



Montessori House
Primary Class Curriculum
First Year

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Creating a Montessori Learning Environment at Home

If you are just joining us and have no material yet, take your child outside for a nature walk now. Let your child guide the process, stopping whenever he or she sees something of interest.

Instead of encouraging your child to keep walking, follow his or her lead and examine whatever it is that has captured your child's attention. Is it a bug or beetle? Observe your child's interesting and interaction with the find. Add your own observations and questions without overriding your child's process of exploration. Can your child take it home to start the Nature Shelf collection?

As you use our lessons, you will read more about the Montessori Method for presenting exercises, preparing classroom material, and suggestions on what to buy and make, and we summarize below the key points.

Things to keep in mind:

1. *Invite your child to join you for this exercise* means literally asking your child if he or she would like to join you in this exercise. Choose a quiet time of the day for quiet activities, and look for energetic periods to introduce active games, play, or physical projects such as table washing. In the classroom for children in this age group, teachers frequently encourage children to initiate a lesson by:
 - a. Waiting until the child asks to be shown a particular piece of equipment.
 - b. Starting a group lesson and making it open for others to join in;
 - c. Allowing children to silently observe a lesson being given to one child.
 - d. Displaying material on shelves in an attractive manner, so children are attracted to it.
2. Physical active play two to three times per day is important. You can include indoor games and activities for one of these periods. Rearrange furniture inside to create a large floor space to encourage indoor movement, too.
3. Make sure to have a daily three-hour work period for classroom work. It is this time period that allows children to sort out their own work, work schedules, and become independent. They can do anything from music and art to math or making snacks. Children putter between tasks in the same way adults do, so it is important not to try to steer them or otherwise interrupt this crucial process.
4. Remember that most of the child's worktime is spent using work you already presented.
5. Present new material only once or twice a week at most. For children who are using all the Primary One material, you will present new material much less frequently.
6. Use the child's worktime to sit and do your own work, so that you avoid the temptation to hover.

7. Do not worry about variety in the curriculum over short periods. Many Montessori schools have adopted daily and weekly curriculum schedules because parents want to see that the school is "doing something". Your goal should be introducing a well-rounded curriculum over a longer period such as one or three months. If your child falls in love with science experiments and art for a month straight, there is no need to start forcing him or her to put aside the paints and magnifying glass and bring out the math equipment just for the sake of keeping a regular schedule.
8. A *three-fingered grasp* (also known as the pincer grip) uses the pointer, index, and thumb. We refer to this grip frequently in the presentations. If you make your presentation using this grasp, but your child naturally gravitates to a two-fingered grip and has no problems, let your child proceed. Continue to use the three-fingered grasp in your presentations, however.
9. Sassoon font is the closest modern font to the one Dr. Montessori specified. There is some confusion about the use of cursive or print because Dr. Montessori used simple, European cursive and print – the transition from print to this style of cursive is easy and intuitive because they are similar. Note that American modern cursive is not correct because it is too different from the text in books that children need to read.

Notes on Methodology

As we start our lessons, you will notice that you are not expected to talk much during the presentations. Indeed, much of the Sensorial presentations are done almost in silence as you focus on demonstrating the handling of the equipment.

The Montessori Method, written by Maria Montessori has some wonderful quotes and discussions that we have shared with you in the text below. It was written in 1912, so the language, translated from the original Italian by Anne E. George, is a bit old, but the flavor of Montessori's original thought comes through beautifully.

From the chapter on *Characteristics of the Individual Lessons: Conciseness, Simplicity, Objectivity*:

"The lessons, then, are individual, and *brevity* must be one of their chief characteristics. Dante gives excellent advice to teachers when he says, "Let thy words be counted." The more carefully we cut away useless words, the more perfect will become the lesson. And in preparing the lessons which she is to give, the teacher must pay special attention to this point, counting and weighing the value of the words which she is to speak."

"Another characteristic quality of the lesson in the "Children's Houses" is its *simplicity*. It must be stripped of all that is not absolute truth. That the teacher must not lose herself in vain words, is included in the first quality of conciseness; this second, then, is closely related to the first: that is, the carefully chosen words must be the most simple it is possible to find, and must refer to the truth."

"The third quality of the lesson is its *objectivity*. The lesson must be presented in such a way that the personality of the teacher shall disappear. There shall remain in evidence only the *object* to which she wishes to call the attention of the child. This brief and simple lesson must be considered by the teacher as an explanation of the object and of the use which the child can make of it."

