

Tactile Reading 2020

Oslo, April 30



Introduction of the MDVI version of Tactual Profile
and a learning path to understand the transition
from 3D to 2D



Introduction of presenters



Ans Withagen



Brenda Zwijnenburg



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Design of presentation

- Introduction of the MDVI version of Tactual Profile
- Short video fragment of Tactual Profile
- Feel Free MDVI
- Learning path for the transition from 3D to 2D
- Some examples of lessons

Tactual Profile MDVI

Reason for development:

Request for an adjusted instrument of Tactual Profile for people with a severe visual and mental disability, to monitor tactual functioning

Projectgroup started to develop this version in 2014

Project group: Behavioral scientist PhD in special education, occupational therapists, teacher MDVI, rehabilitation therapist in early intervention, speech therapist

Expert group: neuro psychologist and other professionals in the field of MDVI and an expert of the the Radboud University Nijmegen

Tactual Profile: starting point MDVI version



Target group

Target group Tactual Profile:

Children, 0-16 years of age, who are born blind or who have no more than some residual vision

Target group Tactual Profile MDVI:

Persons with MDVI, a severe visual and cognitive impairment.

Cognitive development from 0-6 years of age

Differences between Tactual Profile and Tactual Profile MDVI

- Extended interview with a parent, teacher or care taker
- Instruction is less verbal
- Steps are more refined in the items
- Observation in daily environment
- Practical Skills not included in item-set

Tactual Profile MDVI



Domains & Categories

Tactual sensory functioning

Tactual motor functioning

Tactual perceptual functioning



Tactual Sensory Functioning

- Noticing
- Body awareness
- Touch sensitivity
- Proprioception



Tactual Motor Functioning

- Tactual exploration
- Two-handedness



Tactual Perceptual Functioning

- Recognition
- Perception of detail
- Part-whole relationship
- Tactile-spatial relationships
- Figure-ground perception
- Tactual Language
- Touch strategy



Survey with Influential Factors

Client-variables:

- Motor Skills
- Consciousness
- Regulation of sensory stimuli
- Exploration style
- Attention
- Memory
- Executive functions

Stimulus-variables:

- Environmental factors
- Material properties
- Distracting factors



Short filmfragment Tactual Profile MDVI



Feel Free MDVI: materials for 100 activities to stimulate tactual functioning



Categories

Touching and perceiving

Touching and moving

Touching and understanding

Touching and understanding Touch strategy



Activity: Exploring a tactile blanket

Buy or make a tactile blanket. Customise the size of the blanket to the size of the client so there will be enough to explore.

Set-up of the activity

Points for observation and focus

- Make sure that the client uses both hands, if possible.
- Also involve his feet in the exploration, either with socks or barefoot, if the client does not initiate this himself

Category: Touching and perceiving

Noticing: exploring a tactile apron



Category: Touching and understanding

Perception of details: dogtoys



www.tactualprofile.org

[TACTUAL PROFILE](#)
[TACTUAL PROFILE MDVI](#)
[ABBREVIATED VERSION](#)
[FEEL FREE](#)
[FEEL FREE MDVI](#)
[IN TOUCH](#)
[PRICES](#)

[Home > Feel Free MDVI](#)
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Feel Free MDVI

Feel Free MDVI (Multiple Disabilities and Visual Impaired, Tact Toe MB in Dutch) is a source of inspiration to stimulate the sense of touch in clients with a visual and mental disability. Feel Free MDVI has been written by and for Visio professionals. Parents and caregivers of people with MDVI can also use these activities. On the [page Activities](#) you'll find the approximately 100 activities in PDF-format.


About Feel Free MDVI



Feel Free MDVI describes activities to stimulate the sense of touch. Touch is an important compensatory sense for the visually impaired. People with multiple disabilities and visual impaired (MDVI) often gain less tactile experiences.

[Read more about Feel Free MDVI >](#)

Manual



Feel Free MDVI includes materials, ideas and lesson suggestions to stimulate the tactual functioning in practice. Read more about the development level and the layout of Feel Free MDVI.

