Wirral University Teaching Hospital
NHS Foundation Trust

Wirral Children's Occupational Therapy Service

Motor skills Information Folder

Cherry Tree House, Clatterbridge Hospital

If you are unable to attend a session, please contact the Children's OT department on 0151 482 7732.

This booklet has been designed for children who have been assessed via the OT motor skills pathway. It contains activity ideas for parents/ guardians/ schools to complete with the child to develop motor coordination skills.

INDEX

Motor skills

Motor skills are part of your child's everyday life and are the basic movement skills that allow us to do the things we want and need to do throughout the day. They can be separated into gross motor skills, and fine motor skills.

Gross motor skills use the large muscle groups, which work together to produce actions such as walking, running, jumping, catching, and throwing. They need a good deal of strength, control, and whole-body co-ordination.

Fine motor skills use only the smaller body parts, such as the hands, and they make different demands on the body. These include skills such as eating, writing, using scissors, fastening buttons, and manipulating toys.

In young children, gross movements develop first, and these relate to the early developmental milestones of sitting, rolling, crawling, and walking. As fine motor skills develop later, children will have had less practice in fine motor activities, and this explains why some children are, for example, able to run and jump well, but cannot control a pencil. This also explains why problems may not always be evident in the early years.

However, sometimes children find fine motor activities easier, because when the main part of the body is fixed, as in sitting, it does not need to be controlled as much, which then allows more concentration to be given to the moving parts.

Children need to experience movement in order to learn about themselves, and how they relate to the environment around them. In order to move well, a child must be able to:

- Know where all the parts of their body are.
- Control the body as it moves.
- Co-ordinate the different parts of their body so that movement is smooth.
- Judge the amount of force, strength, and speed needed.
- Understand directionality – up/ down, back/ front, left/ right, top/ bottom etc.
- Appreciate the rhythm and timing of movements.
- Make safety decisions about when to move, and where to.
- Be able to stay still.

What if there is a motor skill problem?

Children with co-ordination difficulties generally have difficulty completing or performing motor tasks that they want to do, in a smooth and successful manner. As a result, they may appear clumsy and uncoordinated and the quality of their movements and the speed at which they can learn new skills tend to differ from most children of their age. These difficulties are not related to intelligence.

However, no two children are the same, and there are many different sorts of motor and learning difficulties.

By the time a child is five, six or seven, they have usually made a great deal of progress in their motor development. They can run, jump, balance, climb and swing. Many also like to challenge themselves further, by adding bicycles, skateboards, or roller skates. But children with co-ordination difficulties may not have developed all of the movement skills that allow us to do these things. For these children, just coping with everyday activities, such as getting dressed, can be challenging enough, and for some, can be an overwhelming difficulty.

Why do they have these difficulties?

Moving well (smoothly and efficiently) in different environments depends on the following skills:

- Perception – the ability to recognize process and make sense of information coming into the senses, from the environment.
- Planning – the ability to build a mental picture or plan of how to do something.
- Organizing – the ability to actually carry out the movement.

In normal movement, information comes into the brain through the senses - sight, hearing, touch, smell, vestibular(balance), and proprioception (body position). The brain makes sense of this information and decides what is a sensible way to respond to this. It then sends messages back to the muscles and joints, telling the body how to move. For example, if you put your hand too near a fire, the sensation of heat travels along the nerves, to the brain. These signals are interpreted as being hot, and the brain figures out the potential safety hazard that we might burn. This then sends a message to the arm muscles and joints, to pull the hand away from danger.

To be able to move well, without fumbling and stumbling, the information coming in from senses must be clear, and the processing system must work correctly. If the messages getting to the brain from the senses are not accurate, then this will affect how it is interpreted.

At the interpretation, or processing stage, there are two kinds of problem. Some children may not be able to plan what kinds of actions are appropriate, but for others, the organization is the problem. They know intellectually what they want to do, but lack the memory of previous movement patterns, to help them organize their movement in a sensible order.
At the execution stage, children might not have the body awareness, strength, stamina, balance, or co-ordination skills to do what the brain is trying to tell the body to do.

Feedback is an important part of the process. Experiences of movements are stored in our memories, and we use them to figure out the best way of doing

things, or to figure out how to do something new, that is similar to something we have done before, but may be a little more challenging.

