



Visitor's guide

onderwijsmuseum



WELCOME!

Welcome to the Dutch National Museum of Education! In the beautiful historical building “De Holland”, centrally located just a few minutes’ walk from Dordrecht railway station, we would like to give you an introduction to the history of Dutch education.

Here visitors can experience and understand the influence of education on our individual lives. You will be fascinated by both our permanent and regularly changing exhibitions. Take a look at the beautiful work of famous Dutch educational illustrators. See how Dutch youth learnt and still learns to read and write. Meet educational innovators such as Maria Montessori and Friedrich Fröbel.

In the National Museum of Education, with its extensive collection of almost 325,000 objects, you will

experience the unique history of Dutch education. The Netherlands is one of the few countries in Europe to have included freedom of education in its constitution. Any person may establish their own school, financed by the government and based on religious or educational principles. The impact of this can be seen in the museum.

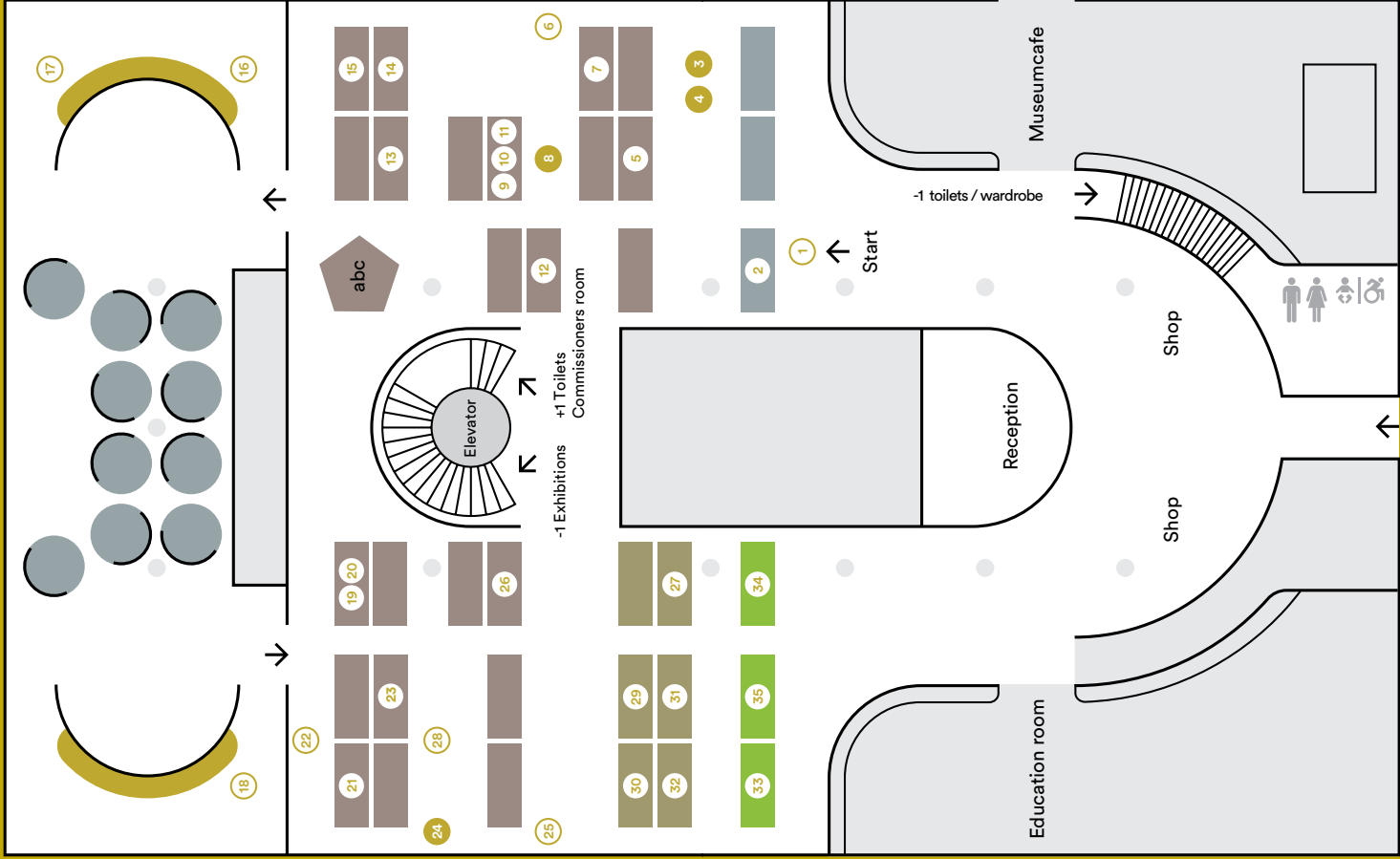
Wander through the exhibitions on your own or take a guided tour (for groups only) for additional information. Enjoy a cup of coffee and cake in our museum café. Afterwards, you may like to stroll into the beautiful, historical city of Dordrecht with its canals and river. Enjoy your visit and we hope to see you again!

