the variety of foods necessary for humans to thrive.
- reduce waste by composting food scraps and/or using single-stream recycling and landfill receptacles.
- conduct an engineering experiment to solve an environmental issue.

INTRAPERSONAL

Lower Elementary

Autonomy & Independence

After their third year in a BMS Lower Elementary classroom, **students can:**

(Emotional Self-Regulation)

- name their emotions.
- use techniques to calm themselves when upset (when their “lids are flipped”).

(Self-Control)

- consistently wait patiently and productively for a “turn”.
- Identify unproductive choices and make a new choice independently.

(Independent Choices)

- work independently near friends.
- productively and effectively manage their time throughout a morning work period.
- demonstrate creativity through originality of ideas or projects and passion for work and other pursuits.

Confidence & Competence

After their third year in a BMS Lower Elementary classroom, **students can:**

(Work Habits)

- make a variety of work choices within their Zone of Proximal Development over the course of a week.

(Self-Advocacy)

- identify when they need help with reasonable accuracy and seek help appropriately.

(Strong Self-Concept)

- verbalize confidence that, with effort, they can figure it out.
- identify and express comfort with their “gifts and challenges”.
- demonstrates willingness to take risks and be wrong.

Intrinsic Motivation

After their third year in a BMS Lower Elementary classroom, **students can:**

(Growth Mindset)

- verbalize the belief that they can achieve their goals through effort and reflect on accomplishment of past goals.
- identify that mistakes are how we learn.

(Embracing Challenge)

- choose challenging works without prompting and persist, problem solve, and persevere with a positive attitude.

(Flow/Concentration)

- regularly demonstrate sustained concentration in a variety of activities.

Spiritual Awareness

After their third year in a BMS Lower Elementary classroom, **students can:**

(Mindfulness)

- reflect on their emotions and behaviors, identify the stimulus, and discuss why it caused their reactions.

(Interdependence)

- discuss themselves as part of the Universe.

(Awe and Reverence)

- demonstrate respect and gratitude through reducing waste and recognizing origins.

COSMIC EDUCATION

Lower Elementary

Maria Montessori urged us to give children a “vision of the universe” to help them discover how all of its parts are interconnected and interdependent, and to help them understand their place in society and the world. In Montessori schools, children in Elementary programs (between the ages of 6 – 12) learn about the creation of the universe through stories that integrate the studies of astronomy, chemistry, biology, geography, and history. These lessons help children become aware of their own roles and responsibilities as humans and as members of society, and help them explore their “cosmic task”—their unique, meaningful purpose in the world.¹

The Great Lessons (aka Cosmic Stories)

Child will experience the following stories presented by a teacher each year, and do appropriate follow up work:

- “Coming of the Universe”- The story of the big bang through the formation of Earth.
- “The Coming of Life”- The story of evolution of life on earth.

¹ American Montessori Society, “Montessori Terminology”
<https://amshq.org/About-Montessori/What-Is-Montessori/Terminology>

- “The Coming of Humans”- The story of the evolution of humans and the beginning of civilizations.
- “The Story of Writing”*: The story of the development of the alphabet and the beginning of written human history.
- “The Story of Numerals”*: The story of the development of counting systems and mathematics.

History

After their third year in a BMS Lower Elementary classroom, **students can:**

- tell, write, or draw the sequence of major events of the Universe (such as the Big Bang, formation of galaxies, formation of stars, the formation of the Sun and our Solar System, the formation of Earth, the cooling of Earth, and the evolution of life on Earth.
- name major periods of prehistory of Earth and a central feature or event of each.
- describe the evolution of the six groups of life on earth, in order of their appearance.
- describe changes that happened throughout the evolution of species of hominids, the fundamental needs of early humans, and the development of culture.
- define “civilization” and name one ancient civilization and the continent on which it existed.
- define “biography” and discuss the biography of one person that they have read, identifying that person’s impact on history and/or the modern world.

Geography

After their third year in a BMS Lower Elementary classroom, **students can:**

- name and locate the continents, oceans, and globe features such as the equator, international dateline, poles, and tropics
- interpret and create simple maps with a key, compass rose, and scale that offer a variety of information
- identify that a culture’s location on the globe affects how people meet their fundamental needs, and discuss similarities and differences in cultures through presentations, experiencing celebrations from a variety of cultures, and research.
- name and describe the 8 biomes of the Earth.
- identify verbally or through writing or drawing that the rotation of the Earth causes day and night, the orbit of the Moon causes moon phases, and the orbit and tilt of the Earth cause seasons and climatic zones.

- summarize the water cycle process verbally or through writing or drawing.
- name twelve water and landforms and identify examples on a map (such as a river, mountain, archipelago, peninsula, isthmus, etc.)