[Learn how to use Feel Free MDVI >](#)


Activities



Here you'll find all the give or take 100 activities in PDF format. They are divided in the categories "Touching and perceiving", "Touching and moving", and "Touching and understanding". Underneath this there are 12 subcategories.

[Go to all activities >](#)

Presentation

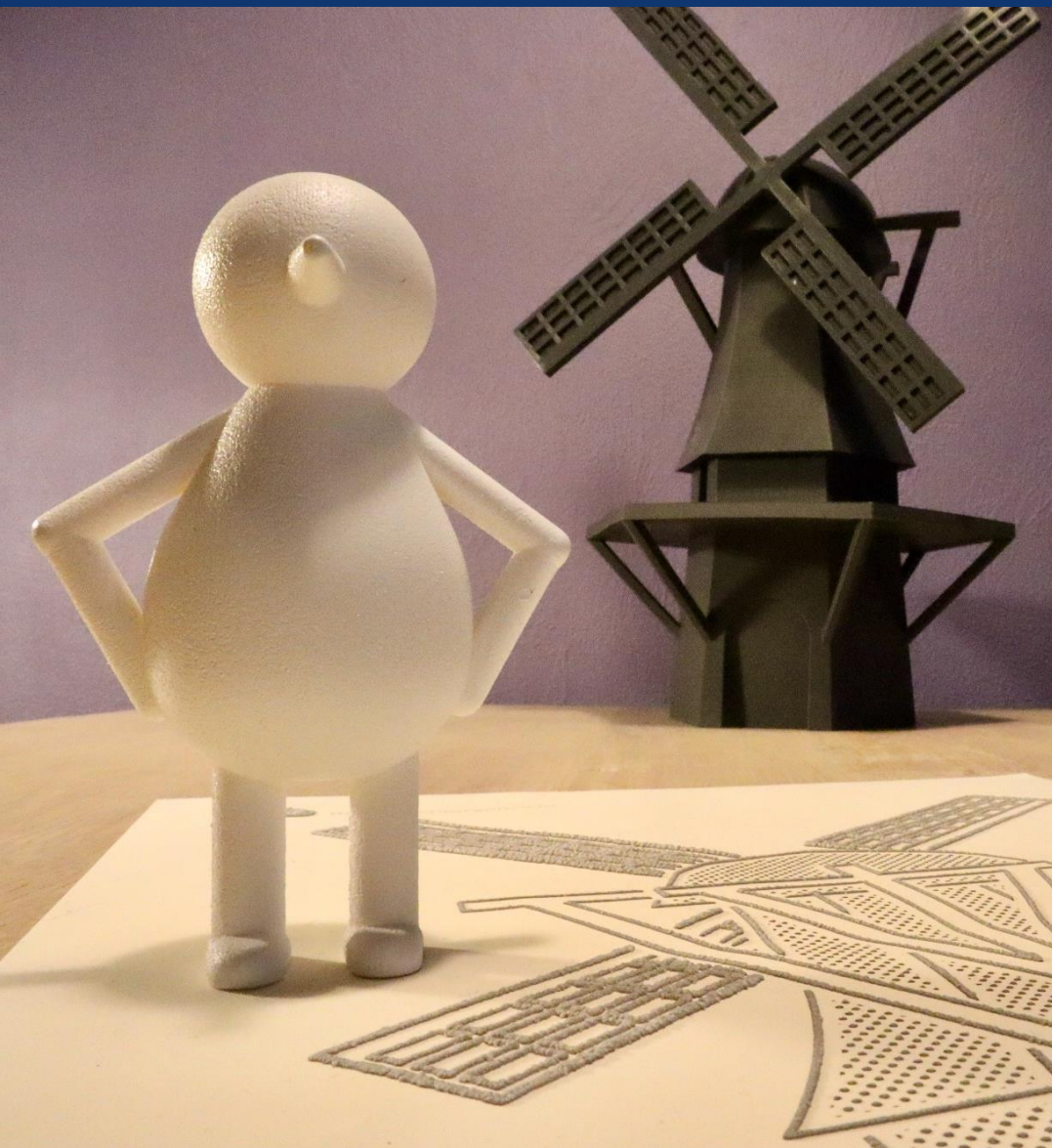


Feel Free MDVI includes materials, ideas and lesson suggestions to stimulate tactual functioning in practice. Try to offer the activity in a quiet one-on-one setting. Also read more about the theme, conditions, and factors of influence.

