



Introduction to Montessori

Montessori teaching is about following the insatiable curiosity of a small child and creating through beauty, care and precision, as artists would, the wonder that is a complete personality. It is about giving a beautiful, tactile and implicitly correct physical form to the cornerstones of elementary knowledge that provide the foundation to great imagination and the world of thought and communication. Both the children and the teachers are "Artisans" in the process of each child's development and every journey is nourished as absolutely unique to each child.

Every Montessori classroom around the world follows the seven curriculum areas in a journey around the classroom that maps the known cognitive developmental pattern of childhood. We begin at **Creative** because the creation of the child as a whole and unique masterpiece is both the beginning and the end of the journey a child travels with us. Next follows **Practical Life** building on the skills and observations a child has made in their incredible journey so far. It also serves to build confidence by giving them control of themselves and their environment, whilst inherently preparing them for later learning. Next is **Sensorial**, where the child learns to isolate thoughts and stimuli and explore them to a satisfying end. This learning of focus is critical as they move to **Maths** and then **Language** developing the tools and thought structures that enable them to endlessly and creatively communicate with and understand the world around them. Finally, having established many means of interpreting and accessing the world they move on to **Cultural** where literally the whole world is laid before them.

The seventh area Montessori covers is **Grace and Courtesy**. This is at the forefront of all our interactions with the children. The classroom is always prepared for them, always furnished at their scale, always consistent, so that it is the children who are in control and not the adults. The calmness so many people comment on stems in part from the highly skilled level of the teachers and also from this preparedness. The children do not need to squabble for materials, they know where to find them and can rely on them being returned there by the child before and to still be there the next time they come in.

You will have seen we always crouch to speak to the children. We teach them both explicitly and by example that you should always make eye contact with the person you are speaking with. We all use first names, teachers and children; because that shows that we have equal importance in the Artisans community. We would never interrupt their speech because they are the experts in their own experience and opinions, we do not expect them to interrupt others; respect for others is given a high value.

Please and Thank You are reinforced at every occasion, no matter how small. We explicitly teach the value of these manners in showing regard for the effort and generosity shown by the other in the act they perform. This is also reinforced by example. We ask the children to work with us, *with a please* and when they have finished what they are doing already, we are not more important than the task they have chosen. We always thank them for working with us.

Meal times are also important. We teach table etiquette, both table manners and social courtesy. Meals are served on crockery and glass to show our trust in the children in handling these materials and implicitly reinforcing their capabilities.

Work is presented on trays, or table mats, or floor mats because these define the working space of that child or children and we teach them to respect each other's space and work in this way. Presentations of materials are made from the child's perspective in every detail; from which hand we use, to the words we say, or don't say. We take time to give each and every child our time.

Practical life

The Practical Life area is inspired by the child's fascination with helping at home. Tasks that we find a chore they find inherently mesmerizing. Pouring, threading, mixing, measuring, polishing, spooning, transferring, buttoning, cutting, sweeping, sifting, opening and closing ... all of these and many more are skills that allow a child to gain control over their environment. This sense of control is critical to their self esteem. How rewarding is it to blow your own nose whenever you need to rather than be dependent on someone else, who however gentle and caring, cannot share the sensation in your nose you are trying to be rid off? How satisfying to be able to button up your own coat and do up your own shoes so that if you want to go out you are not dependent on the whims and time of someone else.

Practical Life serves many more purposes too. The work is presented on trays or in baskets. Everything a child needs to be successful at that task is on that tray. They are being taught independence in selection and the following through of a choice. The trays also mark their work area. They are the beginnings of an understanding of personal space, of respecting the work and effort of others. They also act as a focus narrowing the sphere of concentration to your tray builds an ability to filter the environmental stimuli.

Children are taught from their very first day to return their work to the shelf so that it is there for someone else to find and for them to find if they want it again. They are also taught to make the trays ready for the next child before returning it to the shelf. The learning may take weeks but it instils the notion that there are others with whom we share resources and whose needs we need to consider and in return they will consider ours. These are the foundations of co-operation which may come sooner or later but will be used as a tool for learning in Maths and Language later.

Peer learning is also fostered in Practical Life. More able children are encouraged to demonstrate skills to less able children. This consolidates the learning of the more able and the less able often find it far less daunting to be shown by another child than by an adult.