However, if the movement patterns used in the original memory were faulty, then attempts at repeating the action, or expanding on it will also be faulty, as the 'recipe' is incorrect. This explains why practice alone will not necessarily improve performance, because unless the movements are correct in the first place, the child will just get faster at doing the wrong thing!!

With the right type of practice though, children with co-ordination difficulties should be able to gain any skill they choose, so long as they are motivated. It may take longer than other children.

Is it a disorder or a disease?
Neither – children with Developmental Co-ordination Disorder (DCD) are healthy. They are of normal intelligence, and they do not have any known brain disorder. The cause is not known, but it has been shown to run in families, and more boys than girls have it, in a ration of 4:1. Research has shown that 5-10% of the population has motor co-ordination difficulties, and 2% of these are severely affected. This means there are 2-3 children with a co-ordination difficulty, in every classroom.

DCD is diagnosed by a collection of symptoms. We look at what the child can and can't do and see where they fit in the spectrum (or range) of the 'normal' population. However, DCD is sometimes seen alongside other conditions, such as ADHD/ ADD, Autism, and Dyslexia. This means it can be difficult to pinpoint exactly which aspect is causing the main problem for a child in their daily activities.

What is the difference between Dyspraxia and DCD?
Developmental Co-ordination Disorder (DCD) is a general term, which covers all types of co-ordination difficulties. Dyspraxia is a specific type of co-ordination problem, within that general 'umbrella' term.
The child with dyspraxia has difficulty planning actions. They do not know what to do, or how to do it very well. The child with DCD is more likely to be aware what they need to do but are not able to do it very well.
There is some confusion over the terminology used in the UK, because the term Dyspraxia, is often used by the media, teachers, and many medical and health professionals to mean all children with co-ordination difficulties.

Information regarding the homework programme

Each week you practice specific activities with your child which is designed to compliment the work done in the motor skills groups. It is essential that the homework is completed as it is involvement with these activities carried out on a regular basis that will make a difference in your child's motor coordination. The group sessions are an introduction, but it is the homework programme that will make the biggest difference.

It is important that these activities are approached in a fun and enjoyable manner. To maintain motivation for the child they must achieve success in what they are doing. Building up confidence by providing opportunities for success is the essential ingredient for helping your child's motor skill difficulty. If any of the activities are too difficult for your child you can discuss this with the therapist at the end of the group sessions, who can talk to you about ways to adapt or grade the activity so that your child gets success.

Try all activities – use the provided checklist (see pages 8 - 9) to keep note of the activities your child finds more difficult and requires more practice. This will then be part of your bespoke programme for your child. You must work within your own child's level of ability and then build on this at their pace. Any concerns seek guidance from therapists during motor skills group sessions. You should continue with this programme long after you have completed all the sessions especially in the areas that your child particularly finds difficult.

Research has shown that regular frequent activities are what improve motor skills. Ideally this should run alongside additional leisure activities e.g. swimming, playing in the park, scooter, bike riding, horse riding, martial arts, arts and crafts.

Whilst doing the exercises encourage your child to do them in a controlled manner i.e. slowly. Children with motor coordination problems tend to do exercises very quickly.

Please log the daily homework that your child has completed on the sheets provided. Bring the sheets with you so that the therapist can keep a track of your child's progress. Please be honest on the sheet or we are unable to see if treatment is working for your child.

