

Schools Therapy Resource Pack

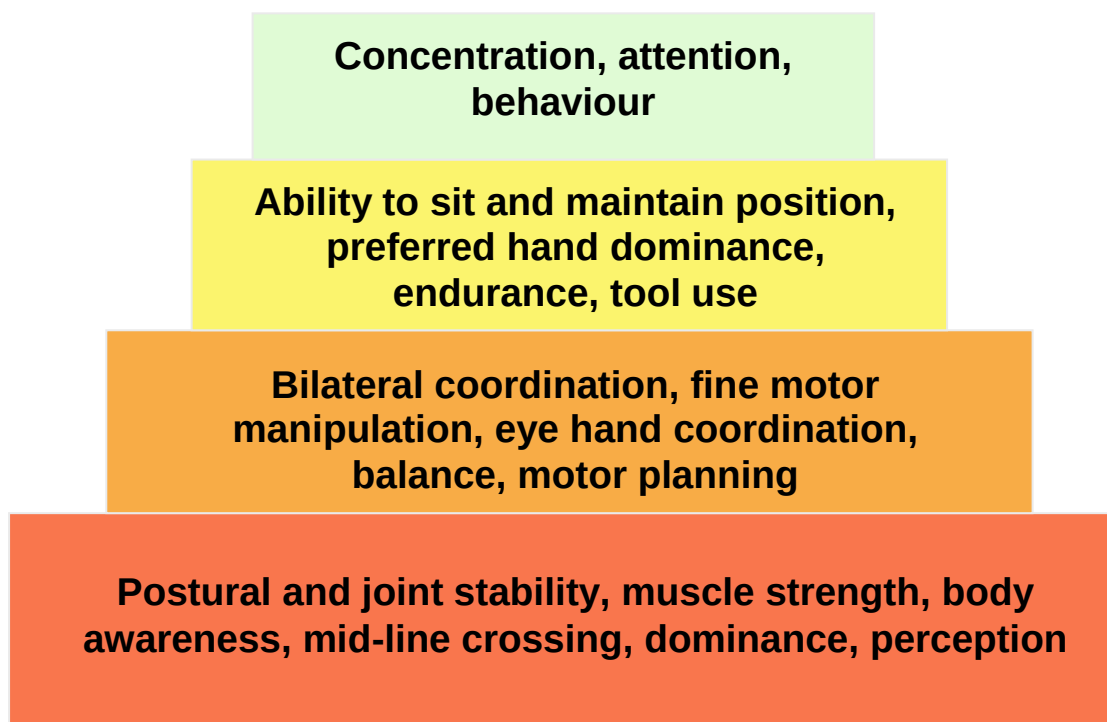
**Section 2 –
Developmental
Information**

Developing Children's Skills

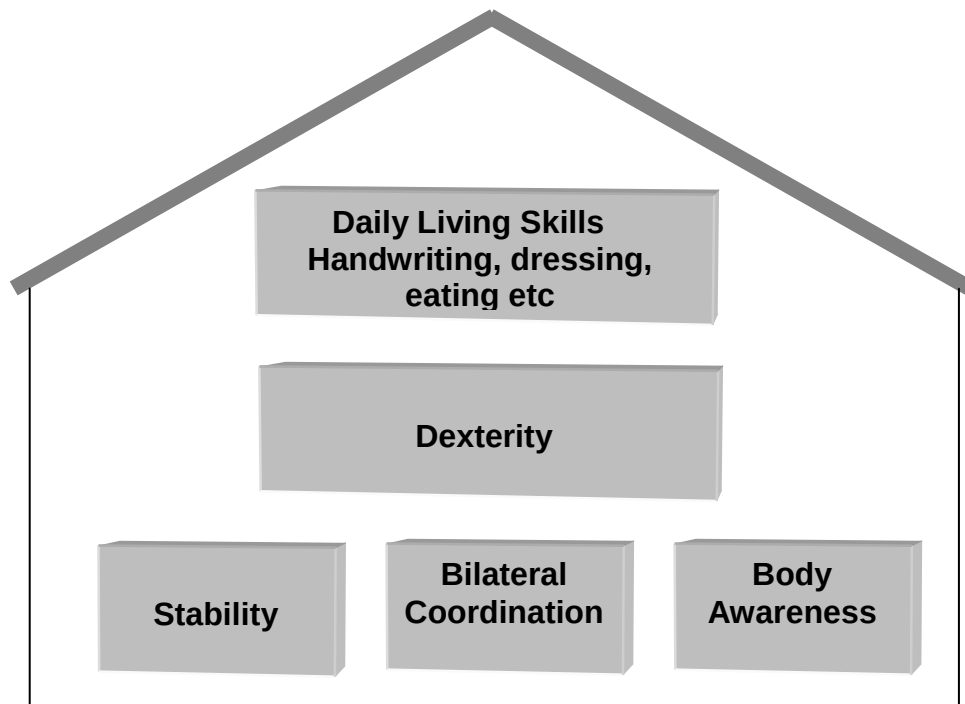
Children enter school at different stages of development and there can be considerable variation between children in an ordinary reception class and beyond. Consider that children born nearly a year apart will be in the same class and the difference between a 4 and 5 year old can be considerable. Many will not have developed the underlying communication, postural control, attention or organisational ability needed for the more complex skills that might be expected.

