

# Bloomington Montessori

## Upper Elementary Learner Outcome Benchmarks

Updated May 5, 2021

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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.*

***Benchmarks are written to reflect experiential lessons and essential lessons. Experiential lessons are lessons that are taught, practiced, assessed, and moved past within the curriculum. Essential lessons are those skills or take-aways that are deemed vital and which are assessed for long-term retention throughout their time at BMS. In each area of the curriculum, these essential benchmarks are bolded.***

# 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*

### Upper Elementary

#### Social Responsibility

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

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

#### Social Justice

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

- read, listen to, and discuss first-person stories about people from a variety of backgrounds, races, ethnicities, religions, family structures, etc. and with themes of historical or current injustice or inequality.
- interview people or listen to presentations by people from a variety of backgrounds around the theme of historical or current injustice or inequality.
- use news articles as starters to discuss current social justice issues.
- focus learning and discussion around a social justice issue within the community and design and implement a related service learning project.

- participate in anti-bias exercises and discussions; reflect on their own “lenses” and the biases they lead to, analyzing current events from this point of view.
- identify an example of systematic racism.
- define and give examples of “privilege” in a social context.

### Global Citizenship

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

- Discuss interdependence, including rights and responsibilities, in terms of the whole-world community.
- Research a variety of locations and cultures outside of one’s own experience.
- Write 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.
- Write a pen pal letter to a child in another country.

### Environmental Stewardship

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

- Observe, record, collect data, and draw conclusions about questions and experiences in nature.
- **Care for their environment by cleaning up after themselves, communally caring for the classroom, and helping to care for the larger school campus.**
- Focus learning and discussion around an environmental stewardship issue within the community and design and implement a related service learning project.
- Help care for classroom pets and plants as well as campus gardens.
- Trace the environmental impact of foods within current food systems and identify goals around healthy and sustainable food.
- Reduce waste by composting food scraps, reducing packaging whenever possible, and/or sorting waste into landfill, single stream, and county recycling receptacles.
- Participate in a Citizen Science project.
- Identify contributing factors to climate change, indicators of climate change, and actions that will contribute to solutions.

- Celebrate 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*

## Upper Elementary

### Autonomy & Independence

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

(Emotional Self-Regulation)

- recognize when they need to pause (between stimulus and response) and use constructive strategies to settle themselves before they act (respond).

(Self-Control)

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

(Independent Choices)

- productively and effectively manage their work plans through planning and prioritization.
- demonstrate originality, passion, and risk-taking through a wide variety of pursuits.

(Care of Self)

- Demonstrates body awareness and autonomously takes care of one's physical, emotional, and mental needs
- Advocate for oneself appropriately when needing assistance to fulfill needs

### Confidence & Competence

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

(Work Habits)

- **prioritize and manage time to complete quality work over the course of a work plan cycle, consistently meeting deadlines.**

(Self-Advocacy)

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

(Self-Concept)

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

### Intrinsic Motivation

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

(Growth Mindset)

- exhibit effort in their work (persist, problem solve, persevere) and map a path toward goals.
- persevere through failure as a natural learning process and discuss effort as the key to success.

(Embracing Challenge)

- choose challenging works fueled by enjoyment of the work.

(Concentration/Flow)

- consciously create conditions for “flow” and demonstrate this even in activities they don’t naturally prefer.

### Spiritual Awareness

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

(Mindfulness)

- reflect on behaviors, feelings, thoughts, and biases and discuss personal reactions.

(Interdependence)

- discuss themselves as a small and important part of an immense whole and honor that they are both humble and significant.
- collaborates in positive, respectful, articulate, balanced relationships with adults

(Awe and Reverence)

- demonstrate 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

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

- describe the migration paths of early humans using a globe or map.
- describe at least 3 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)
- define the three phases of human history (nomadic, agricultural, urban).
- **locate times and determine time intervals on a BCE/CE timeline.**
- compare and contrast the Middle Ages and the Renaissance using a Venn diagram. (5th)
- describe how the lifestyles of Native American groups were influenced by the region and biome in which they lived and how they met their fundamental needs. (5th)
- name two explorers and their countries of origin and areas of exploration.
- **describe European settlement from both a Native American and European settler point of view. (5th)**