"In the giving of such lessons the fundamental guide must be the *method of observation*, in which is included and understood the liberty of the child. So the teacher shall *observe* whether the child interests himself in the [Page 109] object, how he is interested in it, for how long, etc., even noticing the expression of his face. And she must take great care not to offend the principles of liberty. For, if she provokes the child to make an unnatural effort, she will no longer know what is the *spontaneous* activity of the child. If, therefore, the lesson rigorously prepared in this brevity, simplicity and truth is not understood by the child, is not accepted by him as an explanation of the object,—the teacher must be warned of two things:—first, not to *insist* by repeating the lesson; and second, *not to make the child feel that he has made a mistake*, or that he is not understood, because in doing so she will cause him to make an effort to understand, and will thus alter the natural state which must be used by her in making her psychological observation. A few examples may serve to illustrate this point."

"Let us suppose, for example, that the teacher wishes to teach to a child the two colours, red and blue. She desires to attract the attention of the child to the object. She says, therefore, "Look at this." Then, in order to teach the colours, she says, showing him the red, "This is *red*," raising her voice a little and pronouncing the word "red" slowly and clearly; then showing him the other colour, "This is *blue*." In order to make sure that the child has understood, she says to him, "Give me the red,"—"Give me the blue." Let us suppose that the child in following this last direction makes a mistake. The teacher does not repeat and does not insist; she smiles, gives the child a friendly caress and takes away the colours."

"Teachers ordinarily are greatly surprised at such simplicity. They often say, "But everybody knows how to do that!" Indeed, this again is a little like the egg of Christopher Columbus, but the truth is that not everyone knows how to do this simple thing (to give a lesson with such simplicity). To *measure* one's own activity, to make it conform to these standards of clearness, brevity and truth, is practically a very difficult matter. Especially is this true of teachers prepared by the old-time methods, who have learned to labour to deluge the child with useless, and often, false words. For example, a teacher who had taught in the public schools often reverted to collectivity. Now in giving a collective lesson much importance is necessarily given to the simple thing which is to be taught, and it is necessary to oblige all the children to follow the teacher's explanation, when perhaps not all of them are disposed to give their attention to the particular lesson in hand. The teacher has perhaps commenced her lesson in this way: "Children, see if you can guess what I have in my hand!" She knows that the children cannot guess, and she therefore attracts their attention by means of a falsehood. Then she probably says, "Children, look out at the sky. Have you ever looked at it before? Have you never noticed it at night when it is all shining with stars? No! Look at my apron. Do you know what colour it is? Doesn't it seem to you the same colour

as the sky? Very well then, look at this colour I have in my hand. It is the same colour as the sky and my apron. It is *blue*. Now look around you a little and see if you can find something in the room which is blue. And do you know what colour cherries are, and the colour of the burning coals in the fireplace, etc., etc."

Now in the mind of the child after he has made the useless effort of trying to guess there revolves a confused mass of ideas – the sky, the apron, the cherries, etc. It will be difficult for him to extract from all this confusion the idea which it was the scope of the lesson to make clear to him; namely, the recognition of the two colours, blue and red. Such a work of selection is almost impossible for the mind of a child who is not yet able to follow a long discourse."

Before you present material to your child, practice by yourself in front of a mirror. Then practice on an older child or another adult. Older children make wonderful practice partners because they tend to be more forthright about providing feedback. Filming yourself is also a wonderful way to see how the presentation flows. Are your actions clear to your child? Is the language introduced at the right time? The presentation process involves much practice and honing. Good luck!

Your Child's Environment

Creating the appropriate home and classroom environments for young children is key to the Montessori approach to education and learning. Whether your home is spacious and well equipped or quite small with rather lean trimmings, you can put together a home environment that follows Montessori guidelines and setup ideas to help your child's key developmental years.

Common living spaces such as the living room, kitchen, dining room, and entertainment area should all have child-sized furniture, equipment, and other necessary items that are appropriate to the space.

Kitchen and food-related areas should have child-sized furniture, material, and manageable foods that allow your child to prepare snacks independently and join you in preparing family meals. Sturdy steps to the kitchen sink and other high places can help immensely.

Living and dining areas should have child-sized furniture as well as floor space for play, recreation, and joining in family activities. Look for low furniture, coffee tables, and bookshelves so your child can have his or her own space amidst grown up items.

When your child displays interest in an object, make sure to demonstrate properly how to handle that object. For example, use two hands to pick up a CD because your child will need to use two hands.

Bathrooms should be easily accessible for your child to use independently. Steps for the sink and toilet are necessary, along with reachable shelves or storage areas for frequently used items. Real child-sized toilets are excellent to install.

Practical Life: Brain & Body Development

Practical Life exercises help children develop the fine and gross motor skills, along with hand-eye coordination, that are integral to brain development.

The goals of this section are the development and enhancement of four basic concepts:

1. Control of Movement
2. Care of the Person
3. Care of the Environment
4. Grace and Courtesy

Note that you sit on your child's dominant side when presenting material where your child sits next to you.