We know that an individual's ability to do the things that they need to do is affected by many things. Some of these can be changed, others cannot.

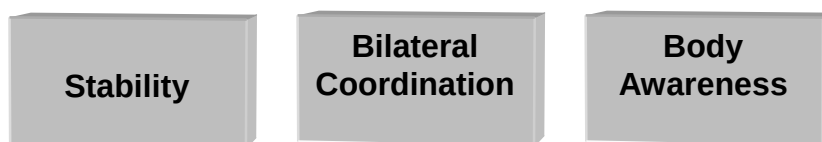
To expand on the information in the introduction; children's development is usually in a sequence and needs foundations to be present before higher level skills can be developed. (See glossary for definitions)



HAND SKILL DEVELOPMENT



What Are the Building Blocks of Fine Motor Skills?



Stability

Stability is a combination of strength and balance that enables us to keep one part of our body still while another part moves.

Bilateral Coordination

Bilateral coordination refers to the efficient use of both hands during an activity. Most daily activities require the coordinated use of both hands, one as the “doer” and the other as the “helper”. Bilateral coordination leads eventually to the development of a dominant hand (becoming right or left handed).

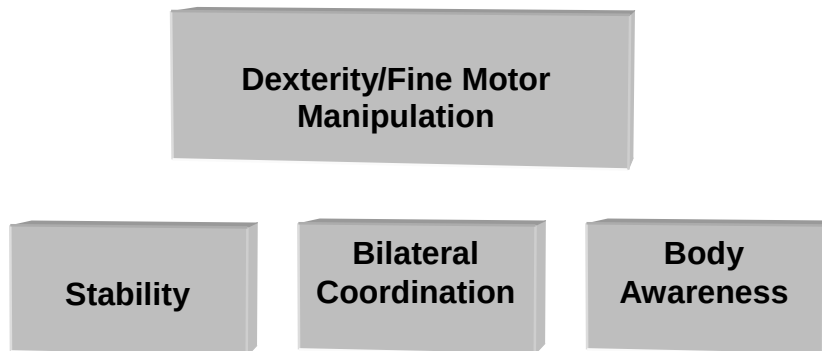
Body Awareness/sensation

We all know the five senses: vision, hearing, smell, taste and touch. We also have three other senses;

- Kinesthesia – the sense of where our body and limbs are in space
- Proprioception – the sense of joint position and movement, perceived by sensors in the joints and muscles.

- Vestibular system – the sense that tells us our head position in relation to gravity, and whether we are moving or still.

The Second Level in the Hand Skills House: Dexterity/Fine Motor Manipulation



Dexterity/Fine Motor Manipulation

This ability enables us to make small, precise, accurate and efficient movements with our hands without tremendous effort. When your child has established some of the foundations and is developing dexterity, he/she is able to use these abilities in her daily living skills.