Practical Life's other essential role in Montessori is to build the muscles of the hand. Exercises and activities are all carefully designed to build the large and small hand muscles and to build them in different pairs. All this is essential preparation if a child is to accurately control a pencil or count counters in Language and Maths later.

Children also learn to order and sequence to complete the tasks.

The engrossed absorption of a child in a Practical Life activity and their beaming smile when they achieve what they set out to do is one of the most rewarding and inspiring sights a teacher can see. It also demonstrates how these activities build an inner calmness within the children.

The resources we use for this area are so varied that they are impossible to list. Equally their joy is in their use, though many are beautiful in their own right. Below is brief list of some skills we develop in this area.

Pouring dry items, pouring liquid, pouring to a mark, pouring with one hand or with two, pouring with handles and without, transferring dry items with a spoon, transferring with different tongs, transferring with tweezers, sorting when transferring, threading a variety of bead sizes, buttons, zips, velcro, laces, buckles, poppers, washing hands, drying hands, using soap dispensers, opening and closing packets and bottles, brushing teeth, cutting in different patterns and different papers, sifting, folding...

Sensorial

The Sensorial Area develops the sensory receptiveness of the children. It works not just the five senses commonly considered but also dimension, colour, thermic (temperature), baric (weight), chromatic (colour) and stereognostic (perception). Its overriding aim is to nurture the ability to focus and concentrate. Materials are deceptively simple concentrating on a single variation and sense. In this way the children learn to isolate a single aspect of the information around them and build their ability to focus and concentrate.

All the equipment is very precise and involves a "control of error" meaning that it is clear to the children when they have been successful and that making mistakes is part of the process of learning. It also builds their ability to work independently as, with practice, they do not require a teacher to tell them when they have achieved the goal or to provide additional material to reach the end. The teacher is a facilitator continuously encouraging the child to a greater challenge.

The materials are designed to provide a concrete example of abstract concepts and as such form the foundations for future learning in areas as diverse as mathematics, geometry, geography, botany, art, language and music.

On the following page are 4 key materials from this area.

Below is a list of the materials always available to the children in this area, whilst we will introduce others on rotation or to meet a particular curiosity.

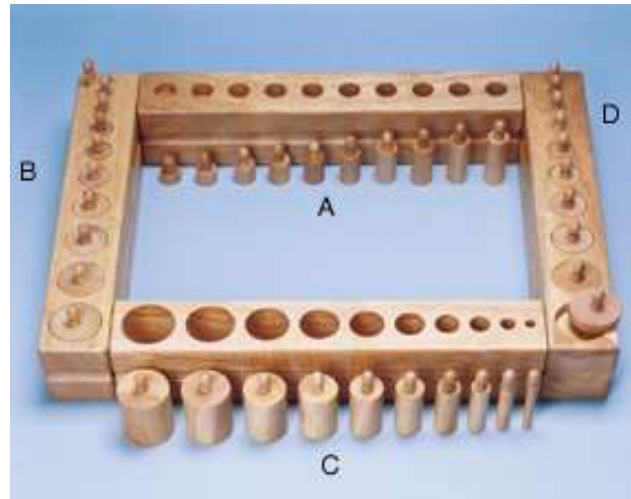
Pink Tower
Broad Stair
Long Rods
Knobbed Cylinders Presentation boxes 1-4
Knobless Cylinders
Colour boxes 1 -3
Colour Grading Game
Colour Match Threads
Geometric Presentation Cabinet with cards
Geometric puzzles
Tessellating shapes
Binominal Cube
Trinominal Cube
Geometric Solids and bases
Sound Cylinders
Thermic Tablets
Baric Tablets
Touch Fabrics and discs
Touch Tablet

Pink Tower

This is a series of ten cubes which vary in 3 dimensions from 1 cubic cm to 1000 cubic cm. The cubes are identical in all other aspects allowing the child to focus on dimension and volume without the distraction of the many colours or sounds you are likely to find in other stacking games. This material is used as a basis for volume, geometry and the decimal system in numeracy.

Knobbed cylinders

These beautiful solid beechwood cylinders come in four sets of ten. The first set varies in height and diameter from small to large. The second vary only in diameter. The third diminish in height and increase in diameter. The fourth varies only in height. They can be worked with together or independently and are a real favourite with the children.