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

- describe and discuss major events throughout American History, including factors such as historical context and point of view, such as:
  - the American Revolution
  - territories, westward expansion, and the process of statehood
  - the American Civil War
  - the Industrial Revolution, modern civilization, and globalization
- **create a diagram of US Government and its checks and balances**
- **identify an invention that had a large impact on humanity and its inventor.**
- **describe and discuss Indiana history through works such as timelines, maps, and trips to historic or governmental sites**
  - **define primary resources and use some to answer historical questions**
- diagram Indiana's state government.
- compare and contrast different government structures and identify examples from around the world.
- **discuss current events from multiple points of view and in cause and effect models.**
- name 5 world religions and list a major belief or characteristic of each

### Economics

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

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

### Geography

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

- **identify the 50 US states and capitals.**
- **name some countries of each continent and their national capitals.**
- create a diagram and/or text to explain the movement of the Sun, planets, and Earth's moon in our Solar System.

- identify climatic zones and describe what types of life are likely to be found there (adaptations)
- diagram the water cycle and identify sources of pollutants and their entry points into the cycle.
- **map world examples of water and landforms, interpreting a variety of maps as resources.**
- travel into the larger community to learn about other cultures through expert or first-hand speakers, experiences, and resources.
- describe the processes of weather and erosion.
- discuss the processes and phenomena of the Earth using the Functional Geography impressionistic charts.
- diagram, write, or verbalize the rock cycle and classify rock samples.

### Biology

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

- **name and describe the 6 groups of life.**
- explain the functions and processes of plant reproduction for both angiosperms and gymnosperms.
- diagram taxonomic relationship between several animals.
- diagram the parts of an animal and plant cell and describe the functions.
- summarize the processes of a plant (photosynthesis, respiration, transpiration) and related structures and their functions verbally or with visual representations.
- **name 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.**
- plan healthy, affordable, balanced snacks and meals using the Harvard My Plate template.
- design well-balanced regimens of physical activity to build flexibility, strength, stamina, coordination, and cooperation and lead a P.E. for the classroom.
- **identify characteristics of healthy and unhealthy relationships and possible actions to create positive change within relationships.**

### Physical Science

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

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

### Engineering

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

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

## *READING*

### Upper Elementary

#### Fluency

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

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

#### Comprehension

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

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

### Mechanics

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

- **apply known rules of morphology to deconstruct unfamiliar words or modify root words.**
- **identify 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 their third year in a BMS Upper Elementary classroom, **students can:**



- **name the coordinating conjunctions and tell what types of clauses are joined by coordinating and subordinating conjunctions.**

### Sentence Analysis

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

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

### Writing Structure

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

- write in words or numerals numbers including hierarchies from the billionths to the quadrillions.

### Place Value

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

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

### Time

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

- **name geometric forms 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.**
- **calculate the volume of a rectangular prism.**
- **use nets to compute surface area of prisms.**

# *FINE ARTS*

## Upper Elementary

### Music

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

- sing with accurate pitch, appropriate tone quality, and varied dynamics a capella and with accompaniment
- sing songs in the languages of other countries
- follow cues of a conductor (tempo and dynamics)
- play classroom ensemble music with instruments such as recorders, bells, or ukulele
- create music collaboratively to enhance a poem or short story using a variety of sound sources
- compose a melody to match given lyrics, or compose lyrics to match a given melody
- arrange and notate (4/4 time including notes and rests in treble clef) a short piece cooperatively in small groups with instruments, percussion, and voice
- identify AB, ABA, and rondo forms
- establish criteria to evaluate classroom music activities
- identify music styles and instruments by their sounds and families
- experience and discuss a wide variety of live and recorded music

### Visual Arts

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

- demonstrate 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
- explore and differentiate between printmaking processes, such as stamping, monoprint, rubbings, stenciling, and relief)
- explore and differentiate between ceramic processes such as pinch and pull forms, slab, imprint decoration, coil, surface decoration, and carving)
- create art using technology

- engage in critique, reflection, and revision of art
- create a color wheel including primary, secondary, and tertiary colors when given primary-color paint
- appreciate art as a reflection of culture and respond to/discuss a work of art
- discuss the role of an artist and study the works of an artist as a collection

### Performance Arts

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

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