

## Learning to Write in Practice Children discovering writing

- Learning to write, cultivating handwriting
- Didactic methodological guidelines
- Comparison of beginner's scripts in Germany
- No workbooks
- Practical tips for the classroom
- Materials



Information,  
exercises and  
aids for all aspects  
of learning  
to write

**NEW**



## Foreword

In this brochure, students, tutors and teachers will find easily understandable information, proven suggestions and aids for teaching children to write in schools.

The history of writing goes back to 3500 BC and begins in Egypt, where, in the predynastic tomb U-j at Abydos, what are suspected to be humanity's first hieroglyphs were discovered. People began preserving information by writing it down. These techniques have changed over the years and the appearance of writing has been continuously refined throughout millennia, but one thing connects this old cultural technique with the demands of the present day: information is still being transmitted in writing.

“Learning to Write in Practice” is intended to help you to reinforce the cultural technique of writing in a primary school setting and to increase children's awareness of the importance of learning to write by providing in-depth specialist knowledge and a number of practical tips. Handwriting gives all human beings their own unmistakable personality.

The theoretical section of this brochure will provide you with an overview of the prerequisites and factors that play a role in the process of learning to write. Moreover, we will analyse Germany's different conventional school scripts for you.

In the practical section, you will find exercises that are intended to develop fine motor skills, as well as methods for teaching children to write. We will also show you how to download a diverse range of teaching aids for free at [www.pelikan-lehrerinfo.de](http://www.pelikan-lehrerinfo.de), such as the simplified beginner's script.

The grifix® learn-to-write system will accompany you through all of the stages of learning to write. You will also find a number of exercises and tips in this brochure about using wax pens, pencils, pens and fountain pens optimally to help children learn to write. At the end of the learning-to-write process, you can reward your pupils with the Pelikan Fountain Pen Licence®.

**Have we made you curious? Then come with us on an exciting journey towards a common goal that has been fascinating humans for thousands of years.**

Second edition, revised and expanded.  
2017.



**Dr Maiko Kahler**  
Primary and secondary school teacher  
Leibniz University Hanover

First edition 2008.

**Maiko Kahler**, primary and secondary school teacher  
**Michaela Klein**, special education teacher and educational therapist  
**Ursula Klein**, expert seminar instructor in German  
**Irmhild Kleinert**, expert seminar instructor in German  
**Achim Rix**, expert in graphomotor skills

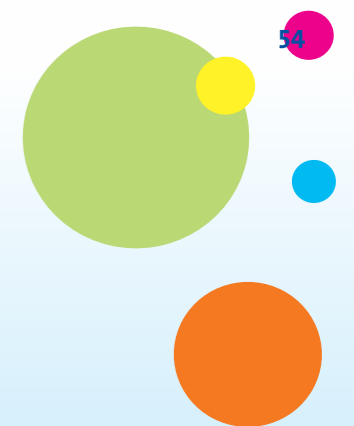
Please send any suggestions or questions you may have about this brochure to: [lehrerinfo@pelikan.de](mailto:lehrerinfo@pelikan.de)

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Pelikan Vertriebsgesellschaft mbH & Co.KG  
Werftstraße 9 · 30163 Hanover, Germany  
P O box 11 07 55 · 30102 Hanover  
Telephone +49 511 6969-118  
Fax +49 511 6969-988  
email: [lehrerinfo@pelikan.de](mailto:lehrerinfo@pelikan.de)  
<http://www.pelikan-lehrerinfo.de>

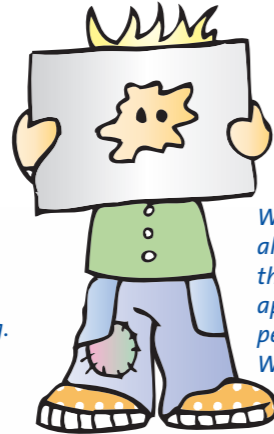




## Problems in handwriting lessons

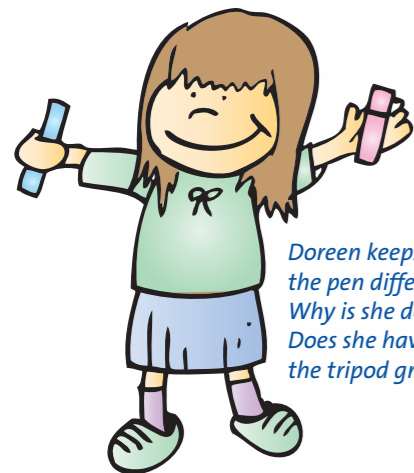


Malte does not sit still on his chair when he is supposed to be writing. How can I help him learn to write?

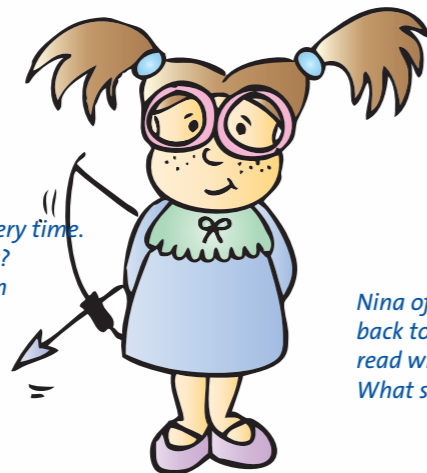


When he writes, Hannes always bores holes into the paper, because he applies too much pressure to the pen. Why is he doing that?

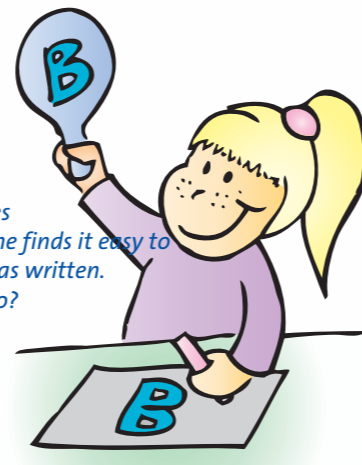
Kai is scrunching up the texts he wrote and refuses to keep writing. What does he need to ensure that he writes successfully?



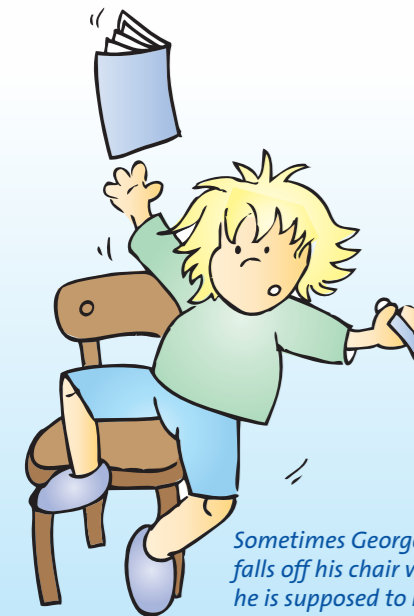
Doreen keeps holding the pen differently every time. Why is she doing that? Does she have to learn the tripod grasp too?



Nina often writes back to front. She finds it easy to read what she has written. What should I do?



Tina writes well, but always 3 mm above the line. Does she need glasses?



Sometimes George falls off his chair when he is supposed to be writing. Why does he do that? Is there any way to help him?



Florian's handwriting is square, angular and illegible. Not even he can read what he has written very well. Are there pens that would make it easier for him to write?

**There is a lot for teachers to think about when they are working on primary school learning-to-write lessons.**

There are a lot of questions and a lot of problems to be solved, and there are not always answers at hand. Learning to Write in Practice provides you with some information and aids.

## 1. Aspects of learning to write

### 1.1 Changing standards

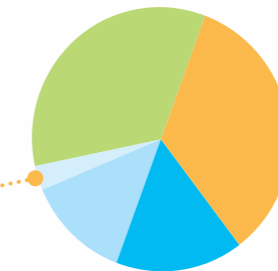
According to the specifications in the KMK educational standards for writing (KMK = Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany), written language acquisition is about interacting with language creatively. Pupils learn about different aesthetic forms of presentation, depending on the reason for writing. As a mandatory skill, children in Germany are required to write a legible, fluid piece of handwriting at the end of year 4.

Writing is used in meaningful contexts from the very beginning. Children learn to write because they want to write something down. They write down their own texts based on an initial sound chart. Constructing their own words independently provides them with fundamental insights into the way that writing is structured.

The different aspects of German lessons are being re-evaluated, which is also reflected in the marking scheme for German. The following marking scheme is recommended:

#### Marking scheme for German

- 1/3 Reading/interacting with media
- 1/3 Speaking/listening
- 1/3 Writing, of which 50% consists of text composition
  - 40 % Spelling and orthography
  - 10 % Handwriting



The exact structure of the marking scheme for German can vary, as it is determined by the respective subject committee (Fachkonferenz).

**Although handwriting comprises a small part of the overall mark for German, bad handwriting can have a negative effect on a student's achievement. Children with bad handwriting have to make a greater effort to learn how to spell and punctuate and to write their own texts – a bad writer becomes a bad student.**

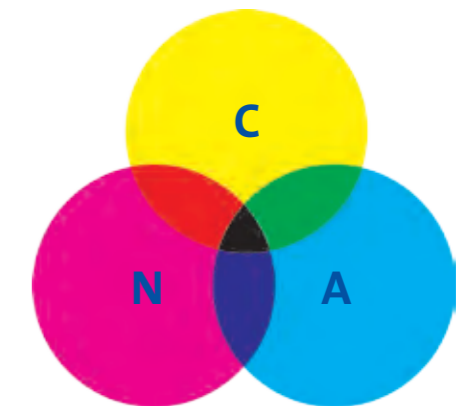
### 1.2 Functions of writing

There have been three constitutive functions involved in writing since it was invented by humans:

- **the communicative function** (what is the intention of my writing, who am I writing to, for which purpose?),
- **the normative function** (what I write can only be read and understood if I conform to certain standards), and
- **the aesthetic function** (writing can be appealing or repellent).

Every time one of these functions is either neglected or over-emphasised, it endangers the writing result (as a special form of language use). There is a diverse range of relationships between these functions.

**Communicative function**  
(recording, conveying, securing)



**Normative function**  
(consensus about the shape of each letter, spelling and orthography, writing technique)

**Aesthetic function**  
(shape and spatial distribution as a unique design)

Of course, it is not always possible to equally emphasise all three functions during the learning-to-write process. However, none of them should be neglected or put off until later – i.e. writing and lettering should be learned and practised in communicative contexts from the very beginning.

Almost every child starting school has a lot of motivation to learn to write.

This is why one particularly important goal for school and lessons is to retain and strengthen this motivation to learn to write and for writing – and, in some cases, to inspire this motivation to begin with and then develop it.

Most children can already write (a little) before they start school – usually in print. Their enthusiasm for writing is expressed for a range of different reasons in short letters, notices, notes and messages. This is mainly an expression of a communicative need. Encouraging this on the one hand and integrating it into the school learning-to-write process on the other is the great (educational and didactic) art of teaching children how to write.

If the process of learning to write at school begins with printing, it creates a didactically ideal “market” for both class-based (see page 7, starting with print) writing activities and activities that are not class related.

**Class-based writing activities** are based on the teaching materials you select. Subsequent exercises must be customised to fit each child individually. Functional **writing-activities that are not class related** are a result of the lesson:

- notices about timetable changes, ...
- homework, ...
- writing memos, ...
- creative writing: Monday story ...

**The skills children are expected to learn are**

- writing in clear, easily legible print,
- keeping notebooks and folders in a way that is appropriate for the issue and the subject
- developing automatic, easily legible handwriting
- writing texts purposefully and clearly

**1.3 Writing as a communicative act**



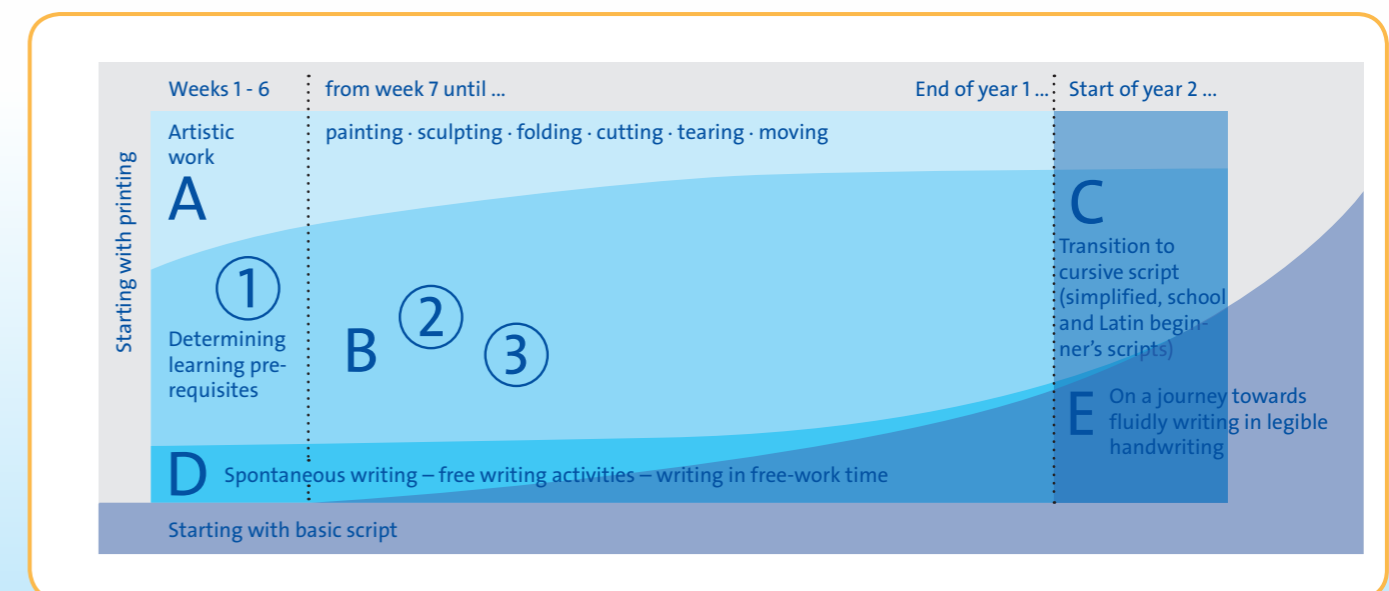
Year 1 Print as the first handwriting script



Year 2 Cursive Latin beginner's script

**1.4 Overview of the learning-to-write process**

- A Artistic work**  
Exercises for fine motor skills (see 5) and graphomotor skills (see 6.1) introduce and supplement the learning-to-write process, but then become increasingly infrequent.
- B Introduction to printing**  
Class-based writing activities continuously increase
  - 1 Basic elements of letters (see 6.1 – graphomotor exercises)
  - 2 Letters (see 6.2 – introducing a letter)
  - 3 Words and sentences (see 6.2. – copying as a work technique)
- C Introducing cursive script**  
Class-based writing activity, see 6.3 – increasing transition to cursive script
- D Free writing activities**  
continuously increase from the start
- E Fluid writing**  
the journey towards legible handwriting



## 2. Analysis of different school handwriting scripts in Germany

In line with its directives for educational standards for primary education, the KMK has defined printing as the first style of handwriting that children learn. Building upon this, pupils then learn a cursive script, enabling them to master the skill of writing in easily legible, fluid handwriting by the end of year 4 (see 2.2).