Sensory Processing-

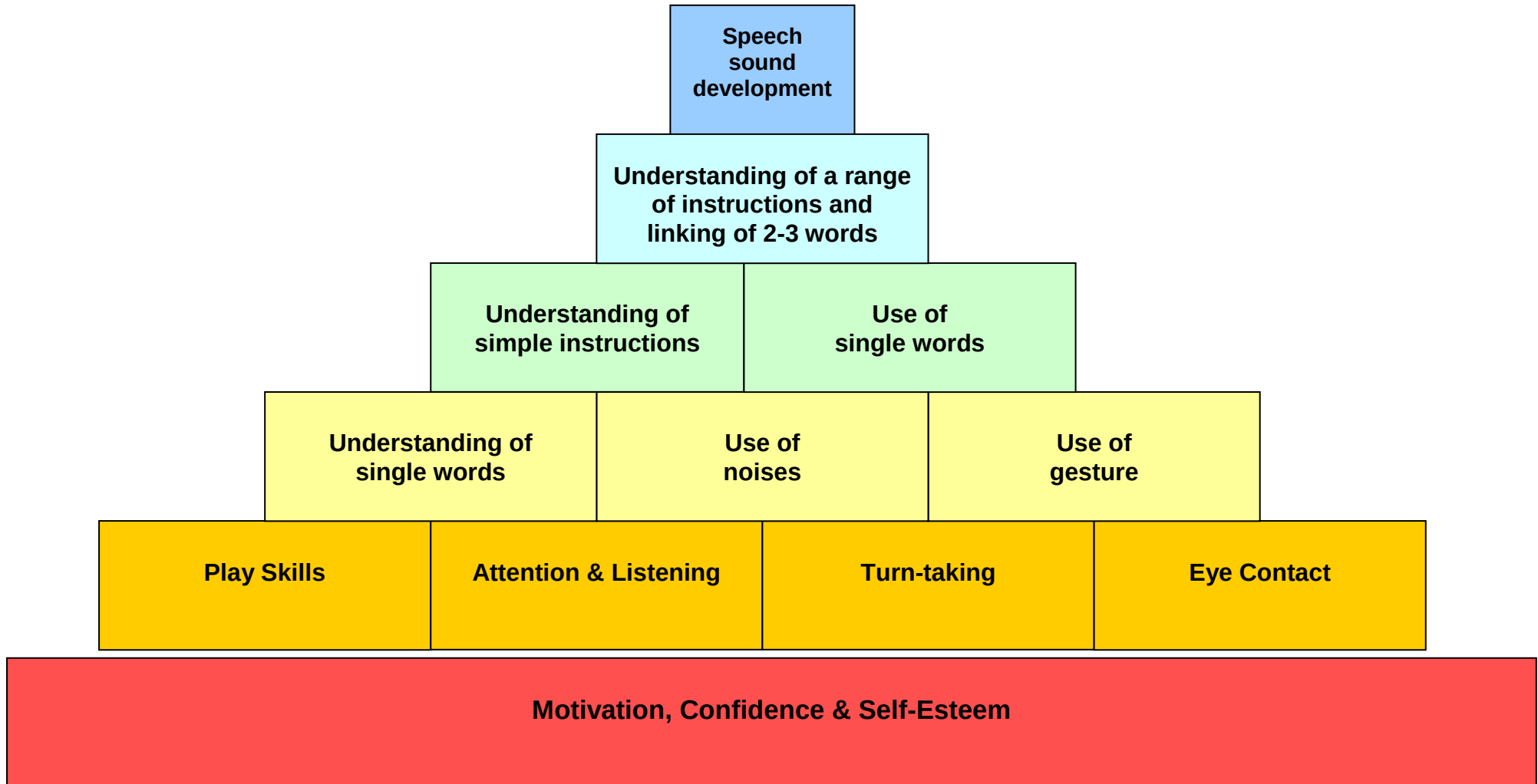
The ability to take in, sort out, process and make use of information from the world around us.

Concentration, Attention & Behaviour

Children need to be able to respond to sensory information in order to behave in a consistent way and plan what they need to do.

Speech Language and Communication Skills

Adapted from Wood, 2001, TalkingPoint and consensus of opinion of Solent NHS Trust Speech and Language Therapists



The following are suggestions of skills we would usually expect children to have by the end of the school year / stage indicated.