When you are reading our instructions for the presentation, keep in mind that if you know your child's dominant side is different from yours, you will need to reverse all the directions for dominant and non-dominant hand instructions for yourself so that the presentation works for your child. It will be too difficult for your child to reverse actions that you do with your right hand so that he or she can do the same actions with the left side.

Once the environment and equipment are set up, whatever your child does in a reasonable way with the material is not wrong per se, so it is up to you to adjust the environment so that you get the desired action. For example, if your child puts the cleanup sponge in the pouring exercise into the pitcher, it is not wrong; it is just an alternative use of the material. It is up to you to change the environment if you do not want your child to put the sponge in the pitcher. Some teachers remove the sponge from the presentation tray and substitute a small washcloth because children seem less inclined to put the washcloth in the pitcher. This is an example of the type of observation and modification that will help you run your classroom at home smoothly.

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Grace and Courtesy: Beginning Presentations

The concept of developing the whole child is an integral part of the Montessori experience that continues through high school years.

We have an outline of basic exercises below with ongoing discussions and posts on our blog that we encourage you to follow and print for use. As you work with your child, you will discover a myriad of occasions that merit a short presentation so that your child will learn how to work and play with other children as well as adults.

The basic setup for a grace and courtesy presentation is as follows:

At the circle, demonstrate for two or more children, if possible, so that children can role-play.

Introduce the topic and say that you will show them what to do in this situation. For example, with the topic below, "Greeting Other," have a child stand in the room, you go out and enter the room. Use the greetings for the first scenario. Invite the children to practice. If you are working with one child, the two of you can act out the scenario.

It is useful to have either a separate area of the house for classroom behavior or a separate area for active indoor play, depending on your space. If you have a small home with Montessori material spread out on shelves in several rooms, you may wish to have classroom behavior in most of the area, but designate a certain area for active indoor play including jumping and rolling around with play-level voices, which children must have.

#1 Greeting Others

People you know -

- "Hello. It is nice to see you."
- "Good morning. How was your weekend?"

People you are meeting for the first time -

- "Hello. It is nice to meet you. My name is ____."

#2 Opening and Closing a Door

Walk up to the door, get just close enough that your hand can reach the doorknob, grasp the doorknob with your dominant hand, twist the doorknob, and pull the door open. Go through the doorway.

Children sometimes run right up to the door. You can explain that if someone else is coming in from the other side, the door might hit them.

Plant Watering

This exercise is a nice way for your child to work on care of the environment as he or she maintains the plants in the home classroom.

Materials needed:

- Watering can with a long spout
- Child-accessible sink
- Sponge

Store the water pitcher and sponge in the Practical Life section of the room where it is easily accessible on a small table or shelf. Choose a watering can that allows your child to carry it easily and view the water inside clearly.

Test the water pitcher before giving it to your child. Make sure that it does not drip or spill water easily -- a frustrating design will thwart your child's efforts to perform this exercise without spilling water and he or she will give up trying to be neat.

Presentation:

1. Invite your child to join you in watering the plants.
2. Fill the watering can about 1/2 full.
3. Carry the watering can by holding the handle with your dominant hand and putting your non-dominant hand on the can under the spout.
4. Walk to a small plant.*
5. Gently lower the tip of the watering can's spout to the dirt closest to the edge of the plant (keeping it away from the edge of the planter).
6. Raise the can until the water flows.
7. Water until the dirt is wet.
8. Ask your child if he or she would like to try.
9. Put the pitcher on a table.
10. Your child picks up the pitcher using the same hand placement that you used.
11. He or she identifies a plant to water, walks to it, and waters it.
12. Let your child continue to water all the plants in the room, if he or she desires.
13. When more water is needed, your child can fill the watering can at the sink.
14. Your child puts the watering can back on the shelf when finished.
15. If your child spills any water, he or she can use the sponge to wipe it up.

*If you water a large plant, you will need to walk around the plant to water it from two or three sides, so that the dirt gets wet evenly. We do recommend at least one aloe plant that can be used for burns because aloe cannot be stored properly in other formats.

Your child can be in charge of spills in his or her work area and the goal is for you not to tell your child to clean up. He or she should do it independently. Teach by example. When you spill something, say, "I need the big sponge to wipe this up" as you calmly wipe up the spill. Children naturally enjoy tidying, unless someone introduces it as a chore.

Dressing Frame: Snaps



Materials needed:

- Zipper frame
- Child-sized table

Presentation:

Setup - Same as for other frames. Make sure the piece of fabric with the snaps on it is on the right. Say that you will show your child how to snap and unsnap.