### 2.1 Printing

In beginners' lessons, printing is the script for both reading and writing. Unlike cursive scripts, there is no generally valid or standardised print script. There are two official versions in Germany: Bavarian print and Hamburg print. They are not mandatory in either of these federal states, but are recommended as guides.

Workbook scripts usually set out the shapes of letters for students learning to write. These letters are characterised by their simple shapes without serifs (small vertical lines

at the ends). Special forms are chosen for letters that are easily confused. In printing, only a few movement patterns need to be learned. Upper-case letters consist of lines, circles and semi-circles. Arcades, garlands and the S-shape are required in addition to this to write lower-case letters. In 1975, Wolfgang Menzel presented a special "Latin beginner's print script" for children learning to read and write. It was intended to make it easier for children to develop their own personal handwriting style and to prevent them from having to relearn a script.

Writing educators have long been wondering whether it makes any sense for children to learn two beginner's scripts in primary school: first printing and then either Latin beginner's script, school beginner's script or simplified beginner's script. Many school scripts lead to unsatisfactory results.

In adult handwriting, it is apparent that adults usually interrupt their writing after the third letter of a word.

The muscles in the hand look for "pauses" to relax (see terminology, 2.3). The script must provide children with these pauses. In printing, they can pause after every letter, which helps them to learn the movements.

So, there are good reasons for printing both in beginners' lessons and outside of beginners' lessons too.

• Printing is used in adult life (forms, record books) and is easy to use and maintain in all primary school subjects.

• Children with fine motor problems should not have to learn a second school script, but be allowed to keep printing instead. The shapes of the letters are simpler, clearer and more concise. This facilitates perception and helps children to learn the movements, which makes it possible for these children to learn to write in legible handwriting as well.

*Print: Bavaria*

*Print: Hamburg:*

abcdefghijkl	abcdefghijkl
mnopqrstuv	mnopqrstuv
wxyz	wxyz
ABCDEFGH	ABCDEFGH
IJKLMNOP	IJKLMNOP
QRSTUVW	QRSTUVW
XYZ	XYZ
1234567890	1234567890

Druckschrift: Bayern 1234567890  
 Druckschrift: Hamburg 1234567890



## 2.2 Cursive scripts

In Germany, there are **three different cursive scripts**: **simplified beginner's script**, **Latin beginner's script** and **school beginner's script**. Each of the federal states have different provisions for selecting one of these scripts in their framework plans. In some federal states, one script is mandatory (M), in others, schools can choose from a number of scripts (E).

In order to make it easier for children to transition from print to a cursive script, one essential criterion when choosing a cursive script should be how similar it is to

print script. For this reason, we recommend the **basic script**, which does not require a change in script. Often, both teachers and parents allow themselves to be guided by their own experiences and aesthetic factors when choosing a script, instead of asking which script is functional and easier to learn.

### 2.2.1 Latin beginner's script

Federal states	BW	BY	BE	BB	HB	HH	HE	MV	NI	NW	RP	SL	SN	ST	SH	TH
Simplified beginner's script	W	W	-	W	W	-	W	W	W	W	W	-	-	P	P	-
Latin beginner's script	W	-	-	-	W	-	W	-	W	W	W	-	-	-	-	-
School beginner's script	-	W	P	W	W	W	-	W	-	W	-	P	P	-	-	-
Basic script	-	-	-	-	W	W	W	-	-	-	-	-	-	-	-	-

Cf. <https://de.wikipedia.org/wiki/Ausgangsschrift>, accessed: 5 January 2017.

Please note: Only print script is mandatory in Thuringia; the choice of the beginner's cursive script to be learned comes down to the teacher's judgement.

Analysing the four scripts can be helpful when it comes to the question of which cursive script is suitable.

**Latin beginner's script** was conceptualised by the Iserlohn Writing Circle in **1953** and replaced standardised German script. It is characterised by complicated upper-case letters with wavy lines and loops that are difficult to write, as well as by difficult ligatures. These features require a lot of practice time before beginners are able to write this script well. Back then, the Latin beginner's script was developed for lessons where children still had a lot of time to learn to "write nicely" and to practice.

In today's primary school lessons, this time is not available due to a diverse range of new tasks. If we compare adult handwriting styles, it becomes apparent that adults simplify the difficult letters and ligatures in Latin beginner's script. They stop writing many of the connections, and upper-case letters have become more similar to printing.

*Lateinische  
Ausgangsschrift*

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

*A B C D E F G H I J  
K L M N O P Q R  
S T U V W X Y Z*

*1 2 3 4 5 6 7 8 9 0*

One reason for this is that the necessary pauses (zero points) are always inside, not between the letters when connecting the letters (see terminology, 2.3 and conceptualisation of simplified beginner's script, 2.4). Furthermore, each of the letters being learned changes its shape depending on its position within a word, which is why numerous ligatures need to be practised.

**Please note:**

### 2.2.2 School beginner's script

In **1968**, school script in the former GDR was simplified and replaced by **school beginner's script**.

In school beginner's script, upper-case letters are very similar to upper-case print letters (and are very similar to the upper-case letters in simplified beginner's script). However, lower-case letters must be joined within the word, making it necessary to practice a number of ligatures, as in Latin beginner's script.

In one remark about school beginner's script (Kaestner/Tost, 1977), it says: "This change takes legibility requirements into account more intensively by simplifying upper-case letters. The different characteristics are more clearly specified. In lower-case letters, movements have been made quicker by including features whose shapes require minimal movement (fewer broad loops, shorter top lines).

The change to the model has also created better conditions for students to continuously train their handwriting by simplifying the shapes of the upper-case letters. The minimal movement required to shape the lower-case letters prevents the development of squashed, ugly, squiggly writing."

**Please note:**

**although school beginner's script simplifies upper-case letters, children still have to go through a number of re-learning processes during the transition from printing, because, just like those in Latin beginner's script, the lower-case letters in school beginner's script consist of an initial stroke, a basic shape and a terminal stroke.**

**This is why it seems didactically unwise to teach children to write by spending a lot of time with one script that they will later simplify in order to be able to write fluidly and legibly.**

**Heinrich Grünwald has used empirical analyses to prove that Latin beginner's script is difficult to learn. These analyses were the basis for the development of simplified beginner's script (see conceptualisation of simplified beginner's script, 2.4).**

*Schulausgangsschrift  
1968*

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

*A B C D E F G H I J  
K L M N O P Q R  
S T U V W X Y Z*

*1 2 3 4 5 6 7 8 9 0*



### 2.2.3 Simplified beginner's script

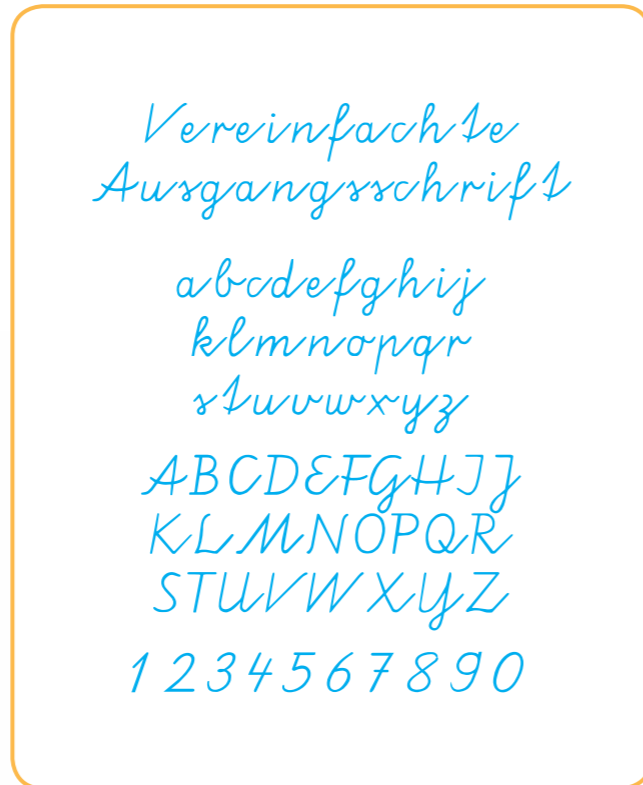
In 1973, members of the guideline commission of the federal states and the writing education working community, as well as representatives from the working group Grundschule e.V., came up with the concept of "simplified beginner's script" based on the results of the scientific analyses carried out by H. Grünewald (1970).

This simplified writing style was developed because analyses had shown that the Latin beginner's script that had been introduced was difficult to learn and became severely misshapen with increasing writing speed.

In the years to follow, simplified beginner's script was tested in a number of scientifically based regional and trans-regional school trials and found to have successful results.

Simplified beginner's script is easier to learn than Latin beginner's script and school beginner's script. Its upper-case letters are similar to those of Antiqua, the many changes in direction (see terminology, 2.3) have been drastically reduced, and almost all of the lower-case letters begin and end at the top edge of the upper medium line, creating reasonable pauses during writing and enabling letters to be connected with each other, similar to using a modular principle (see conceptualisation of simplified beginner's script, 2.4).

**Please note:**  
The majority of teachers are not familiar with simplified beginner's script or with suitable methods for teaching it, which means that a lot of pupils' handwriting has an unsatisfactory appearance.



**Conclusion:**  
The close relationship between printing and simplified beginner's script in terms of its shape and movement structures makes the transition to cursive writing a lot simpler.

*This comparison of print script and simplified beginner's script shows the close relationship between their movement structures. The few differences are highlighted in blue.*

a a	j j	s s	A A	J J	S S
b b	k k	t t	B B	K K	T T
c c	l l	u u	C C	L L	U U
d d	m m	v v	D D	M M	V V
e e	n n	w w	E E	N N	W W
f f	o o	x x	E F	O O	X X
g g	p p	y y	G G	P P	Y Y
h h	q q	z z	H H	Q Q	Z Z
i i	r r		I J	R R	

### 2.2.4 Basic script

For German primary school pupils, the journey towards developing their own personal handwriting style takes them through the process of learning a print script as an initial beginner's script. As an interim step on the path to cursive handwriting, many schools then teach a cursive script such as simplified, Latin or school beginner's script.

In 2010, the German primary schools association, Grundschulverband, created more opportunities for children to learn to write by introducing **basic script**. It is intended to eliminate the need to learn a second, cursive script and thus to decrease the additional accumulation of form inventories. Because they are so similar to print script, children are already familiar with the shapes of its letters as a result of learning how to read, which means that they serve as a writing template.

**Script form**  
Basic script is not a standardised script, but rather a guide. Ultimately, it is intended to help all children to develop their own personal handwriting style, without having to take a detour through a standardised cursive beginner's script.  
Basic script is based on a number of conceptual conditions that make it useful as a first and only beginner's script.

**Writing paper**  
Children write on blank sheets of paper; there are no formatted handwriting lines. The baseline is the only thing that provides children with orientation, which is provided to them in a range of different spacings on pieces of guide paper that are placed beneath the writing paper.

**Letters**  
According to the Grundschulverband, the shapes of the letters are based on mixed Antiqua. Its origins date back to the early Italian renaissance in the 15th century.

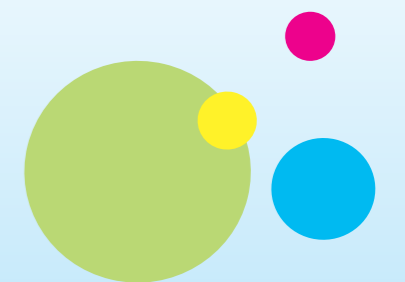
**Turning points**  
All of the ten lower-case letters that end on the baseline (see terminology page 13) have been prepared with their later, potential connections in mind. They also have turning points that create more writing momentum.

**Discussing handwriting with peers**  
Children find the individual ligatures by themselves. Discussing handwriting with their peers enables the children to exchange their ideas with each other in order to help themselves, but does not necessarily have to lead to ligatures.

**Air jumps**  
To avoid cramping, practised writers lift the pen from the paper more often, continue the movement and then stop it again.

**Letter variants**  
After some time, children continue to develop the shapes of their letters. For example, the lower-case letters b, f, h, k and l can be formed using loops.

**Lettering**  
Alongside discussions with peers, another focus is on lettering. Children should recognise the practical value of writing for words, texts and other visual communication media.



The way children learn basic script obeys five didactic principles that apply to all written products, precisely because of their individual character.

1. Clarity of letter shapes
2. Readability (legibility of the text)
3. Fluency (writing with momentum)
4. Discussing handwriting with peers (conversations about connections between letters)
5. Lettering (recognising the practical value of writing)

**Please note:**  
The advantages of one single basic script compared with printing and then learning a beginner's script is a matter of contention in academic circles.

**Conclusion:**  
Didactic analyses of basic script should be completed before the start of the first school year and be approved by the subject committee, as this decision has far-reaching consequences in terms of the materials selected and thus for stationery lists for parents.

