

# From Braille House to Braille Letter

Playfully gaining experience in the spatial positions of a Braille cell

Gyntha Goertz

Manual





# **From Braille House to Braille Letter**

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*Royal Dutch Visio 2020*

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## Preface

Until recently, there was no material available to introduce an enlarged version of the Braille cell in a playful manner. For this reason, Visio Education Rotterdam has developed the Braille Doll's House with its associated materials. It has been used at the school in Rotterdam for some years now. Because we are so enthusiastic about it, Visio Knowledge, Expertise & Innovation has asked us to share this knowledge.

I was asked to put together a complete box that can be distributed within Cluster 1 Education (visually impaired children or children with multiple disabilities including visual impairments). I have written this manual included with the materials, so that other teachers and ambulatory counsellors can also use it.

The starting point is that young children playfully gain experience in the spatial positions of a Braille cell. We do this by first offering the spatial concepts in the (3D) form of a doll's house that can stand upright on the table, then in the large (2D) form of a flattened, enlarged Braille cell and finally we proceed to an actual Braille cell. Our experience is that young children enjoy playing and working with these materials on a regular basis and therefore enjoy the preparatory steps to learning braille.

The materials in this box are part of the revamped "Braille Curriculum" of Visio Education.

Yours faithfully,

Gyntha Goertz  
Teacher with an expertise in Braille

Thanks to:

Ans Withagen (Editor)  
Marianne van der Vinne (Hokey Cokey song and Editor)  
Marion Brillemans (Editor)  
Ann Conefrey and Thea den Dulk (Translation Hokey Cokey song)  
Hans Hoogendijk (Carpenter)  
Colleagues from Visio Education Rotterdam

## **1. Objectives of the materials**

The materials in this box contribute to the forming of concepts that are necessary for reading and writing Braille. A concept is a mental representation that you get by gaining experience in the world.

With the materials from this box, these terms are first offered spatially (three dimensionally) and then on a flat surface (two-dimensionally).

The materials are intended for young blind persons and visually impaired toddlers so that they can playfully experience and gain insight into the spatial positions of a Braille cell. The materials are also suitable for children with multiple disabilities with a developmental age of 4-6 years. The Braille House and associated materials support an element of early literacy, in particular spatial orientation and thus the concepts of reading that are necessary for learning Braille. The materials can be used to enable visually impaired and blind children who are dependent on Braille to achieve the goals of pre school ( in the Netherlands: group 1 and 2 from the "Leerlijn Schriftelijke taal PO, CED-GROEP" in the field of technical reading, especially the sections "Reading Concepts", "Technical Writing", "Reading and Writing Motivation" and "Spelling".

Not all auditory reading conditions are included, because we assume that Braille students follow the same curriculum as their sighted peers.

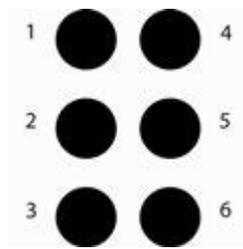
See Annex 3.

## 2. Contents of the Box

- Braille house (doll house)
  - 6 doll house dolls
  - 6 little duvets
- a set of glue pots (doll's baths)
- a set with pin cubes
  - separate pin cubes
  - 1 pin cube with 2 Braille cells
  - 1 pin cube with 3 Braille cells
- 1 folding pin cube
- tray with 25 pins
- sets with Braille cards
- Book with Braille paths
- CD with Braille songs (Hokey cokey song)
- anti-slip mat
- Manual

### 3. General Explanation of Spatial Development and Reading Concepts

To be able to learn Braille, you require knowledge of the spatial positions of the dots of a Braille cell. A Braille cell consists of 6 dots, referred to as follows:



A child who is going to learn Braille must know that point 1 is always on the top left, point 2 underneath and point 3 is on the bottom left. Point 4 is at the top right, point 5 below point 4 and point 6 is in the bottom right. A young child still needs to learn these spatial concepts. They learn these concepts mainly through play, while applying the concepts.

The renewed "Braille Curriculum" (Royal Dutch Visio, 2017) contains a great deal of information on spatial development and motor development as preparation for learning Braille. See in particular the sections "body awareness", "spatial orientation" and "orientation on a flat surface" in the chapter "Preparatory Braille".