Unsnapping:

1. Press the index finger and middle finger of your left hand on the right side of the snap.
2. With your right hand, use the index finger and thumb to grasp the fabric in front of the snap. Pull upwards to unsnap the snap.
3. Pause so that your child can see the fabric apart.
4. Put your right hand down and let go of the fabric.
5. Slide your index fingers and middle fingers of both hands down until they reach the next snap.
6. Repeat until all snaps are unsnapped.
7. Open both flaps and trace the inside of the frame as shown in earlier exercises.

Snapping:

8. Replace the flaps using the same procedure as in earlier exercises.
9. Using the index finger and middle finger of your left hand, press down on the fabric to the left of the snap.
10. Grasp the snap with the index finger and thumb of your right hand. Put your index finger on top of the snap with the thumb underneath (leave room for the snap).
11. Push down with your right hand to close the snap. Listen for the snapping sound.
12. Repeat with the other snaps until all snaps are closed.

Knobbed Cylinders



A.



B.



C.



D.

There are four different Knobbed Cylinders sets, each containing ten cylinders that are sequentially related.

Each of the four blocks contains ten cylinders each with knobs, each fitting into its own hole and differing from the others in dimension.

The purpose of the blocks is to develop your child's visual discrimination of size with the indirect aim of preparing his or her fingers for holding the pencil for writing.

Description of the Blocks:

Block A: Each cylinder has the same diameter or cross-section as every other. They rise successively in height from short to tall. They differ from one another in height only.

Block B: The size of the cross-section gradually increases, but the height of all remains the same. They differ only in degree of fatness or thinness.

Block C: While the cross-section of these cylinders increases, their height decreases. The shortest, therefore has the largest circumference and the tallest, the smallest circumference.

Block D: Each cylinder increases in size of cross-section as it grows in height. The tallest is, therefore, fattest and the shortest is the thinnest.

Materials needed:

- Block B
- Child-sized table or mat for floor work

What to do - the Presentation of Block B:

1. Invite your child to join you in this exercise.
2. Carry the block to the table using two hands.
3. Place the block so that the largest cylinder is on your left and, therefore, nearest your child.
4. Take out the cylinders -- using the three-finger grasp -- from left to right.
5. Put the cylinders down carefully, one side at a time and in random order. Place them between you and the block.
6. When all the cylinders are removed, look carefully for the thinnest one and return it first.
7. Choose any cylinder at random and look at it carefully.
8. Select the hole with the appropriate dimensions.
9. Grasp the cylinder by the knob using the three-fingered grasp and return it to its proper place.
10. Continue carefully examining the cylinders and deliberately replacing them into the correct holes.

Expansion Exercise A: Your child may work with any two blocks. They are to be placed parallel to each other and perpendicular to the child. They are placed far enough apart for cylinders to be placed between them.

Expansion Exercise B: Your child works with any three blocks, placing them in the form of a triangle.

Expansion Exercise C: Your child works with all four of the blocks, placing them in a square formation.

Language: The language aspect of the presentation is taught near the end of your child's work because that is when sufficient experience has been accumulated for the words to have meaning. Using the three-period lesson, introduce the following terms.

Block A: Short - Tall, Shorter-Taller, Shortest-Tallest

Block B: Thin - Thick, Thinner-Thicker, Thinnest-Thickest

Block C: None

Block D: Small - Large, Smaller-Larger, Smallest-Largest

The main point of this exercise is not to match all the cylinders quickly in the correct place. Rather, the importance of this exercise is that your child experiments and builds a wide array of sensory and perceptive skills.

Geometric Cabinet - Introductory Presentation



The Demonstration Tray of the Geometric Cabinet initially contains a square, circle, and triangle. When you take out new shapes (as you will see in the next exercise), you select the shapes you will use from their respective drawers and put them into the Demonstration Tray to make your presentation. After the presentation, put all the shapes back into their original drawers.

Materials needed:

- Demonstration tray (shown above)
- Child-sized table or mat for floor work

The set of three cards includes a fully drawn in figure, a figure with thick lines, and a figure with thin lines.

Presentation:

1. Invite your child to join you for this exercise.
2. Bring the Demonstration Tray to the table.
3. Holding the knob of the square with three-fingers, remove it carefully from the frame. With the first two fingers of your right hand, trace the edges carefully, and place it on the blank square directly on top.
4. Repeat with the above procedure with the circle and triangle.
5. With the first two fingers of your right hand, trace the inside of the frame with a smooth motion, beginning at the lower left-hand corner of the frame. Trace it slowly and deliberately.
6. Return the inset to the frame with your right hand, putting down one corner at a time.
7. Repeat the above procedure with the circle and triangle.
8. Then remove the shapes and place them on the blank squares and say, "Let me take them out so you can do it." "Do you want a turn?"
9. If your child accepts your invitation, be sure he or she traces the edges of the insets as well as the frames.
10. If your child declines, then you do it so that he or she can see the two repetitions.
11. If your child has accepted and done the exercise once, suggest, "Now, this time why don't you take them out yourself."
12. After the exercise is finished, put the Demonstration Tray back in its place, showing your child so that he or she can work with it later independently.