Petra Reijnhoudt
director



MAP - ROUTE

- Tables 1 tm 3 - Schoolbuilding
- Tables 4 tm 16 - Reading, writing, calculating
- Collection wall** - **Being a teacher | Being a pupil**
- Back space** - **School furniture**
- Tables 19 tm 28 - Methods, models, subjects
- Tables 29 tm 32 - Educational innovation
- Tables 33 tm 34 - Legislation
- Tables 35 tm 37** - **What will I, can I, be?**
- Find the objects here
- Look up to find the objects





1 THE WORLD'S LARGEST COLLECTION OF EDUCATIONAL TOOLS

The collection of the National Museum of Education is the largest of its kind in the world. It comprises more than 325,000 objects, ranging from text books, wall charts, ink pots, atlases, photos and educational films to diaries and school bags. Together, these objects teach us about education, school life and youth culture. Both students and scholars frequently call on the museum's unique collection.

The majority of these objects are safely stored but over 4,000 objects are on display, for example exercise and course books. The museum also looks at other aspects of school life such as the buildings and their facilities, educational reform, legislation and career choice.

The collection's cornerstone is Article 23 of the Dutch Constitution. Since 1848, freedom of education has been a fundamental right in the Netherlands. According to Article 23, any person may establish a school, provided that a number of rules formulated by the government

are respected and can be checked by the Inspectorate of Education. Freedom of education also means that parents can choose for their children between public schools, education based on religious or ideological principles (special education) and home education. In some countries, registration in a public or state-controlled educational system is compulsory and citizens do not have the right to set up a school themselves.

2 THE SCHOOL BUILDING

Until the beginning of the 19th century, the notion of 'school' had not really existed. The classroom was often a dark, untidy and rather dirty place. There was no group instruction at all. Instead, teachers taught pupils individually and pupils helped one another. Just imagine the noise!

With the arrival of chalk boards and school desks, the classroom was transformed. Order and unity entered the school building which also changed fundamentally. In the 19th century, government construction programmes stimulated frantic school-building activity. From the beginning of the 20th century, villages, towns and cities took pride in their schools. They were seen as symbols



of modernity built for a new age. The new schools were picture perfect, as demonstrated here by old postcards.

Both simple village schools and modern urban colleges feature on these postcards. Let's play 'I spy ...'. Can you find a naval college? Or a Catholic school? Can you see any resemblance to your old school?



3 EDUCATIONAL DRAMA

Colourful wall charts once decorated the classroom. Many a child dozed off in class, dreaming of foreign and unknown worlds. Decorative and exciting as these charts certainly were, they also had clear educational objectives.

Take for example this thrilling image by the well-known illustrator Cornelis Jetses. A graphic whale hunt and a life and death encounter between men and a polar bear. This image was composed in such a way as to attract the attention of the students. Many details vie for attention here - the harpoons, the whalers' ships, the unfamiliar animals, the activity at the

wharves in the background. All of this set in the foreign landscape of the northernmost colony on earth: the small Dutch trading post of Smeerenburg on Amsterdam Island in northwest Svalbard. A combined history, geography and biology lesson presented on one spectacular chart. Educational drama that takes your breath away.



4 WALLCHARTS FOR THE VERY YOUNG

Wall charts were aimed at all age groups. Adri Alindo is well known for her vibrant and clear drawings and her illustrations were considered particularly suitable for toddlers and young children attending preschool. This is one of her wall charts,

published in 1931. Alindo's illustrations show everyday activities and places in children's lives. Every chart tells a story, which only truly comes to life when the teacher expands on it. What is happening here? A young boy and girl are working in the garden. What happens next? It is up to you to tell the rest of the story, or ask someone who knows more.



5 A TRIED AND TESTED METHOD FOR LEARNING TO READ

Reading methods change with the times. Around 1960, Caesarius Mommers, a friar and educationalist from Tilburg, created the reading method on display.

Mommers is often called 'the reading father of the Netherlands' and his method

is still widely used in Dutch schools. Over seven million Dutch school children started their reading life with the words 'tree', 'rose' and 'fish' - later 'tree' was replaced with 'moon' as pedagogical insights progressed. Can you decipher the Dutch words?

To the left, you can see the newest version of Mommers' method, with new words and illustrations reflecting today's multicultural society. Kim and Sim welcome young readers into their world, a world of letters and unlimited reading adventures.