## Grundschrift

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

1234567890

### 2.3 Terminology

<p><b>Abstände</b></p> <p><b>Anfangspunkt/Endpunkt</b></p> <p><b>Deckstrich</b></p> <p><b>Drehrichtung</b></p> <p><b>Graphem</b></p> <p><b>grafomotorisch</b></p> <p><b>Grundformen</b></p> <p><b>Haltestelle</b></p> <p><b>Kreuzungspunkt</b></p> <p><b>Liniensystem</b></p>	<p>bezeichnen die Räume zwischen den einzelnen Buchstaben im Wort und zwischen den Wörtern</p> <p>Schreibanfang bei Einzelbuchstaben und Wörtern bzw. Endpunkt</p> <p>bezeichnet den Teil einiger Buchstaben, auf dem eine Bewegung sowohl hin- als auch zurückgeführt wird. Dabei wird der erste Teil der Bewegung nochmals <b>überdeckt</b></p> <p>Beispiel</p> <p>optische Gestalt eines Buchstabens</p> <p>schreibspurerzeugende Bewegung</p> <p>Bei Schreibschriften: Ecke Arkade Oval Girlande Acht Schleife bei Druckschriften: Gerade Kreis/Oval Halbkreis/Halboval</p> <p>ist ein Punkt in der Schreibspur, bei dem die Bewegung gleich null ist, weil ein Richtungswechsel erfolgen soll</p> <p></p> <p>Oberlinie Oberlinie des Mittelbandes Grundlinie Unterlinie</p>	<p><b>Luftsprung</b></p> <p><b>Mittelband</b></p> <p><b>Ober- und Unterlänge</b></p> <p><b>Phonem</b></p> <p><b>Schräglage</b></p> <p><b>Schriftarten (Erstschrift)</b></p> <p><b>Struktursynchronität</b></p> <p><b>Lateinische Ausgangsschrift/SAS</b></p> <p><b>Vereinfachte Ausgangsschrift</b></p>	<p>Um schwierige Deck- und Verbindungsstriche nicht ausführen zu müssen, wird das Schreibgerät kurz vom Papier abgehoben und zu der Stelle „gesprungen“, bei der es weitergehen soll</p> <p>bezeichnet den Schreibraum, in dem die meisten Buchstaben stehen – siehe Liniensystem</p> <p>bezeichnet die Teile der Buchstaben ober- bzw. unterhalb des Mittelbandes</p> <p><b>Lautzeichen</b> eines Buchstabens</p> <p>linksschräg gerade rechtsschräg</p> <p>DS = Druckschrift LA = Lateinische Ausgangsschrift VA = Vereinfachte Ausgangsschrift SAS = Schulausgangsschrift (ehem. DDR)</p> <p>Buchstaben- und Bewegungsstruktur sind bei der VA gleich, bei LA und SAS ungleich</p> <p><i>Eimer</i> Schriftstruktur <i>Eimer</i> Lautstruktur <i>Eimer</i> Bewegungsstruktur</p> <p><i>Eimer</i> Schriftstruktur <i>Eimer</i> Lautstruktur <i>Eimer</i> Bewegungsstruktur</p>
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## 2.4 The conceptualisation of simplified beginner's script

There are three requirements for a script that is to be learned by children, which all relate to the type of script:

- it must be easy to learn,
- it must be legible,
- it must provide children with opportunities to develop their own personal handwriting style.

The conceptualisation of simplified beginner's script meets these requirements to the greatest possible degree.

### The learnability of the script

It is easier to learn a script when its letter structures match the movements required to write it. This means that a writing movement ends at the point where the letter is concluded.

This requirement is not met by either Latin beginner's script, school beginner's script or Latin beginner's scripts in other countries, because the structural characteristics of the script on the one hand and the writing movement on the other are asynchronous. Every time a letter comes to an end, the movement must be continued, as the points in the script where speed comes to a zero point are usually inside the letter.

e i n e n (LA)  
Gegliedert nach Buchstaben

e i n e n (LA)  
Gegliedert nach Bewegungsphasen

These different structures prevent the process of writing from being structured in a way that promotes economical learning. Reading is a process of analysis, singling out phonetic sequences, pronouncing syllables and identifying individual phonemes in order to make structural elements available for learning new words. However, it is not possible to thoroughly structure words adequately when writing in Latin beginner's script or school beginner's script. In contrast, in simplified beginner's script, there is conformity between the structures of the script and the writing movements. The restructuring was carried out according to the following principle: in Latin beginner's script and school beginner's script, each letter consists of a basic shape, an initial stroke and a terminal stroke. However, because the

terminal stroke of the last letter and the initial stroke of the following letter are written in one go within one word, it makes sense to connect the terminal and initial strokes and to add what is referred to as a "connecting stroke" to the basic shape of the letter. This means there is no initial stroke in simplified beginner's script. It becomes easier to write the letter, as it only has a basic shape and a connecting stroke.

Basic shape, initial stroke, basic shape, terminal stroke die (Latin beginner's script, school beginner's script)

Basic shape, connecting stroke die (simplified beginner's script)

By eliminating the initial stroke, all of the lower-case letters in simplified beginner's script begin and end on the upper edge of the middle line (apart from "s"). This makes it possible to practise each letter individually without changing its shape within the word, regardless of where it is located.

Eimer (Latin script)

Eimer (School script)

Eimer (Simplified script)

**Just like in a modular system, structural elements (individual letters or groups of letters) can be added to one another and pronounced individually when writing a word.** However, consolidating consistent phases of movement not only makes the process of writing easier, it also has a positive effect on spelling and orthography.

**Moreover, due to the way it has been restructured, simplified beginner's script has a clear internal structure. The long connecting stroke at the end of a letter clearly emphasises the individual letter within the word.** In Latin beginner's script and school beginner's script, the connections between the letters are often bent or written crookedly.

### Script legibility

Simple, concise letter shapes facilitate script legibility. In addition to this, every letter needs to be shaped in such a way that it cannot be mistaken for any other letter of the alphabet. And, finally, it comes down to well-structured word shapes, because the more clearly the individual letters within a word as a whole are distinguished from one another, the more legible the writing is. The upper-case letters in Latin beginner's script often begin with wavy lines that children starting school find difficult to write, which reduces legibility. In adult handwriting, they are often replaced by a stroke or omitted entirely.

J K - Judieu. Kaffee

E H - Chron. Haus

For this reason, the upper-case letters in simplified beginner's script have been made more similar to print script. The results of this are improvements in the clarity of their shape and their conciseness.

### The development of handwriting

It is striking that Latin beginner's script undergoes a great deal of change on its way to becoming developed handwriting. Many letters are changed simply because they resist fluid movement. Above all, continuous changes in direction have an inhibitive effect on the fluidity of writing movements. In developed handwriting scripts, all letters that require a change in direction in Latin beginner's script, such as a, d, g, h, m, n, r, z and others, have been reshaped.

l-a-d-r-e-n, (Latin script)

Direction changes eight times in Latin beginner's script

lacheu (Simplified script)

Consistent direction in written handwriting.

In simplified beginner's script, the number of changes in direction required has been heavily reduced from the outset. Directionality that is as consistent as possible is achieved primarily by changing the sequence of movement in the connections.

If one writes the lower-case letters from "a" to "z" together in simplified beginner's script, it reduces the number of changes in direction by more than half compared with Latin beginner's script.

Latin beginner's script abcdefghijklm  
nopqrstuvwxyz

Simplified beginner's script abcdefghijklm  
nopqrstuvwxyz

In simplified beginner's script, changes in direction rarely take place within the middle line, which is the norm in Latin beginner's script, instead generally taking place at the upper edge of the middle line. This means that there is less bending in the writing. If writing speed is increased, the shape of the letters remains more stable and the pauses are always at the same point.

Latin beginner's script und gestern etwas

Simplified beginner's script (Pupil handwriting from year 4) und gestern etwas

### Lower-case letters

Due to a full restructuring of the script, all lower-case letters (apart from "s") start and end at the upper edge of the middle line. This means that, when learning the script, connecting strokes both within the word and at the end of the word are pulled up to the top of the middle line. With increasing writing proficiency, the connecting strokes at the end of the word are pulled up to the top of the middle line.

Obere Linie  
Mittelband

### Upper-case letters

Upper-case letters in simplified beginner's script are similar to those in print script. There are no superfluous wavy lines or loops. Please note that the omission of the initial stroke in the lower-case letters means that a number of upper-case letters are unconnected at the start of the word.

### 3. Prerequisites for learning to write

When it is time for school children to learn to write, it poses a number of different challenges to teachers. Teachers are expected to know exactly what kind of encouragement and which activities children need in order to learn how to write letters, words and texts. They are also expected to know how to assist children individually when problems arise in the learning process, e.g.:

- when children cannot concentrate on tasks for very long and are continuously fidgeting or falling off their chairs;
- when children have problems holding a pen properly, their handwriting is illegible or they keep tearing the paper;
- when children write back-to-front, in the wrong line or do not touch the lines.



They are also expected to encourage children who can already write all of the letters when they start school and who seem to find it easier to learn. Children arrive in school with very different skills, abilities and needs.

cause diagnostics are the basis for useful, individual assistance, children's current developmental levels must be ascertained in a differentiated way.

When learning to write, children need lessons with phases of frontal instruction in order to develop the basics. They also need in-depth, differentiated activities for practice and to receive individual assistance (see chapter 6, especially chapter 6.2).

Each of the federal states sets out guidelines about precisely which obligations and duties the school has if a child has problems learning to write and which tests should be used to diagnose educational needs, such as, for example, the handout "Handreichung Nachteilsausgleich", Behörde für Schule und Berufsbildung der Freien und Hansestadt Hamburg (Compensating for disadvantages, by the authority of school and professional education of the Free Hanseatic City of Hamburg (2013)).

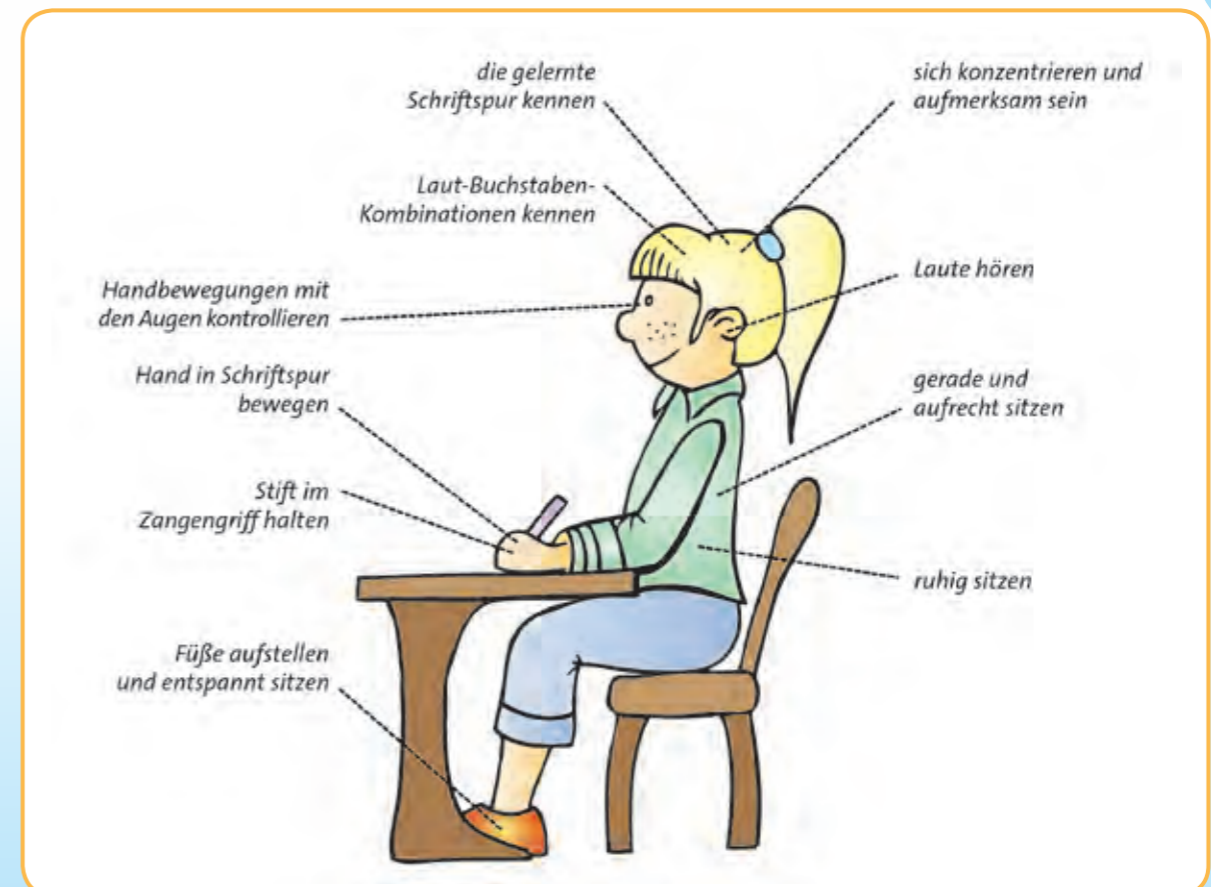
This means that teachers require in-depth knowledge of the didactics and methods of learning to write. They also need to know about the prerequisites required for children to learn written language and how to assist children when needed. They need in-depth knowledge of developmental problems and developmental disorders so that they can prepare individual educational plans for each child. Be-

**In order to learn to write, children have to meet a number of requirements. They must be able to**

- sit quietly and upright on a chair and at a table (gross motor skill) for the length of time it takes to complete a task;
- work on a task attentively and with focus (attention span and concentration);
- hold a pen using a tripod grasp and guide it within a particular handwriting line (graphomotor skill);

- use their eyes to guide themselves and control what they are writing (visual skill);
- divide words up into individual phonemes (auditory skill);
- correctly match phonemes with the appropriate symbols or letter combinations (skill in phoneme-grapheme conversion).