School Entry	
<u>Gross motor Skills/ Stability</u> • Stable in sitting on a small chair at a table • Can walk, run and stand on tiptoe • Can stand on one leg for 3-5 seconds • Can hop on preferred foot • Can stand/walk on heels when shown • Throws ball overhand and catches with more skill • Kicks ball forcibly with skill	<u>Bilateral Coordination</u> • Climbs ladders in the playground • Can use a bat • Threads medium beads • Supports the paper when 'drawing' • Has developed hand preference • Knows how to hold scissors and uses them to cut a piece of paper in half • Use fork and spoon together
<u>Body Awareness</u> • Draws a person with three different body parts	<u>Fine Motor Skills</u> • Builds tower of 10+ bricks • Holds pencil using a static (still) tripod grasp on the pencil • Engaging in messy play
<u>Activities of Daily Living</u> • Drinking from open cup, • Stabbing with a fork and scoops • Washes and dries hands and face. • Unbuttons large buttons. • Toilet trained • Can get on / off the toilet unaided • Puts on garments such as a t-shirt with some help, • Shoes put on (possibly the wrong way round), • Pulls up trousers • Child knows what he does & doesn't like to eat • Uses a spoon and fork	<u>Visual Perception</u> • Copies a cross (+), with a pencil /crayon. • Places 5 rings on a post in order / 3 shapes into inset puzzle / 4 part nesting toy
<u>Attention and Listening</u> • The child has single channelled attention, alternating his full attention between the task and the speaker (looking and listening), but can now switch between them independently. • Able to concentrate on 2 speakers. • Can attend to an adult's choice of activities for increasing periods.	<u>Play Skills</u> • Can imagine things that are not present, e.g. play includes make believe characters. • Early symbolic play, e.g. using a banana as a phone. • Can hold simple pretend conversations.

<u>Understanding of Language</u> - Follows more complex sentences though may not understand every word. - Follows 3 key words in a sentence, e.g. 'shall we wash big teddy?' - Understands concept of size (big/little), numbers 1-5 & colour. - Understands simple positional language, in/on/under. - Understands past tense verbs. - Answers 'Why?' questions. - Begins to make inferences and can predict what will happen next.	<u>Speech sounds</u> - Vowels and syllable structure established. - Becoming more intelligible. - May use sounds in some words but not others. 'c'/'k', 'g' may be replaced by 't', 'd' respectively. - Beginning to use sounds sh, ch, j, z, v and l. 's', 'z' may be lisped. 'th will be replaced by 'f' or 'v' 'r' will be replaced by 'w' - Beginning to use blends, e.g., bl, pl - otherwise reduces them to a single sound.
<u>Spoken Language</u> - Puts 3-5 words together to form simple sentences. - Uses positional language, e.g. in, on, under. - Uses words which represent people, e.g. I, you, me, yours, he, she. - Talks about past, present and future. - Asks a lot of questions, what? where? who? - Still makes grammatical errors, e.g. mouses, slept. - Uses comparatives.	<u>Speech sounds</u> - Vowels and syllable structure established. - Becoming more intelligible. - May use sounds in some words but not others. 'c'/'k', 'g' may be replaced by 't', 'd' respectively. - Beginning to use sounds sh, ch, j, z, v and l. 's', 'z' may be lisped. 'th will be replaced by 'f' or 'v' 'r' will be replaced by 'w' - Beginning to use blends, e.g., bl, pl - otherwise reduces them to a single sound.

Year R	
<u>Gross motor Skills/ Stability</u> - Uses arms for climbing - Shovels and pours with control - Can carry large objects - Balance on either leg for 5 seconds or more - Jumps forwards and backwards - Hops on either leg 5 or more times - Throws a ball to hit a target - Uses playground/gym equipment independently (climbing frame with ladder slide, low balance beams, swings – may not be able to initiate the swing) 'Gallops' along for 4 – 5 metres. - Kicks ball forward with good aim - Throws ball overhand with accuracy - Bounces / catches football to self - Catches bounced ball most of the time	<u>Bilateral Coordination</u> - Starts to show preferred hand - Uses one hand to steady while other manipulates - Uses scissors to snip - Threads large beads - Skips, alternating feet - Goes upstairs and downstairs without support and with one foot to each step - Skips along on alternate feet 4 or more times

with hands only – does not need to use a body grasp • Walks along a line heel-to-toe and backwards 6 or more steps • Walks sideways on a 10cm beam without stepping off	
<u>Body Awareness</u> • Knows body parts • Draws a person with head, legs and trunk • Moves forward and backward and sideways with agility • Runs around obstacles and turns corners with agility	<u>Fine Motor Skills</u> • Places small pegs in pegboard • Can move things from palm of hand to fingertips • Uses thumb and fingertips to grasp, turn small knobs, etc • Draws a circle and other shapes independently • Draws house with windows and a door • Draws a person with two to four body parts, includes head, legs, trunk and usually arms and fingers • Holds instrument with proper tension and grasp (scissors, pencils, pen, paintbrush) • Turns book pages one at a time • Hands out individual sheets from a stack of paper • Uses scissors • Begins to copy some capital letters • Able to unscrew and screw up objects
<u>Activities of Daily Living</u> • Dresses/undresses independently. • Shows ability in personal hygiene • Uses knife & fork competently • Attempts to do buttons and other fastenings on self or dolls	<u>Visual Perception</u> • Copies square and cross • Matches and names 4 primary colours
<u>Attention and Listening</u> • Concentration may still be short, but can be taught as part of a group, e.g. to follow a story or join in a discussion. • Attention skills are generally two-channelled i.e. the child can do a task while listening to a simple instruction • Many can remember a sequence of four digits • Listens to and follows quite a long story with pictures	<u>Play Skills</u> • Organising and co-operative play with other children, e.g., sharing a toy/game and negotiating. • Imaginary play includes other children e.g., pretending to be doctors and nurses. • Can follow rules of a game, e.g. Snap. • Can cooperate with others in play for some periods of time • Not always able to take turns and appreciate other children's point of view