The colour boxes

The first of these teaches the primary colours. The second box containing 11 pairs of colour tablets introduces secondary and tertiary colours. The third box refines the chromatic sense by introducing shades of colour. The children learn to discriminate and grade shades of colour. We are also able to introduce the colour wheel and the concept of a spectrum and colour blending.

Geometric solids

These tactile cobalt blue 3d shapes introduce a concrete example of 3d shapes. There are ten shapes and the children are taught the names of each. We use them to categorise e.g. those with a triangular base, those that roll etc. We also look at faces, vertices and edges. Did you know the ovoid (an egg shape) rolls in a circle to stop it falling out of a nest?



Maths

Of all the Montessori materials the maths are perhaps the most precise and beautiful. Each stage of the mathematical and numerical understanding is taken as a separate step in learning and all are given a concrete form which builds a deep understanding of the abstractions which will follow in later mathematical teachings.

The children have been indirectly prepared for the maths materials by the logical sequencing of many Practical Life activities and by the categorisation, grading and dimensional understanding built in the Sensorial area. The children will often choose to explore number before letter and this is why it is the next area as we travel around the room.

Children are introduced to number as an increasing amount with fixed quantity using the Number Rods. They are then shown the corresponding numerals with the sandpaper numbers. We move on to a fixed numerical sequence in the Spindle Boxes with loose quantities that the children handle and repetitively count so that they experience quantitative increase aurally, physically and visually. Finally they move on to loose numerals and quantities matching the two.

With such beautiful and clear materials the majority of the children who stay with us whilst 3 and 4 years old move on to the concept of place value (digits holding value according to their place in a number) and the four operations of mathematics. They will learn addition, subtraction, multiplication and division using materials which they literally put together, take apart, carry and borrow, allowing them to explore and perceive physically and visually the interplay of number within these operations.

With such definitive understanding of the foundations of mathematics the children's' luminous and extraordinary minds are launched into the wonders of algebra and mathematical abstractions with confidence.

The following page has 3 key pieces of materials.

The list below is the materials always available to which others are added in rotation and as needed.

Number Rods and cards, large and small sets

Sandpaper numerals; 2 sets

Spindle box

Cards and Counters

Short Bead Stair

Golden Beads

Seguin Board A

Seguin Board B

Fraction Skittles

100 Square and numerals

Abacus

Large Dice

Wooden Clock

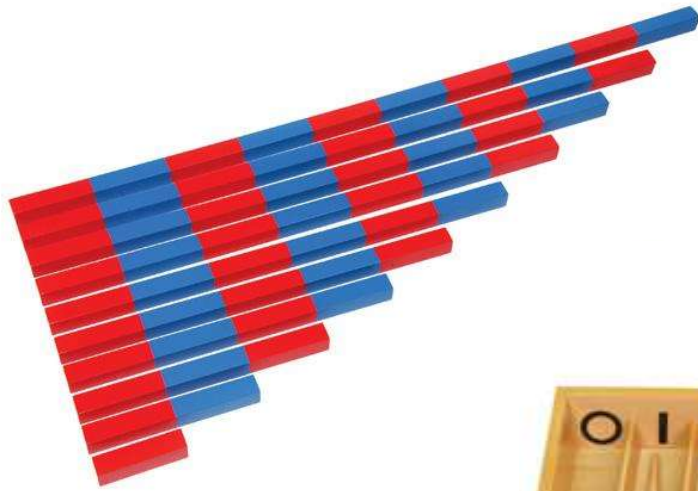
Number tiles

Glass counting Beads

Numerical puzzles

Number Rods

The number rods are ten wooden rods, divided into units by alternating colours of blue and red and progressing in ten equal steps from 10cm to 1 m. They are used to introduce quantity from 1 - 10 and later used to build concepts of addition and subtraction as the rods can be physically put together to make new quantities.



Spindle Box

The solid beechwood Spindle Box provides opportunities to practice counting quantity for 0 - 9 against a fixed number sequence. It creates a visual and physical sense of the increasing amount as well as an aural clue as the spindles are placed in the box. It contains the exact amount of spindles so that children will know when they reach the end whether they have counted accurately.