In order to answer this multitude of questions and to get ideas about how you can help, it is important to know the demands that are being placed on children when learning to write.



### 3.1 The senses in the learning-to-write process

Children fulfil the prerequisites required in order to learn to write once they meet certain developmental requirements. The different senses each have different significance for the process of learning to write. Exercises that foster sensory perception and sensory processing are described in chapters 4 and 5.



The Senses	Its Function	The range of perception
<p><b>The depth perception - The kinesthetic system</b></p> <p>The basis for the development of the body schema</p> 	<p>Acoustic waves ↓ eardrum, inner ear ↓ auditory nerve ↓ auditory system</p>	<p>Posture</p> <p>Movement sense</p> <p>Sense of tension</p> <p>Force</p>
<p><b>The sense of balance The vestibular system</b></p> <p>The precondition for the development of all senses</p> 	<p>Body position ↓ Inner ear receptors ↓ Brain</p>	<p>Sense of space</p> <p>Sense of acceleration</p> <p>Direction of rotation</p>
<p><b>Sense of touch - the tactile system</b></p>  <p>1. passive perception: to be touched 2. Active perception: touch and explore</p>	<p>Touch ↓ Cutaneous receptor (skin, hand, mouth) ↓ Neural pathways ↓ Brain</p>	<p>Sense of touch</p> <p>Exploration sense</p> <p>Sense of temperature</p> <p>Sense of pain</p>
<p><b>The vision – the visual system</b></p>  <p>The most common sense</p>	<p>Light waves ↓ Retina ↓ Optic nerve ↓ Visual processing center</p>	<p>Figure</p> <p>ground perception</p> <p>Visual memory</p> <p>eye–hand coordination</p> <p>colour perception</p>
<p><b>The sense of hearing The auditory system</b></p>  <p>This includes fundamental functions for human communication</p>	<p>Acoustic waves ↓ Eardrum, inner ear ↓ Auditory nerve ↓ Auditory system</p>	<p>Auditory attention</p> <p>Discrimination</p> <p>Auditory memorability</p> <p>Understanding the reference to meaning</p> <p>Auditory figure-ground perception</p> <p>Localization</p>

The importance for writing	Occurring problems and physical limitations	Help and support during lessons
<ul style="list-style-type: none"> <li>- Appropriate sitting position</li> <li>- Adequate muscle relaxation for the grip technique</li> <li>- Control of the movement of hand and fingers in the writing trace</li> <li>- Regulation of the pressure when using the writing instrument</li> </ul>	<p><b>Too weak / too strong muscle tone:</b> Child falls off the chair, child wriggles, pencil falls out of the hand, cracks in the writing pad due to too much pressure, illegible typing pattern, pain caused by cramped muscles.</p>	<ul style="list-style-type: none"> <li>- Opportunities for movement in the classroom</li> <li>- Games with coarse and fine motor movements</li> <li>- Proper chairs</li> <li>- griffix®-pens</li> </ul>
<ul style="list-style-type: none"> <li>- Attention through a good balance</li> <li>- Right-left orientation</li> <li>- Writing speed regulation</li> </ul>	<p><b>Hypersensitivity / sub-sensitivity:</b> Slow writing and working speed, anxious attitude to work, motor clumsiness, urge to move, concentration problems.</p>	<ul style="list-style-type: none"> <li>- Adequate seating or seating posture (possibly on the floor)</li> <li>- Haptic and visual support for the right-left distinction</li> </ul>
<ul style="list-style-type: none"> <li>- Adequate grip technique (grip handle)</li> <li>- Understanding letter forms</li> <li>- Adequate seat surface</li> </ul>	<p><b>Hypersensitivity of pain and temperature sensation:</b> Avoid sitting on the chair.</p> <p><b>Hypersensitivity / hypersensitivity of the sense of touch:</b> Problems with learning objects and understanding of learning content, problems with pencil posture.</p>	<ul style="list-style-type: none"> <li>- Tactile games (without visual Perception)</li> <li>- Finger games</li> <li>- Finger paint</li> <li>- Griffix-pens</li> </ul>
<ul style="list-style-type: none"> <li>- Identification of Character shapes</li> <li>- Remember letter shapes</li> <li>- Writing movement control</li> <li>- Recognition of letters in different fonts</li> <li>- Alignment of the letters</li> </ul>	<p><b>Defective vision:</b> Low trained visual memory. Visual control is missing, mirror writing is perceived as correct.</p>	<ul style="list-style-type: none"> <li>- Glasses</li> <li>- Training of visual differentiation</li> <li>- Kim Games</li> </ul>
<ul style="list-style-type: none"> <li>- Attentive listening.</li> <li>- Listening out language.</li> <li>- Analysis of sounds.</li> <li>- Memorizing the text.</li> <li>- Attribution of meaning to words</li> <li>- Adequate seating position in the room</li> </ul>	<p><b>Hypersensitivity / sub-sensitivity:</b> Slow writing and working speed, anxious attitude to work, motor clumsiness, urge to move, concentration problems.</p>	<ul style="list-style-type: none"> <li>- Hearing instruments</li> <li>- Audio games without visual distraction</li> </ul>

### 3.1.1 Depth perception and mechanoreceptors – the kinaesthetic system

The kinaesthetic system and its receptors in the muscles, tendons and ligaments provide the organism with information from its own body. The body perceives muscle contractions and automatic movements. This is the basis of depth perception. The brain always knows where which body parts are and how they are moving. The child's body schema and laterality are developed on the basis of this information, as the brain consciously perceives each half of the body (see chapter 3.3). The brain perceives the movements and positioning of its joints via the kinaesthetic system and regulates muscle tension and the application of strength. But the information it acquires from its other senses is also required to control movement. Only by coordinating and properly processing the information provided by the senses can the brain control muscles and joints and usefully regulate the application of strength, e.g. it is only possible for us to effectively control the muscles and joints when climbing stairs if there is balance and if sufficient information is being provided by the visual system. We trip when we keep climbing at the end of the stairs because we think that another stair is coming.

#### Significance of the kinaesthetic system in the learning-to-write process

When learning to write, children have to learn to carry out new movements in the handwriting line for letters. Visual control is required to guide the movements of the hand and the fingers. An upright sitting position is required to learn to write. It is important that children properly regulate the position of their joints, their muscle tension, movements and the way they apply their strength. Moreover, they also require good balance.

#### Problems with kinaesthetic perception

Children with weak muscle tone have problems sitting upright. They collapse or even fall from their chairs when sitting. They seem to be dreaming during lessons because they are using all of their attention to concentrate on keeping their bodies upright.

Weak muscle tone can lead to children continuously dropping their pens because they cannot grasp them well enough. Many writing implements are too thin or children are not holding their pens using a tripod

grasp. In order to compensate for their weak muscle tone, many children develop a tense writing posture. Children with a lot of muscle tone or body tension are noticeable at school because they wobble, fidget or run through the room. They have problems concentrating and focussing their attention. Children that have problems adequately controlling their movements and their application of strength are often unhappy with the results of their writing. When they write, they often tear holes in and rip the paper, because they are holding their pens too tensely and pushing too hard on the paper.

#### Aids and ways to foster kinaesthetic perception

Children who have problems with kinaesthetic perception

*For some children, the tactile-kinaesthetic feedback process is not as well developed. They find it difficult to control their writing movements in tactile and kinaesthetic terms, and are more dependent on visual control.*

need help. Sometimes the only stimulus required is a ball cushion with nubs, and the child can concentrate while sitting. The child should decide which sitting position is conducive to his or her learning. **A Swiss ball is not usually helpful**, as it requires children to have good control of their muscle tension while also concentrating intensely. Above all, it requires them to have a good sense of balance. The child is not left with very much energy or attention for the work at hand. It also depends on the dimensions of the seating in the classroom. All children require a table and a chair that are appropriate to their height so that it is anatomically possible for them to sit upright. Chapter 3.2 presents the DIN standard applicable to school furniture and the new Euro standard.

*If children have problems with muscle tone or cannot adequately regulate the tension or relaxation in their muscles, ergotherapy and psychomotor therapy can be helpful. This professional help can successfully and individually foster a sense of self-awareness in children outside of school in a targeted way over a longer period of time.*

The **griffix®** range of writing implements can help children with muscle tone problems. The prescribed tripod grasp (cf. chapter 3.4) can help children to better concentrate on movement sequences, and to regulate muscle tone and their use of strength. **Each of the griffix® writing implements provides the following opportunities to address educational needs within this context:**

### 3.1.2 Sense of balance

- *Children who exert a lot of pressure on the writing implement when they write can work successfully using the wax pen, as it requires more pressure. They are able to see differences in the way they apply pressure and their strength when using the wax pen due to the different marks it leaves on the paper.*
- *Writing and tracing using a pencil requires a much more exact application of muscular strength and for the pen to be guided more precisely, because the handwriting line is narrower. The lead is soft and children can easily erase or correct what they have written.*
- *The ink pen can be held in a relaxed way and enables children to make marks using less pressure because of its slight friction. Children with a tense writing posture can use it to practice holding the pen in a lighter, more relaxed way.*
- *Children only begin writing with a fountain pen when they can adequately utilise their muscle tone to write and can guide the pen properly.*

#### – the vestibular system

The vestibular system and its receptors in the inner ear provide the organism with information about the perception of gravity, rotary motion and horizontal and vertical acceleration. The inner ear perceives vibrations that are forwarded to the brain. Having a good sense of balance is the basis for keeping the body upright and getting our bearings within a space. It is closely linked to the kinaesthetic system, whose information it requires to control its movements and the location of the body within a space in order to carry out corrective movements if needed. The

information provided by the visual system also helps us to keep balance. Anyone who has been seasick on a boat is aware of this. One glance at the horizon helps to provide the brain with information about our stability, even though the floor is rocking beneath our feet.

#### The significance of the vestibular system in the learning-to-write process

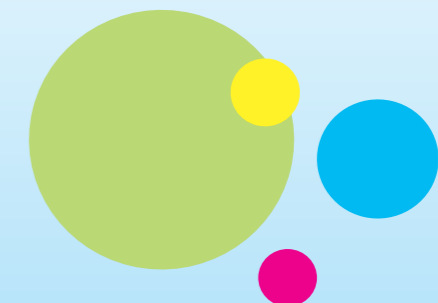
Children with a well-developed sense of balance are alert and can focus their attention and concentrate on learning. If their vestibular and kinaesthetic systems work well together, children can sit more upright. This collaboration is the basis for the way children develop their body schemas. Left-right orientation develops out of this body schema (see chapter 3.3). Orientation within space and a well-developed body schema are the fundamental prerequisites that allow children to get their bearings within a given environment: at school, in the classroom, in the child's own material, on a piece of paper. It is on this basis that children learn to write: writing from left to right, finding their bearings within the lines, regulating their own writing size etc.

The perception of acceleration is the basis for regulating writing speed.

#### Problems with vestibular perception

Children who have problems with vestibular perception find it difficult to concentrate on lessons. They stand out due to their lack of motor skills and the slow speed at which they write and work.

Children who have problems with left-right orientation sometimes write back to front or from right to left, or they find it difficult to get their bearings on the page and do not know which task to begin with. These children require assistance to help them find their way within a space and to tell the difference between right and left.



### Aids and ways to foster vestibular perception

Sometimes all that is needed to foster an upright sitting position is a support e.g. a wedge-shaped ball cushion, to enable a child to focus its attention on the lesson. On the other hand, this support is likely to make other children slide off their chairs. In this respect, it helps to find out which aid is the right one together with the child. If a child has problems meeting the lines when writing on lined paper and diagnostics have shown that this has nothing to do with a visual impairment, special kinds of paper with tactile guiding lines can help. Clear visual supports can be used to foster left-right orientation (right is red, left is blue).

It helps to use a consistent system to develop left-right orientation within a space, on paper and for reading.

*Disorders in the body schema should not be treated during lessons. Psychomotor therapy, e.g. ergotherapy, professionally fosters the development of a body schema.*

The tactile system and its receptors in the skin provide the organism with information about tactile stimuli. The skin is the largest sensory organ in the body, and represents the point of contact between humans and their environment. The tactile corpuscles beneath the skin perceive tactile stimuli and send them to the nerve pathways of the brain as electric impulses. Tactile stimuli are created when the skin, the mouth or the fingers are touched (passive touch) or when they themselves touch or explore something (active touch). Alongside touching and exploring, other areas of tactile perception include the perception of temperature and pain.

Each human being perceives different tactile stimuli quite differently. The way they assess these stimuli depends on individual experience and the ways that different fields of perception are processed. An objectively positive tactile stimulus can be subjectively perceived as unpleasant

or can lead to defensive or preventative courses of action being taken.

The dominance of visual perception means that touching is eventually pushed into the background during the course of childhood development. Tactile perception is the first sense to be developed in the womb. This is why we always go back to it to “grasp” the world.

### Significance of tactile perception for the learning-to-write process

Exploration provides essential access to understanding learning content. The fingertips are very sensitive, as there are many tactile corpuscles located beneath the skin. Blind people feel Braille with their fingertips, compensating for their lack of visual perception of the text. Seeing people find it difficult to feel out Braille, as they are dominated by their visual perception. When the fingers grasp the writing implement, the fingertips touch its surface. Tactile stimuli can be perceived as pleasant or unpleasant and thus influence a child’s ability to focus its attention and concentrate. The tactile system also plays a significant role in sitting due to the quality of the seating and the table.

### Problems with tactile perception

Children develop strategies to avoid unpleasant tactile stimuli. Some children avoid touching unfamiliar materials with their fingers, e.g. dough. They might even try to avoid touching writing implements because they find touching the material surface unpleasant, e.g. when using wax crayons or finger paint. If this leads to the development of an incorrect grasping technique, it has negative effects on the way the child’s handwriting looks and, as a result, on the child’s motivation to learn to write. If the seating surface of a wooden chair is too hard or too cold, some children will not want to sit on it. They try to touch the surface as little as possible and move around restlessly on the chair.

### Aids and ways to foster tactile perception

At school, simple aids can be used to address children’s individual needs. In general, it is not appropriate to confront children with unpleasant dermal stimuli as part of school learning.