	• Begins to have 'best' friends • Can role-play and make-believe • Cannot negotiate when things don't go their way
<u>Understanding of Language</u> • Follows 4 key words in a sentence, e.g. 'put the <u>big doll</u> <u>behind</u> the <u>cupboard</u>'. • Understands increasingly complex grammar and concepts, e.g. between, above; future tense; simple opposites; same/different; time (e.g. night/day). • Understands 2500-3000 words. • Asks meaning of new words. • Can give 3 objects on request. • Can identify the odd-one-out. • Can understand stories. • Beginning to use language to think, problem-solve and understand simple humour. • Understands sentences with four information carrying words • Understands simple question words: 'where', 'who', 'what'	<u>Speech sounds</u> • Mature use of most sounds including blends. • Intelligible to strangers. • Produces most consonant sounds but 'r', 'th', 'l', 'ch' and 'j' may still not be correct. Possible exceptions include 'th', 'r' and 3-consonant blends such as 'spl-'. • 's', 'z' may be lisped. • Simplifies some sound combinations e.g. 'tain' for 'train', 'boon' for 'spoon' • Words may be less clear in sentences than spoken singly
<u>Spoken Language</u> • Uses words such as 'and' and 'so' to form longer sentences • Vocabulary of around 1500 words • Understands a range of prepositions e.g. 'on', 'under', 'behind' • Starts to link words by meaning e.g. opposites, categories • Can be literal in interpretation of language • Uses regular grammatical endings but often over-applies rules e.g. 'runned', 'mouses' • Refers to activities and events that are not present • Tells a familiar story while looking at a book • Average sentence length is 5 – 7 words • Talks in more detail about everything and asks endless questions, e.g. Why? When? • Grammar is increasingly correct, e.g. uses he/she correctly and a range of prepositions.	<u>Social Use of Language</u> • More skilful at initiating, holding and ending conversations. • Adapts conversation content to a variety of partners, but not yet fully aware of the listener's needs. • Contributes to adult conversation. • Begins to understand indirect requests, e.g. "Dinner's ready" could mean 'Wash your hands'. • Uses and understands a range of communicative functions, e.g. • To gain attention • Ask for help • Request things • Reject • Greet • Name/label • Comment • Express feelings • Plan – future events • Report – recent activity • Seek or give information • Give instructions

- Names categories. - Can explain meaning of simple words. - Makes longer sentences using 'and', 'but' and 'because' to link ideas (coordination and subordination). - Tells/retells familiar short stories, sequences of events and jokes. - Correctly sequences 2 – 4 pictures. - Uses 'yesterday' and 'tomorrow'.	
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Key Stage 1

<u>Gross Motor Skills/ Stability</u> - By this age children should have acquired most of their developmental milestones for movement. - Basic motor skills acquired – improvement in speed and skills of tasks should be observed - Able to use ball skills whilst running at speed and changing direction - Accuracy with aim and throwing whilst on the move - Able to co-ordinate bat and ball activities - Skills can be incorporated into team games. - Throws, bounce and catches a tennis ball - Turns a skipping rope - Performs a running kick - Balances on one foot for 15 seconds - Rides a bike (with or without stabilisers)	<u>Bilateral Coordination</u> - Threads small beads - Hand dominance evident - Folds paper - Cuts out simple shapes with scissors - Children are not expected to be consistent with identifying right and left until 8 years.
<u>Body Awareness</u> - Draws a person with head, trunk, legs, arms and features - Use a computer mouse - Uses appropriate force for grasp and play - Negotiates obstacles	<u>Fine Motor Skills</u> - Controls pencil to draw between 2 straight lines - Can touch each finger end in turn - Plays with small construction toys - Holds pencil in a tripod grasp
<u>Activities of Daily Living</u> - Beginning to use a knife - Uses toilet independently - Able to tie a bow or do shoe laces (If this has been practised). Mastering a tie usually takes a few more years	<u>Visual Perception</u> - Recognises 10 colours - Copies a triangle, diamond or rectangle - Accurately throws ball at target - Completes simple interlocking jigsaw

