

Montessori Casa Curriculum- Math, Science, Geography and History

MATH

The Montessori math curriculum is very concrete and hands-on. There's little direct instruction in math. Instead, teachers guide and counsel. This is similar to the discovery approach to math instruction, and unlike the traditional approach.

Students work with many concrete materials to learn skills and concepts. They use self-correcting manipulatives, which allow them to find and correct their own mistakes. They also use sandpaper numbers, number rods, spindle boxes, golden bead material, bead frames, fraction insets, 100 boards, and sequin boards.

Montessori math starts with concrete learning. For instance, in arithmetic, students learn the names of the numbers by identifying numerals and objects. They then move on to more abstract and complex concepts.

The content for math is divided into categories that allow the students to grasp increasingly challenging concepts. Usually, brief lessons cover these categories in a special order. However, most work is done independently or in groups and the pace of study varies between students.

The detailed curriculum is attached.

CULTURE AND SCIENCE

The Montessori science curriculum, similar to math, is experiential. It's very concrete and hands-on, with little direct instruction. This is similar to the inquiry approach to science instruction, and unlike the expository approach. This area encompasses History, Geography, Zoology, Botany, and others. For further details, refer to the curriculum.

Inquiry

Inquiry-based science emphasizes teaching science as a way of thinking or practice, and therefore tries to get students "doing" science as much as possible – and not just "learning" it. Students still learn foundational scientific ideas and content (and build on this knowledge progressively); however, relative to expository science instruction, inquiry-based programs have students spend more time developing and executing their own experiments (empirical and theoretical). Students are frequently challenged to develop critical and scientific-thinking skills by developing their own well-reasoned hypothesis and finding ways to test those hypotheses. Projects and experiments are emphasized over textbook learning. Skills are emphasized over breadth of knowledge.

Students are rarely taught scientific subjects on their own. Instead, the Montessori science interdisciplinary focus allows students learn several subjects (scientific and non-scientific) at once. For instance, they might be given a great lesson about the beginning of the world, where they'll learn about science, history, and theology.

Students are free to explore in and out of the classroom. They learn about the world through problem-solving and trial and error.

In secondary school, some science lectures are given. There also might be some textbook learning at this level. This is especially true in high school, where provincial curricular requirements must be met.

BOTANY, ZOOLOGY, AND MORE THINGS WE TEACH

BOTANY

- THE NATURE TABLE
- LIVING, ONCE LIVING, NON LIVING
- CLASSIFICATION CARDS – SOLID, LIQUID & GAS
- THE THREE PUZZLES
- NOMENCLATURE – FLOWERS
- NOMENCLATURE – “PARTS OF”
- GROWING PLANTS
- COLLECTING LEAVES
- BOTANY CABINET
- LEAVES AND FLOWERS PRESSING
- IMPORTANCE OF THE SUN
- CLASSIFICATION CARDS – DECIDIOUS & EVERGREEN
- PAPER MAKING
- STORY/CARE CARDS
- VEGETAL NATURE LIFE CYCLES
- LIFE CYCLE OF A PUMPKIN
- CLASSIFICATION CARDS – FRUITS & VEGETABLES
- EXPLORING THE VEGETAL KINGDOM

ZOOLOGY

- MODEL ANIMALS
- LARGE CARDS OF ANIMALS
- CARDS ABOUT ANIMALS WITH A BACKBONE
- FIVE CLASSES OF PHYLUM CHORDATE
- DIFFERENT SONGS OF BIRDS OR ANIMALS VOICES
- NOMENCLATURE – ANIMALS
- NOMENCLATURE – GROUPED BY THEMES
- NOMENCLATURE – “PARTS OF”
- ANIMAL NATURE LIFE CYCLES
- LIFE CYCLE OF A TURTLE
- THE HUMAN BODY
- HUMAN LIFE SEQUENCE
- THE HUMAN SKELETON

GEOGRAPHY

- FAMILY PICTURES
- INTERNATIONAL SOUVENIRS
- FESTIVALS & CELEBRATIONS OF LIFE
- INTRODUCTION OF THE THREE ELEMENTS
- THE SANDPAPER GLOBE
- THE COLOURED GLOBE
- PUZZLE MAP OF THE WORLD
- FOLDERS FOR EACH CONTINENT
- ANIMALS OF THE WORLD
- PUZZLE MAP SHOWING COUNTRIES OF CHILD'S CONTINENT
- PUZZLE MAP OF THE CHILD'S OWN COUNTRY
- NOMENCLATURE – PARTS OF A FLAG
- NOMENCLATURE – FLAGS
- FLAGS
- CONTRASTED LAND & WATER FORMS
- SANDPAPER LAND & WATER FORMS
- MINERAL KINGDOM
- SOLAR SYSTEM
- IMPORTANCE OF THE SUN
- CONSTELLATIONS

HISTORY

- MEASURING THE TIME
- EVENTS CHART
- A TIMELINE OF A DAY IN THE LIFE OF A CHILD
- THE LENGTH OF TIME
- SEASONS' TIMELINES
- DAY CALENDAR
- MONTHLY CALENDAR
- SEASONS' CALENDAR
- USABLE SEASON'S CALENDAR
- WEATHER CALENDAR
- SUMMERY CALENDAR
- CHILD'S BIRTHDAY WALK
- THE CHILD'S TIMELINE
- GROWTH OF A CHILD SEQUENCE
- THE PREHISTORIC TIMELINE
- MAKING A PREHISTORIC TIMELINE
- FOSSILS