6 EVERY BEGINNING IS DIFFICULT

Around the turn of the 20th

century, fierce competition between publishers often formed the driving force behind the production of new educational materials. In 1910, publishing house J.B. Wolters struck gold. Its improved version of an older reading method was an instant success and 'reading boards' entered Dutch classrooms on a massive scale. The iconic illustrations by Cornelis Jetses, headed by a cheeky little monkey, are now part of the Dutch collective memory.

On their reading boards, children combined letters with pictures. Supplemented by books with simple stories and wall charts, reading became a game. If you turn around and look up, you can see two wall charts using this method – one from 1910 and one from 1930. Can you find Jetses' little monkey? Can you guess which wall chart is older, and why?



7 A READING BOARD FROM THE EAST INDIES

Reading boards were also developed for the Dutch colonies. In 1918, this version was published for the Dutch East Indies - now the independent Republic of Indonesia. It was used in schools for many years but only the colonizers' children learnt to read and write with Jaap, Gijs and Dien.

Illustrator Cornelis Jetses tried to capture colonial life to the best of his ability. He had never been to the East Indies, but instead studied colonial life in the ethnographic institute in Amsterdam. He also viewed many photo albums of families from the East Indies who were visiting their Dutch relatives. The children are wearing clothes

suitable for a tropical climate and a colonial house is depicted in a typical Indonesian garden. Little Dien holds a Wayang (shadow) puppet. Also typical of a colonial upbringing is the "boe" or "baboe" – a local woman who served as a live-in nanny. Many children fondly remember their "boe". Viewed from today's perspective, this teaching tool from the colonial period of the Netherlands represents oppression, exploitation and 'othering': the domineering white man in his colonial clothing, the submissive servant and the privileged children with their toys.

This particular reading board has a special history. It survived the horrors of a Japanese prisoner-of-war camp as part of the belongings of a Dutch school teacher. It was damaged in the camp and you can still see the repairs.



8 PRONOUNCING LETTERS

Here we can see two sausages: one resembling the letter 's', the other the letter 'z'. How do these charts help children to read? The clue is in the frying pan. If a sausage is placed directly into a hot frying pan, it makes the sizzling, hissing sound of 'sssss...'. If a sausage is cut up and then cooked on a lower heat, it frizzles with the softer sound of 'zzzzz...' By referring to familiar scenes, these illustrations helped children to connect the letters of the alphabet to the sounds they represented.

This reading method was created in 1885 by teacher Johannes van Wulfen, who



wanted to stimulate children's imagination. He therefore used images of objects from children's daily lives to visualize the sound of letters. This unique method was used in schools up to the 1920s. Visualizing the sound of letters turned out to be a highly effective way of teaching reading skills. However, due to the enormous commercial success of Wolters' reading boards, this method is now mostly forgotten.

9 PRINSEN'S READING MACHINE

At the start of the 19th century, P.J. Prinsen created this large, standing variation on a printer's type case. It consisted of three parts. On the left, we can see vowels and, interestingly, diphthongs. On the right, we can see consonants. In the middle, letters could be placed to form words. In this way, group instruction was possible.

Prinsen's invention was in many ways revolutionary for



the Netherlands. It was the first instruction method that combined the advantages of learning by sound (rather than by letter form) with those of group instruction. His method also invited children to use their sense of touch to form words. Word forming became an interactive process. It helped children to learn reading more quickly and efficiently. It was a true 'reading machine'!



10 THE HORNBOOK

For a long time, reading started with learning the letters of the alphabet by heart. Tools, such as this hornbook, were used from the 15th century onwards. Hornbooks served as a primer for children and consisted of a sheet containing the letters of the alphabet mounted on wood or leather. This was then protected from dirty fingers by a thin sheet of transparent horn or mica. On the reverse side, the Lord's Prayer could often be found and was endlessly repeated.

Hornbooks were usually worn hanging at a child's waist, as

we learn from paintings of the period. Children used them over and over again and as a result, these little tools wore down easily and ended up in the fire. Hornbooks are now very rare. This example dates back to c. 1680 and is one of the museum's most precious possessions.



11 THE ROOSTER AS A SYMBOL

Once you knew your letters, you could move up to your first book. ABC books appeared from the 16th century onwards, with texts printed alongside the image of a rooster. The rooster is a universal symbol for a new beginning

and also stands for a good work ethos. Every morning, the rooster proudly announces a new day. These images were intended to inspire children to improve their reading.

ABC books mostly contained biblical excerpts such as the Lord's Prayer, songs and psalms, and the Ten Commandments. These books were full of difficult words and religious imagery and were hard for young children to understand.

This particular booklet is from the second half of the 18th century and printed here in Dordrecht. Note the Roman and Gothic letters which children were obliged to learn.