Our body awareness allows us to understand what our body is doing. To learn to read Braille, we need to know that we have to move our fingers from left to right. The body pattern forms an important basis for gaining insight into spatial structures. *During the development of the body pattern, a child becomes aware of the fact that the body has "two sides". It consists of a left and a right side, from which we can also distinguish left and right in our surroundings. This is the basis of the feeling of direction. This allows blind children to later distinguish between an "e" and "i" (letters that are each other's mirror image in Braille writing)* (Withagen, 2017).

To learn to read, it is important to have a good basis of the most elementary reading concepts such as left, next, above, below, first, last, at the front, at the back, underneath, behind and in front. As Braille writing consists entirely of various combinations of the 6-dot Braille cell in different spatial positions, concepts such as straight, diagonal, middle, top left, etc. are also essential to master and achieve letter differentiation.

For this reason, it is important to stimulate reading concepts such as left-right and related concepts by allowing the child to act more independently, to manipulate objects and to use of concrete objects. It is necessary to repeat the processes with different materials to achieve a correct understanding. The child's own actions in combination with verbal support from the counsellor help the child understand the reading concepts and help the child express the spatial positions and reading concepts on their own.

The materials in this manual are presented in a constructive order, from three dimensional (the Braille house) to two-dimensional (the doll baths and pin cubes), and they are presented from large (the Braille house) to smaller ones (paint baths and pins)

and then to small ones: namely the small Braille cell that fits under the fingertip (Braille cards, Braille paths in the book).

Our experience at Visio Education Rotterdam teaches us that after working with the Braille house, it is easier for children to make the transition to the 2D enlarged Braille cell in the form of a pin cube and eventually to a Braille letter.

A list with all the terms used for reading is attached at the back of this manual (Annex 1). The list can be filled in after you have presented reading terms by means of the 3D Braille house. But also after offering the other materials in this box, during which the two-dimensional reading concepts are discussed. The ultimate goal is that the child will be able to apply all the terms from the list during the Braille reading process.

## 4. Materials & Lesson Plans

In the following chapters, lesson plans are given for all materials.

### Braille House



*Spatial orientation, three-dimensional*

The Braille house with its 6 rooms is a preparation for the Braille cell with 6 spatial positions.

The Braille House is a sort of doll's house and contributes in a playful way to the actual spatial placement of objects, so the child can experience several reading concepts through play. For a blind child, the term "up" initially means "on top", just as your head is up and your feet are down. Because the Braille house is sturdy and has the size of a young child's torso, it is easy for the young child to orient themselves with both hands relative to the doll's house and its little rooms. In this way, the child can playfully learn the concepts of reading.

The Braille house includes 6 different doll puppets (the puppets are different in size and have different tactile characteristics) and 6 duvets with fabrics of different textures. You can additionally add doll's house furniture like a chair, vacuum cleaner, toilet, pan,

pans, cupboard as well as small cards/letters and boxes/packages (DIY).

Lesson plans:

1. Play with the Braille house as you would with a doll's house and all the dolls' belongings. Encourage the child to discover all 6 rooms.
2. As a coach, passively present concepts such as above, below, besides, on, in front of, behind by always expressing where the puppets lie or where the child puts the puppets. Concepts such as the following and similar ones can also be discussed: "Will we take the next doll? Will this doll go into the same room?"
3. (Passively) offer concepts such as top left, middle left and bottom left by organising the rooms together with the child: "Do you want to put this little doll in the room in the top left?"
4. (Actively) refer to terms such as top left, middle left and bottom left. "In which room is mom/is the chair?" The child names left/top/bottom/centre.
5. (Passively) present the numbers 1 to 6 by placing the beds (duvets) together with the child in all rooms (in order of the dots of a Braille cell). "The top left is called room 1, below in the middle left is room 2 and in the bottom left is room 3. The top right is called room 4, below in the middle right is room 5 and in the bottom right is room 6. First, go through the rooms in order: "Which duvet do we place in room 1?", etc.
6. The same as for assignment 4, but now with the different dolls that go to bed.
7. Same as with assignment 4, but now the dolls are tucked in. The duvets have different textures to promote tactile language.
8. Allow rooms 1 to 6 to be named, in the order of the dots of a Braille cell. "In which room does daddy sleep in?", etc. Child list numbers from the rooms.
9. Mix the order of rooms. For example: all dolls are sleeping. The teacher says: "Dring! The alarm clock in room 3 is jangling! Do you want to get that little doll out of bed?" Continue until almost all beds are empty. "In which room is someone still sleeping?" etc.
10. Play postman. The teacher makes small cards (letters). The miniature cards must be delivered by the child to the right room. Examples of mini-cards:
  - Tickets with and without Braille on them. Only the tickets with Braille on them are delivered by the postman in small rooms (child chooses which room to use).
  - Deliver cards with full Braille cells (cards with 1,2,3,4,5 or 6 Braille cells) in the right room, in other words, the ticket with 1 Braille cell in room 1, etc.