Exercise in matching:

1. Do steps 1 through 4 above, but place the shapes on the table.
2. Mix up the figures on the table.
3. Pick up any figure with your left hand and trace it.
4. Put it back on the table.
5. Look carefully for the frame it fits into.
6. Trace the frame.
7. Place the figure in the frame.

8. Continue until all the figures are in the frame.

Language:

Using the three-period lesson, introduce the names of the shapes in the order that you presented them. Do this after step 20 above. If your child already knows the names of the shapes, skip to the third part of the lesson, asking, "What is the name of this shape?" as you point to the square, circle, and triangle.

Our goal is to present all the drawers in the geometric cabinet before your child turns five. Your child is encouraged to experiment with the shapes, try fitting different shapes into various frames, comparing shapes, touching the shapes, touching the frame outlines, and whatever else interests them. The geometric shapes cabinet will be revisited in the Junior Class (First Grade) as a formal pre-geometry phase, relying on this foundation of knowledge from Primary One.

Your notes

Date of presentation _____ Your child's age _____

Date of mastery of the language of the shapes _____

Observations (e.g., Ease of handling the knobs, ability to quietly place shapes into the frames):

Geometric Cabinet - Regular and Irregular Polygons & Closed Form Shapes

This additional exercise can be introduced when your child is comfortable with the earlier exercises.

Materials needed:

- Geometric Cabinet
- Mat for floor work

For this presentation, you will take the three contrasting shapes from different drawers in the cabinet because there is no single drawer with these shapes.

Presentation:

1. Invite your child to join you for this exercise.
2. Select three other contrasting shapes (for example, rhombus, ellipse and pentagon) and present them the same way you presented the shapes in the Demonstration Tray. Bring this material to the table.
3. When the presentation is complete, if your child's interest is still engaged choose one other figure from any drawer, as long as it is one the child has not used.
4. Place it in the Demonstration Tray with its frame.
5. Remove all the insets from the demonstration tray and place them one by one carefully on the table.
6. Present as you did with the Demonstration Tray, except that your child may join you in putting the figures back into the frame (if he or she does not reach over to help, put them back yourself).
7. Your child returns the figures he or she removes to place in the Demonstration Tray to the trays from which they come. The Demonstration Tray should be put away with the square, circle, and triangle in it.

You can continue to work with all the shapes using the same presentation.

Language:

Using the three-period lesson, introduce the names of the new shapes. Trace the shape as you say the name. Hand it to your child to examine.

This is a rhombus.
This is an ellipse.
This is a pentagon.

Can you find the pentagon?
Can you find the ellipse?
Can you find the rhombus?

What is this? (Point to the rhombus)
What is this? (Point to the ellipse)
What is this? (Point to the pentagon)

When your child is comfortable with all the language, you can present more shapes.

Sound Cylinders



An important part of the Sensorial section is the work we do with sound. Children love to listen to objects as they shake, rattle, and roll, so here is a formal introduction to sound distinction work for those of you who have not worked with the Sound Cylinders yet.

For those of you making your own equipment, it is hard to make material like the wooden originals, so you can try using glass jars that allow your child to see the kinds of materials that make the different noises. Children can use a blindfold to accomplish the sound-only matching of the jars.

Make sure the contents of each bottle in the pair are identical in type and quantity. Ingredients such as sand, rice, and dried beans work well, but make sure you do not use objects that present a choking hazard if your child is very young.

Materials needed:

- Set of Red and Blue Sound Cylinders
- Child-sized table

Note that as you shake the cylinders in the following presentations, it is important to maintain the proper grasp and shaking technique because your child will automatically copy you, so hold the cylinders as they will need to hold them.

Matching Presentation:

1. Before you and your child start working, look at the box so that you can immediately take out the three most contrasting pairs.
2. Place the three red cylinders in the center of the work area.
3. Place the three blue cylinders beside them.
4. Pick up a red cylinder. Place your index finger on top of the cylinder, three fingers on the one side, and your thumb on the other side.
5. Shake the cylinder up and down a couple times as you hold it by your ear.
6. Hold it with the other hand and shake it by your other ear.

7. Isolate this red cylinder on the table.
8. If you have picked up the cylinder with the softest sound, shake it beside your child's ears so that he or she can hear the sound.
9. Repeat the process with the next two cylinders.
10. Shake the original cylinder. If it is a match (verify by shaking again and listening), place them side by side.
11. If it is not a match, place the blue cylinder a little apart from the remaining two.
12. Shake the original red cylinder.
13. Shake another blue one.
14. If it seems to be a match, shake to verify, and place aside.
15. If they are not a match, continue until the three pairs have been paired.
16. Separate the cylinders into color groups and mix them.
17. Invite your child to pair them.
18. If your child's interest is still holding, repeat the presentation as above gradually adding in the next three pairs of cylinders.
19. If not, present the exercise with the additional cylinders another day.
20. You and your child put the cylinders away. If the cylinders are a new, show him or her where the cylinders belong by putting them away yourself.