When learning about the way letters are shaped, tactile perception can be incorporated by getting children to feel out and identify the shapes of letters on sandpaper or by tracing letters in bird grit (see chapter 6.2). When feeling out the shapes of letters, visual perception should be blocked out as much as possible (by using a blindfold or getting the children to feel around in a bag).

The fingertips touch the writing implement when the fingers grasp it. The best grasp is the tripod grasp, as it provides the fingers with sufficient freedom to move (see chapter 3.4). This means that all of the basic writing shapes (see chapter 2) can be traced by moving the fingers (see chapter 6.1). The wrist and the arm do not have to move. The fine motor skill activities described in chapter 5 can also foster fingertip sensitivity. The **griffix**® learning-to-write system provides children who have tactile problems with the following incentives:

To help foster an upright sitting position, it can be enough

- *Apart from the wax pens, all of the pens are of the same shape and size and foster a consistent grasp.*
- *The indentations for the index finger and thumb are still the same in the first pen in the griffix® writing system, the wax pen. This means that both right- and left-handed children are able to use the pen.*
- *The wax crayon does not have to be touched directly because it is encased within the wax pen like a lead (cf. further above: avoiding tactile stimuli).*
- *In the other three pens, the indents provided have different tactile stimuli, the indent for the index finger is rippled, in the indent for the thumb there is a small lump and the indent for the middle finger is smooth. Moreover, the indents have been anatomically adjusted to fit the fingers. There are suitable versions available for left-handed children.*

to place a footstool or a wheat bag underneath the table as a tactile stimulus. When the child touches the aid bare-foot, his or her sitting position usually changes automatically into a more upright position. All some children need is to be told how to place their feet and, above all, their heels correctly on the floor. It helps to find out together with children which aids they find pleasant and therefore conducive to their learning.

### 3.1.4 Seeing – the visual system

The visual system and its receptors in the eye provide the organism with information from the environment. Waves of light are forwarded to the brain’s visual cortex as impulses via the retina and the optical nerve. The information from both eyes then creates a three-dimensional image in the brain, which differentiates between colours and patterns. We need visual information about the space around us (structure, ground, walls, obstacles) and about moving objects in order to control our body posture and locomotion, to localise potential sources of stimulus and to find our bearings within a space.

Of the sensory organs, the eye is the one that we require the most frequently. It can therefore be quickly overloaded by sensory impressions. Children today are used to quickly engaging with new visual stimuli due to watching television. However, they might find it difficult to concentrate on and engage with one visual stimulus for a long period of time.

Seeing is particularly relevant for the cognitive, emotional and social development of children of preschool and primary-school age, as almost all of the tasks they are expected to perform at this age (crafts, painting, writing etc.) are under visual-motor control.





### Significance of visual perception for the learning-to-write process

The different fields of visual perception have different significance for the learning-to-write process:

- **Visual-motor control (hand-eye coordination)** is our ability to control our movements visually. We control our arm and hand movements using visual information. This is important when learning how to use the handwriting line to write letters. The visual system must visually apprehend the handwriting line. The hand is then moved within the handwriting line provided and the movements are controlled visually.
- **Figure-ground perception** is the ability to differentiate between important information (the figure) and unimportant information (the ground). This is the basis for perceiving and identifying objects and figures, for spatial perception and for recognising the shapes of things like letters.
- **Form-constancy perception** is the ability to perceive a shape in another size and colour as constant. In beginner's reading lessons, children must be able to recognise letters in different fonts, colours and sizes, in different environments and in front of different backgrounds. Important: when a shape, e.g. a letter, is not perceived as constant, it cannot be memorised, which means that it cannot be reproduced.
- **Visual perception of spatial location** is recognising the location and the spatial relationships between ourselves and objects on the basis of a properly functioning body schema. This kind of perception makes it possible to differentiate between letters, as the only thing that is different about the shapes of some letters is their position (e.g. b, q, d, p).
- **Visual memory** is our ability to remember what we have seen. Visual memory is a prerequisite for cognitive development. When learning to write, children have to correctly recognise, remember and match up the shapes of letters.

### Problems with visual perception

Defective vision such as long or short-sightedness can now be identified in babies and their vision can be aided

with glasses. Ophthalmologists need to treat impaired vision early on so that children are in a good position to develop their visual memory and the other areas of visual perception.

Some visual impairments are only identified later or not at all. At school, children with visual perception impairments can stand out

- because they frequently injure themselves or run into other children. They are not able to find their bearings within a space well or only recognise obstacles later, making them unable to avoid them.
- because they have problems writing on a straight line and their writing hangs in the air.
- because they become unsettled or refuse to work when they are supposed to be copying something from the board. They cannot see the writing on the board and become insecure or angry.
- because they write certain letters back to front or in a rotated position (e.g. B, b, p, q, d) They lack the guidance provided by well-developed laterality, among other factors. They have problems with visual control and cannot compare their writing with the template, which means that they are unable to identify any differences.

### Ways to foster visual perception at school

Ophthalmologists carry out extensive diagnostics that provide in-depth assistance to children with visual impairments. The earlier and more accurately a visual impairment is identified and treated, the quicker a child can practice making use of aids to train their vision.

Playing with optical illusions promotes nuanced visual perception and trains conscious viewing. Different areas of visual perception can be fostered at school using what are referred to as KIM games (chapter 4.3).

In general, good sufficient lighting at the workspace facilitates the learning-to-write process.

The source of light must come from the correct side so as not to cast shadows over what the child is writing (see chapter 3.2). Different writing templates (for left and right-handed children) can help to provide orientation in the workspace. Some children are better able to work on their loop and writing exercises using a lined piece of paper with thicker lines and more space between the lines. Moreover, writing implements that create rich contrasts are helpful (thick black pen on white bleached paper).

*The ophthalmologist responsible and the associations for the blind and visually impaired provide individual consultation if needed. As part of the school lessons, professional advice from educationalists who specialise in the area of blindness and visual impairments can be requested from school authorities if needed.*

### 3.1.5 Hearing – auditory perception

The auditory system and its receptors in the ear provide the organism with information from the environment. When hearing, sound waves are forwarded from the outer ear via the inner ear and the auditory nerve to the brain's auditory cortex, which identifies and differentiates between sounds, noises and tones as well as the distance and direction of sound waves.

Auditory perception is of great significance for the way people communicate: for hearing, understanding and speaking with each other.

### Significance of acoustic perception in the learning-to-write process

Auditory perception cannot be separated from learning to speak. In the following areas, hearing is relevant for learning spoken language, learning at school and for the learning-to-write process:

- **Auditory attention** is our ability to engage with auditory stimuli and to concentrate on what we hear.
- **Auditory figure-ground perception**

is the ability to pay selective attention to important acoustic stimuli.

We differentiate between important stimuli (the figure, e.g. voice of the teacher) and unimportant stimuli (ground, e.g. background noise in the classroom).

- **Phonological awareness or phonemic differentiation**

is the ability to differentiate between linguistic and non-linguistic sounds by different categories (short/long, loud/quiet, faster/slower and same/different).

This is the basis for learning language and for analysing sound and therefore for phoneme-grapheme conversion. A word can be written if the sounds are analysed in a certain order. Every sound (phoneme) is matched with a letter or a combination of letters (grapheme). The writing implement can then be guided over the piece of paper in the handwriting line for the letters according to a defined sequence.

- **Acoustic source localisation**

is the ability to categorise a source of sound within a space and identify the direction it is coming from.

Localising the source of sound enables children to differentiate between sounds in one word in a particular order, i.e. individual phonemes can be analysed in the proper order and the word RAIN does not become NIAR. Children are able to write 50% of all words correctly if they analyse the sounds (phonemes) properly and then match them with a letter or a combination of letters (graphemes). Phonological awareness is the basis of phoneme-grapheme conversion.

- **Auditory retention**

is the ability to retain auditory sequences – the basis for learning language.

The sound of the word is memorised so that the child can retrieve and articulate it. However, pictograms can still be a good visual aid to help children to memorise what they have heard. When auditory memory is well trained, children can follow the instructions that they have heard. However, children still have to assign meaning to what they hear.

**Problems with acoustic perception**

The basis for good linguistic development is identifying and treating hearing impairments early on. Children with hearing problems can develop speech impediments that make it more difficult to learn at school. A child that cannot hear properly and does not speak clearly enough will have problems learning spelling and orthography. A speech impediment makes it more difficult to correctly pronounce what is referred to as the pilot language (speaking the same way that we write). Pilot language is the basis for being aware of the distinct phonemes in a word and thus one of the prerequisites for phoneme-grapheme conversion. Children who have problems with auditory retention cannot remember the words or order of sounds properly. This is why they write words incorrectly and do not recognise their mistakes.

Children with hearing problems cannot concentrate on the teacher's instructions or properly tell the difference between important and unimportant acoustic stimuli in the background noises in the classroom.

**Ways to foster acoustic perception**

In general, the teacher should ensure that overall background noise in a classroom is kept to a minimum.

In lessons, hearing games can foster the different areas of acoustic perception (chapter 4.3).

When learning to write, phonetic gestures can be used as an aid: the individual phoneme is matched to a phonetic gesture. The movement of phonetic gestures focuses attention on one single phoneme and helps the child to synthesise (connect) the sounds when reading.

*ENT doctors carry out extensive diagnostics that provide in-depth assistance to children with hearing impairments. The earlier and more accurately a hearing impairment is identified and treated, the quicker a child can practice making use of supports (e.g. a hearing aid) to train their hearing. The ENT doctor responsible provides individual consultation where required. As part of the school lesson, professional advice from educationalists who specialise in the area of hearing impairments can be requested from school authorities if needed.*

**3.2 Sitting position, seating and lighting**

In lessons, teachers should tolerate children who change their seating position frequently and foster and practice movement during lessons, e.g. with breaks in movement, standing phases, sitting in a circle on the floor etc. The table and the chair must be appropriate for the child's height (in line with DIN standard ISO 5970/1981).

Because the children in any given year are of different heights, there could be up to three different sizes in a classroom.

2006 also takes into account a dynamic sitting position based on different acceptable seating angles. Moreover, it redefines size categories and also introduces class 7 (colour code "brown") for very tall students (see page 30).

**Dynamic sitting** means not always staying in one particular sitting position, instead being able to take up a diverse range of sitting positions.

Whereas the international standard DIN ISO 5970 from 1981 is based on the physiologically correct sitting position, the European standard DIN EN 1729-1:2006-09 on Furniture – Chairs and Tables for Educational Institutions from

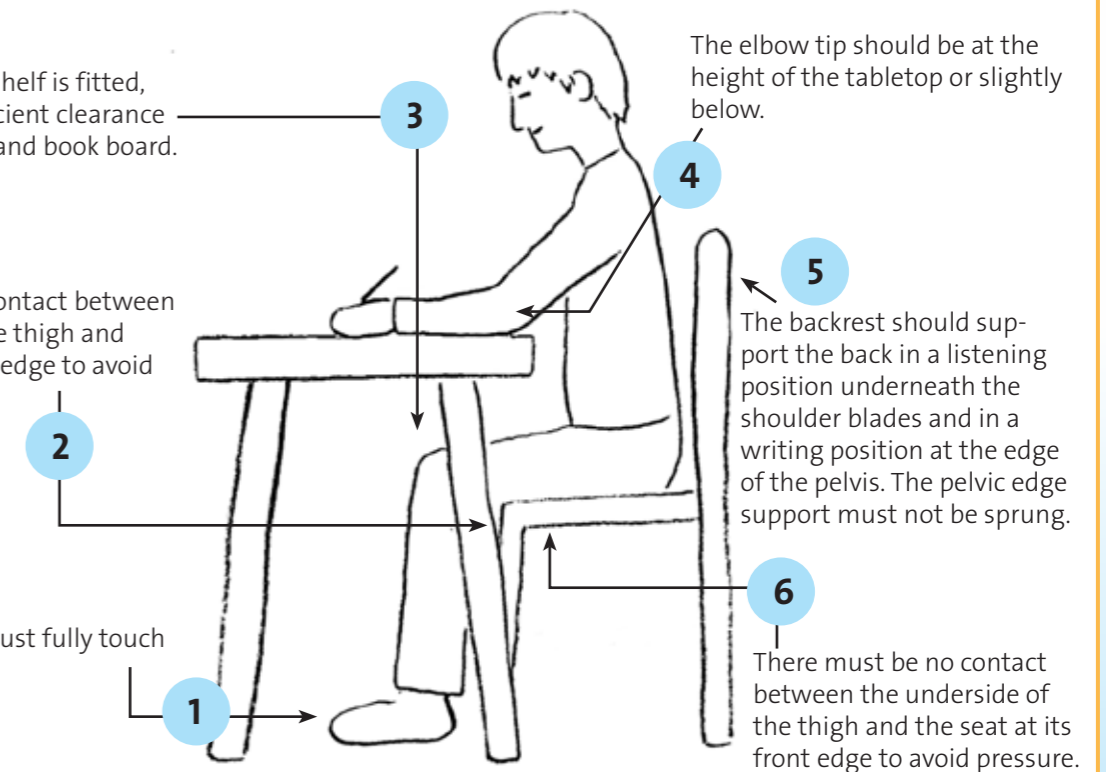
**The physiologically correct sitting position**

The most important minimum requirements for sitting in a chair with a table in school and at home:

However, if a book shelf is fitted, there must be sufficient clearance between the thigh and book board.

There must be no contact between the underside of the thigh and the seat at its front edge to avoid pressure.

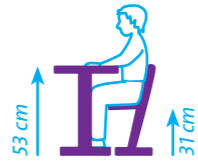
Both feet must fully touch the ground.