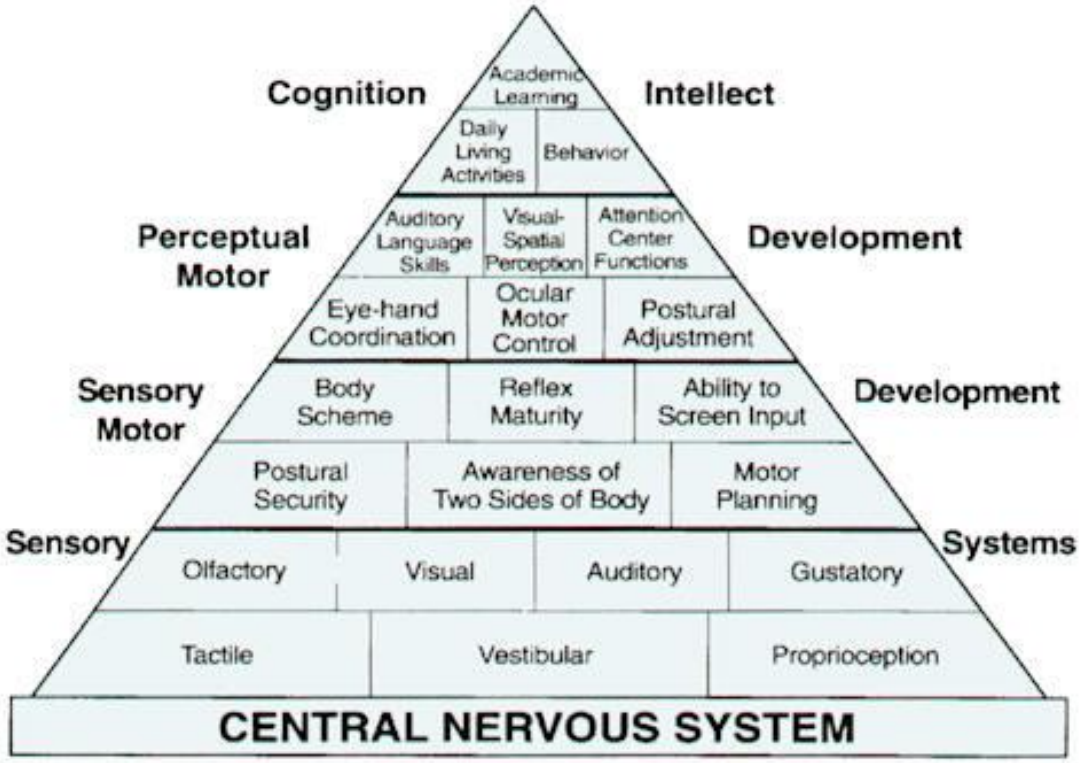

Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Pyramid of learning

The pyramid of learning by Williams and Shellenberger, shows the connection between the sensory systems, sensory motor development and perceptual motor development. It shows the building blocks that we need for learning how to do different things – including self-care activities like getting dressed as well as academic learning in school.

If some of the building blocks are not yet fully developed. It can make learning how to do some things quite challenging.

The foundation block is **sensory**. It involves smell, vision, touch, taste, body awareness, and movement. Children use their senses to explore and learn about the world around them. This creates and strengthens neurological pathways for the next stage.

The next stage is the **sensory motor** development. This is the stage where we learn about our body and spatial awareness, we learn how to use and coordinate 2 sides of the body (bi-lateral), balance and plan/ organise our movements. We refine our movements so we can do things efficiently. We can then build on this to do more complex activities e.g., start on a ride on toy, progressing to a 3 wheeled trike and eventually developing skills to independently ride a bike.

The third foundation block is **perceptual motor** development. This connects sensory skills (the brain) to motor skills (physical). Such skills involve language, attention, and eye-hand coordination. These skills help us to sing, dance, put puzzles together, and catch a ball.

At the top of the pyramid (**cognitive**) is daily living skills, behaviour and academic learning. Executive functioning, emotional intelligence, and social skills are in this category. These skills typically take longer to develop.

Motor skills group programme – keeping track of my child checklist!

Gross motor – Session 1 – body awareness

Exercises	Secure	Emerging	Needs practice
1: Be more aware of your body parts.			
2: Simon says.			
3: Angels in the snow.			
4: Where did I touch you?			
5: Drawing on your child's back.			
6: Mirror game.			

Gross motor – Session 2 – postural stability

Exercises	Secure	Emerging	Needs practice
1: Arm wrestle.			
2: Tug of war.			
3: Push ups.			
4: Bridge.			
5: Wall press ups.			
6: Superman.			
7: Plank.			
8: Dipping toes.			
9: Ball rolling (under foot).			
10: Ball rolling (on tummy).			
11: Static wheelbarrow.			

Gross motor – Session 3 - balance

Exercises	Secure	Emerging	Needs practice
1: Superman.			
2: Stepping stones.			
3: Balance a ball.			
4: Dipping toes.			
5: Ball rolling (under foot).			
6: 2 feet jumping.			
7: Standing on one leg.			
8: Hopping.			
9: Hopscotch			
10: Jumping jacks.			
11: Skipping.			
12: Tip toe walking.			
13: Heel to toe walking.			