Biology

After their third year in a BMS Lower Elementary classroom, **students can:**

- describe evolution as changes within a population of organisms over millions of years that help them survive and adapt.
- label diagrams of the systems of the human body and describe a simple function of each system.
- name categories of healthy foods and summarize why eating healthy foods and staying active are important.
- classify animals as vertebrates/invertebrates and by the class to which they belong and identify the internal and external features unique to each class of animal.
- differentiate between angiosperms and gymnosperms.
- differentiate between diagrams of plant cells and animal cells and identify some structural differences.
- identify the internal and external parts of plants, including those of the reproductive cycle of angiosperms.
- complete experiments with plants and draw conclusions about the needs of plants.

Physical Science

After their third year in a BMS Lower Elementary classroom, **students can:**

- produce a summary of completed experiments that follows a simplified scientific method format.
- create hypotheses and follow procedures to complete experiments exploring magnetism, electricity, sound, light, simple machines, cohesion/adhesion, chemistry, etc.

Engineering

After their third year in a BMS Lower Elementary classroom, **students can:**

- use the engineering cycle to test a variety of designs or materials to solve a problem, given a specific challenge (such as “design a water filter to...”)

READING

Lower Elementary

Concepts of Print

After their third year in a BMS Lower Elementary classroom, **students can:**

- Explain that words are made of letters, sentences are made of words, paragraphs are made of sentences, and essays and stories are made of paragraphs
- Navigate a nonfiction text using the table of contents, headings, captions, illustrations, index, and glossary to find or clarify information
- Categorize texts into groups such as fiction/nonfiction, poetry/narrative, and genres (biographies, mysteries, etc.)
- Discuss the author's purpose for writing a given text
- List, define, and identify within a text craft tools authors use to engage or assist readers (such as imagery, repetition, headings, etc.)

Phonemic Awareness

- Break multi-syllabic words into syllables
- Demonstrate a variety of sound substitutions, including those that identify root words and prefixes/suffixes
- Identify rhyming patterns in poems or songs using letter labels (ie ABAB)

Decoding

After their third year in a BMS Lower Elementary classroom, **students can:**

- Independent of context, fluently identify, segment, and blend sounds and read multi-syllabic words, demonstrating knowledge of
 - spelling patterns such as short and long vowel syllable patterns (CVC, CVr, V, VV, VCe, Cle), blends/consonant and vowel digraphs/diphthongs, consonant doubling, -y to -ies, word families (such as -ight) and r-controlled vowels
 - Morphology such as Roots and affixes
 - Contractions and possessives
- Recognize and read a list of 220 high-frequency sight words (https://lincs.ed.gov/readingprofiles/Dolch_Basic.pdf)
- Read grade-level appropriate (F&P level P) texts

Fluency

After their third year in a BMS Lower Elementary classroom, **students can:**

- Read grade-level appropriate texts (F&P level P) with phrasing and pauses for punctuation, expression, and reasonable pace

Comprehension

After their third year in a BMS Lower Elementary classroom, **students can:**

- Independently respond to comprehension questions about fiction and nonfiction texts that require them to
 - ask and answer concrete and inferential comprehension questions, including questions about feelings/motivations
 - Identify the characters, setting, and plot/events
 - paraphrase/summarize a story following the overall structure (beginning introduces the characters and setting, middle introduces an action or problem, ending concludes the action or solves the problem)
 - identify the main idea/theme
 - make predictions
 - support idea with details from the text
 - Compare and contrast themes, events, and/or characters in one or more stories
- Identify the organizational structure of a nonfiction text, such as compare/contrast, sequential, chronological, problem/solution, cause/effect, etc.
- Distinguish between fact and opinion
- Apply context clues to understand unfamiliar words or graphics

- Identify figurative language such as metaphor, simile, and hyperbole and the author's purpose and meaning
- Identify and define content-specific vocabulary in nonfiction texts using tools such as context clues, glossaries, and dictionaries if needed
- Distinguish the purpose of media messages (information, entertainment, persuasion, interpretation, etc.) and identify the target audience.

LANGUAGE ARTS

Lower Elementary

Letter Formation

After their third year in a BMS Lower Elementary classroom, **students can:**

- generate easily legible writing in both manuscript and cursive, including both capital and lower case letters and with correct orientation to the line and spacing.
- demonstrate home-row hand position when typing.

Mechanics

After their third year in a BMS Lower Elementary classroom, **students can:**

- capitalize letters including proper nouns and the beginning of sentences.
- use ending punctuation for sentences including the period, exclamation point, and question mark.
- use commas to denote a list, to address people, or after an introductory word or phrase when writing sentences.
- use commas in dates, addresses, and greetings and closings of letters.
- use apostrophes to denote singular and plural ownership and contractions.