NB: Of course, all assignments can be adapted to the child's experience. Think of castle dwellers, animals, cars, etc.

## Doll's baths



*Orientation on the flat surface (change from Braille house to doll's baths)*

As with spatial orientation, it is important that the child is given a structured orientation on the flat surface. Concepts that are first practised in space (3D) and in relation to one's own body, are subsequently or additionally practised on a flat surface (work surface). As an intermediate step between the wooden Braille house and the pin cubes, 6 (glue) pots can be used as baths for the dolls.

At the Braille house, the child experiences that "top" (3D) is above. When working with the glue pots, the child makes a switch to the flat surface (2D); "top" is no longer high in the air, but at the top of the base plate.

The glue pots form a 2D enlarged Braille cell with the bottom plate. There are now 6 baths for the doll house puppets. Only 1 doll fits in each bath. There is a doll at the top left in the bath. For a he young child, it is a large transition as the top left is on a flat surface (table) and not in the air, as with the Braille house. During play with the glue pots we also use both spatial concepts and the numbers of the Braille cell.

Lesson plans:

1. Orientation on the container with jars (doll's baths). Encourage the child to discover all baths. Let the child feel the short and long sides of the bottom plate with jars. The short side is near the child's stomach.
2. (Passively) offer concepts such as top left, middle left and bottom left by putting the dolls in the baths. "Do you want to put this girl in the bath that is on the top left?" and questions such as "Where is this doll?"
3. (Passively) present the numbers 1 to 6 by placing the dolls in the baths together with the child (in order of the dots of a Braille cell). "The top left is called bathtub 1, below in the middle left is bathtub 2 and in the bottom left is bathtub 3. "The top right is called bathtub 4, below in the middle right is bathtub 5 and in the bottom right is bathtub 6.

4. The glue pots with lids can also be used for memory games, so that spatial memory can be exercised. The child and you place a small object in each pot. Then, place all the lids on the pots and let the child guess. "What is hidden in pot 1? "What is hidden in pot 6?", etc. or "What is hidden in the pot at the top left"? The child can also play game master and hide objects from the teacher.

## Pin cube



*From more concrete to slightly more abstract, smaller and now on completely flat surface.*

After the child has had experience with the Braille house and the dolls' baths (glue pots) the pin cube can be introduced.

The pin cube can be compared to a gnome house with 6 beds. To represent gnomes, we use pins (gnome hats). Gnome 1 always sleeps in the bed at the top left. For the young child, it can be a big transition as the top left is not in the air like with the Braille House and that it is next to the concept "top right". The relationships between concepts top and bottom are also very different (smaller) than with previous materials. As with the Braille house and the glue pots, we use both the spatial concepts and the numbers 1 to 6 of the Braille cell.

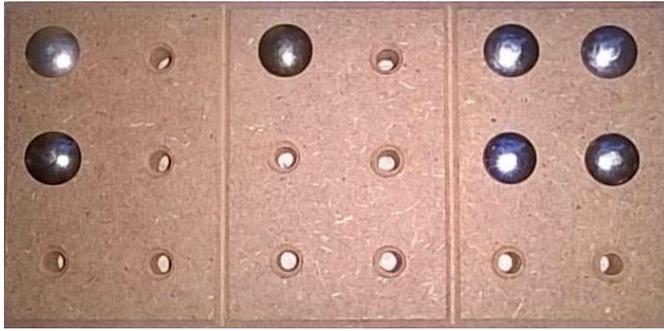
Lesson plans:

1. Orientation on the pin cube (gnome house). Encourage the child to discover all the holes (gnomes' beds). Let the child feel the short and long sides of the cube. The short side is near the child's stomach. The pins are also examined by the child.
2. (Passively) offer concepts such as top left, middle left and bottom left by taking the gnomes to bed. "Do you want to put this little gnome in the bed on the top left?" and "Where does this gnome sleep?" Let the child experience that all beds are now closer together. Let the child indicate the top left bed with his left index finger and the top right bed with his right index finger.
3. (Passively) present the numbers 1 to 6 by placing the gnomes in the pin cube together with the child (in order of the dots of a Braille cell). "The top left is called bed 1, below in the middle left is bed 2 and in the bottom left is bed 3. "The top right is called bed 4, below in the middle right is bed 5 and in the bottom right is bed 6.
4. Mix the order of rooms. For example: all gnomes are sleeping. The teacher says: "Dring! The alarm clock in room 3 is jangling! Do you want to get that gnome out of bed?" Continue until almost all beds are empty. In which bed is someone still sleeping?", etc.

5. Playing with letters: the teacher can place pins in a cube, the child imitates them and the teacher says: "Hey, we made the letter b!" The child does not have to remember the letters yet.
6. Practising linking sounds with signs: the child can create approximately 10 different letters on a pin cube.

NB: Some children have difficulties remembering the positions of the dots, for example, with the letters b and k. It is nice to take another look at the Braille house and let the child experience the positions spatially (the dolls in room 1 and 2 sleep underneath each other just like the letter b). If we place the dolls in room 1 and 3 there is an empty room, just like with the letter k).

## Pin cubes in a row



*From flat surface to successive (reading direction)*

The pin cubes lined up in a row can be used as a "structured strip", allowing Braille students to practice with the reading concepts front and back. This allows them to work on temporal order and to point out the sound/letter position in a word. In this way, children can spatially experience auditory exercises, such as "where do you hear b from bee?", because they can lay their hands on the correct sound position. These pin cube strips can also be used to test Struiksmas's reading conditions in the section "sound positions".

Lesson plans:

1. Give the child the pin cube with 2 Braille cells attached to each other. This can be compared to two Braille houses that are attached to each other. The houses are "next to" each one another. Let the child feel where the second house begins. Let the child place gnomes in the beds of both houses and name the positions.
2. Let the child imitate spatial positions without using letters. The example cube contains 1 or more pins and the child should copy the same position on another pin cube with 2 Braille cells.

Suggestions over time (if the child is ready):

1. After learning a letter, for example the letter l, ask the child to make the l in the correct place in the row of pins. Ask, for example: "Where do you hear b in the word bag?" Have the child make the letter b in the correct Braille cell. Help the child by asking questions: "Make the b in the front, in the middle or at the back of the word?" Practice this with other CVC words such as ball, bar etc. Simple words with a consonant vowel consonant cluster (CVC).
2. The box also contains pin cubes with 2 cells. These can be used side by side in the creation of words with 4 sounds, so that the child can orientate on slightly longer words. For example: Where do you hear the r in print"? At a later stage, these pins are also suitable for making numbers.
3. Make the name of the child with pins on a row of pin cubes. For long names, several pins can be placed one after the other. Practise concepts such as after, before, next by placing the child's hand on a certain letter in the word. Question "Point to the next letter" or "Which letter comes before it"? or "Which letter comes after it"?

For more suggestions, see also the "Braille Curriculum", the chapter "Preparatory and Initial Braille" of Visio.

## Braille cards



*In 2D and in real size*

The small Braille cards are intended as an introduction to Braille cells at true Braille size. There are 2 sets of cards with 1,2,3,4,5 and 6 Braille cells. The cards have a hole that is always on the left so that the child can always keep the cards in the correct position.

Lesson plans:

1. Sort cards: the child pairs Braille cubes that have the same number.
2. Cards in combination with the Braille house. The child plays postman and ensures that mail is delivered in every room. In this way, the child can playfully the express reading concepts and the 6 spatial positions.
3. Cards in combination with the Braille house. The child plays postman and ensures that mail is delivered in every room in accordance with the assignment: Room 1 gets a ticket with 1 Braille cube, room 2 with 2 Braille cubes and so on.

Additional suggestion: make your own tickets with Braille letters and words for the concepts "letter" and "word". Provides exercises such as: "Today, the postman will only deliver cards with a letter on them."