**A rough overview guide to seating sizes pursuant to European standard DIN EN 1729**

**Size 2 Violet colour code**

Body height 108-121 cm  
Seat height 31 cm  
Table height 53 cm



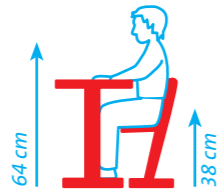
**Size 3 Yellow colour code**

Body height 119-142 cm  
Seat height 35 cm  
Table height 59 cm



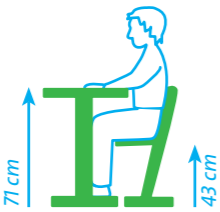
**Size 4 Red colour code**

Body height 133-159 cm  
Seat height 38 cm  
Table height 64 cm



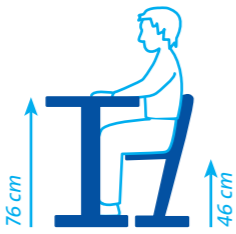
**Size 5 Green colour code**

Body height 146-176.5 cm  
Seat height 43 cm  
Table height 71 cm



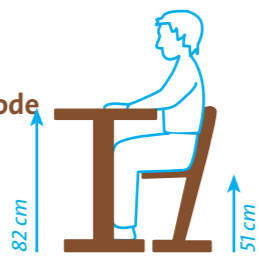
**Size 6 Blue colour code**

Body height 159-188 cm  
Seat height 46 cm  
Table height 76 cm



**Size 7 Brown colour code**

Body height 174-207 cm  
Seat height 51 cm  
Table height 82 cm



**Lighting**

Light must come from the direction in which the nib is pointing (for right-handed students from the left and for left-handed students from the right). Glaring light is blinding and strenuous on the eyes.

The notebook must be tilted towards the left (approx. 30 degrees) for right-handed students and slightly towards the right (approx. 15 degrees) for left-handed students. Children should be sitting in such a way that their writing arms do not come into contact with each other so that they are not obstructed during writing.



**3.3 Laterality (right/left-handedness)**

Laterality is another important factor in the learning-to-write process. Laterality is clearly visible in most children when they start school. They prefer one side of their body for most activities. For example, a child always paints using the same hand, uses the same hand to cut with scissors, kicks a football using the same foot, looks through a keyhole using the same eye and listens on the telephone using the same ear. The right-hand side is dominant in about 80% of children, the left-hand side is dominant for about 10% of children, and another approx. 10% of children are ambidextrous. Laterality or sidedness usually develops automatically in the first few years of life. When the senses describe above (see chapter 3.1) develop well due to sufficient movement and stimuli from the environment, and when those senses work well together, both sides of the brain work well together, too. Certain functions then develop in one half of the brain and other functions in the other half of the brain. The specialisation of a function on one side of the brain is called sidedness or laterality. Functional specialisation is important because a function cannot develop equally well on both sides of the brain.

**Problems in the learning-to-write process due to imbalanced laterality**

When learning to write, children can develop problems if laterality is not well developed. A child then paints e.g. alternately using different hands or cuts with scissors using the left and then the right hand. Even if the child changes hands during writing exercises, dexterous function cannot develop at the same time for both hands.

When lateralisation is postponed or impaired, children can have problems with perception and telling the difference between left and right. They cannot properly perceive the location and position of their bodies in relation to their environments and therefore have difficulties with spatially perceiving the location of objects. They have problems writing from left to right, mix up letters that look similar and do not recognise that mirror writing is incorrect.

With "reversed" left-handed writers, the left half of the body is usually dominant, i.e. they prefer to use the left half of their bodies for motor activities. However, they write using their right hand because they were told that this was the correct writing hand. This "reversal" of the writing

movement function can lead to learning difficulties, but it does not have to be the case. Professional consultation with learning therapists or advisers for left-handedness can provide assistance in this regard on the basis of extensive diagnostics. Ambidextrous children change between using their left and right hand for activities carried out using one hand. They develop laterality during writing and always prefer one hand over the other. They usually do not have any problems learning to write.

*Children who use both hands but are not ambidextrous (i.e. who do not have one clear writing hand) should receive professional help, e.g. from psychologists or learning therapists, because without functional specialisation in the two halves of the brain, it is not possible for a child to develop a "guiding" hand for the learning-to-write process. It is not possible for both halves of the brain to develop with equal specialisation. Children like this have problems either with sensory perception or with processing this perception in the brain. This can only be identified and treated by professionals.*





### Aids and assistance during the learning-to-write process

At school, it is important to take problems that children have with handedness and left-right orientation into consideration. In general, movement games and exercises for all of the senses (cf. chapter 4) can be utilised to help children of all ages to learn and develop.

- The wax pens in the griffix® system take children into consideration who do not yet have a clear writing hand when they start school. The indents in the wax pens are the same shape for the index finger, the thumb and the middle finger, so that the same pen can be held in either the right hand or the left hand.
- This means that children can still change their writing hand when using the wax pen. But they should be required to focus on one hand for the writing exercises.
- When writing with a pencil, ink pen or fountain pen, children must already have decided to use a single writing hand. These writing implements are available in one model for right-handed children and another for left-handed children.
- The indent for the index finger is very different to the indent for the thumb, which clearly defines the tripod grasp as the grasping technique for the preferred side.

If children have problems with left-right orientation, mnemonics can help them to tell the difference between left and right, e.g. a red band on their right hand or a red dot on the right side of their desk. Please note: visual orientation aids in the classroom (e.g. a red piece of paper on the right-hand side of the room) are only helpful if all children have the same view from where they are sitting, e.g. frontal to the board. At the beginning of the first school year, appropriate exercises can be used to determine children's degree of lateralisation. This is how teachers can find out which side of the body children prefer for which activities. The following table provides an overview.

#### Identifying sidedness/laterality

These activities are incorporated into regular everyday lessons so that children can make decisions spontaneously and unconsciously. This does not create a test situation where they think about and want to do something "properly".

Area	Tasks	Left	Right
Eye	Look through the keyhole.		
	Look into the kaleidoscope.		
	Look through this cardboard roll.		
Ear	Is this watch/alarm clock ticking? (Which ear is used to find out?)		
	Come on, let's talk on the phone. (Which ear does the child want to use to listen?)		
Hand	Please open this bottle and pour some of the liquid into the glass.		
	Please pick up the puzzle pieces from the floor.		
	It's your turn to roll the dice.		

### 3.4 The pens in the griffix® learn-to-write system

Choosing a writing implement has a significant influence on the process of learning to write. A writing implement that meets the child's needs should be chosen during the learning-to-write process. Depending on the child's level of development, a suitable writing implement promotes the correct pen hold, control over writing pressure, the development of handedness and the learning of fluid writing movements and good handwriting. With the four-stage griffix® learn-to-write system, all children can be accompanied and assisted in their learning-to-write process from the very beginning and at their respective developmental levels.

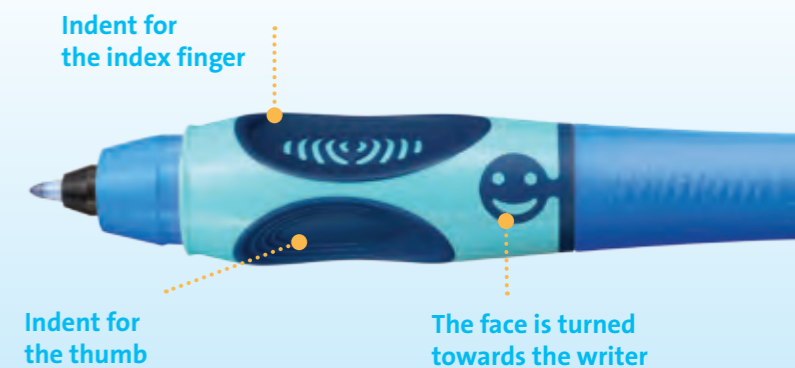
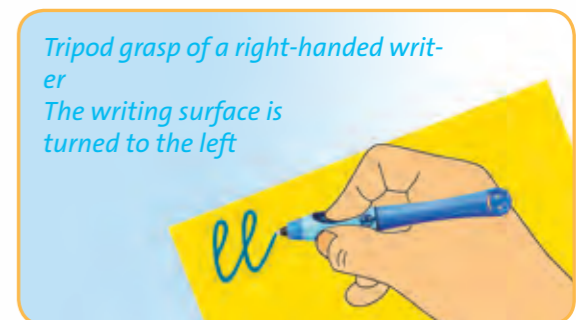
#### Graphomotor requirements for the learning-to-write process

Writing as a motor process (graphomotor skill) involves a range of different factors, such as writing posture, control over and direction of movement, and, above all, grasping technique. In order to learn to write, children have to develop a favourable grasping technique that they can use to hold a writing implement. A good writing implement should facilitate the development of such a grasping technique. A child trains in different grasping techniques from the early days of childhood. Starting with the infant's grasp reflex, these are the palmar grasp, the palmar supinate grasp, the digital pronate grasp, the quadrupod grasp and the tripod grasp.

Writing letters and numerals with a writing implement requires the child to be able to produce small-scale movements (e.g. garlands). These can be created using finger movements.

The best grasping technique for carrying out these small-scale movements by bending and stretching the fingers while resting the palm of the hand is the tripod grasp. The pen is grasped with a slightly bent thumb and the index finger at the same distance from the tip of the pen. The pen lies on the supporting middle finger. This is the best way to carry out the movement using the fingers. Small-scale stroke movements can be controlled very precisely by stretching and bending the fingers in the slightly bent position of the tripod grasp hold.

The writing surface is turned by approx. 30-40 degrees so that the ball of the hand can rest as favourably as possible, allowing the fingers to carry out fluid writing movements.



To help develop the tripod grasp, all pens in Pelikan's griffix® learn-to-write range are equipped with a specially designed grip zone.

### 3.4.1 Learning to write using the wax pens from Pelikan's griffix® learn-to-write system

- Because of the position of their grip zone, the wax pens help children to learn to hold the pen using a tripod grasp early on. But the grip zone is not yet clearly specified for either left or right-handed writers. The wax pen is thus an optimal first writing implement, especially for children who have not yet developed a clear preference in terms of handedness. However, it is still important to encourage children to train a single writing hand when they start school.
- Because they leave behind clearly visible marks, wax pens give children a visual sign of "success" when they use them to write and draw on paper. Differences in the amount of pressure exerted immediately create clearly visible differences on the paper. Marks vary in terms of colour intensity and thickness, depending on the amount of pressure being exerted. It does not matter if children exert too much pressure, as it does not break the wax lead or destroy the paper.



### 3.4.2 Learning to write using the pencils from Pelikan's griffix® learn-to-write system

- The indented grip is optimally geared towards the development of a tripod grasp in variants for both right-handed and left-handed writers.
- Writers see a face that helps them to control the way they hold the pen.
- The distance between the indents and the tip of the pen is consistent in griffix® writing implements, as are the length ratio and the diameter. For this reason, children do not have to change their grip when changing to a different writing implement in the griffix® learn-to-write system.
- Although the grip zone of the pencil is exactly the same size as in all writing implements in the griffix® learn-to-write system, it has a 2 mm-thick lead that writes like a conventional pencil.
- The hardness (HB) and abrasion of the beginner's lead has been developed for children's writing and leaves behind clear marks on the paper. The leads can be replaced. The strokes are easy to erase.



### 3.4.3 Learning to write using the ink pen from Pelikan's griffix® learn-to-write system

- The distance between the indents and the tip of the pen is consistent in griffix® writing implements, as are the length ratio and the diameter. For this reason, children do not have to change their grip when changing to a different writing implement in the griffix® learn-to-write system.
- The fibre tip provides more resistance than ballpoint pens when writing on the paper. This prevents the writing from being "thrown off course".
- The technology in the lead guarantees a flow of ink that facilitates fluid writing movements. The leads can be replaced.
- The child can compensate for the amount of pressure exerted to a certain degree.
- The ink pen is the best possible way to transition from writing with a pencil to writing with a fountain pen. The "only" thing that is new compared with the pencil is the flow of ink.
- The ink pen is optimally suitable as an ideal alternative to the fountain pen if a child has motor problems. The ink can be erased.



### 3.4.4 Learning to write using the fountain pen from Pelikan's griffix® learn-to-write system

- The distance between the indents and the tip of the pen is consistent in griffix® writing implements, as are the length ratio and the diameter. For this reason, children do not have to change their grip when changing to a different writing implement in the griffix® learn-to-write system.
- The grip profile is at an optimal angle to the nib. If a child holds the fountain pen using a tripod grasp, the nib is always at the proper angle.
- The nib provides optimal frictional resistance, which ensures fluid writing, but also provides enough resistance to stop the writing from being thrown off course.
- The fountain pen encourages slow, properly shaped writing at the start of the learning process, and the writing speed can subsequently be increased. Cartridges are refilled in the familiar, simple way.



## 4. Exercises and opportunities to observe perception

Daily activity time is one component of beginner's lessons. Movement crucially improves children's ability to concentrate and learn. Games are one important element of this. Games help children to perceive their bodies and to feel their muscles. Certain games can be used as both exercises and as opportunities to observe. While conducting games, teachers can ascertain children's level of development and diagnose developmental problems in each field of perception.

### 4.1 Tactile perception

#### Feeling bowl

*Feeling things out.*

A large bowl (five litres) is filled with grains or rice.

**Activity**

Small objects (marbles, Lego blocks, shells, chestnuts, nuts, wooden letters...) are hidden in the grains or rice and are felt out by the children.

**Comments**

- Feeling with both hands, children can also volunteer to be blindfolded so that they can completely concentrate on touching.
- Fosters cognitive and linguistic skills (conceptualisation)



#### Touch memory

Different materials, e.g. fur, fabric, leather, foam, buttons, nails, beans etc. are stuck onto two strips of cardboard or metal jar lids.

**Activity**

Children identify which cardboard strips or metal lids are the same while playing with a partner.

**Comments**

- A blindfold must be used.
- Partner work with immediate feedback and assistance if needed.
- This memory game can also be prepared gradually as a joint activity for the class. The sticking surfaces and a glue stick are always at the ready.

#### Tactile telephone

All of the children sit behind each other in a row. They must be able to easily reach the back of the person in front of them.

**Activity**

The last child in the row draws something on the back of the child in front of them with their finger (circle, square, triangle, tree, letter).

The symbol is drawn on the back of each child sitting in front of the last. The child sitting at the very front draws the symbol that was drawn on his or her back onto a piece of paper.