12 THE WALKING HAND

According to a teacher in 1882, good teaching of writing

not only teaches the art of writing, which is so important in everyday life, but also cultivates a sense of regularity, order, cleanliness and beauty. The primary school has achieved its goal when it has taught the pupils clean, clear and solid handwriting. Characteristics of good handwriting are clarity, simplicity, swiftness and beauty.

What was important in teaching writing? Proper writing tools, the way the classroom was set up - the light must come from the left, otherwise the pupil will be writing in his own shadow - and teaching correct writing posture were essential. A good posture of body, arm, hand and fingers prevents mistakes.

The Rotterdam-based publishing company of the Brusse brothers had a long-term best seller on its hands. In 1910 the first edition appeared of the writing method “De loopende hand” (‘the walking hand’ meaning cursive writing). This publication became the economic backbone

of the company for decades. The annual sales of sample booklets, exercise books, side-series, letter cards, wall charts and explanatory notes brought the publisher a lot of money.



13 TEACHING ARITHMETIC

Already in the 19th century, producers of educational tools introduced simple but well thought-out and sometimes beautiful objects for the visual teaching of arithmetic. They taught pupils to count effectively.

Why was and is arithmetic so important? Good arithmetic is important in areas such as

buying and selling, trading, investments, mortgages and not to be forgotten, baking and roasting in the kitchen. Arithmetical errors can lead to sensitive debts and unappetising cakes and biscuits.

The formation of ‘number understanding’ is the most important thing and the awareness of numbers, like everything in education, is based on visualization. The first teaching of arithmetic begins with looking and the teacher used a variety of aids, such as apples, cubes and matches.

In the 19th and 20th centuries, numerous textbooks and objects for the visual teaching of arithmetic appeared on the education market. An example is the “Eerste rekenboek voor de lagere school” (1929) [First arithmetic book for primary school] by Amsterdam primary school teacher Sara Heijmans. It was accompanied by four wooden hands, displaying the numbers 1-20.



14 HOW LINA LEARNS HER TIMES TABLES

Nobody escaped the endless repetition of multiplication tables at school. Out loud and all together. The teacher set the rhythm leading to a sing-song of numbers dancing around the classroom. After a while, children learnt the tables by heart. Do you still know the seven times table?

With the tables we learnt to multiply and also add up, subtract and divide. Practical examples helped: A room is 4 metres wide and 6 metres long. What is the surface area? Five notes of 10 euro make 50 euro. Some methods have been

used for centuries. Arithmetic is timeless, but its education is often determined by the times.

On display is a course book from 1885 called 'How Lina learns her times tables'. Multiplication is explained via simple illustrations of chickens, cherries, soldiers and balls. Which examples would you use?



15 TEACHING FRACTIONS WITH APPLES

Apples are everywhere in the Netherlands: apple sauce as a side dish, apple pie for dessert and apple juice and cider as drinks. Apples are also traditionally used in the classroom, for example, for teaching fractions. This is not a bad idea, as apples taste better

when shared: half an apple for you, or just a quarter?

These beautifully-designed wooden apples were produced in 1920 by a Dutch publishing house specializing in teaching materials. Fractions made visible, without any danger of rotting fruit.



16 "PECHVOGEL" (THE BIRD OF MISFORTUNE)

The term "pechvogel" originates from medieval bird hunting when hunters smeared tree branches with pitch ("pech"). This made the birds stick to the branches so that they could be easily caught. This is the origin of the Dutch expression "pech hebben" [having bad luck]. The "pechvogel" also found its way into education. In overcrowded schools in the 17th and 18th

centuries, teachers would throw a fabric 'bird' (often a small bag filled with sand) at a misbehaving pupil. The naughty boy or girl then had to bring the "pechvogel" back to the teacher. This was followed by punishment.

School should be a safe environment but for a long time, it was not. Punishment was easy and the teacher had plenty of instruments at his disposal. In particular, the ferule, a piece of wood the size of the palm of your hand attached to a handle. This was a popular means of punishing children by giving a smack on the wrist or fingers. Drawings show grim teachers applying this method which, despite a ban in 1820, was used until well into the 19th century. Alternatively, the teacher could use the rod, easily made from birch twigs and good for hitting the buttocks or back.



17 A BLACKBOARD FOR EXPLANATIONS

A blackboard is a school classic. At the start of the 19th century, with the introduction of the classroom education system where a teacher instructs a group of pupils at the same time, it was a major innovation. A so-called 'class' was created with its own infrastructure: a room filled with rows of neatly-arranged benches for the pupils, and the teacher at a desk or lectern in front. Now a teacher could explain the same thing to all the pupils at the same time.