## Book with Braille Paths



*In real size, from left to right, and from top to bottom*

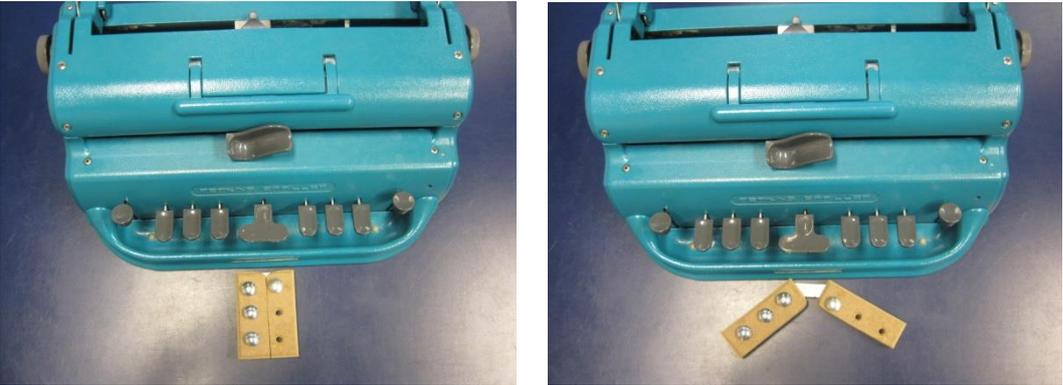
Young children should understand and use the notions: book, page, sentence, line, word, and letter. The child must also experience that the reading direction is from left to right. A lot of independent practice gives the child more insight into these concepts. More and more, the reading direction is maintained from left to right and from top to bottom during work.

The Braille student can use the book "Braille roads" (Braille paths) to experience tangible lines that can be followed and with the actual folding of pages. Working with a book creates a good concept of pages that follow each other in a book. By following the lines on a sheet of paper in a book, the Braille student gets an awareness of lines that follow each other from top to bottom. The Braille paths also immediately teach tactile motor skills, such as following a line with both hands together. The child learns to refine the touch by feeling small differences with the fingertips.

Lesson plans:

- Let the child put the book right in front of him/herself. Let the child orientate relative to the book and the first page. Tell the child that this is a book with Braille paths. Explain to the child that we can practice with this book to properly learn to feel Braille. Explain that we will always use both hands in this book and that we can follow the lines of Braille from left to right.
- Mention concepts such as "the top line", "bottom line", "start left" and so on.
- If the child has followed the rules a couple of times on the first page, encourage the child to follow the Braille edges with as many fingers as possible.
- Assignments in the book are:
  - Page 1 & 2: Where is the pot-hole?
  - Page 3 to 5: Where is the hole? The child can always indicate when it feels like a hole or count the holes per edge.
  - Page 6: Where do you feel the cube?
  - Page 7: Where do you feel the rod?
  - Page 3 to 10: Do you feel a cube or a rod?
  - Page 3 to 12: Where do you feel a letter?
  - Page 13: Which letter do you feel?

**Folding pin cube**



*Underneath each other and side by side*

To switch from the pin cube to the Perkins Braille (Braille typewriter), a fold-out pin cube can be used so the child may experience that the dots 1, 2 and 3 are lined up next to one another on Perkins Braille.

## Braille song: The Hokey Cokey song



*Text and music of the Braille song are by Marianne van der Vinne, AOB Visio.*

The starting point when using the CD is that the child is familiar with the Braille.

The CD shows two songs that can be played while the child has the Braille with paper in front of him/herself. The goal of the songs is to playfully learn to deal with the Braille and playfully practice the spatial positions when writing Braille. Children learn how to use the right finger on the right button. With the Braille song, children learn the concepts left and right as well as finger placement.

In addition, the Braille song trains the child's fine motor skills. Fine motor skills of Braille students often develop less spontaneously and are therefore learned more individually. With the Braille song, many motor skills can be trained, such as building strength and coordination in the fingers and building tempo and flexibility through the rhythm of the song.

Hereby the text of the Hokey Cokey song, so that the coach can sing along.

### The Hokey Cokey song

Song 1: Use one key for each verse.

Hokey cokey little swan, number 1, number 1.  
Hokey cokey little swan, yes that is dot 1.  
Hokey cokey shoo fly shoo, number 2, number 2.  
Hokey cokey shoo fly shoo, yes that is dot 2.  
Hokey cokey, tweedledee, number 3, number 3.  
Hokey cokey, tweedledee, yes that is dot 3.  
Hokey cokey now one more, number 4, number 4.  
Hokey cokey now one more, yes that is dot 4.  
Hokey cokey fingers alive, number 5, number 5.  
Hokey cokey fingers alive, yes that is dot 5.  
Hokey cokey end of tricks, number 6, number 6.

