

Upper EL 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.

Our curriculum can be discussed as integration of both skill-based lessons and experiential lessons.

Skill-based lessons are those, typically in the areas of language and math, that must be mastered before the next lessons on a given concept can be taught. Beginning skills are foundational to later skills. It is essential that children are provided extra support and time to master these concepts, and they are most often taught at the individual or small-group level. These skill-based lessons are assessed throughout a child's time in the classroom and data is used to inform future teaching.

Additionally, Montessori believed that we should "give children the Universe", and we have an expansive curriculum of integrated cultural (science, geography, and history) and social (interpersonal, intrapersonal, social responsibility) lessons. These lessons are laid out in a spiral, building deeper and deeper layers of knowledge each year throughout the three-year classroom cycles. We present much more information on every topic each year than we expect children to retain long term. Instead, the goal is to spark their interest and introduce them to the immenseness of the Universe and the limitless possibilities of learning. Children then choose passion projects to dive deeper into the areas that most spark their interest. Social skills listed are introduced with explicit lessons and guided practice, though we recognize mastery of these skills is lifelong work for all of us.

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 collaborators 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

Upper Elementary

Social Responsibility

In Upper Elementary, we practice:

- working to solve conflicts through listening, expressing oneself effectively, recognizing the needs and feelings of others, and compromising/brainstorming solutions.
- empathizing with peers who are upset or hurt and focusing on comfort or solutions.
- understanding the interdependence of our classroom and larger community through our actions.
- demonstrating the balance of listening, speaking, asking, tone of voice, and body language in effective communication during conversations with peers and adults.
- demonstrating respect for ourselves, each other, and the environment, even in new or unfamiliar situations.
- engaging in critical thinking regarding media (message, credibility, goal, etc.)

Social Justice

In Upper Elementary, we practice:

- reading, listening to, and discussing first-person stories about people from a variety of backgrounds, races, ethnicities, religions, family structures, etc. including some with stories of historical or current inequality/injustice.
- interviewing people or listening to presentations by people from a variety of backgrounds around the theme of historical or current injustice or inequality.
- using news articles as starters to discuss current social justice issues.
- focusing learning and discussion around a social justice issue within the community and designing and implementing a related service learning project.
- participating in anti-bias exercises and discussions; reflecting on our own “lenses” and the biases they lead to, and analyzing current events from this point of view.

- identifying an example of systematic racism.
- defining and giving examples of “privilege” in a social context.

Global Citizenship

In Upper Elementary, we practice:

- Discussing interdependence, including rights and responsibilities, in terms of the whole-world community.
- Researching a variety of locations and cultures outside of one’s own experience.
- Writing a first-person narrative story about a person from a different cultural, religious, geographic, or political background than oneself based on relevant non-fiction information.
- Writing a pen pal letter to a child in another country.

Environmental Stewardship

In Upper Elementary, we practice:

- Observing, recording, collecting data, and drawing conclusions about questions and experiences in nature.
- Caring for our environment by cleaning up after ourselves, communally caring for the classroom, and helping to care for the larger school campus.
- Focusing learning and discussion around an environmental stewardship issue within the community and designing and implementing a related service learning project.
- Helping care for classroom pets and plants as well as campus gardens.
- Tracing the environmental impact of foods within current food systems and identifying goals around healthy and sustainable food.
- Reducing waste by composting food scraps, reducing packaging whenever possible, and/or sorting waste into landfill, single stream, and county recycling receptacles.
- Participating in a Citizen Science project.
- Identifying contributing factors to climate change, indicators of climate change, and actions that will contribute to solutions.
- Celebrating Earth Day through activities to raise money for an environmental stewardship cause, creation of informative posters, and festivities to bring school the community together around the issue of caring for our Earth.

INTRAPERSONAL

(Awe and Reverence)

- demonstrating a love for nature through interest in playing outside and examination of natural objects.

Upper Elementary

Autonomy & Independence

In Upper Elementary, we practice:

(Emotional Self-Regulation)

- recognizing when we need to pause (between stimulus and response) and using constructive strategies to settle ourselves before we act (respond).

(Self-Control)

- taking responsibility for prioritizing work over social urges as needed (finding a balance).

(Independent Choices)

- productively and effectively managing our work plans through planning and prioritization.
- demonstrating originality, passion, and risk-taking through a wide variety of pursuits.

(Care of Self)

- Demonstrating body awareness and independently taking care of one's physical, emotional, and mental needs
- Advocating for oneself appropriately when needing assistance to fulfill needs

Confidence & Competence

In Upper Elementary, we practice:

(Work Habits)

- prioritizing and managing time to complete quality work over the course of a work plan cycle, consistently meeting deadlines.