Word Study

After their third year in a BMS Lower Elementary classroom, **students can:**

- define and match homophones, homonyms, homographs, synonyms, and antonyms of an appropriate vocabulary level.
- identify common prefixes and suffixes and how they change the meaning of a word.
- spell common sight words, phonetic words (including those that follow common long vowel rules such as silent e and double vowels), and familiar word families (such as -ight).
- apply spelling rules for adding suffixes to familiar words, such as doubling the final consonant, dropping a silent e, or changing a “y” to “i”.

Grammar

After their third year in a BMS Upper Elementary classroom, **students can:**

- name and describe the eight parts of speech and identify the part of speech of each word in a given sentence.
- craft sentences that demonstrate recognition of regular and irregular verbs in simple verb tenses and distinguish between action and linking verbs.
- use appropriate pronouns after antecedents.

Sentence Analysis

After their third year in a BMS Lower Elementary classroom, **students can:**

- identify the subject, predicate, direct object, and indirect object of a sentence, or generate an original sentence with these parts.
- recognize sentence fragments and run-ons.

Writing Structure

After their third year in a BMS Lower Elementary classroom, **students can:**

- write using a variety of sentence structures (simple, compound, complex).
- build paragraphs with a topic sentence and related supporting details.
- author 5-paragraph essays about a familiar topic that contain an introductory paragraph, 3 body paragraphs, and a conclusion paragraph.
- write a simplified bibliography

Writing for a Purpose

After their third year in a BMS Lower Elementary classroom, **students can:**

- write friendly letters
- write short, well-organized research using the 5-paragraph format and synthesizing information from text resources based on a research question, as well as enhancing writing with visuals such as pictures or graphics.

- journal or free-write on a given or original topic, including multiple related sentences that demonstrate spelling and mechanics knowledge.
- author stories in a variety of genres (mystery, fantasy, etc.) that include a beginning, middle, and end and describe the characters and setting.
- write a persuasive essay that includes an introductory statement, opinion, support for the opinion, and a concluding statement.
- with support, edit writing for conventions and craft, and use available technology to publish documents (including typed papers and slide shows)
- present writing to an audience with appropriate volume, intonation, and content.
- compare and contrast information in Venn diagrams.

ARITHMETIC

Lower Elementary

Numeration

After their third year in a BMS Lower Elementary classroom, **students can:**

- explain the concept of infinity as it relates to numbers.
- explain and demonstrate (with materials) the meaning of operational symbols (+, -, x, ÷) and comparison symbols (<, >, =) as well as exponents and the radical.
- when given a number, read and write numerals and count on from numbers including place values from millions to thousandths.
- write any number word phrase for numbers from zero to one thousand, and hierarchies up to one million.

Place Value

After their third year in a BMS Lower Elementary classroom, **students can:**

- explain the relationship between any place values between thousandths and millions, including non-adjacent place values (for example, there are 1000 tenths in a hundred).
- round a given number (from one to 4 digits) to a given place value.
- identify the place value of any given digit in a number between millions and thousandths.

Operations

After their third year in a BMS Lower Elementary classroom, **students can:**

- explain reciprocal relationships of operations (addition and subtraction or multiplication and division) and how this can be used to “prove” an answer to a math problem.
- demonstrate automaticity of mixed fact sets of addition, subtraction, multiplication, and division through 10.
- solve abstract dynamic addition and subtraction with numbers up to millions.
- solve multiplication problems with two-digit multipliers using materials.
- solve abstract multiplication problems with a one-digit multiplier (and four-digit multiplicand) and division problems with a one-digit divisor (and four-digit dividend).

Mathematical Mind

After their third year in a BMS Lower Elementary classroom, **students can:**

- verbalize three ways to solve a given math problem mentally.
- explain and demonstrate that estimation is a justifiable guess of a quantity or answer.
- demonstrate mathematical stamina to complete a set of math problems with consistent focus and effort at an appropriate level of challenge.
- define and give examples of prime numbers.
- synthesize mathematical understandings to solve a multi-step math problem (abstractly).
- volunteer regularly and comfortably to answer math questions during groups or lessons and explain strategies.
- regularly and independently cycle back to correct an error in a math problem.
- identify multiples of numbers from 1-20, going up to 100.
- find a complete list of factors of numbers up to 100.
- identify and complete patterns, or apply a given pattern (such as 10 more or 10 less) to a given number.

Applied Mathematics

After their third year in a BMS Lower Elementary classroom, **students can:**

- identify and apply key words to solving word problems.
- complete two-step word problems using any operation, giving a properly labeled answer.