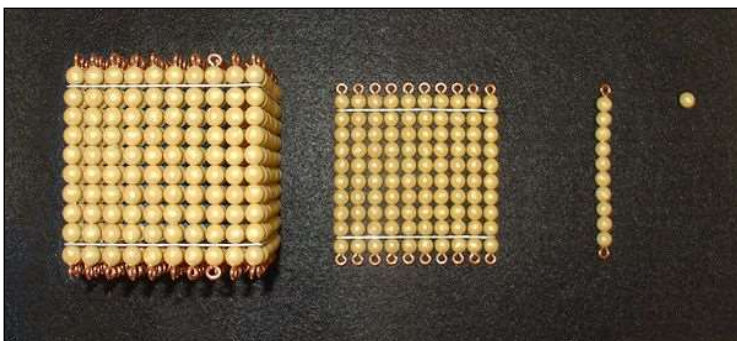
The box is from 0 - 9 in keeping with the decimal system so that place value can be introduced later and the number 10 which often appears to children as a 1 and 0 does not interfere with their quantitative comprehension of number and number sequence in its early development.



Bead materials

The golden beads offer a concrete introduction to the decimal system 1 to 1000. It demonstrates place value and that a decimal category cannot exceed 9. there are so many ways to use this material to develop this essential understanding we cannot list them here. The teen boards and short bead stair further develop place value understanding and begin to introduce the more complex skills of the mathematical operations. Children learn to build and deconstruct numbers as well as to skip count (times tables) and divide into equal parts.

Once begun it is often difficult to persuade a child to leave these materials!



Language

It was the phenomenal development of literacy skills among the children she taught first made Maria Montessori famous.

The materials in this area, like in Sensorial and Maths, are designed to give concrete form to abstract concepts and provide tiny and therefore constantly achievable and rewarding steps, in the potentially limitless development of the skills of literacy. Like the Creative curriculum it is about process, discovery and modes of expression to enrich the child's ability to interact with their world. Like Practical Life it is also about order and sequencing.

The skills practised in Practical Life have developed the hand to be able to control a writing tool. The Sensorial activities have built a sensitivity to shape and pattern in order to prepare the mind to learn letter shapes, word and grammar patterns. So it becomes clear that the journey around the classroom in this unique Montessori pattern is about constantly following a child's natural developmental progression and building each tiny step with such precision and care that the next step sits perfectly and securely on top. In this way the children constantly experience the joy of achievement always being taken just far enough to be thrilled by newness and the adventures of learning but never so fast as to be scared by the vastness of knowledge or experience of mistakes as insurmountable.

Reading skills will have begun long ago while looking and listening to books and learning that the black marks and not the white gaps create the words, learning that spoken sound can correspond to written marks and so many more skills. We move on to individual letters now. Montessori teaching has always used phonetic learning that has only become commonplace in mainstream in the last generation. Children are taught letters in a sequence meaningful for them as individuals and at their own pace. We experience the letters as sensory shapes using sandpaper letters, sand, salt, mud, shaving foam, rice and more. The Moveable Alphabet again allows children to explore the shape of letters and then build them together to explore the shape and construction of words.

Writing skills began long ago building the tiny muscles in the hand with all the manipulation of tools. Now we move on to Insets for Design. The pink stencils create a control to ensure success with the pencil at the outset. The blue insets then practice essential patterns for writing, providing support for the shaping of the marks but less control of error; taking letter formation a tiny step at a time. Colouring in these patterns and creating more complex variations with smaller sections fine tunes control.

There is so much material here we cannot possibly describe it all. The following page has three key pieces and below is a list of other materials always available.

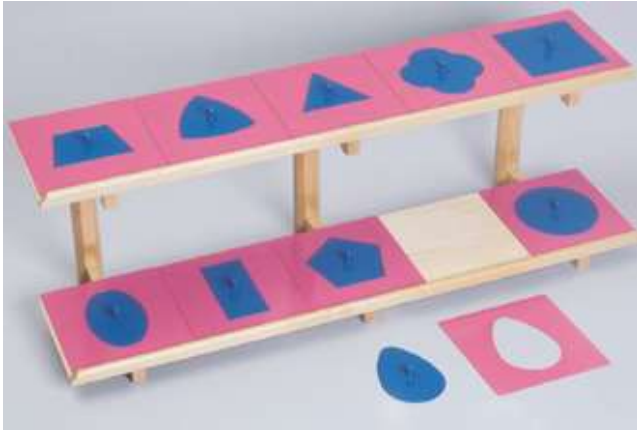
Insets for Design
Sandpaper Letters
Tracing names
Sensorial tray
Large Moveable Alphabet
Small Moveable Alphabet
Initial sound boxes a- z
Initial sound books a - z
Initial sound 3d frieze
Preposition tin