(Self-Advocacy)

- When personally struggling with something, articulating the cause, feeling, and need to the appropriate resource.

(Self-Concept)

- Leading a conference with teachers and parents that includes sincere reflection on a healthy balance of gifts, goals, and challenges.

Intrinsic Motivation

In Upper Elementary, we practice:

(Growth Mindset)

- exhibiting effort in our work (persisting, problem solving, persevering) and mapping a path toward goals.
- persevering through failure as a natural learning process and discussing effort as the key to success.

(Embracing Challenge)

- Choosing challenging works fueled by enjoyment of the work.

(Concentration/Flow)

- consciously creating conditions for “flow” and demonstrating this even in activities we don’t naturally prefer.

Spiritual Awareness

In Upper Elementary, we practice:

- reflecting on behaviors, feelings, thoughts, and biases and discussing personal reactions.

(Interdependence)

- discussing ourselves as a small and important part of an immense whole and honoring that we are both humble and significant.
- collaborating in positive, respectful, articulate, balanced relationships with adults

(Awe and Reverence)

- demonstrating respect and gratitude for resources in our environment by limiting waste and consumption.

COSMIC EDUCATION

Upper 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.’

The Great Lessons (aka Cosmic Stories)

- “The Great River”: a story about the systems of the human body and the interdependence of its parts.

History

In Upper Elementary, we learn about:

- the migration paths of early humans using a globe or map.
- ancient civilizations, their locations, how they met their fundamental needs, and how this was influenced by their biome and the time in which they lived. (4th)
- the three phases of human history (nomadic, agricultural, urban).
- using a BCE/CE timeline.
- the Middle Ages.
- the Renaissance.
- the Native American groups of North America, how they were influenced by the region and biome in which they lived, and how they met their fundamental needs. (5th)
- European explorers. (5th)
- European settlement from both a Native American and European settler point of view. (5th)
- major events throughout American History, including factors such as historical context and point of view, such as: (6th)

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

- the American Revolution
- territories, westward expansion, and the process of statehood
- the American Civil War
- the Industrial Revolution, modern civilization, and globalization
- US Government and its checks and balances (6th)
- inventions that had a large impact on humanity and their inventors.
- Indiana history through works such as timelines, maps, and trips to historic or governmental sites. (4th)
 - using primary resources to answer historical questions
- Indiana's state government. (4th)
- different government structures and identify examples from around the world.
- current events from multiple points of view and in cause and effect models.
- world religions and their major beliefs.

Economics

In Upper Elementary, we learn about:

- trade and barter systems and identify how they impacted relations between individuals and groups.
- imports v. exports and globalization v. nationalism in terms of economics.
- finite resources we depend on, such as natural resources, and how scarcity of resources can lead to negotiation and conflict.
- a variety of economic systems, identifying examples from around the world.

Geography

In Upper Elementary, we learn about:

- the movement of the Sun, planets, and Earth's moon in our Solar System.
- climatic zones and describe what types of life are likely to be found there (adaptations)
- the water cycle and sources of pollutants and their entry points into the cycle.
- other cultures through expert or first-hand speakers, experiences, and resources.
- the processes of weather and erosion.
- processes and phenomena of the Earth using the Functional Geography impressionistic charts.
- the rock cycle and classifying rock samples.

After the third year of Upper Elementary, **we can**:

- identify the 50 US states and capitals.
- name countries of each continent and their national capitals.

- map world examples of water and landforms, interpreting a variety of maps as resources.

Biology

In Upper Elementary, we learn about:

- the 6 groups of life.
- the functions and processes of plant reproduction for both angiosperms and gymnosperms.
- taxonomic relationship between animals.
- the parts of animal and plant cells and their functions.
- the processes of a plant (photosynthesis, respiration, transpiration) and related structures and functions.
- the systems of the human body and major parts of each system with functions, as well as habits that promote the health of each system.
- healthy, affordable, balanced snacks and meals using the Harvard My Plate template.
- well-balanced regimens of physical activity to build flexibility, strength, stamina, coordination.
- characteristics of healthy and unhealthy relationships and possible actions to create positive change within relationships.

Physical Science

After our third year in a BMS Upper Elementary classroom, **we can:**

- design and complete experiments (following the scientific method format) with one variable and a control to help answer a question

Engineering

After our third year in a BMS Upper Elementary classroom, **we can:**

- use the engineering cycle to solve a problem, conceiving and testing multiple original solutions with isolation of variables.