Hokey cokey end of tricks, yes that is dot 6.  
Thumb thumb, space, thumb.  
This is really fun.

Song 2: Use more keys together.

Hokey cokey little swan, number 1, number 1.  
Hokey cokey little swan, yes that is dot 1.  
1 and 2, me and you, we'll walk a path together.  
1 and 2, me and you, a path in sunny weather.  
1 and 2 and 3, tweedledee, come with me, with me.  
1 and 2 and 3, tweedledee, Lilly, Luke and Lee.  
1 and 2 and 3 and 4, coming through, coming through.  
1 and 2 and 3 and 4, coming through the door.  
5 4 3 2 1 tweedledom, here we come, here we come.  
5 4 3 2 1 tweedledom, lets run up to my mum.  
Now altogether, fingers 1 to 6, 1 to 6, 1 to 6.  
Now altogether, fingers 1 to 6, oh, oh, what a mix.

## **Anti-Slip Mat**

The blue anti-slip mat can be used with loose materials, such as under the pin cube, but also under the book of Braille paths or Braille cards. With an anti-slip mat, unwanted rotation of materials (and therefore problems in the rotation of spatial concepts) is prevented.

## **End**

All mentioned materials can also be used when initially learning Braille. Each time a new letter is learned, the Braille house and the pins can be used. In this way, the child can first learn the correct spatial positions of each letter in a larger format.

The materials can also be used to correct students. Think of a student who has difficulty imprinting the dots/positions of a certain letter.

Some children have difficulties remembering the positions of the dots, for example, with the letters b and k. It is nice to take another look at the Braille house and let the child experience the positions spatially, such as. "The dolls in room 1 and 2 sleep underneath each other just like the letter b. If we place the dolls in room 1 and 3 there is an empty room, just like with the letter k."

Even in children with persistent issues (when reading and/or writing f/d, h/j, /e/i, r/w), the child practices the spatial positioning and thus internalise the positions of the dots.

And perhaps the most important thing: the materials intended so the child can have fun when preparing to learn Braille!

On this point, I hope all coaches enjoy working with this box "From Braille House to Braille Letter".

## Annex 1. List with reading concepts

Through practice and training, the child will eventually be able to apply and understand all the reading concepts. In the overview below, you will find all the concepts that are tested while working with all materials.

<b>Reading concepts - complete overview</b>	
above	
below	
front in the front	
back in the back	
middle	
in the middle	
left	
right	
first	
last	
second, third, etc.	
same	
behind, in front	
next	
top left/right	
middle left/right	
bottom left/right	
short	
long	

up/down	
right	
angled	
letter	
word	
line/sentence	
sound	
page	
reading direction (from left to right)	

## **Annex 2. Suggestions for Finger Plays**

- Give the child a finger doll and tell the child on which finger the finger doll would like to sit. For example, on the left index finger, the right middle finger and so on.
- The child puts his or her hands on the table, the teacher taps a finger and the child tells him or her which finger it is.
- Let the child take turns tapping their thumb with each finger and immediately name each finger.
- Say rhymes or sing finger play with the child, stimulating the individual movement of the fingers:

### **Eeny, meeny, miny, moe**

When reciting/singing this verse, the child can tap their thumb to the rhythm of the verse with one hand or with both hands and

*Eeny, meeny, miny, moe  
Catch a tiger by the toe.  
If he hollers,  
let him go,  
Eeny, meeny, miny, moe*

### **The Finger Family Song**

When reciting this nursery rhyme, the child each time holds another finger or moves the right finger.

Daddy finger, daddy finger, where are you?  
Here I am, here I am. How do you do?  
(*thumb*)

Mommy finger, Mommy finger, where are you?  
Here I am, here I am. How do you do?  
(*index finger*)

Brother finger, Brother finger, where are you?  
Here I am, here I am. How do you do?  
(*middle finger*)

Sister finger, Sister finger, where are you?  
Here I am, here I am. How do you do?  
(*ring finger*)

Baby finger, Baby finger, where are you?  
Here I am, here I am. How do you do?  
(*little finger*)

### **Tommy Thumb, where are you?**

When singing this song, the child is each time encouraged to hold up and move a different finger from both hands.