After your child has successfully matched the cylinders, introduce the terms "loud" and "soft." This exercise provides training of the auditory sense and introduction to tone quality.

When there is a mismatch, extra cylinders will usually remain, unless your child has mismatched two pairs. The double mismatch makes it easier to hear mistakes.

Note that if your child has trouble distinguishing between different sounds, this may be a clue that he or she has an inner ear infection or hearing loss.

Your notes

Date of presentation _____ Your child's age _____

Date of successful pairing _____

Observations (e.g., pairing, period of concentration, language):

Music for Listening

The music for listening should include a wide range of musical genres. Our list below is a typical classroom starting point, but the school is encouraged to add material from Blues, Jazz, and other traditions.

Eine kleine Nachtmusik (A Little Night Music), Mozart

Carnival of the Animals, Saint-Saens

Children's Corner Suite, Debussy

Fantasiestucke, Schumann

Firework Music, Handel

Flight of the Bumble Bee, Rimsky-Korsakov

Grand Canyon Suite, Grofe

Young Person's Guide to the Orchestra, Britten

La Mer, Debussy

Mikrokosmos, Bartok

Night on Bald Mountain, Mussorsky

Peter and the Wolf, Prokofiev,

Peter Grimes, Britten

Petrushka, Stravinsky

Pictures at an Exhibition, Mussorsky

Scenes of Childhood, Schumann

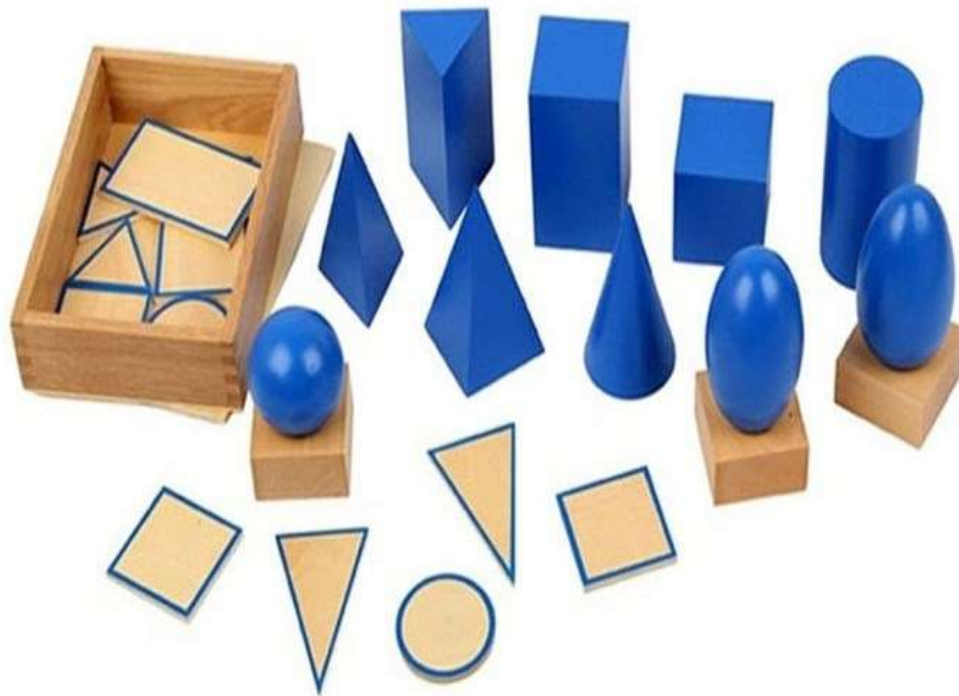
Scheherazade, Rimsky-Korsakov

Symphony No. 6, Pastoral, Beethoven

Symphony No. 101, Clock, Haydn

The Four Seasons, Vivaldi

Geometric Solids



The beginning basket of Geometric Solids includes ten standard shapes: cube, sphere, cone, cylinder, rectangular prism, triangular prism, ovoid, ellipsoid, triangular-based pyramid, and the square-based pyramid.

Some sets include additional shapes such as the hemisphere and different sizes of cylinders. If you have one of these sets, put the extra shapes aside until the end of this exercise, and then introduce the extra shapes.