The first child walks to the back and draws a new symbol on the back of the child in front.

**Comments**

- Close corporeal proximity is tolerated playfully.
- The game trains children to focus on a stimulus.

#### Spiky ball

*Passive touch.*

Two children work together using a spiky ball. One child lies on the floor on his or her stomach (or back) with his or her eyes closed.

**Activity**

The partner places the spiky ball on various body parts and applies slight pressure. Each time, the other child localises the body part in question. After a while (e.g. after two minutes), the partners change.

**Comments**

- Depending on the pressure applied, being touched with the spiky ball is perceived as tickly or as pressure.
- Children identify and respect personal boundaries.
- They expect and consciously perceive stimuli.



#### Balancing

*Sense of balance*

A thick rope lies in a bow-shape on the floor. (alternatively in a line)

**Activity**

Children place one foot in front of the other and walk the length of the rope. They can balance a wheat bag on their head or hold a glass of water so that they have to touch blindly with their feet.

**Comments**

- Going barefoot develops tactile perception in particular using the soles of the feet.



## 4.2 Visual perception

### Acting out figures/letters

*Perception of spatial location.*

Cards with numbers or letters on them. Acting them out using the body.

**Activity**

Four children hold cards and then act these out with their bodies as a group by lying down on the floor.

**Comments**

- Children perceive the position of their own bodies within a space  
in relation to the bodies of the other children.
- They have to recognise and present figures (letters) using gross motor skills.
- The members of the group must consult with one another.

**E H K L M N O S T W X Y Z**



### Recognising shapes

*Vision.*

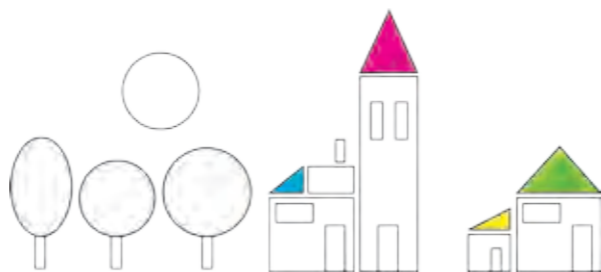
Worksheets with objects and shapes in various shapes, sizes and locations.

**Activity**

Children colour in e.g. the triangles onto this image.

**Comments**

- Visual differentiation
- Children perceive shape constancy, i.e. that the properties of an object can vary in size, shape and arrangement.



### Continuing sequences

*Vision.*

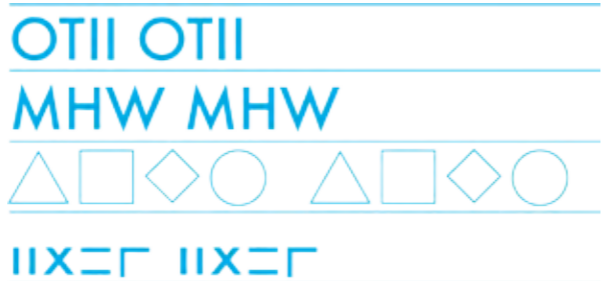
Worksheets with templates with sequences of different figures, letters...

**Activity**

Children recognise and continue the arrangement of drawn sequences.

**Comments**

- Children recognise and continue a serial pattern.
- This game trains visual differentiation



## 4.3 Auditory perception

### Hearing memory

Two small jars are each filled with the same contents, e.g. rice, peas, stones, nuts, nails, paper clips...

**Activity**

Working with a partner, children identify matching pairs of sound jars.

**Comments**

- Partner work with immediate feedback and assistance if needed.
- A blindfold can be used to help children to concentrate more intensely.

### Hearing puzzle games

*Hearing directions and distances.*

With their eyes closed, children point out the source of a sound, e.g. a ringing alarm or a bell, or go to the source of the sound.

**Activity**

*Duration of sound*

Children listen precisely to the duration of a sound, e.g. a triangle or a bell, and can convey this information by raising a hand.

*Rhythmic differentiation and auditory memory*

Children "clap" a rhythm as quietly as possible into the hand of the child sitting next to them. This rhythm is passed from child to child.

*Auditory figure-ground perception*

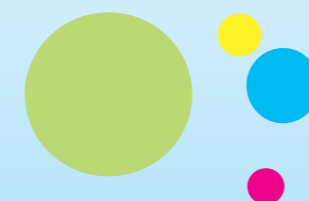
Children wander through the room, each of them holding a sound jar from the hearing memory game, and try to find the right partner.

*Auditory seriality and auditory memory*

With their eyes closed, children listen to three to five different sounds, e.g. striking a match, blowing out a match, pouring water or scrunching up paper. Afterwards, they name the sounds in the correct order.

**Comments**

- Recognising/differentiating between sounds
- Identifying sounds from a sequence of sounds
- Registering and reproducing rhythms



#### 4.4 Body perception

##### Tipping over, pouring out, using a spoon

*Hand-eye coordination, hand and finger skills, application of strength*

In front of the child there is a jar with buttons in it and an empty bottle on the left and right respectively.

**Activity**

Children take buttons of different sizes from one vessel and place them in the other. Children usually grasp the small objects using their thumb and index finger (quadrupod grasp). If a child has difficulties doing this, the teacher should demonstrate the exercise using the correct grasping technique. Mastering the quadrupod grasp is an important prerequisite for grasping a writing implement using a tripod grasp (see chapter 3.4).

**Comments**

- This activity trains hand-eye coordination.
- Training fine motor skills requires strength to be applied deliberately.



##### Variation

In order to specifically practice the tripod grasp, a spoon can be used as an aid to fill rice or grains from one vessel into another. Children usually automatically hold a spoon in a tripod grasp (using their thumb, index finger and middle finger). If this is not the case, it is more helpful for the child to practice the quadrupod grasp without using an aid to begin with. Moreover, exercises from chapter 5 should be used to sensitise fine motor skills.

### 5. Supplementary exercises that help children to learn to write

**Artistic work**

As preparation for learning written characters, strength and hand and finger motion can be trained and fostered using different tools.

This means that teachers can address and compensate for any delays in the development of fine motor skills individually. Alongside hand-eye coordination, artistic work also trains creativity and imagination, and helps children to understand tasks. The integrative, interdisciplinary beginner's lessons provide ample opportunities for children to work on topics creatively.

#### 5.1 Moulding and sculpting

Moulding and sculpting (clay, salt dough, clay and modelling clay) are important exercises. This provides focused training to the muscles in both hands and the lower arms and also develops fingertip feeling and a sense for proportions and shapes. Working deliberately like this requires children to consistently coordinate the finger and hand movements that are also necessary for writing. Sculpting is an activity that should be picked up on again and again in lessons in order to train children's growing hands.

- Animals
- Different types of fruit and vegetables – and a basket to go with them
- Hedgehog (make its spines out of toothpicks or matches)
- Snails
- Letters



**Topic suggestions:**

#### 5.2 Drawing and painting

Drawing and painting are of central importance throughout lessons, and not just because they develop the gross and fine motor skills described above and provide ensuing benefits for the learning-to-write process.

Drawing and painting are also a means for children to manage conflicts. They process experiences that they have had. This is why **free creative work** is especially important.

But children also want prompts for artistic activities. These topics should originate in the child's realms of experience and areas of interest.

**Example: "Monday stories"**

On Monday mornings, all children draw a picture of one of their weekend experiences in their "Monday stories notebook".

**Painting and drawing techniques:**

**Finger painting**

- An especially haptic experience due to the consistency of the material
- Painting on different surfaces
- Painting with both hands trains the integration of the left and right halves of the brain

**Finger painting to music**

(without a set topic)

This is a relaxation technique that is intended to relieve tension and relax children by getting them to play experimentally and come into direct contact with colour. This works best with large formats (using two hands) on the floor – where it is also possible to ascertain children's dominant sides.



**Painting using opaque paints**

- Opaque colour application (e.g. animal motifs)
- Wet-on-wet on damp paper (e.g. for the background of an aquarium – and then place several large and small fish over it)

**Drawing and colouring-in using felt-tip pens**

is as popular amongst children as ever, because they can spontaneously get going without having to make technical preparations and can use the pens to make detailed drawings. Nothing shines more beautifully than the ink of a felt-tip pen.

*Examples:*

Drawing people on the street, at the swimming pool, doing exercises or in scenes from a story or a fairy tale.

**Drawing using wax pens and coloured pencils**

Indispensable materials for primary education – also suited to larger formats (wallpaper, packaging paper)

*Partner work example:*

One child lies on the floor on the reverse side of a strip of wallpaper and the partner traces his or her shape. The child then stands up and draws him or herself (self-perception) or his or her partner (exact vision/perception of the other).

**5.3 Other techniques**

**Diverse printing techniques**

Potato printing, materials printing, finger printing, print-monotype

*Example:*

Printing letters or birthday cards, also motivating children to write at the same time.

**Collages/decals**

Usually combining different materials (diverse range of printed and unprinted paper types, fabric scraps etc.). Children practice basic techniques such as cutting, tearing and gluing, and gain experience with materials.

*Example:*

Shop window of a toy shop or a pet shop – in addition, cutting out and sticking on motifs from magazines or catalogues. Or creating pictures from colourful tissue paper (flowers, sheep, blooming apple or cherry trees). Collages are optimal for partner and group work.

**Folding/cutting**

(fosters a sense of proportion and helps children to work precisely)

*Examples for folding work:*

- Colourfully painting a hat or painter's cap made out of newspaper
- Ship, swallow, windmill
- Fan, accordion, moving dragon
- Beaker (dexterity game)
- Figures made from paper springs

Using a piece of paper folded as a zigzag, the (half) figure is only torn or cut once.



**6. Learning-to-write methods**

**6.1 Graphomotor exercises**

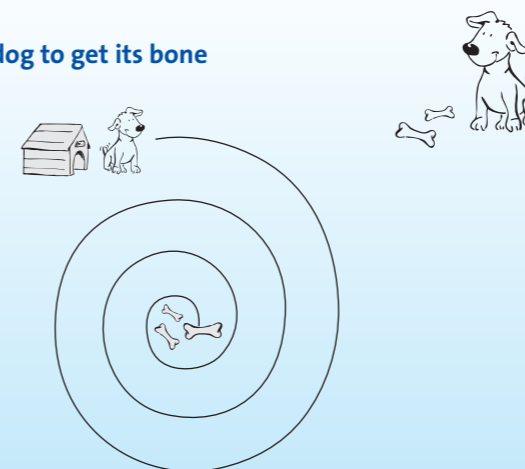
Writing letters requires complicated finger and hand movements, the precise coordination of these movements and visual control using the eyes. This is why it must be preceded by graphomotor exercises that accompany the learning-to-write process. A programme of exercises like this specifically fosters the abilities that are required to write first letters and words.

The exercises consist of the graphic shapes that comprise our alphabet. Children trace, copy, vary and connect up strokes and target points, arcades and circles. It is important that children use the right pen to begin with so that they can train a proper, relaxed writing posture.

As we can see from the exercise examples on page 44, it is important that each of the elements is worked out in a sensory context, keeping children motivated.

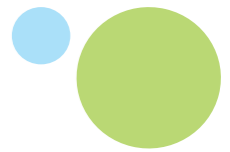


**Help the dog to get its bone**



**Take the aeroplane to the airport**





**Directional line** **The straight line**

Straight vertical, horizontal and diagonal lines appear most frequently in print script. But even in cursive writing, “diagonal lines” in the form of upstrokes and downstrokes are important.

Many beginner writers find it difficult to position straight lines within the limits of lined paper.

**Example exercises:**

- It’s raining
- Flower stalks
- Bristles on the broom
- Spines on a hedgehog



**Upward arch** **The arcade**

This writing motion is usually more difficult for beginners than the garland. Because children misshape these lines very frequently, arcade exercises are indispensable and should be observed attentively. Semi-ovals and semi-circles turned to the right are also a kind of arcade.

**Example exercises:**

- Children throwing a ball to one another
- Bridge arches
- Painting patterns
- Jumping over objects



**Directional line** **The zigzag**

The zigzag counteracts misshapen writing. This is why numerous letter shapes – e.g. in simplified beginner’s script and sometimes in school beginner’s script as well – are “zigzagged”.

**Example exercises:**

- Continuing to draw a fence
- Continuing patterns (with dots as limits)
- Pointed hat for gnomes
- Ice-cream cones
- Completing or tracing a stick figure



**Upward and downward loops** **The loop**

Loops are special shapes that are formed out of the counter-movement to garlands and arcades.

**Example exercises:**

- Skating loop
- Loop on a kite string
- Smoke from the chimney
- A poodle’s fur, a sheep’s coat...



**The circle**

The full circle and semi-ovals and semi-circles turned to the left appear in writing as movement-friendly shapes – see the garland. (By contrast, the half-oval turned to the right is a lot more difficult for beginning writers – see arcade.)

The S-shape is relatively challenging. It comprises a left-turned semi-circle and a right-turned semi-circle attached directly to it. Important: even in preliminary exercises, children must make sure that they begin their circle shapes at the top.

**Example exercises:**

- Eggs
- Balloons
- Circles, e.g. as decorative patterns
- Pearls on a string



**Downward arch** **The garland**

The best way to understand the garland is rhythmically – this applies to both left and right-handed children. It has the largest proportion of movement in the beginner’s cursive scripts as well as in most adult handwriting.

Students often tend to accelerate when writing the movement-friendly garland, which is often to the detriment of its shape.

**Example exercises:**

- Roof tiles
- Fish scales
- Garlands
- Ocean waves



**6.2 Introducing a letter**

Children come to school with different written language skills, and many can already print their own names. Beginner lessons build upon these skills, provide children with guidance and challenge them to construct and write down “their own words” with the help of an initial sound chart. Children train these skills when they compose their own texts.

They also work out letters together and learn them as phonemes and signs. Being able to work out how a sign (grapheme) matches up with a sound (phoneme) is an important basis for learning rule-based spelling and orthog-

raphy. If children can tell the difference between each of the phonemes in a word and match them with their respective graphemes, up to 50% of all words can be spelt correctly, as they are phonetic. It is therefore extremely important for children learning to write to concentrate on working out each individual letter parallel to the work they do using an initial sound chart.