Tommy Thumb,  
Tommy Thumb,  
Where are you?  
*(hold up thumb)*  
Here I am,  
Here I am,  
How do you do?

Peter Pointer,  
Peter Pointer,  
Where are you?  
*(hold up index finger)*  
Here I am,  
Here I am,  
How do you do?

Toby Tall,  
Toby Tall,  
Where are you?  
*(hold up middle finger)*  
Here I am,  
Here I am,  
How do you do?

Ruby Ring,  
Ruby Ring,  
Where are you?  
*(hold up ring finger)*  
Here I am,  
Here I am,  
How do you do?

Baby Small,  
Baby Small,  
Where are you?  
*(hold up little finger)*  
Here I am,  
Here I am,  
How do you do?

## Annex 3 Written language curriculum in combination with specific Braille materials

Listed below in the left column are the CED group's objectives for preschools (in the Netherlands groups 1 and 2 PO and SBO). The column next to it shows which materials from this box can be used by students who are going to learn Braille. These students follow the same objectives as those described in the curriculum.

<b>CED group's objectives for preschools</b>	<b>Materials from this box</b>
<b>4.1. Technical reading</b> Make the first sound of a word, separate from the rest of the word Audibly synthesises words with three phonemes (CVC) Correctly names the number of letters	<b>Pin cube</b>
<b>4.1.1 Temporal organisation</b> Indicates a certain letter position in a word	<b>Row of pin cubes</b>
<b>4.1.3. Visual discrimination = tactile discrimination</b> Recognises a certain letter among (similar or other) letters and in words (minima difference)	<b>Braille cards</b> <b>Book with Braille Paths</b>
<b>4.1.5. Reading concepts</b> Indicates what a book is Uses the concepts "story"/"reading a book" Indicates the reading direction (left to right) Knows the following concepts: front, middle Knows the following concepts: word, sentence, line, and page Knows the following concepts: after, before, next, behind, first, second, sound, letter Knows the meaning of a period Uses the following concepts: word, sentence, line, and page	<b>Book with Braille Paths</b>  <b>Doll's baths</b> <b>Braille house</b> <b>Pin cube</b> <b>Row of pin cubes</b>
<b>4.1.8. Sound-Sign-Connection</b> Knows approximately 10 letters Links the right phoneme to the observed grapheme (with known graphemes) Links each grapheme to the right phoneme (6 of 36 graphemes)	<b>Braille house</b> <b>Doll's baths</b> <b>Pin cube</b>
<b>5.1 Strategic writing</b> Understand that letters form words Writes or copies several letters Writes recognisable sound-sign links in which one or more letter represent an entire word Writes, copies or forms words Writes (a part of) their own name Uses the written language as a means of communication Recognises all letter, except for x, y and q and names all these letters phonetically	<b>Braille house</b> <b>Pin cube</b> <b>Row of pin cubes</b> <b>Folding pin cube</b> <b>CD with Braille Songs</b> <b>Perkins</b>
<b>5.2. Technical writing</b> Recognises sign systems Perform symmetric exercises from the shoulder, elbow, wrist Performs parallel movements in two and three dimensions Stretches, bends and turns the fingers in combination with sideways wrist movements Writes in a relaxed position Maintains a correct sitting and writing posture when writing Writes edges of 1 or more dots Coordinates hand, eye, arm and finger movements Maintains a correct sitting and writing posture when writing Assembles separate letters into words	<b>Pins</b> <b>CD with Braille Songs</b> <b>Anti-Slip Mat</b> <b>Finger Family Nursery Rhymes</b>
<b>5.3 Spelling</b> Links each sound to a letter (b, ea, ou, ie, etc.)	<b>Braille house</b> <b>Pin cube</b>
<b>9.1. Reading and writing motivation</b> Is actively involved with reading and writing in the reading/writing corner/enjoys "reading" and "writing" letters and words Views/experiences language as a means communication/expression, with which you are faced on a daily basis	<b>Braille house</b> <b>Dolls baths</b> <b>Pin cube</b> <b>CD with Braille Songs</b> <b>Braille cards</b> <b>Perkins</b>

**Annex 4 Photos and sizes Braille House**