Gross motor – Session 4 – leisure and play

Exercises	Secure	Emerging	Needs practice
1: Static wheelbarrow			
2: Statue (in sitting)			
3: Statues (weight bearing positions)			
4: Leisure activities / balance equipment (List)			

Gross motor – Session 5 – aiming and catching

Exercises	Secure	Emerging	Needs practice
1: Balloon keep uppy.			
2: Bounce and catch.			
3: Bounce a ball repeatedly on the floor.			
4: Throw and catch in the air.			
5: Ball bounce to another person.			
6: Throw and catch in pairs.			
7: Throwing and catching against the wall.			
8: Target throwing.			
9: Rolling ball.			

Please note this is not an exhaustive list of activities to improve gross motor skills. The programme is designed to give you ideas to get started. There are plenty more leisure and play activities to build your child's skills.

- Secure = consistently able to complete independently.
- Emerging = developing skill. Performance may vary. Some adult prompts required.
- Needs practice = struggles/ takes effort – needs a lot of adult support.

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Gross motor session 1 Homework Programme

Body awareness

The following activities will help your child become more aware of the different parts of the body (body awareness). This is important in establishing the concept of left and right, as well as learning what the different parts of the body are able to do. They need to know where different body parts are in relation to each other and realise the effect moving one part has on another. They also need to learn how to move one part of their body while keeping other parts still to produce co-ordinated movements.

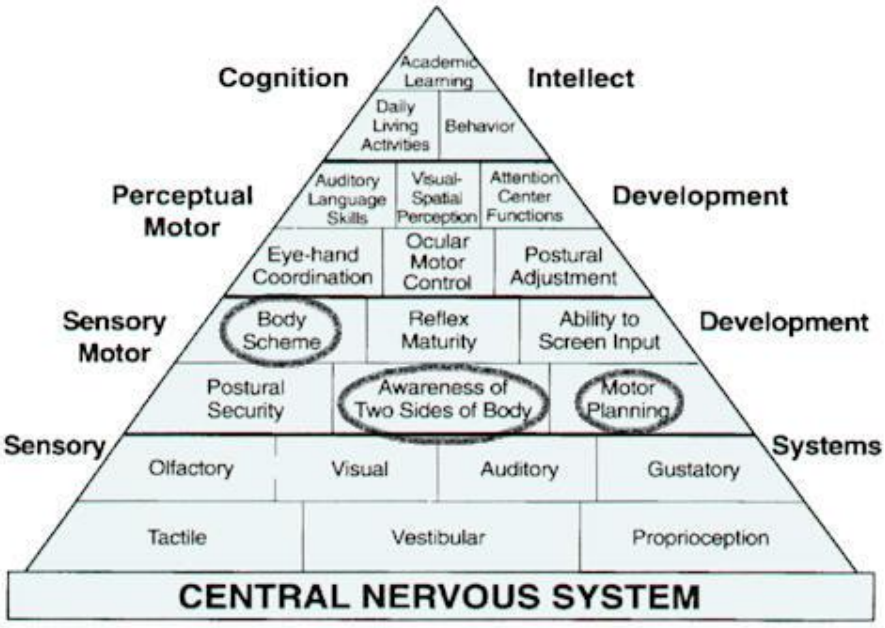


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1
Be more aware of your body parts:
Ask your child to point to the following body parts:
Shoulder
Knee
Ankle
Hips

Also include less familiar body parts:
Back of hand
Palm of hand
Heels
Wrist
Elbow
Progress to introducing left and right. Make a note on your homework sheet if there are any parts your child doesn't know.

Exercise 2
Simon says:
Take the role of "Simon" and issue instructions to your child to make different physical movements. Start by giving the instructions verbally starting with one instruction and build up to two instructions at the same time. If your child is struggling with verbal instructions you may demonstrate actions and do with your child at same time. Try actions such as:
Touch right hand to left ear.
Touch left hand to right ear.
Touch your right knee with your left elbow.
Bend forwards/ sidewards/ backwards.
Swing arms in front of you/ to the side of you.
Touch right foot with left hand and left foot with right hand.
As your child progresses make the instructions more complicated and try playing with your eyes closed.

This helps your child to learn concepts of left and right. Encourage movement that cross the middle of the body (e.g., right hand on left knee) as this helps 2 sided bi-lateral co-ordination.