Pink series boxes 1-5
Pink series word lists
Pink series phrases and sentences
Pink series reading books
Blue series boxes 1-4
Green series boxes 1-4
Noun cards
Verb cards
Rhyming boxes
Rhyming pairs boxe:

Missing sound activities
Reading book schemes
Reading books
Literacy puzzles
I spy
Phonetic drawers
Pencils and pens
Paper

Insets for Design

These metal shapes are specifically designed to develop the movements required in the formation of letters and to build the coordinating wrist movements and tripod grip. The control provided by the shapes both the pink outer stencil initially and the blue insets subsequently allow the child to build a lightness of touch and even pressure which enables fluency of writing later. The boundless potential for design and pattern building they provide is strangely addictive and immensely rewarding and the repetition this creates consolidates the skills.



Moveable alphabet

The moveable alphabets allow further exploration of the shapes of the individual letters. This supports the development of the writing skills of the child. It also allows the child to create words to nurture their reading skills. They can sound out the letters and build up a word without the distraction of needing to form it as well. They may then copy out the word and in this way are able to break down the many skills of writing into constituent parts focusing on each element individually and securely building their knowledge. They can also use the letters to match to objects identifying perhaps just the first or last sound. The different colours of vowels and consonants helps develop an awareness of the role of vowels in word construction and creates a visual stimuli to secure this knowledge.

We can move on to alphabetical order and story building and expand endlessly following the creative magic of language.



Pink series

The pink series is a collection of boxes with which the children gradually learn to abstract their reading skills. The first series involves objects which the children name listening for the sounds in the words. The objects are carefully selected to represent one of each vowel as a medial sound, a focus on initial sounds or the final phoneme. The series take each step gradually. We match objects to letters and then to words. Then we match pictures to letters and to words. Finally we look just at words without the support of pictures or objects and whispering them to the child encourage them to do the same back to us identifying individual sounds within each word and its corresponding grapheme (letter) in the written word. Limiting the number of objects / pictures / sounds / words in a box continues the Montessori principle of ensuring success by taking each step at a controlled pace. Feel free to look in the boxes, but please ensure you replace the contents accurately.

Cultural

The Cultural area of the classroom covers biology, botany, geography, history and science. It strives to make explicit and give direct experience and knowledge of the limitless wealth of experiences and impressions children have gleaned from the world around them. We look from the child's perspective. Remember how you walk along the pavement and it is the pattern on the man hole cover or the ant on the kerb that fascinates the children rather than grand structures or distant horizons. In the cultural area we look from the scale a child looks.

In the biology and botany we will look at the individual parts of a flower and the parts of an animal or the names of animal families. We also examine our responsibility towards nature with living plants and animals.

We introduce the world as a sphere, and as you will see in our birthday circles for your child, we show how the world travels around the sun once per year. We look at the world as land and water and air and examine these elements. We look at continents and how these are divided into countries. We also look at flora and fauna and how different continents vary.

We begin the concept of history with time. We look at quantities of time with our sand timers. We look at the passing of time in birthday circles. We look at times in our day and week, both in the past and future. We look into history with the invention of things your children never knew had once not existed.

In science we explore concepts of magnetism, floating and sinking, speed, weather, vehicles and many more following the children's interests and questions.

The following page contains 3 key pieces of materials.

Below is a list of others always available, however this is the area with the most flux as we follow an interest or topic.