**Method for learning new letters**  
(frontal instruction)

- Analysing a letter from a linguistic passage as a whole, reading a word, understanding its meaning
- Slowly pronouncing a word, visual and acoustic division into individual letters, grapheme-phoneme conversion.
- Analysing the new letter, experiencing its articulation and feeling it out using the lips, mouth and throat
- As a support, it can be helpful to introduce a phonetic gesture for every grapheme-phoneme conversion. This makes analysis and synthesis easier and therefore facilitates the alphabetic strategy in the reading and writing process as well.

**Method for practising correct spelling**  
(frontal instruction)

- Tracing the letters on the board and getting the children to write the words in the air.
- Tracing the letters on the board and then getting the children to copy them using different colours and in different sizes.
- Using **griffix**® wax pens to write on an A3 drawing block in different sizes

Only once writing technique has been thoroughly memorised and automatized does it make sense to write on lined paper.



### Copying as a work technique

The keywords in the reading unit only contain familiar letters. This means that children can memorise and practise words and sentences.

Copying must be taught and learned and regularly repeated! (Introduction and repetitive reminder in frontal instruction)

- Reading the word
- Observing and memorising writing difficulties, writing in the air
- Writing the word and pronouncing it quietly and slowly (pilot language)
- Self-control: children compare each letter in the template with their own writing. Using this method, children's writing confidence and speed improve (at the end).

### Further information:

The degree to which a child can analyse a phoneme and match it with a grapheme confidently can be ascertained using the diagnostics of the Hamburg Rechtschreibprobe (Spelling Test, HSP). The HSP shows to what extent a child has mastered what is referred to as the alphabetic strategy.

### To supplement and intensively foster this, correct spelling and orthography can be practised in learning stations:

- Modelling the letter in clay
- Writing in the sand
- Tracing sandpaper letters
- Making letters out of thick wool
- Feeling out and recognising wooden letters



## 6.3 Transition to cursive script

The point at which children are able to learn a cursive script depends on the level to which each child's fine motor skills have developed.

Studies have shown:

*The learning-to-write process is not made more difficult by learning print, but rather by the beginner's script that is learned afterwards.*

*The later a cursive writing unit is introduced, the less misshapen the writing.*

*This transition is made more difficult when the shapes of the cursive letters are unlike the existing print shapes, and when complicated additional connections have to be practised.*

*The worst handwriting results were in classes where little time was invested in learning the cursive beginner's script.*

### Point in time for the transition

The results of studies have shown that a writing unit in one of the beginner's scripts should only be introduced once children can write print letters automatically and without visual control, and can concentrate on spelling, orthography and the content side of writing.

As we know from insights from neuropsychology, each consciously controlled movement places intense demands on our brain.

Writing movements must proceed automatically, so that the writer's brain can concentrate on content and learn new things. Children with physical challenges related to movement in particular require consistent support to achieve this.

The learning phase is shaped by

- demonstration
- intensive practice (rich in variety)
- precise observation of each student
- individual correction by the teacher

Once the children in a year have mastered printing, a cursive writing unit can be introduced for everybody.

On the other hand, children who are highly advanced in terms of their fine motor skills and can print effortlessly should be provided with the opportunity to start learning cursive script.

One potential choice for this is simplified beginner's script (see chapter 2).

With instruction, these children can learn the new movement shapes and connections in small groups and practice them during free phases (see also chapter 6.2).





Children with motor difficulties should be allowed to continue using print for their handwriting. They must be provided with individual assistance so that, with time, they can develop their own personal handwriting style from print script.

In all methods, it is important that it is not left up to the children to learn the shapes of letters and connections by themselves using templates. Falsely ingrained movements prevent the development of a clear handwriting style with economical movements.

Things that have been learned incorrectly and then automated can only be corrected with great difficulty!

**The graphomotor principle**

When practising cursive script, it is important to show children strict patterns of movement. This is why teacher-centric lessons are the focus at the beginning (see chapter 6.2).

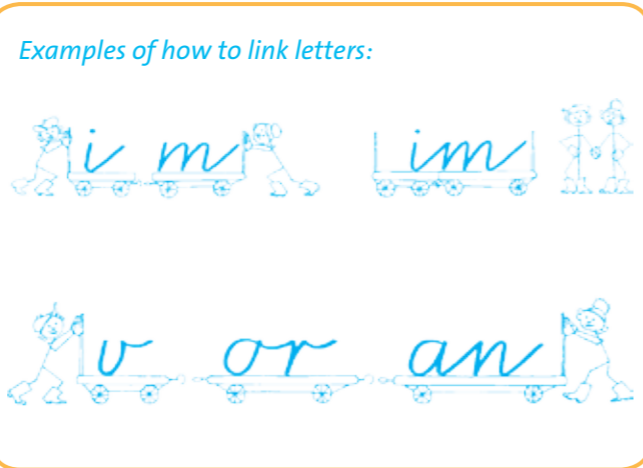
Letters with the same or similar shapes are compiled into practice activities.

In this way, movement patterns can be developed by repeating the same graphic elements. When e.g. the small *i* is presented, the small *m* then becomes an option. Both have the circle and the same connecting stroke as their basic shape.

Practice activities depend on the choice of beginner's script. Each of the three beginner's scripts require a different methodological procedure! (Characteristics and features of the three beginner's scripts are described in chapter 2.)

Unlike the two other beginner's scripts, the letters in simplified beginner's script only consist of the bodies of the letters (frequently identical to those in print script) and the extended connecting stroke, which is part of the letter. In this way, the letters in simplified beginner's script can be linked as in a modular system, because they always begin and end on the upper edge of the middle line.

This creates natural "pauses". The script can be rhythmised. No pauses are made when writing letters with ascenders (b, f, h, l, t)!



Because the transition from print to simplified beginner's script is the most simple, children are often not given enough time to practice. However, we must warn against (see chapter 6.3 – research results) failing to provide simplified beginner's script learners with enough time to practice and leaving it up to them too early, which results in poor simplified beginner's handwriting.

Significantly more time is required to learn the other two beginner's scripts.

The connections in school beginner's script and Latin beginner's script are significantly more difficult, because the start and end of each letter are different. For this reason, in these two beginner's scripts, alongside the individual letters, children must additionally practice the ligatures.

School beginner's script, for example, requires three kinds of connections.

1. One-stroke connections from the baseline



2. Connections placed on the baseline



3. One-stroke connections at the upper edge of the middle line



Latin beginner's script has connections that are similarly complicated to those in school beginner's script.

**Learning steps when introducing cursive script letters**

- Comparison of print letters with cursive script letters – observe slanted positioning.
- Varied practice of the new direction of movement.

It is not easy for children to stay on the baseline at first, as they are accustomed to print. Letters that have been written on unlined paper in pencil are suitable for this (no hollow forms), which children can repeatedly overwrite using griffix® wax pens. Here it is mainly about learning how to assume a relaxed hand position and not so much about precision.

- Writing letters on suitable lined paper using the griffix® pencil (first with a larger middle line, then getting smaller)
- Composing small words out of letters
- Observing children and offering them individual assistance

Teachers usually use the writing unit offered by the workbook they are using to teach children to write. For time reasons, this is understandable, although it is not necessary.

There are good materials outside of workbooks that are suitable and motivating. However, all materials should be subjected to a critical analysis.

Cursive script places increased demands on the hand's fine motor skills. Unlike print, in which the pen is lifted after every letter, the pen must "glide" into connections. It must be held well in the hand and have a lead that meets these demands.

The griffix® pencil lends itself to this purpose. If children can write connections confidently, the griffix® ink pen can also be used. You will find more information at: [www.griffix.de](http://www.griffix.de)

**6.3 Exemplary function of the teacher's handwriting**

It should go without saying that teachers themselves need to be proficient in the script that their students are learning and writing, and that they need to use it for writing on the board, worksheets, notes for children etc. in their lessons.

The teacher's handwriting has an exemplary function and a significant effect on how successfully children learn to write.

In simplified beginner's script, the following shape groups are compiled into practice activities.

MM	AMNA
UU	UVWY iuovy
MM	nmrp
CC	CGOQ co adgq
llll	elb h k f
yyy	g j y g j y
TL	TFHKXx
LC	LZ z JSs
IDC	DPBR ßE

## 7. Aids for writing lessons

Writing is a multifaceted process and comprises more than just learning a script. In particular, initial lessons have undergone changes due to advanced approaches in writing didactics. Traditional writing lessons – additive and systematically structured – have been extended, even partially replaced by what is referred to as the “language experience approach”, where the communicative aspect of writing, that is, meaningful writing, is the focus from the very beginning.

However, teachers should not neglect the aesthetic and standard-based elements of script. Particularly during their first years at school, children require a good introduction to learning script as well as suitable materials. In terms of teaching methods, these activities require a high level of differentiation, because writing output shows personal characteristics from the beginning. Pelikan provides a wide selection of materials that it supplements with new developments on the internet, which are therefore available to you around the clock.

### 7.1 Handwriting training and the Fountain Pen License®

For the different phases in the learning-to-write process, Pelikan’s griffix® writing files offer exercises that have been tried and tested in lessons as well as suitable materials. These files can be downloaded as templates free of charge at [www.pelikan-lehrerinfo.de](http://www.pelikan-lehrerinfo.de). Depending on your topic, each of the files can be used in lessons to help children to develop easily legible, fluid, individual handwriting. The four writing files for the griffix® learn-to-write system provide a foundation that deals with everything from the introduction of print script, right up to writing using a fountain pen. At the heart of the writing files are exercises using the wax pen, the pencil, the ink pen and the fountain pen. After introducing the fountain pen and at the end of the learning-to-write phase, students can acquire the Fountain Pen License®,

which deals with the skills they have gained up to that point once again in a playful way.

#### Supplementary exercises that help children to learn to write

As an addition to our classic writing files, we provide supplementary exercises that help children to learn to write. The guiding insight here is that writing requires complicated finger and hand movements, and fine coordination between these movements and visual control using the eyes (see chapters 4 and 5). This includes artistic activities that use different materials, such as sculpting and modelling, cutting out shapes and tearing small pieces of paper. In these exercises, children not only gain basic techniques and experience using materials, but also train the way they understand tasks and coordinate their eye and hand muscles, and muscles in general.

Moreover, gluing using Pelikan’s multi-purpose children’s glue is important, as children can use it to practise exerting even pressure on their tool. Drawing using wax drawing pens particularly supports the development of finger muscles, as well as gross and fine motor skills, that is, proficiencies that must be well trained when learning to write and when writing.



More information including download at: [www.pelikan.com/fueller-fuehrerschein](http://www.pelikan.com/fueller-fuehrerschein)

### 7.2 Script posters

Our A1 script posters for lessons have stood the test of time.

These decorative writing templates can be ordered from Pelikan free of charge. They provide students with a constant, reliable overview of each of the letters during lessons.



### 7.3 Test samples in the Pelikan teacher shop

In the Pelikan teacher shop at [www.pelikan-lehrerinfo.de](http://www.pelikan-lehrerinfo.de)

you have the opportunity to order Pelikan test samples at a trial price.

### 7.4 Self-organised learning

#### A participative project

Of course, “self-organised learning” as a mode of working is nothing new for educators. For a number of years now, there has also been a lot of demand for this kind of learning from parents. It is not by accident that lessons are opening up at many primary schools and that special modes of learning are taking shape.

Dr Maiko Kahler, who has been advising Pelikan on education for many years, has now been practising this mode of learning for a number of years with his primary school classes in Hanover. Time and time again, he encounters questions and statements from both parents and colleagues such as:

- Does it actually work?
- I guarantee that it won’t work with my class.
- Great, I have to try it out!

The information sheet on the topic of “self-organised learning” picks up on some of these questions. However, it can and should only be used as food for thought. Of course, you do not have to throw everything you have learned “overboard”, but it could perhaps be an incentive for you to try out in a project whether this mode of working could be something for you and your pupils too.



Lettering/personal book – year 1  
Children wrote their own books after seeing a play. The children modified the story in line with their imaginations, but the key message remained the same. The play is about the love of a mute girl for a wild animal.



More information including downloads at: [www.pelikan.com/selbstorganisiertes-lernen](http://www.pelikan.com/selbstorganisiertes-lernen)

## 7.5 Computer scripts/computer learning aids

The use of computers to prepare lessons has become indispensable, especially in beginner's lessons. Writing beginner's scripts quickly and perfectly, professionally generating worksheets and creating (blank) lined writing paper in the blink of an eye is no longer a problem. Bold, large-format letters can be designed and printed out in a flash. Popular software is available for both Windows and Mac. This range of programmes is becoming more comprehensive, more differentiated and more convenient every day.

Pelikan has had simplified beginner's script on offer as a free computer programme since 1995. This computer script has been continuously adapted to meet the requirements of current operating systems and has been expanded with the addition of numerous other types of script.

### Picturalis® initial sound lettering

With Picturalis®, its initial sound lettering for beginners' lessons, Pelikan provides teachers with the opportunity to help children effectively on their journey towards developing their handwriting. This computer script can be used both to create worksheets and as a laminated image template for use in lessons.



More information including download at:  
[www.pelikan.com/gestalten-mit-schrift](http://www.pelikan.com/gestalten-mit-schrift)

### Script download

The following scripts are available on the internet free of charge:

- Bavarian and Hamburg print scripts (each as a script sample)

**Druckschrift Hamburg 1234567890**

**Druckschrift Bayern 1234567890**

- Simplified beginner's script

*Vereinfachte Ausgangsschrift*

- School beginner's script

*Schulausgangsschrift*

- Latin beginner's script

*Lateinische Ausgangsschrift*

- Picturalis® initial sound lettering



- Sütterlin

*Sütterlin*

- Basic script

*Grundschrift*



More information including download at:  
[www.pelikan.com/schriften](http://www.pelikan.com/schriften)

Lined scripts and basic script are made available by the company Will Software ([www.will-software.de](http://www.will-software.de)).



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## Notes




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# It's the **beginning** that matters.



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