Exercise 3

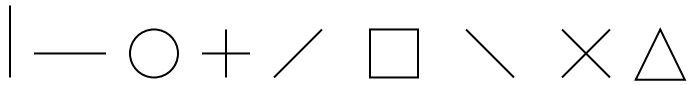
Angels in the snow:
Whilst lying in their back on the floor ask your child to move their arms and legs out to their side, always maintaining contact with the floor. Aim for a minimum of 10 repetitions for each instruction. If your child struggles to keep other body parts still while moving, physical support/ guidance can be given e.g. hold moving limb still and/ or move limb so they can feel/ understand the correct movement. Ensure that arms move up to touch side of head/ ear. Ensure your child does not overstretch legs so that hips are twisted. Keep practicing to develop skills. Try using the following instructions:
Move left arm.
Move right arm.
Move both arms together.
Move left leg.
Move right leg.
Move both legs together.
Move left arm and left leg at the same time.
Move right arm and right leg at the same time.
Move opposites - left arm and right leg at the same time.
Move opposites - right arm and left leg at the same time.
Move both arms and both legs together at the same time.
Try with eyes closed. Make sure limbs are moving at the same speed.

Exercise 4
Where did I touch you?
Stand behind the child or encourage your child to keep their eyes closed. Touch him/ her quickly and lightly with your fingertips. See if they can tell you where they have been touched.
1. Touch with 1 finger
2. Touching 2 body parts at the same time
3. Use different types of touch e.g., light brush stroke and gentle tap touch.

Get your child to place their hand on the table palm down. Touch their hand with your index finger on each individual finger allowing them to point to where you touched them. Make sure they cover their eyes, so they are not using vision to support this.
See if they can tell you where they have been touched and by how many fingers.
1. Touch with 1 finger
2. Touch with 2 fingers on same fingers or different fingers.

Exercise 5
Drawing on your child's back:
Draw shapes on your child's back using your fingertip. See if the child can tell you what you drew. Between each drawing rub the old one out by rubbing the child's back briskly with the palm of your hand – this will increase sensory feedback. Get them to tell you shape or draw the shape.

Shapes include:



Make a note of what shapes they can recognise.

Exercise 6
Mirror game:
Stand opposite your child and move your body into different positions. Ask your child to copy you and make sure movements are slow and controlled.
For example: Put both hands on your knees.
One hand on your ear and one hand behind your back
One hand on your head and one hand on your stomach
Both hands on your head and bend your knee
Put your left hand on your right ear.

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Gross motor session 2 Homework Programme

Posture and balance

Postural stability

The following activities will help your child improve their shoulder and hip stability. This enables a child to reach, grasp and weight bear through the arms. It is an important factor for control in handwriting, and general hand function. Hip stability is related to the muscle strength around the hips, and it is important for good control in standing, and balancing.

Balance

Balance is concerned with maintaining good control of the posture, either whilst moving (dynamic balance) or when still (static balance). Children need to experience a wide variety of situations in which they can practice these skills. An important feature of balance is the child's ability to use their feet to feel and grip the surface they are moving or standing on. Practicing on different surfaces and textures should help increase their awareness of this. For this reason, where possible, children should be encouraged to perform balance activities in bare feet, so they feel as much sensation as possible. Children must learn to balance on two feet before they can master the skill of balancing on one foot and then progress through to related activities such as hopping and skipping.

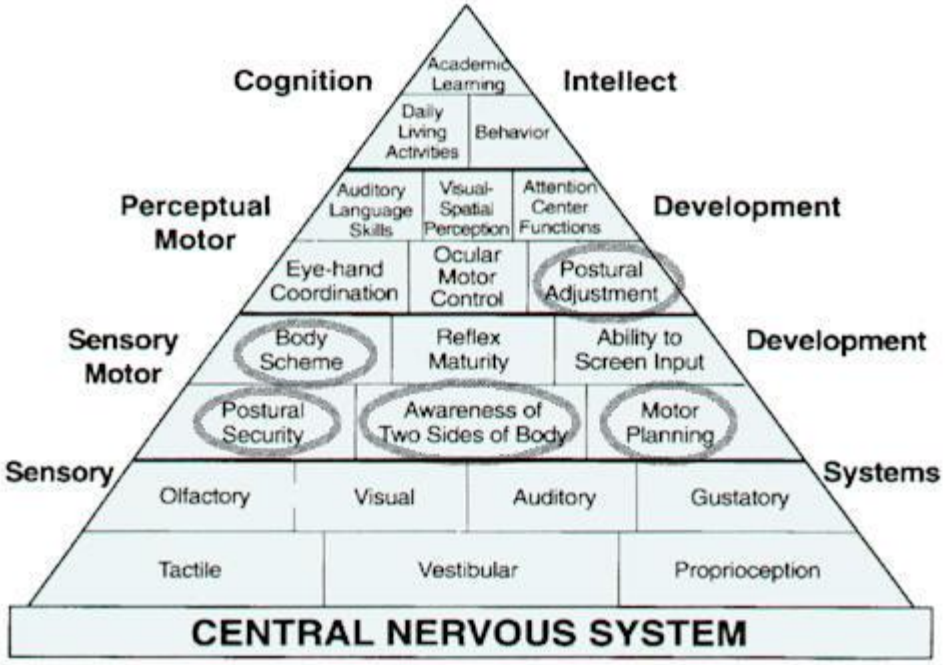
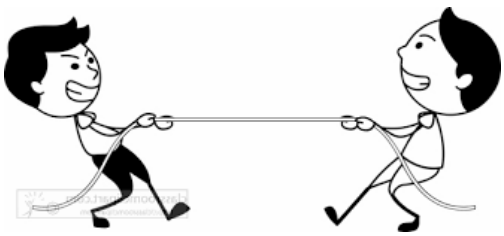