A blackboard came in handy, with or without a pointer. Even better, the blackboard could be cleaned and used time and

time again. Chalk could easily be wiped off with an eraser or a damp sponge at the end of the school day. For many generations, this was a daily task for pupils. Nowadays, no sponge is needed to clear a digiboard. One day, digiboards will also be outdated as technology keeps on changing. It would be wise to reserve a place for them in the museum!



18 REFLECTIONS OF THE TIMES

Like school diaries, school bags reflect the times and the zeitgeist. In the past, they were sturdy, plain and all fairly similar. Now, they are colourful and fashionable, according to a student's individual preferences.

Above, you will see a distinctive example: a canvas bag originally used in the military. This was very popular among boys for its toughness and rough look in the 1950s, 1960s and 1970s, when US army issue was shipped on a massive scale to the Netherlands. To the left, a forerunner of the school bag: a small, beautifully-painted wooden box. It was used in a time when the school bag did not yet exist. Books and exercise materials were kept neatly together at school.

Don't stay in the past, think ahead. What will the future bring for the iconic school bag, now that digital tools are replacing books and paper?



19 UNDERSTANDING NATURE WITH A SPHERE

Nature is complicated. At least, that is what most students conclude after taking physics at school. Fortunately, nature can also be observed and calculated by those with a mathematical brain and the willingness to unravel, explain and understand.

Take the Magdeburg hemispheres, on display at the far right. They are an invention from 1654 which demonstrate the power of atmospheric pressure. When the rims of the hemispheres are sealed with grease and the air is pumped out, the sphere contains a vacuum and cannot be pulled apart by teams of horses. In the

classroom, theory could be put to the test: pull hard, they won't give.



20 CLASSROOM MIRACLE

On display is a distant ancestor of the neon light, the X-ray machine and the television set. Physics teachers liked to show off with this miraculous novelty: the Geissler tube, invented in 1857 by the German physicist and glassblower Heinrich Geissler. It consists of an evacuated glass cylinder with an electrode at each end and contains rarefied gasses. When a high voltage is applied between the electrodes, an electrical current causes the

gas to light up. A difference in gasses, glass or pressure leads to a variation of colours. A mesmerizing display and great fun for the teacher to elaborate on. It is difficult to explain though during your physics test.



21 INTO THE FIELD

Where should you go to learn about plants and animals, and about their mutual relationships? Outside, of course, in the field! Some teachers decided to take their classes outside around 1900. This was often easy as villages and towns were still quite small and nature could be found on the school's doorstep.

Not everything observed outside revealed its true nature at first sight. What plant is this? And

what kind of insect is that? If uncertain, you could take it back to school or home for further study, in a vasculum, a botanist's collecting case or a herbarium, a collection of dried plants.



22 HUMAN SKELETON

Biologically speaking, a human being is just another animal. A skeleton could be a very informative way of exploring the human structure with bones, joints and vertebrae on display in the classroom. Nowadays, these skeletons are made of plastic but in the past, actual human bodies served as instruction material.