READING

Upper Elementary

Fluency

After our third year in a BMS Upper Elementary classroom, **we can:**

- Orally read grade-level appropriate (F&P Level Y) or higher text smoothly, accurately, and with expression

Comprehension

After our third year in a BMS Upper Elementary classroom, **we can:**

- Discuss the characters, setting, themes, and events of a text using specific details from the text to support ideas
- Ask and answer questions about a text including concrete comprehension, inference, and making predictions based on details in the text and prior knowledge
- Compare and contrast stories from different genres
- Summarize themes, supporting details, and plots of a text or speaker.
- Review claims made by various types of media and evaluate evidence used to support these claims

LANGUAGE ARTS

Upper Elementary

Letter Formation

After our third year in a BMS Upper Elementary classroom, **we can:**

- type using home-row fingering and a productive pace.

Mechanics

After our third year in a BMS Upper Elementary classroom, **we can:**

- use commas to separate two independent clauses or dependent clause followed by an independent clause, or for appositives and coordinating adjectives.
- denote dialog with quotation marks and related punctuation, with dialogue tags in a variety of placements.
- use semicolons to connect main clauses and colons to introduce a list or quotation.
- use parentheses, dashes, or commas to denote nonrestrictive or parenthetical elements.

Word Study

After our third year in a BMS Upper Elementary classroom, **we can:**

- apply known rules of morphology to deconstruct unfamiliar words or modify root words.
- discuss the etymology and meaning of common prefixes and roots, and use this information to hypothesize the meaning of unfamiliar words.
- write sentences that reflect correct verb conjugation for all tenses.

Grammar

After our third year in a BMS Upper Elementary classroom, **we can:**

- name the coordinating conjunctions and tell what types of clauses are joined by coordinating and subordinating conjunctions, and use them appropriately in writing.

Sentence Analysis

After our third year in a BMS Upper Elementary classroom, **we can:**

- analyze sentences, including those with more than one clause and/or phrases (such as adverbial, adjectival, and prepositional phrases).

Writing Structure

After our third year in a BMS Upper Elementary classroom, **we can:**

- write expository, persuasive, narrative, and descriptive essays using the 5-paragraph format as a baseline.
- support statements in writing with qualitative and quantitative facts gathered from multiple sources, including quotes and citations.
- use appropriate vocabulary and sentence variety, structure, and transitions to provide appropriate “flow” and “voice” for writing.
- enhance or support writing through addition of a variety of graphics and illustrations that convey meaning.
- self-edit writing for conventions and revisions based on purpose, and publish work with a variety of available technology formats and related conventions.
- generate common MLA bibliographies and simple citations.

Writing for a Purpose

After our third year in a BMS Upper Elementary classroom, **we can:**

- write formal and informal letters.
- write stories in a variety of genres that incorporate essential elements such as character, setting, plot (event sequence/climax), dialogue, imagery, narrator/point of view, and resolution.
- write presentations for a variety of purposes, designed for an audience, including engagement tools such as hooks and multimedia.
- create arguments that have a clearly identifiable organization (such as compare and contrast or cause and effect), and support claims with precise evidence from credible sources.

ARITHMETIC

Upper Elementary

Numeration

After our third year in a BMS Upper Elementary classroom, **we can:**

- Read and write in words or numerals numbers including hierarchies from the billionths to billions.

Place Value

After our third year in a BMS Upper Elementary classroom, **we can:**

- if given a value on the decimal board, explain equivalencies with non-adjacent place values.
- explain when you would use scientific notation and give an example.
- round any number to any place value within a number containing trillions to billionths.
- write a number as a numeral, in expanded notation, or in words if given any number.
- student can translate from any base system (1-9) to base 10, below a value of 100.

Operations

After our third year in a BMS Upper Elementary classroom, **we can:**

- abstractly divide with a three-digit divisor and check answers using multiplication.
- complete 50 math facts in 2 minutes accurately in all four operations.
- perform all operations with negative numbers.

Mathematical Mind

After our third year in a BMS Upper Elementary classroom, **we can:**

- demonstrate willingness to address corrections and persevere through challenge with mathematical problems.
- demonstrate risk-taking, flexibility, and the ability to recognize multiple solutions for math problems.

Applied Mathematics

After our third year in a BMS Upper Elementary classroom, **we can:**

- estimate answers with reasonable accuracy and/or solve three-step real-world problems with any operation, using the proper units.
- create and solve equations with one variable to address real-world problems.
- write inequalities to represent real-world constraints.

Fractions, Decimals, Ratios, and Percents

After our third year in a BMS Upper Elementary classroom, **we can:**

- explain relationships between fractions, ratios, decimals, and percents and give examples.
- when given any fraction/ratio, decimal, or percent, convert to an equivalent fraction, decimal, or percent.
- solve real-world problems in all four operations that contain fractions, ratios, decimals, and percentages.
- define and identify greatest common factors and least common multiples and use to solve fractions problems.