[Read more about presentation and conditions >](#)

More information:

www.visio/tactile-reading-2021



Learning path

Transition 3D-2D

Project group

Royal Dutch Visio + Bartiméus

Anneke Blok, Royal Visio
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Wendy Voorn, Royal Visio
Ans Withagen, Royal Visio
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Aim of the project

To develop an educational guideline to gain blind children insight in the transformation of a three-dimensional object into a two-dimensional tactile drawing.

With this learning path, the relationship between objects and associated drawings, which can be produced by different viewpoints, is explained step by step. The learning path increases in complexity and difficulty level.

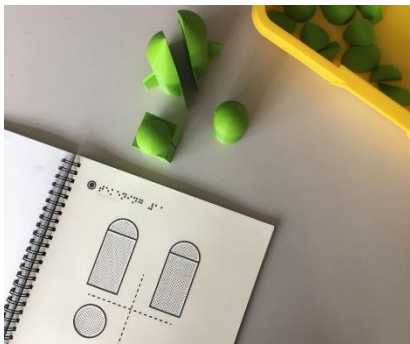
Workshops

We checked the added value for a blind person to gain more insight in the transformation of a 3D model into a tactile drawing.



Statements after the workshop

“We learned a lot today! I never knew about the different viewpoints of an object. Really did not know that you depict this in different ways. It’s an enriching experience. Learning this also gives me a different view of the world and objects in my environment. If I had learned this younger, I would perhaps have asked different questions and would have gained a richer concept of the world.





Starting points

- Participation of pupils in regular schools
- Focus of the learning path: practicing insights in the transition of 3D into 2D. The learning path does **not** focus on concept development
- The learning path is not a fixed pattern: it should be used in line with the insight and understanding of the pupil



Structure in levels (age is indication)

Preparatory phase: age level 4-7

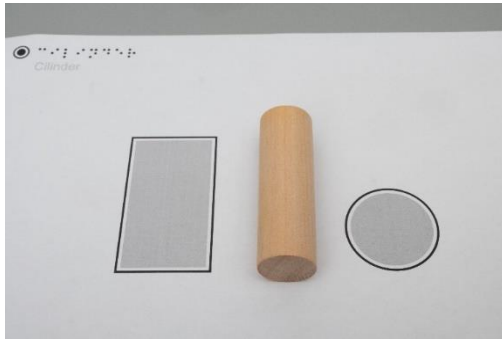
Initial phase: age level 7- 10

Continuous phase: age level 11+

Checklist



Insights A to S



Insight F:
something round
can be depicted straight



Insight H:
human, animal or object,
can have more legs from
another point of view



Insight K: 'occlusion'
overlap in a drawing,
something that is partially
depicted is behind the
object that you fully perceive

Insight Q

Knowing that something closer is depicted larger and that is further away is depicted smaller