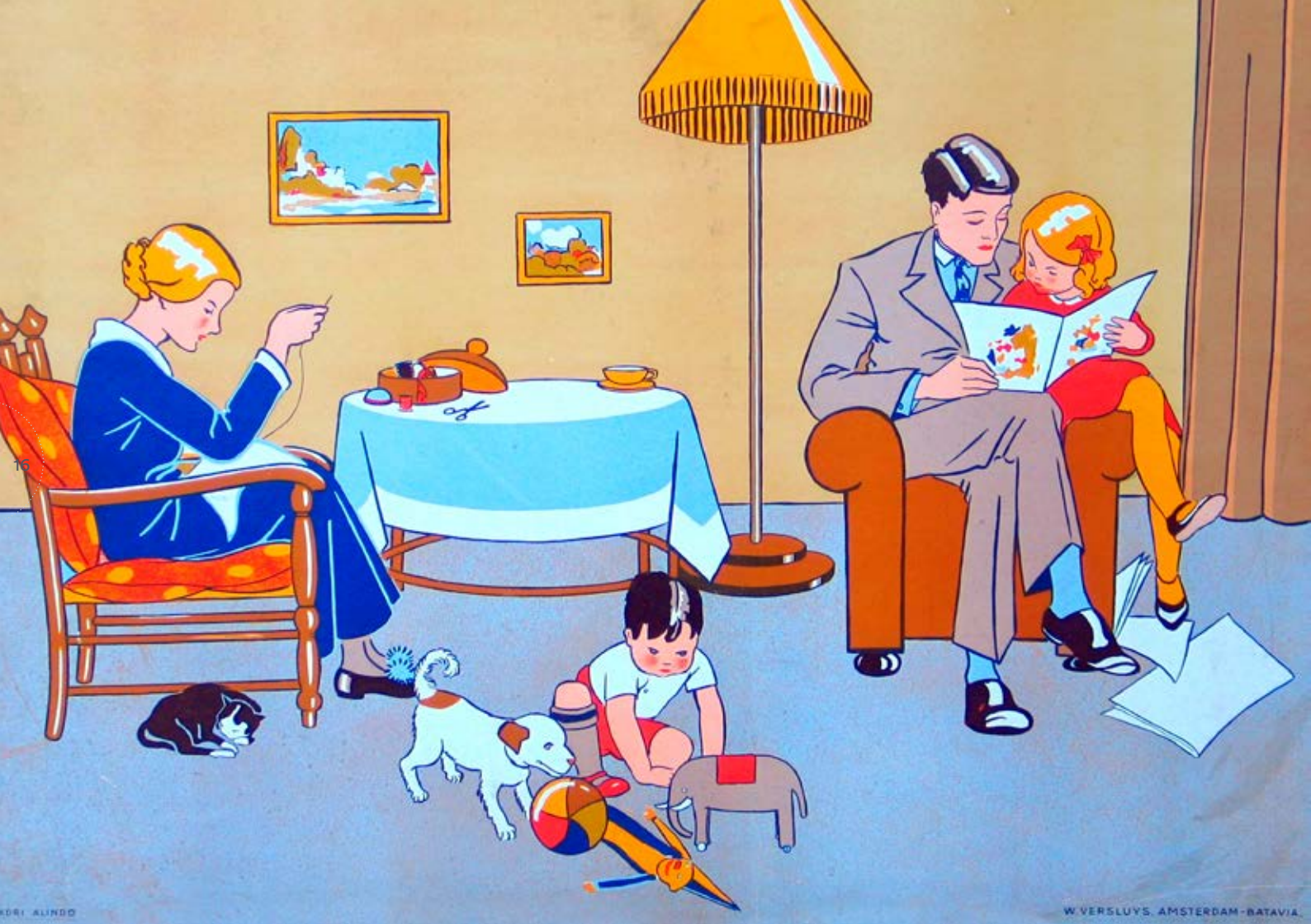
Who they were and where they came from is often unknown.

Many a skeleton came all the way from Africa or Asia. Poor people, who were sold by their relatives in order to survive another day. Our skeleton is that of an older man, his age revealed by his decayed teeth. Note the method used to present the human form - it is literally 'hanging by a thread'.



23 FOR THE ALTAR BOY

Article 23 of the Dutch Constitution concerns the freedom of education. It is not surprising that all kinds of religious movements took their lead from it. In addition to public state schools, which offered a 'neutral' and 'non-religious' education, religious schools offered an exclusively Protestant-Christian or Catholic education, with their own



methods and exercise books. Article 23 still offers scope for new initiatives. For example, Islamic schools are now becoming part of the Dutch school landscape.

On display are school materials from a Catholic school in the first half of the 20th century. Attributes and symbols from the Catholic liturgy, instructive for prospective altar boys. Bible stories really came to life with such beautiful illustrations. Don't forget the crucifix. This is still a vivid memory for some older people: a teacher dressed in the robes of his or her educational congregation, sometimes with a crucifix dangling on a chain.



24 WALL CHARTS FOR BIBLICAL EDUCATION

The Bible held a central position in a Protestant-Christian education. Teachers frequently read its stories out loud to younger children, and explained its parables to the older ones.

Protestant-Christian ethics were everywhere and the phrase 'in word and image' was particularly applicable. There was plenty of opportunity to contextualize the Bible in reading books and school methods, both in terms of its contents and its message. Images supplemented the word or was it the other way round? Biblical wall charts were very popular and beautiful drawings adorned books and

exercise materials. The images all appeared realistic and even stickers and comics were used to explain the Biblical narratives. They made life-long memories for some people. What role did religion play at your school?



25 DOMESTIC SCIENCE

Proper, old-fashioned cooking was taught in domestic science schools. These schools were founded at the end of 19th century to provide a type of vocational education. They prepared women for family life and provided training for servants in larger households.

There's no cooking without a stove. On your way around the museum you may come

across an old-fashioned stove used in one of these schools. A cookbook was also indispensable. On display is the cookbook produced in 1910 by Cornelia Wannée, director of the domestic science school in Amsterdam. A true Dutch classic, reprinted over thirty times. Continually adapting to taste, the times and the latest insights in nutrition, it remained relevant for subsequent generations of budding chefs.



26 USEFUL NEEDLEWORK

Knitting, patching, darning and mending. A good housewife and a respectable maid needed to be highly skilled in crafting techniques. Clothes were usually handmade and often

repaired at home. They had to last.

