

Handwriting

- there's far more to it than we think

*Q: My son's teacher says he has a problem with handwriting.
Are there any exercises you can recommend that will help with this?*



A: In order to help you, I need to first explain something of how handwriting develops as a skill.

Handwriting is a highly complex task, involving far more than just motor skills; and we need to be able to understand what goes into performing such a task, in order to understand what has gone wrong when a child is struggling. Handwriting is a highly refined and sophisticated task because it utilises many different areas of performance.

We have all probably heard of [motor skills](#) and we may know that there are two general types:

- Gross motor - where we perform large or gross movements, and



- Fine motor, where we have refined our gross motor performance and can perform smaller or finer motor tasks.

Handwriting is seen to be a fine motor skill; however, viewing it as **only** a motor skill is quite limiting.

All performance begins with [perception](#). If there was nothing here to see or experience, we would have nothing to respond to. All action is performed because of something being perceived, which we respond to. That action, in turn, changes what is before us ie: what we are perceiving. A deep and intimate relationship exists between perception and performance, with both utilising the exact same skills, abilities and processes, just reciprocally.

At the core of both perception and performance is our ability to form [inter-relationships](#) (connect the dots) between pieces of [sensory information](#). On one hand we are receiving vast amounts of sensory information and, through the process of perception, and forming meaningful patterns within that information, which we perceive as objects or things. On the other hand, we are generating patterns of performance in response to what we are perceiving. This also requires us to 'connect the dots' in order to generate that performance.



When there is a breakdown in perceptual performance, sensory information will be left out of what is being perceived.¹ And, any performance generated will have the same information missing. This is why it is possible to look at what someone is doing and see where their perception has broken down.

The infinity symbol is an excellent representation of the ongoing flow of movement between perception and performance



¹ There is a whole dynamic around what happens when we are unable to account for all sensory information available to us and how it causes sensory overload. I cover this in the section on sensory overload in the article Understanding & Treating Concussion



When we talk about refining or improving upon performance (perceptual and task performance), we are referring to the refining of the inter-relationships, which exist within patterns of information and perceptual performance. Ultimately, we need to have a substantial number of ways in which we can relate new information to what we have already integrated and continue to improve upon the inter-relationships, which already exist between information we have previously integrated. The more we can do this, the clearer our perception becomes, and more efficient our task performance becomes. It also allows us to deal with increasing amounts of sensory information.

Therefore, when we are talking about a highly refined and sophisticated task, such as handwriting, we are talking about a task that requires a high level of information processing and integration, and a comparable level of task performance, in order to even consider performing such a task.

Handwriting requires such a high level of refined performance (perceptual and task) that I often say the child is struggling long before they ever picked up a pencil; and I say this because the breakdown in their performance is typically occurring in their ability to form inter-relationships, which, means that their capacity to process and integrate sensory information is not functional.

The formation of inter-relationships is not only critical in processing and integrating sensory information, it is also critical in forming concepts, turning those concepts into language, generating written language from spoken language, and forming motor patterns necessary to write those concepts down. So many of these children have difficulty in forming concepts in the first instance and their spoken language tends to demonstrate this so very clearly.

Handwriting also has a very strong clear visual component. When children first learning to write, they do so by copying letters and words and, when we apply what we know about the relationship of perception to performance, we know that if a child is missing information because of a visual perceptual deficit, then

- A. They won't be able to connect the dots and make sense of what they are perceiving

I cannot stress enough that all performance arises from the exact same place – perceptual performance – and that everything we do requires the exact same skill base. It is how this is expressed, through variety of different tasks we perform and the ways in which we behave, which make it seem as though we have various distinct and different skill bases. It really doesn't matter if we are performing a motor task, a psychological task, a cognitive task, or whatever; at its heart is our perceptual performance, specifically our visual perceptual performance. I tend to refer to those appearances of distinct and different neurological, cognitive, physiological, psychological, social and emotional performance, as things that exist on the surface of the pond, where, if we want to see where it is all arising from, we actually need to dive beneath the surface and look.

- B. This will show up in their performance of the task – they will struggle to some degree or other.
- C. It will seem that handwriting is the issue but it is not.



Below is a breakdown of just a few things involved in writing:

- Conceptualise our experience
 - ie: break that experience down into pieces or ideas and convey them to others, whilst explaining how each concept relates to all others.
- Understand the relationship of receptive language to expressive
 - ie: understanding (comprehending what we hear) and being able to express this verbally - expressing this in written form will only ever add yet another layer of complexity to this.
 - Being able to relate what others have conveyed about their experiences to our own experiences.
- Use symbols (letters and words) to convey our experiences to others
 - This is an extraordinarily complex and refined thing to be able to do. We have to understand our world and our experience, understand language and relate all of this throughout all areas of perceptual performance. We then need to be able to construct those symbols and relate them to everything else.
- Position ourselves relative to the task, position the pencil on the page, and construct the symbols relative to the lines on the page and to each other and to the edges of the page.

A B C D E F G
H I J K L M N
O P Q R S T U
V 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 x y z
1 2 3 4 5 6 7 8 9 0



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*With that, I would like to welcome you to my world,
the world of visual perceptual performance*