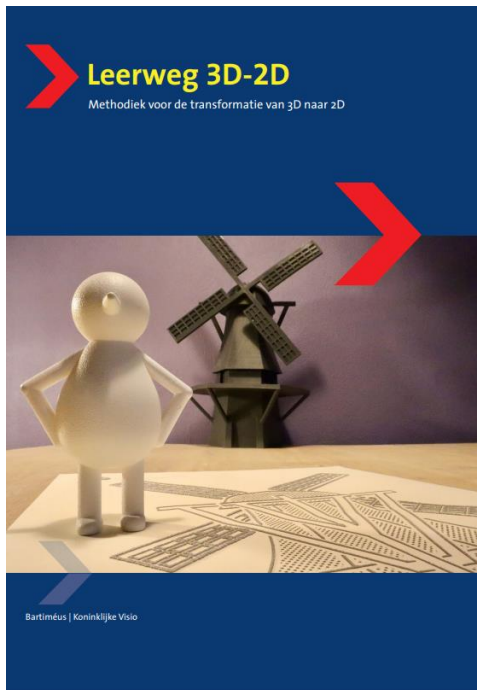
o lip en joep op afstand



19 Lesson descriptions concerning the insights with special materials and drawings

Objecten en stappen	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Vorbereidend																			
Hand	X																		
Knoop, schelp, kam		X	X																
Hamer		X	X	X															
Beker			X	X		X	X			X									
Schoen	X	X	X	X			X												
Appel	X	X								X									
Aanvankelijk																			
Tafel (Transfograph)			X					X											
Willem Wijsneus				X				X											
Bed en kast								X			X								
Bus				X				X				X		X					
Jip & Joep												X					X		
Hond				X				X											
Olifant				X				X					X						
Paraplu				X					X			X			X				X
Voortgezet																			
Ui										X									
Molen					X				X			X	X		X		X		
Brug				X	X							X	X						
Trap				X														X	X
Auto				X										X		X		X	

Instruction manual and written lessons for each phase



Let's open the box





3 phases: 3 boxes

Preparatory phase:

- Emphasis on : Experiencing the transition (3D- through 2.5D- to 2D)
- Objects are familiar
- Drawings are real life size

Objects:

- Apple
- Cup
- Comb. Shell, button
- Hand
- Shoe
- Hammer

Lesson Hammer

Teachers instructions:

Description of concepts and goals, materials, activities, points of observation and attention.

Lessons contain standard curriculaire activities and more challenging ones.

Lesbrief

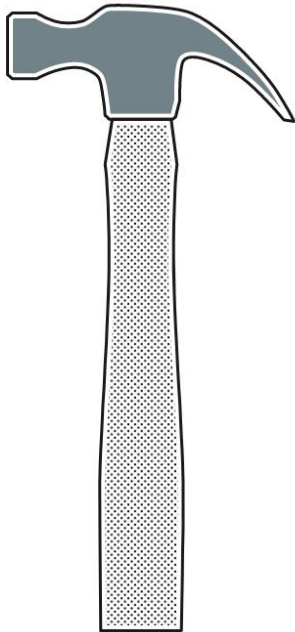
De hamer



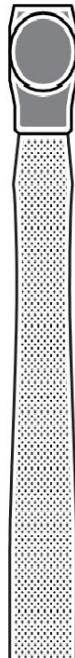
Vorbereidend niveau	
<p>Inzicht(en)/les(doelen)</p> <ul style="list-style-type: none"> ■ Inzicht B: de overgang begrijpen van een 3D-object, via 2½D (bijvoorbeeld in thermoform), naar een 2D-tactiele tekening. ■ Inzicht C: de relatie begrijpen tussen het 3D-object en de 2D-afbeelding ervan, door de overgang van het object naar de tekening te ervaren. ■ Inzicht D: de kennis hebben dat hetzelfde object verschillende aanzichten heeft (tekeningen vanuit verschillende gezichtspunten, bijvoorbeeld object van opzij, van bovenaf, van achter). 	<p>Lesopbouw</p> <p>Begin de les met het samen lezen van het boekje "Lap is weg". Ga daarbij een gesprek aan over de dingen die gebeuren. Vooral het gegeven dat mam een tekening maakt van pop Lap, zodat iedereen weet hoe pop Lap eruitziet, is van belang. Het geeft aan dat we iets uit de werkelijkheid kunnen weergeven op papier.</p> <p>Vertel dat we vandaag met een hamer gaan leren hoe je die in een tekening kunt herkennen.</p> <p>Bied de leerling de hamer aan en vraag: "Wat kun je doen met een hamer?"</p> <p>Laat de hamer ontdekken, bespreek dat de steel van hout is gemaakt en de kop van metaal. Dit voelt anders aan, ook in temperatuur. Benoem:</p> <ul style="list-style-type: none"> - Zijkant: de hamer ligt op de tafel. - Voorkant: hamer rechtop met de ronde kant naar de leerling toe. - Bovenkant: de hamer hangt met de kop aan het tafelblad, zodat deze boven de tafel uitsteekt, waarbij de steel zich beneden het tafelblad bevindt. <p>Neem een bak/doos waarin het kinetisch zand niet wegvloeit, net iets groter dan de hamer. "Je mag de hamer in het toverzand duwen om een afdruk te maken." Als de leerling niet genoeg kracht heeft om een goede afdruk te maken, kun je dit samen doen, zodat er een goede</p>