<u>Attention and Listening</u> • Attention is well established and child can concentrate for longer without being reminded to do so. • Listens with sustained concentration to others in the class and to an adult speaking.	<u>Grammar</u> • Understanding and use of more complex constructions, e.g. passives ('The book was read by the teacher'), relative clauses ('Tell the girl that is drawing a picture to come and see me') and constructions which reverse the sequence of events ('Before you line up, put all your books in a pile on my desk'). • Awareness of the grammatical function of prefixes/suffixes, e.g. past tense endings. • Uses adult-like grammar and word order in their oral language.
<u>Meaning</u> • Understanding and use of an increasingly broad vocabulary. • Less reliant on pictures and objects to learn new language and, although these still help, they <i>can</i> learn just by hearing/reading new words. • Understand increasingly abstract ideas, such as feelings and descriptive words, e.g. 'carefully', 'slowly' or 'clever'. • Understanding that some words have multiple meanings, e.g. 'orange' = a fruit/a colour. • Understand that different words can mean the same thing, e.g. 'minus' and 'take away'. • Follows instructions. • Remembers main points. • Asks relevant questions.	<u>Speech sounds</u> • Accurate use of all speech sounds (as appropriate to the child's accent). • Phonological awareness at the individual sound level, enabling segmentation and blending of the individual sounds in words.
<u>Social Use of Language</u> • Has learned the 'rules' of conversational etiquette (e.g. "Excuse me") • Can start and sustain conversations over multiple turns (five or more) with two or more partners. • Produces stories that centre around a theme and contain a logical chain of events. • Becomes more explicit in their language when they recognise that the listener is not understanding. • Follows spoken and unspoken rules about communication and behaviour in school, including when to talk, when not	• Use of questions – to gain information about the present, past and future, e.g. 'What's he doing?'; 'Where's he gone?'; 'What happened?'; 'What will happen if..?' • Give descriptions • Reasoning/Explaining, e.g. comparing/classifying, understanding cause and effect • Prediction of events • Drawing conclusions • Imagining • Argue/Debate • State rules • Evaluate • Persuasion

to talk and how to speak to adults versus peers. • Uses language to learn about the world (e.g. "Why can I hear my voice when I put my hands over my ears?"). • Ability to adjust the form of language for a range of contexts, e.g. talking to the headteacher, other children and family members. • Shows awareness of what the listener needs to know. • Speaks clearly and audibly to a large group. • Varies voice and intonation with purpose. • Takes turns when talking. • Understanding and use of idiomatic language. • Using language for an increasing range of functions, e.g. • Initiating conversation with familiar adults and children • Awareness of feelings – anticipating and describing feelings that might be experienced by others in familiar, emotive situations	• Negotiate • Beliefs/Opinions • Entertain • Tease
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Key Stage 2	
<u>Gross Motor Skills/ Stability</u> • Uses PE equipment well • Increased refinement of complex gross motor tasks	<u>Bilateral Coordination</u> • Ties a knot • Shuffles and deals cards • Uses scissors well
<u>Body Awareness</u> • Plays computer games without looking at hands • Consistent identifying right and left • Writes right to left	<u>Fine Motor Skills</u> • Opens packets • Mature pencil grip • Handwriting becoming fluent • Typing ability good if practised. (Able to touch type)
<u>Activities of Daily Living</u> • Does up buttons, zips, etc • Ties shoe laces and school tie • Able to do up bra • Tie up long hair	<u>Visual Perception</u> • Visual memory developed • Draws diamond and triangle