Biology/botany

Bird table

Bird box

Gardening

Care for our plants and animals

Animal families

Terminology cards

Life cycles

Habitat activities

Botanical puzzles

Geography

Land, air and water jars

Continent globe

Land and sea globe

Land formation cards

Continent puzzle

Flags of the world

Continent folders

Animals of the world / continents

History

Sand timers

Artefacts

Time lines and charts for children

Special person book

Science

Floating and sinking

Magnetism

Prisms

Magnifying glasses

Seasons cards

Experiments with light

Experiments with energy

Vehicle cards and models

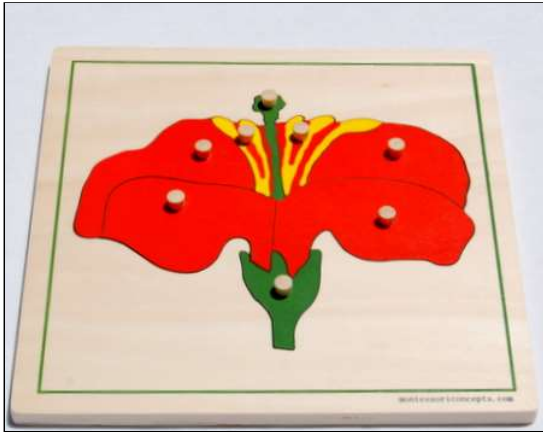
Electronics

Chemical reactions

Books - for all areas

Puzzles

With the botany puzzles we look at and label parts of a flower, leaf and tree; learning about stigma and stamen and their roles etc. We are then able to use the natural world and outdoor space with our magnifying glasses to see this in nature. We also have bird puzzles looking at the different plumage of native birds. There are geographical puzzles of the world, continents and countries.



Continent folders and artefact boxes

Together with the continent maps these folders and boxes show a taste of each continent. We look at different physical landforms including mountains, lakes, rivers, volcanoes and waterfalls. We also look at landmark buildings such as Sydney opera house, the pyramids, houses on stilts and places of worship. We look at cultural differences exploring dress, homes, festivals, traditions and even space. We look at animals from around the world both land dwelling and water dwelling, big and small.



Birthday Celebrations

If you have not yet been to a Montessori birthday circle then you have treat in store. Using a candle to represent the fire of the sun the birthday child carries the globe around the sun once for each year of their age whilst we chant the months. Each time a year is complete we ask the parents and children about the changes in that year. Looking at photographs we see how the child grows and changes with time. Finally we look forward to what might be still in store. We always end with "happy birthday" and the children decorate a cup cake per year of their age with us whose candles they blow out. There is also an invitation to lunch for parents on the day of the birthday circle.

Creative

Maria Montessori considered creation to be the central ambition of a child's development; the creation of the personality and the intelligence of the child. It is therefore both the beginning and the end of the journey of childhood and indeed adulthood.

Within the Montessori ethos the child is seen as a craftsman of themselves and a teacher's role is to provide a beautiful and secure environment to stimulate that creation and to support its germination and flowering by carefully prepared resources and by gentle direction thus providing tools for the children to craft and create their unique selves.

Creativity develops alongside the cognitive and physical stages of the child's development whilst reflecting and inspiring their emotional development. The creative curriculum is therefore about providing materials (paints, pencils, papers, crafts, tools etc) and stimuli (beauty, music, drama, dance, works of art) in union with the other areas of learning. That is why so many of the Montessori apparatus you will find in other areas is so beautiful and tactile. It is also why, for example, the Cultural area focuses on the detail of the beauty of individual flowers rather than broad categorisation.

Montessori teaching recognises that the best way to learn is to see and handle, experiment, make mistakes and discover. It is about the child taking a journey constantly supported by the care and knowledge of adults. This is in contrast to mainstream approaches which focus more on the passing on of information as pre packed knowledge from adult to child. Creativity is about the process of the creation and the trial and error involved not about the end product.

Role Play is also an important aspect of learning at Artisans and an immensely popular area of the classroom for the children. It provides opportunities for children to root specific skills into the context of life experience. It allows them to experiment with their own character development taking on different roles and discovering the responses they get. Role Play also allows children to explore fantasy and learn the difference between reality and truth and importance of both in their world construct.

We have Movement and Music sessions led by teachers with specialist training on Thursdays and Fridays which most children relish the chance to participate in. We incorporate both into the daily routines of Artisans, singing while we sweep the floor, listening to bird songs, using our bodies to respond to or recreate sounds and images around us.

A whole staff inset day on Yoga in Summer term 2011 meant all staff achieved a certificate in Yoga for the Early Years and teachers and children alike delight in regular opportunities to use yoga techniques to ground ourselves in the joy of the present and the calm of inner quiet when the body becomes still and balanced.

There are no standard pieces of Montessori apparatus for the creative curriculum because everything has the potential to be part of the creative process. So this area includes all other areas within it.