Materials needed:

- Basket of Geometric Solids
- Set of wooden tablets (bases) which have the same base as the rectilinear solids or the same shape as a vertical cross-section of the curvilinear solids.
- Mat for floor work

Presentation:

1. Invite your child to join you for this exercise.
2. Bring the basket and tablets to the mat.
3. Introduce the figures using the three-period lesson. Use the sphere, cube, and cone for the first lesson.
4. Put the basket aside.
5. Say, "These are geometric solids."

6. Pick up the sphere.
7. Use both hands to slowly explore the shape with your hands. Roll the shape along the mat to see how it rolls.
8. "This is the sphere. Would you like to feel the sphere?"
9. Use both hands to put the sphere in your child's hands.
10. Your child handles it and returns it.
11. You place the shape on the mat to the side.
12. Repeat with the cube and cone.
13. If your child is eager to continue, you can move to the second period of the presentation. Otherwise, let your child work with the shapes independently now.
14. With the sphere, cube, and cone, ask questions for the second period: "Can you find the sphere?" "Can you put the sphere over here?" "Feel the sphere again." Repeat with the cube and cone.
15. When you feel that your child knows the terms, continue to the third period, but only if their interest remains high. Make sure your child knows the names before moving to the final period.
16. For the third period, give your child the most recently handled shape. Ask, "Would you like to feel this and tell me what it is?" Repeat with the cube and cone.
17. If your child's interest remains high and he or she has mastered the vocabulary easily, introduce another three solids today. Otherwise, put everything away and review the presentation in 2-3 days to see if your child is ready for more solids.

Note that the three-period lesson is slightly different in this lesson due to the intensive handling of the solids that is required.

If you only do one period in the first presentation, you start with the first period the next time you make this presentation. Your child may use the solids whenever they wish. We encourage children to move the shapes on the ground to compare the way in which they roll.

Identifying the Forms:

1. When your child knows the names of at least six of the solids, put those six in one of the baskets.
2. Cover the basket with a cloth to hide the solids.
3. Reach your hand in and feel a solid.
4. Name it.
5. Bring it out from under the cloth.
6. Look at it and handle it with both hands.
7. Place it on the table.
8. When your child is ready, let him or her try.
9. When all the solids have been removed and named, say, "Let's put them back in the basket." Cover the basket and invite your child to do the activity independently.

Sandpaper Letters

The Sandpaper Letters provide your child's first introduction to letters and their sounds.

Introduce this presentation after the Rough and Smooth Boards, the Geometric Cabinet, the Sound Boxes, and four of the pre-reading exercises. Your child does not need to have mastered the Geometric Cabinet, of course, but you should have made the introductory presentation because it helps with hand-brain recognition of shape differences.



Sassoon font from Absorbent Minds UK

Materials needed:

- Sandpaper Letter set

Presentation:

- Invite your child to join you to work with the Sandpaper Letters
- Pick a pair of letters
- Sit at a child-sized table with your child
- Trace the "m" as you say the sound. Trace it slowly in the direction in which it is written. Use your first two fingers and trace lightly. Repeat several times.
- "Would you like to trace "m"?"
- Your child traces as you make the sound. Your child might copy the sound, but do not request it.
- Repeat with the "a" next.

The letters you select must differ in shape, sound, and type. Do not present shapes that look or sound similar when using these pairs. Your child will work with them in the context of real words shortly.

If your child has problems pronouncing certain sounds, present those sounds later. Never pester the child to pronounce letters more clearly. Instead, stealthily ascertain which sounds create problems for the child. You must begin myofunctional exercises augmented by a nutritional program immediately because the problem is usually lack of bone and jaw development. Pesticides have been shown to create jaw malformation (the Bitterroot Valley incident), so we do not mean to say that you have not fed your child properly. However, extra nutrition, combined with physical therapy, is needed now to overcome this problem.

By the time a child is two, they should be able to speak clearly and well. Nowadays, many children have cramped jaws and teeth, but do not let professionals tell you that pronunciation problems are normal. The earlier you start myofunctional exercises and nutrient therapy, the better. Your child's pronunciation problems are not related to their brains, unless something extraordinarily rare has occurred. Please feel welcome to contact us.

Common mistakes made by Montessori teachers: Many of you wrote us recently about the presentation order of sandpaper letters because you confused the box numbers on the teacher-training delineation of sounds with the order of sound presentation to the child. You must never do this. The letters from these numbered boxes must be mixed!

There is no set order for presentation, but here is a suggestion (barring any pronunciation problems):

c and r
t and a
b and m
p and i
g and o
h and w
d and y
n and q
f and e
j and k
l and s
v and x
w and z

Reading and Writing - Movable Alphabet



The form of the Movable Alphabet letters is important because children can integrate the sense of touch with the visual presentation as they move the letters to form words.

We introduce the physical creation of the word with the Movable Alphabet letters as the first step in the "writing road to reading" in the Montessori system. As your child works with forming beginning consonant-

vowel-consonant words with the letters, he or she will begin to read naturally.