<u>Attention and Listening</u> • Listens attentively, following up points, agreeing or disagreeing with others and making their own notes. • • Many children can remember a sequence of 6 – 7 digits • Able to listen to and understand a story without pictures if the vocabulary is familiar	<u>Grammar</u> • Consistent use of grammar across longer sections of discourse/narrative. • Understanding of how some words can change the relationship between other words in a sentence, e.g. 'John is <i>easy</i> to see' vs. 'John is <i>eager</i> to see'.
<u>Meaning</u> • Further expansion of vocabulary, including words for items outside the pupil's personal experience. • Increasing ability to select the most appropriate word for use in a particular context. • Understands questions requiring inference or prediction e.g. 'How do we know he is feeling sad?' or 'What could he have done?' • Can use regular and irregular verb tenses and plurals • Uses higher-level connectives like 'although', e.g. 'I had a good birthday although some of my friends couldn't come to my party' • Can tell a sequence of events coherently with beginning, middle and end and in logical order • Acquires some technical vocabulary related to interests or school subjects • Has increasing knowledge of abstract concept words • Can define words and understands words have multiple meanings • Is developing good awareness of a range of non-literal language e.g. idioms, metaphors and sarcasm	<u>Speech sounds</u> • Ability to manipulate individual phonemes in words, e.g. in order to perform spoonerism tasks. • Has most speech sounds and sound combinations including 'th' and 'r' unless errors are related to dialect • Certain sounds may be produced in a slightly unusual way giving a different quality to the child's speech, e.g. a lisp, although this will not affect intelligibility • Multisyllabic words may contain the occasional mistake
<u>Social Use of Language</u> • Understands a range of types of jokes and humour including those that rely on word meaning ambiguity • Varies the 'code' of communication appropriately e.g. uses different structure, vocabulary and pronunciation	• Extended use of questions – a set of questions to pursue a line of enquiry • Hypothesising • Inferring and deducing • Reflecting on and exploring language – puns, etc. • Presenting a sequenced oral account – in

when talking to friends compared to talking to teacher • Has deeper understanding of how non-verbal cues change the intention and meaning of what is said Ability to produce cohesive narrative in which different characters and events are clearly marked. • Understanding more complex humour, e.g. sarcasm. • Using language for an increasing range of functions, e.g. • Initiating conversation with unfamiliar adults and children • Projection of thoughts or feelings – what might be felt by self and others in a range of situations, familiar and less familiar • Giving a sequence of instructions • Explaining clearly and concisely • Imaginative use of language – drama, puppetry, etc.	clear, concise chronological order • Giving opinions – a reasoned opinion on a range of issues; will consider and discuss alternative opinions • Planning and organising work in a group • Negotiates, taking account of alternatives and consequences
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Common variations in speech and language development

There is a range of normal variation in how children say words. The following areas are often a cause for concern to parents, carers and teachers but are all normal variations that do not require speech and language therapy assessment.

- **Lisping in children aged under 7 years.** This is when children are observed to use a forward movement of the tongue and instead of 's' a 'th' is heard. This is a normal variation and usually disappears as children mature and develop. If this habit persists beyond the age of 7 and is causing difficulties with intelligibility or teasing, then consider contacting the Integrated Therapy Service for advice.
- **'w' substitution for 'r'.** This is part of normal development and may persist up until the age of 7, although most children will have acquired the 'r' sound by the age of 5.
- **Omitting 't' in the middle and at the end of words.** This is a common speech habit and, in the absence of any other difficulties, is not indicative of a speech problem requiring advice from the Integrated Therapy Service.
- **'f' substitution for 'th' in words like 'thing' and 'v' substitution for 'th' in words like 'that'.** This is another common speech habit which in the absence of any other difficulties does not require advice from the Integrated Therapy Service.

- **Selective mutism**

Selective mutism is an emotional disorder of childhood in which children speak fluently in some situations but remain silent in others. In other words they can speak normally and they want to speak normally but they often don't speak. They may behave in a completely normal way when they are in an environment in which they feel relaxed and comfortable i.e. at home with family.

Selective mutism often occurs at times of 'transition' i.e. starting pre-school or school. A period of 'settling in' and some general strategies may help to support them to talk during this time. If after 3 – 6 months the child is still not talking advice should be sought from a Speech & Language Therapist. For a diagnosis of selective mutism to be made the condition has to:

- Interfere with the child's social and learning development
- Have lasted for longer than one month after the first month at nursery / school
- Not be due to having English as an additional Language
- Not be better explained by a communication disorder or any known condition

The Speech & Language Therapist has a role in assessing the child and co-ordinating / supporting the pre-school or school in implementing a structured programme, which relationship with and who they see daily in the environment in which they are not speaking.

