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Hand Therapy in Nursery and Primary Settings:
Theory, Activities and Session Plans
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HT07

Hand Therapy Glossary

25 key terms explained in plain language

Use this glossary in conversations with parents, in observation notes and when planning sessions.
Terms are listed in order of relevance to the programme.

GLOSSARY TABLE

Term	What does it mean?	Why does it matter?
Proximal-to-distal law	Motor development proceeds from the body's centre (trunk) outwards to the periphery (fingers).	You cannot effectively train the fingers if the trunk is unstable.
Cephalocaudal law	Development proceeds from head downwards (head → neck → trunk → legs).	Explains why head control matures before leg control.
Ulnar-to-radial law	Hand development proceeds from the little finger side towards the thumb.	This is why a cylindrical grasp (whole hand) appears before a pincer grip (two fingers).
Biokinematic chain	The movement sequence: trunk → shoulder → elbow → wrist → fingers.	Blocking one link affects the entire chain.
Postural stability	The ability to maintain a stable body position (trunk) during limb movement.	Key principle: 'Without a stable body, there is no stable hand.'
Shoulder girdle	The group of bones, muscles and joints connecting the arm to the trunk.	Must be both mobile and strong for the hand to move freely.
Finger dissociation	The ability to move each finger independently.	A prerequisite for a mature pencil grip (3 fingers work, 2 stabilise).
Hypotonia	Low muscle tone (muscles too relaxed at rest).	Pupil may appear to 'melt' onto the desk, tires quickly, holds the pencil loosely.
Hypertonia	High muscle tone (muscles too tense at rest).	Pupil grips the pencil very tightly, breaks pencils, stiff hand.
Proprioception	The sense of deep touch – information from muscles and joints about body position.	Controls the pressure applied to paper and guides the hand without looking.
Tactile system	Superficial (exteroceptive) sensation from skin receptors.	Allows the pupil to feel the pencil in the hand and regulate grip force.
Vestibular system	The sense of balance – information about movement and head position.	Maintains stable seated posture and coordinates eye–hand movements.
Tactile hypersensitivity	The brain interprets ordinary touch as unpleasant or threatening.	Pupil avoids sensory substances, Plasticine, glue – this is NOT 'fussiness'.
Sensory-seeking behaviour	The brain needs a high level of stimulation – the pupil actively seeks it.	Fidgets, touches everything, breaks pencils, chews on the pencil.

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Tripod grip	The mature pencil grip: thumb + index + middle finger.	The developmental target for grip (approximately age 5–6).
Coin Trick	Coin held under the ring and little finger – separates the 'power side' from the 'precision side'.	Teaches the pupil that two fingers 'rest' while three 'work'.
Tenodesis effect	Natural biomechanical mechanism: wrist extension = fingers flex (grip strengthens).	This is why writing on a vertical surface (wrist in extension) improves the grip.
ATNR	Asymmetrical Tonic Neck Reflex ('fencer's reflex'). Should integrate by 6 months.	Persistent ATNR: head turn = involuntary arm movement. Sabotages writing.
Ester Cotton method	Desk warm-up: 'Dusting' (flat palms sliding on the surface) and 'Pancakes' (alternating palm up/down).	Prepares hands for writing; mobilises the wrists.
Lazy 8s	Drawing a figure-of-eight (∞) with both hands simultaneously, and then one at a time.	Integrates both hemispheres, develops eye–hand coordination, mobilises the shoulder.
Graphomotor skills	The motor ability of the hand needed for writing and drawing.	This is the RESULT of whole-body work, not the starting point of therapy.
Stereognosis	Recognising objects by touch alone, without looking.	Prerequisite for fluent writing: the pupil must 'feel' the pencil without visual control.
Arches of the hand	The transverse and longitudinal vaults of the hand – like a 'bowl'.	Enable functional grip. A flat hand = weak grasp.
W-sitting	Pupil sits between their heels with knees pointing forwards (W shape).	May stress hip and knee joints with prolonged use; blocks trunk rotation.
90-90-90 rule	90° angles at the ankles, knees and hips during seated work.	Optimal working posture. Dangling feet act as an alarm signal for the brain.

ⓘ This is a general developmental resource. The activities support fine motor skills, coordination and sensory regulation, but do not replace diagnosis or specialist therapy. For pupils with an EHCP or diagnosed sensory processing difficulties, please consult a physiotherapist or occupational therapist. *© edutimo*

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