The Hammer drawings: 3 different points of view

hamer zijaanzicht



hamer vooraanzicht



hamer bovenaanzicht



3 phases: 3 boxes

Initial phase:

- Objects are familiar but scale is introduced
- Mascotte Willem is introduced for different points of view
- More complex concepts are explored

Objects:

- Willem
- Transfograph Bob Marek
- Bed and closet
- Dog and elephant
- Twinbrothers
- Umbrella
- Bus

Willem Wijsneus

Mascot

Literally translated:
William Pointy Nose

Figuratively translated:
William Smartass

The pointing of his nose is used to the concept point of view.



The Bus:

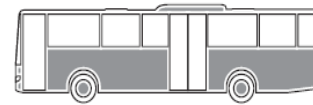
Concepts like:

- A wrong and a right drawing to choose from
- Working with reference points
- Working with a floor plan

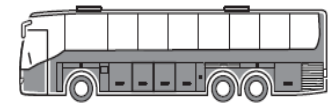
Tekeningenoverzicht

De bus

1 Bus zijaanzicht verkeerd



2 Bus zijaanzicht correct



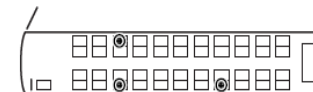
3 Bus bovenaanzicht



4 Bus voor- en achteraanzicht



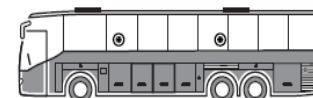
5 Bus doorsnede bovenaanzicht met passagiers



6 Bus doorsnede bovenaanzicht zonder passagiers



7 Bus zijaanzicht passagiers



3 phases: 3 boxes

Continuous phase:

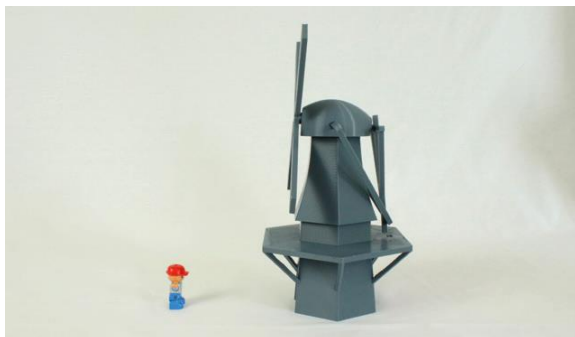
- Objects are more complicated
- More complex concepts are elaborated

Objects:

- Onion
- Bridge
- Windmill
- Car
- Staircase

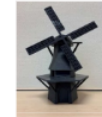
The Windmill

One of the more elaborated and complex lessons.



Tekeningenoverzicht:

De molen



1 Vooraanzicht molen



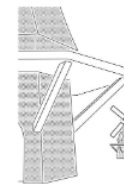
2 Achteraanzicht molen



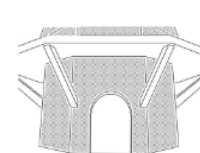
3 Zijaanzicht molen



4 Kleine molen in de verte



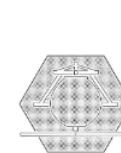
5 Molen voor de deur 1



6 Molen voor de deur 2



7 Bovenaanzicht molen



Special Thanks

Prof. Dr. Boguslaw Marek

Dr. Mathijs Vervloed

More information:

www.visio.org/tactile-reading-2021