The photo above shows the Movable Alphabet set with a word card.

Materials needed:

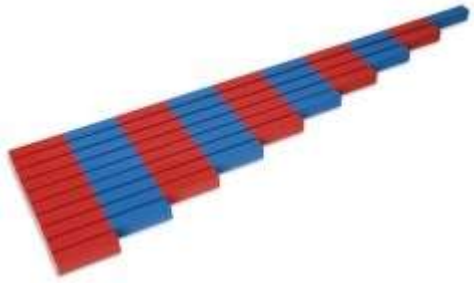
- Movable Alphabet set
- Partitioned box with a lid to display and store the letters (as shown)
- Green mat to provide optimal contrast for the work

Presentation:

1. Invite your child to join you for this exercise.
2. Your child unrolls the mat as you bring the box of letters to the floor.
3. Bring these Sandpaper Letters for review: *m, a, n, c*.
4. Open the lid on the box and take out the letter *m*
5. Place it next to the Sandpaper Letter for the same letter. Tell your child that this *m*, too.
6. Introduce the *a* and *n*.
7. Put the three letters together to form "man". Sound them out as you place them on the mat in order (*m* first, then *a*, and then *n*)
8. Ask your child to sound out the word, if he or she has not yet said that the letters form the word "man". Wait a few seconds. Sound the word out once. Then sound the word out so that it sounds like the word.
9. If your child catches on quickly, say that you can make a new word.
10. Remove the *m* and substitute *c*.
11. If your child is still enthusiastic, introduce the *p* to make "pan". You can also show how "man" becomes "map" and how "map" becomes "cap".
12. Stay with the exercise as long as your child is having a good time. You can introduce the use of a few more letters that make short "a" words. When you are finished, you and your child can share the cleanup. If there is more than one child, the children can put everything away by themselves.

Photo credit: Apple Ridge Montessori School in Maryland.

Number Rods (Red & Blue Rods)



The Number Rods give your child a concrete experience that provides the base for him or her to work with numerals, which are the symbolic representation of numbers.

Materials needed:

- Set of Number Rods
- Two long mats

When you carry the rods, carry them in the same manner as you did the Red Rods. When you arrange the rods on the shelf, they should be aligned with the red parts together as shown above. The idea is to show the odd and even numbers on the other end via the red and blue partitions.

Presentation:

1. Have your child bring a mat and place it in a convenient location.
2. Both of you go to the shelf and carry the rods to the mat. Tell your child that they are to be built like the Red Rods.
3. As you bring the rods put them in the proper order. Always place the red section on the left.
4. When all the rods are properly assembled, pull out of formation rods one through three.
5. Begin a three-period lesson on these first three rods: "This is one." "Let's count it -- one (pat deliberately with four fingers when you count partitions)." "This is two." "Let's count it -- one, two (patting deliberately)." Introduce the three rod in the same way.
6. During the first period, do the numbers in sequence.
7. Begin the second period (it does not have to be in sequence): "Show me two." "Let's count -- one, two." "Show me one." "Let's count -- one."
8. Prolong the second period as long as needed. Remember to count the rods every time!
9. Continue with the third period.
10. End this first presentation after the introduction of the first three rods, if your child has had trouble or is losing interest. Present the rest of the rods if your child's level of interest is still high.
11. You and your child can put the rods away together.

Present the remaining rods in a subsequent lesson after your child has reviewed the first three.

Numerals & Counters



The goal of this exercise is to help children develop the sense of association between numerals and quantities as well as understanding the sequence of the numbers. The concept of *odd vs even numbers* is subtly introduced here through visual representation. There are ten numerals here.

Introduce 1 to 5 first, waiting until your child is comfortable with the concept, sequence, and associated quantity before continuing.

See how the counters are placed in twos? The odd numbers stand out because there is a single counter at the bottom. This helps introduce odd and even numbers for later, so make sure to follow the setup in the photo when making your presentation.

It is important that this material look as shown in the photo.

Materials needed:

- Numeral and Counters set as shown above
- Green floor mat

Presentation:

1. Invite your child to join you.
2. Your child can bring the mat and unroll it.
3. You bring the box to the mat.
4. Line up the numbers 1 to 5 from left to right across the mat. As you put each one down, say what it is.
5. Line up counters under each number. Count them as you do it -- "one, two, three..." Position the counters in rows of two.
6. Put the counters back in the box.
7. Ask your child, "Would you like to put the counters under the numbers?" And let him or her put them out.
8. If your child is working with the material easily, introduce the rest of the numbers. Otherwise, save the rest for another lesson.
9. You and your child can put everything away.

Your notes

Date of initial presentation ____ Your child's age ____

Date your child is able to complete the entire matching sequence _____

Observations