Since 1878, girls learnt these crafts at school in a compulsory course, appropriately named 'useful crafts'. An experienced, often strict, female teacher unravelled the secrets of needle and thread, fabrics and patches. Some girls were handy, even gifted. Others were less so and dreaded these classes, but they had to try.

Sometimes, crafts became works of art. Crocheting and embroidery resulted in beautiful garments. Later on, macramé and quilting were taught, to adorn a wall, bed or couch. The 'useful crafts' became fully artistic in the 1950s and 1960s. The school subject was renamed to reflect this shift. Girls, and later also boys, now took a course in 'textile arts'.



27 THE MAMMOTH LAW

Cutting, rewriting, deleting and adding. Jo Cals, Minister of Education in the 1960s, conscientiously kept track of all the suggested changes to his highly controversial Education Bill. The bill was passed in 1963 and completely changed the Dutch educational landscape at secondary school level.

The bill was a typical product of the 1960s. Rapid social reform had resulted in a welfare society that promised better opportunities for the lower and middle classes. The old-fashioned educational system, however, still favoured the upper classes. Cals' Education Bill allowed children to move up through the school system,

creating an opportunity for social mobility. Simultaneously, the bill opened up all schools to co-education, i.e. for both sexes together.

Cals' Bill was highly contested and exhaustively discussed as shown here. The final bill is now commonly known as the 'Mammoth Law', after a disdainful remark by MP Anton Roosjen, a strong opponent of the bill, "to send this Mammoth of a Law to the world of yore, in which it belongs." Despite this, in 1968 after five years of preparation, a mammoth charged into every secondary school in the Netherlands, creating the basis of the current Dutch secondary school system.



28 SWIMMING ON DRY LAND

A healthy mind in a healthy body. In ancient times, the idea already circulated that physical exercise is an important part of mental and psychological well-being: courage, determination and purpose would all stem from physical education.

Gymnastic equipment entered schools in the 19th century. In the Netherlands, a land of water, swimming swiftly followed suit. Pools were, however, not always nearby, making actual swimming classes hard to organize or too expensive. 'Dry swimming' was an answer to this problem. Many children learnt swimming movements on

this relatively simple machine, during gymnastics lessons or at the playground. Did children actually learn to swim using this machine and without any water in sight?



29 MONTESSORI EDUCATION

Maria Montessori was by training a medical doctor rather than an educationalist. For her medical research, she worked with mentally-challenged children and the blind, children commonly considered too stupid to be able to learn anything. In Montessori's view, it was rather a case of a lack of suitable materials. She set out to address this lack. Her tools and materials

were such a success that she built an educational movement around them. Many of her ideas fed into other school systems. For example, attention for individual children and their needs and independent learning strategies are now common.

Her learning materials are still used in Montessori schools. They facilitate children's self-discovery, in her own words: 'Help me to do it by myself'. In Montessori schools, teachers demonstrate to pupils how to use these materials. Afterwards, the children work with them, sometimes in groups, often individually. They may reproduce what they have seen but are also encouraged to experiment. Many of these materials were based on the use of the senses: touch, sight and also smell and hearing. On display here are the iconic pink tower, the brown stairs and coloured cylinders (tablets). These materials are used to, among other things, train the eye to distinguish size and colour, to develop control of movements,

and to learn terms such as big and small, and thick and thin.



30 THE WALDORF SCHOOL – 'WHO IS THIS CHILD?'

The German philosopher Rudolf Steiner (1861-1925) founded the first Waldorf school in Stuttgart in 1919. A school for children from all social classes, named the "Freie Waldorfschule". "Frei" (free) because it was a school without government interference. "Waldorfschule" because, at first, the school was mainly for the children of workers at the Waldorf Astoria cigarette factory.

In 1923, the first Waldorf school was founded in The Hague. At present, the Netherlands has 88 Waldorf schools for primary education and 26 for secondary education.

What is the pedagogical

and didactical background of Waldorf education? The Waldorf school focuses on the harmonious development of body, soul and spirit. Head, heart and hands – or thinking, feeling and willing – are equal. It is all about the human being as a whole. Of course, Waldorf schools also teach basic subjects (reading, writing and arithmetic). At the same time, much attention is paid to the artistic element: drawing, singing, drama, music, handicrafts, woodwork and eurhythm (expressive movement).

Characteristic of Waldorf education is experiencing the seasons, celebrating (Christian) holidays and stories about old cultures. Personal attention is important. 'Who is this child?' is the central question for the teacher/educator. The Waldorf school educates creative and social people. This type of education is also about developing one's own path to later life, a unique path in life as an individual.