Children should also be referred to CAMHS (Child & Adolescent Mental Health Service) and families signposted to support groups e.g. SMIRA (Selective Mutism Information and Research Association)

Fluency (Stammering)

Children often experience a period of normal non-fluency while acquiring language. The demands of remembering and finding new words amongst a rapidly increasing 'dictionary' place sudden pressure on the child's language processing system, meaning that they stop-start, repeat and change the words they use. This can last a few weeks or even months until they have mastered their new skills. They may also hesitate or get stuck while trying to access the information required to produce a word, all of which may result in an apparent 'stammer' while they are learning to manage their new skills effectively.

Children who show self-awareness, become very frustrated or who are displaying secondary features such as grimacing, blinking, wringing their hands, tapping their feet or head-banging are likely to be experiencing dysfluency and should be referred to the Service, as should children who have a significant family history of stammering or who have been stammering for a period of more than 6 months. These factors suggest the stammer is more likely to persist without additional support.

Common variations in children using their hands

- **Hand preference.** Children tend to show a definite hand preference from about 4 – 5 years when they start attempting more fine motor tasks. Children establish hand dominance at approximately 7 – 8 years. It can be common for some children to use one hand for writing but then choose to use the other hand for different fine motor tasks.

Quite often children who write with their left hand find it easier when cutting to hold the scissors in their right hand and the paper in the left hand. This allows the action hand (left) to move the paper whilst the scissors tend to remain fairly stationary only needing to open/close.

- **Dressing and cutlery.** Some children can take longer to learn dressing skills or to use a knife and fork due to lack of opportunity. Parents sometimes find it easier and quicker to dress their child in the morning if they are short of time but this may mean that the child does not get the practice they need to learn to dress themselves. Children who do not eat food which requires cutting up or who do not sit at a table to eat may not have practised this skill. Advice for parents is provided in section 5.
- **Pencil grip.** Children will hold their pencil/pen in slightly different ways. Although there is a typical and preferred way to hold the pencil (dynamic tripod – using the thumb, index and middle finger) if the child is able to write legibly for the required amount of writing then it is not important to adjust the way that they hold their pencil. See section 5.

Common variations in walking patterns

There is a wide range of normal variation in children's walking patterns. The following areas are often a cause for concern to parents and carers but are all normal variations that do not require physiotherapy assessment.

- **Flat feet.** All children are born with flat feet; the medial arch of the foot develops gradually over the first 10 years of life. 20% of 6 year olds still have flat feet with no evidence of a medial arch. There is no evidence that insoles will help an arch to develop in the foot, however they may be useful if a child is experiencing foot and ankle pain associated with walking.
- **Intoeing.** This is where the knee and foot turn inwards in standing. This is common in children, girls more than boys. Often children who intoe sit in a W kneeling position to play (bottom on the floor, feet on the outside of the knees, knees apart). Up to the age of 7 or 8 you can expect gradual improvement and many will resolve completely without requiring treatment. Physiotherapy assessment is not required unless the child:

- Is having difficulty with walking or running.
- Demonstrates significant asymmetry.
- Presents with pain.
- Has tight hamstring muscles.
- Has metatarsus adductus (feet bend inwards)
- Is still intoeing after 6 years of age

The child should be encouraged to sit cross legged and not in a W and to participate in sports. You should not ask the child to try and correct their walking pattern as this can be counterproductive.

- **Bow legs.** This is when there is a larger gap between the knees than the ankles in standing. This usually corrects naturally by the age of 3 with no long-term consequences. Assessment by a Physiotherapist is required if one leg only appears bowed and one leg is straight or if the gap is very large (greater than 10cm).
- **Knock knees.** This is when there is a larger gap between the ankles than the knees in standing. It is common in children aged 3 – 8 years. This usually improves over time without treatment. Assessment is required by a Physiotherapist if one leg appears more bent than the other or if the gap is very large (greater than 10cm). Knock knees that first become apparent in adolescence need to be assessed by a Physiotherapist.
- **Curly toes.** This is common in young children and often runs in families. No treatment is required unless there is pain or skin or nail changes.
- **Toe walking.** This is where a child walks on their tip toes. There are several different reasons why this might occur and it often runs in families. Assessment from a Physiotherapist is advised as treatment may be required if they habitually walk on their toes should be referred for community physiotherapy if they are over the age of 3 years.

Hypermobility

Joint hypermobility is defined as an excess in joint range of movement. Many children (about a third) have some joint hypermobility and have no or few difficulties with motor skills and development.

Children should be referred to the Children's Therapy Service if they have:

- Delayed motor skills which do not respond to the programmes in this resource pack.
- Functional difficulties – e.g. unable to walk distances compared to their friends despite gradual increase in activity.
- Pain