Fractions, Decimals, and Percents

After their third year in a BMS Lower Elementary classroom, **students can:**

- add and subtract fractions with unlike denominators (with materials).
- convert between proper (mixed numbers) and improper fractions and reduce fractions to lowest terms (with materials).
- students can use correct nomenclature for the parts of a fraction, describe their relationship, and supply a real-world example.
- given any fraction, student can read, write, or demonstrate the fraction with materials .
- solve dynamic addition and subtraction problems that include decimals (up to thousandths) with materials.

- multiply fractions and mixed numbers by whole numbers with materials.

Money

After their third year in a BMS Lower Elementary classroom, **students can:**

- participate in group budgeting discussions including concepts such as spending, saving, and prioritizing.
- count, exchange, and make change with currency (both coins and dollars).

Radicals and Exponents

After their third year in a BMS Lower Elementary classroom, **students can:**

- create next successive squares given any square (up to 20).
- demonstrate and explain how to square and cube a number.

Data and Graphing

After their third year in a BMS Lower Elementary classroom, **students can:**

- create and interpret a bar graph, line graph, and pie chart.

Algebra

After their third year in a BMS Lower Elementary classroom, **students can:**

- explain that a variable represents an unknown number, and that this can be represented with letters.
- students can create and solve one-step equations with one variable, using all four operations.

Measurement

After their third year in a BMS Lower Elementary classroom, **students can:**

- use appropriate tools to measure and record data in standard and non-standard units of measurement.

Time

After their third year in a BMS Lower Elementary classroom, **students can:**

- tell time verbally and in writing when shown a time on a digital or analog clock.
- verbally estimate the passage of time with reasonable accuracy and use time-specific vocabulary.
- calculate passage of time, and project what time it will be after a given amount of time passes.

GEOMETRY

Lower Elementary

Foundational concepts

- categorize and define points, lines, surfaces and solids.
- define symmetry and asymmetry and provide examples.
- compare congruence, similarity, and equivalence and create an example.
- discuss how a shape can look different when its position in space is manipulated, and identify actions such as flips, turns, and slides.

Line

After their third year in a BMS Lower Elementary classroom, **students can:**

- discuss types of lines, positions of lines, and relationships between two or three straight lines.
- identify parts of an angle, categorize angles as acute/right/obtuse
- measure a line in standard and metric units to the nearest fourth of a unit.
- use relationships between angles (such as adjacent angles, vertical angles, complimentary angles, and supplementary angles) to draw conclusions about the measurement of unknown angles when given the value of one or more of the angles.

Shape

After their third year in a BMS Lower Elementary classroom, **students can:**

- Name, illustrate and explore triangles, quadrilaterals, regular polygons, and curved figures.
- Name and define the seven triangles of reality
- use correct nomenclature to discuss the parts of polygons, and discuss how we can use this information to classify them.
- use constructive triangles to create stars with up to twelve points or polygons with up to twelve sides.
- calculate the perimeter of a quadrilateral or triangle with sides measured in whole numbers.
- calculate the area of a square, rectangle, and triangle with whole number measurements.

Form

After their third year in a BMS Lower Elementary classroom, **students can:**

- name geometric solids and identify some of the shapes of their planes.
- draw a geometric form in a way that shows observation of shadow and light in relation to a 3-dimensional object.

Tools

After their third year in a BMS Lower Elementary classrooms, students can:

- Use a compass to create a circle
- Use a straight edge and set square to create straight lines and right angles
- measure an isolated angle with a protractor.

FINE ARTS

Lower Elementary

Music

After their third year in a BMS Lower Elementary classroom, **students can:**

- Sing with mostly accurate pitch within a limited range and with varied dynamics (a capella and with accompaniment)
- sing songs that include languages other than English and folk songs or dances from a variety of cultures
- play classroom instruments with given melodies and patterns, as well as improvisation (such as xylophones, recorders, keyboards, or ukuleles)
- read simple notated music in treble clef including notes and rests
- identify musical instruments by their sound and family
- experience and discuss live and recorded music

Visual Arts

After their third year in a BMS Lower Elementary classroom, **students can:**

- differentiate between representational and abstract art
- classifying landscapes, portraits, still life, and abstract
- create art based on objects from the real world as subject matter and/or to express personal ideas, interests, and feelings
- demonstrate concentration and stamina when creating art, share art, and respect the art of oneself and others

- define principles of art, elements of art, and study of space and discuss them in relation to their own art and the work of other artists
- demonstrate basic techniques with a variety of mediums and proper care of tools used in creation of art
- create a secondary colors when provided primary pigments

Performance Arts

After their third year in a BMS Lower Elementary classroom, **students can:**

- identify elements of theater (character, costume, setting, plot)
- improvise dramatization of stories
- Perform one act plays
- use classroom materials to create visual “setting” for a skit or play
- explore the use of sound effects to create feeling and mood
- perform skits or plays to explore a concept from another discipline