31 KINDERGARTEN ACCORDING TO FRÖBEL

“Fröbelen” is a verb in Dutch. It means to tinker with, to potter or to play around. Many people will instantly associate it with child’s play but not so many know that it is named after Friedrich Fröbel, a 19th century German pedagogue.

Fröbel observed young children at play, only 3, 4 or 5 years old, and quickly recognized the formative function of their activity. To encourage this ‘natural’ learning process through play, Fröbel designed special toys. These were his ‘play gifts’, starting with soft coloured balls, a wooden sphere, a cube and a cylinder. After a while, came blocks,

puzzles, paper cutting, weaving and braiding. All used to observe, touch, move around and about, explore and lay out.

In this way, children playfully developed their spatial aptitude and focus. Not just simply pottering around, but guided by their teachers to work in a structured and observant way. Fröbel used this method in his new preschool, the so-called “Kindergarten”, which inspired generations to come.



32 AUDIO-VISUAL EDUCATION

The teacher’s voice and the blackboard are no longer the only means of interactive instruction. In the Netherlands,

school radio was broadcast for the first time in 1928. Collective classes for all and received, for example, on a Philips radio speaker or ‘wireless’. An art deco model is on display. These audio classes were sometimes brightened up with images. Each time the little bell rang, the teacher showed a new image on a type of flip chart.

The yellow tubes contain slides with photos and pictures, shown one after the other via a projector while the teacher explained. They were very popular up to the 1970s. GrMoving images also entered the classroom. The curtains were closed, the projector switched on ... now sit back and watch. School television arrived in the 1970s, every week at a specific time. If you were too late, you missed it. Just imagine that in our modern age, now that image and sound are so readily available!



33 ‘IDIOTS’

Less able, challenged, special. These were labels for children who are different. Children who, due to their intellectual ability, upbringing or background, cannot succeed academically. From early on, scientists have researched and tested these children. What was going on, what could be the problem here?

Around 1900, these children were referred to as ‘backward’ and prone to abuse for being too stupid to meet educational norms. It was unfair to call them ‘backward’, they simply couldn’t keep up.

The French psychologist Alfred Binet designed a test to determine how serious their condition was. His test was often decisive for a child's access to any kind of education. Binet's test took a child's IQ as the starting point, resulting in an applicable label. The 'feeble-minded' had an IQ between 70 and 90, 'imbeciles' an IQ between 35 and 55, and 'idiots' an IQ below 20. Yes, those terms were once official categories used in psychology...



34 THE POPPELREUTER TEST

When I grow up, I want to be ...? A zoo keeper, a doctor or a

fire fighter? Which profession will you choose? First of all, what are your strengths, for which profession are you most suited? These questions have always been asked. Scientists have stepped in and designed tests to help determine children's abilities.

One of these was Walther Poppelreuter, a German psychologist. Around 1925, he designed a test which was used well into the 1950s. The child was shown a box containing cogs and strings cleverly linked together. The child was asked to view and absorb the assembled whole. The object was then taken apart and the elements placed randomly in the box. The child then had to reassemble the original structure, while being observed. Was it going smoothly or slowly? Was the child in control or nervous? The test was supposed to shed light on the child's analytical abilities and technical capabilities.



35 THE CITO EXAM

How do you put a child on the right path to learning after finishing primary school? Should exams decide a child's final achievement level when it comes to language, mathematics and world orientation? Or should a primary school's advice, based on a pupil's performance over a longer period, serve as a benchmark?

You can practice for exams but children may be nervous or overexcited when exam day arrives. What does an exam, a single snapshot, say about a child? On the other hand, is

school advice not intrinsically biased, influenced as it may be by prejudices based on class, gender or stereotypes?

Testing in primary schools was first proposed by psychologist Adriaan de Groot in the early 1960s. During a study trip to the United States, he was excited by the potential objectivity of testing. A central examination organization was created that now produces exams for national use. As part of the Dutch freedom of education, other agencies have also developed their own means of exams. Discussion on the merits of testing has not, however, subsided.



IN CONCLUSION

The National Museum of Education is the treasure trove of Dutch education. Each object on display tells a story from the long and rich history of schooling. Upbringing and education reflect the culture of a nation and people are shaped by the schooling they receive.

A prominent characteristic of the Dutch school system is the freedom of education. Article 23 of the Dutch Constitution guarantees the right of every child to a good, sound education. It also offers parents the possibility of choosing a type of school for their child that suits their own philosophy of life.

Tools such as school wall charts, text books and educational models help to visualize a school subject such as arithmetic. The objects on display tell the story of education but why is education so important? Since the first education laws at the beginning of the 19th century and the introduction of compulsory education in 1901, generations of teachers have worked with heart and soul toward the development of children and young people.

A society that provides a good education for every citizen is richer, more social and more democratic than a society that doesn't. This is why education is so important.

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