Money

After our third year in a BMS Upper Elementary classroom, **we can:**

- explain the difference between a loan and a savings account in terms of interest.
- explain the purpose of a budget and process of prioritizing, planning, and saving.
- solve a problem for simple interest for one 'term'.

Radicals and Exponents

After our third year in a BMS Upper Elementary classroom, **we can:**

- illustrate and explain the meaning of 'root' in terms of exponents.
- when given any base number and exponent, solve for actual value.
- when given a number below 1000, calculate the square root and cube root (with materials).

Data and Graphing

After our third year in a BMS Upper Elementary classroom, **we can:**

- generalize use of axes labels and keys to interpret data from a variety of graphics.
- create visuals such as line plots, histograms, and box plots to organize numerical data; summarize numerical data in a variety of ways.
- explain the meaning and use of, as well as calculate, mean, median, and mode when given a set of data.
- plot ordered pairs in a coordinate plane.

Algebra

After our third year in a BMS Upper Elementary classroom, **we can:**

- explain that the absolute value of a number is its distance from zero and state the absolute value of a given number.
- differentiate between linear growth and exponential growth.
- plot positive and negative whole and partial numbers on a number line.

- create and solve multi-step equations with one variable or two variables with a proportional relationship.
- define and demonstrate the order of operations and algebraic properties by applying them to the solution of an algebraic equation and justifying each step.

Measurement

After our third year in a BMS Upper Elementary classroom, **we can:**

- measure any length, temperature, weight/mass, and volume in US standard and metric systems, as well as convert within systems.

Time

After our third year in a BMS Upper Elementary classroom, **we can:**

- solve problems including rates over a given time.
- calculate time passage for given years on a BBE/CE timeline.

GEOMETRY

Upper Elementary

Foundational Concepts

After our third year in a BMS Upper Elementary classroom, **we can:**

- categorize and define points, lines, shapes (or planes or surfaces) and form (or 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 our third year in a BMS Upper Elementary classroom, **we 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, and measure one isolated an angle with a protractor.
- measure a line.
- 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 our third year in a BMS Upper Elementary classroom, **we can:**

- name and explore triangles, quadrilaterals, regular polygons, and curved figures.
- use correct nomenclature to discuss the parts of polygons, and discuss how we can use this information to classify them.
- identify that the sum of the angles of triangles is 180-degrees and the sum of the angles of quadrilaterals is 360-degrees and use this information to solve problems.

Form

After our third year in a BMS Upper Elementary classroom, **we can:**

- name geometric forms and identify some of the shapes of our planes.
- draw a geometric form in a way that shows observation of shadow and light in relation to a 3-dimensional object.
- calculate the volume of a rectangular prism.
- use nets to compute surface area of prisms.

FINE ARTS

Upper Elementary

Music

In Upper Elementary, we practice:

- singing with accurate pitch, appropriate tone quality, and varied dynamics a capella and with accompaniment
- singing songs in the languages of other countries
- following cues of a conductor (tempo and dynamics)
- playing classroom ensemble music with instruments such as recorders, bells, or ukulele
- creating music collaboratively to enhance a poem or short story using a variety of sound sources
- composing a melody to match given lyrics, or compose lyrics to match a given melody
- arranging and notating (4/4 time including notes and rests in treble clef) a short piece cooperatively in small groups with instruments, percussion, and voice
- identifying AB, ABA, and rondo forms
- establishing criteria to evaluate classroom music activities
- identifying music styles and instruments by our sounds and families
- experiencing and discussing a wide variety of live and recorded music

Visual Arts

In Upper Elementary, we practice:

- demonstrating basic techniques with a variety of mediums (such as wet-on-wet, wet-on-dry, sponge, wash, and resist with watercolors) and proper care of tools used in creation of art
- exploring and differentiating between printmaking processes, such as stamping, monoprint, rubbings, stenciling, and relief)
- exploring and differentiating between ceramic processes such as pinch and pull forms, slab, imprint decoration, coil, surface decoration, and carving)
- creating art using technology
- engaging in critique, reflection, and revision of art
- creating a color wheel including primary, secondary, and tertiary colors when given primary-color paint

- appreciating art as a reflection of culture and responding to/discuss a work of art
- discussing the role of an artist and study the works of an artist as a collection

Performance Arts

In Upper Elementary, we practice:

- performing folk songs and dances from other cultures
- Creating stories to perform as plays or skits
- Creating scenery for, rehearse, and performing a multi-scene play (including musical accompaniment with voice and instruments or sound effects and lighting to create mood)
- giving a speech with appropriate volume, intonation, and body language