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1

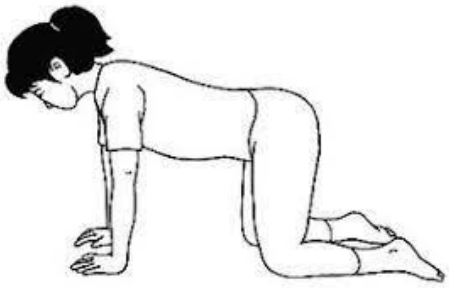
Arm wrestle: Sit opposite the child with elbows on the table. Hold each other's hand and encourage the child to push against resistance. Record the amount of time spent of this activity.

Exercise 2



Tug of war: Can be done either sitting, kneeling or standing, using a rope, a twisted bathroom towel, scarf etc.

Exercise 3



Push ups: Kneel on all fours and bend the arms at the elbows so that you just touch the floor with the nose. Straighten the arms slowly and come back to all fours position. To encourage this, you could try placing a ball slightly in front of the hands to touch with the forehead – decrease the size of the ball as it gets easier. Record the amount of press ups the child completes.

Exercise 4

Bridge: Lie on your back with your knees bent and feet flat on the ground. Keep your arms at your side with your palms down. Lift your bottom off the ground. Hold your bridged position for 10 seconds and increase time as skills improve. To increase challenge cross arms over chest. Remember to get your child to hug their knees into their chest, as shown in group session.

Exercise 5

Wall press ups: Stand an arm distance away from the wall. Lean on the wall, with the hands flat on it. Keeping the arms straight, push away from the wall using the fingers, to get an upright position. As it gets easier, move the feet backwards so that there is a greater angle of lean against the wall. Record the amount of wall press ups completed.

Exercise 6

Plank: Place the forearms on the ground with elbows bent, aligned below the shoulders, and arms parallel to the body at about shoulder-width distance. Lift your knees and tummy off the floor. Back and hips should be straight – no bottoms raised in the air. Build up to a maximum hold for up to 10 seconds.

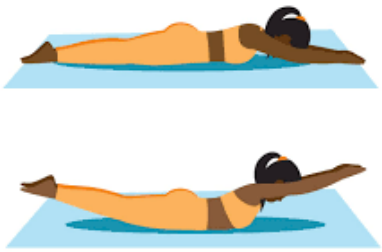
Exercise 8

Dipping toes: Stand on a sturdy step/ bottom stair and pretend you're standing on side of pool – trying to dip toe in water to check temperature! Do not put whole foot onto floor or allow your child to twist at hips. Build up to 20 times on each foot.
Record how many times the child was able to do this without holding onto the banister or wall.

Exercise 9

Ball rolling under foot: Place your foot on a football and roll it back and forward. If too easy, roll it round in circles gradually making circles larger. Try on each leg.

Exercise 10



Ball rolling on tummy: Lying on your front, keeping your legs straight, raise the legs, head, chest, and arms off the floor at the same time, and hold position. Build on time your child can hold position. You can roll a ball on the floor back and forth between you and a partner both whilst remaining in this position make sure that your arms and shoulders are lifted off the floor. Ensure child does not hold for long period of time. Do not overdo this position - you should not feel pain in your body. They should rest down flat onto floor at regular intervals.

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Gross motor session 3 Homework Programme

Posture and balance

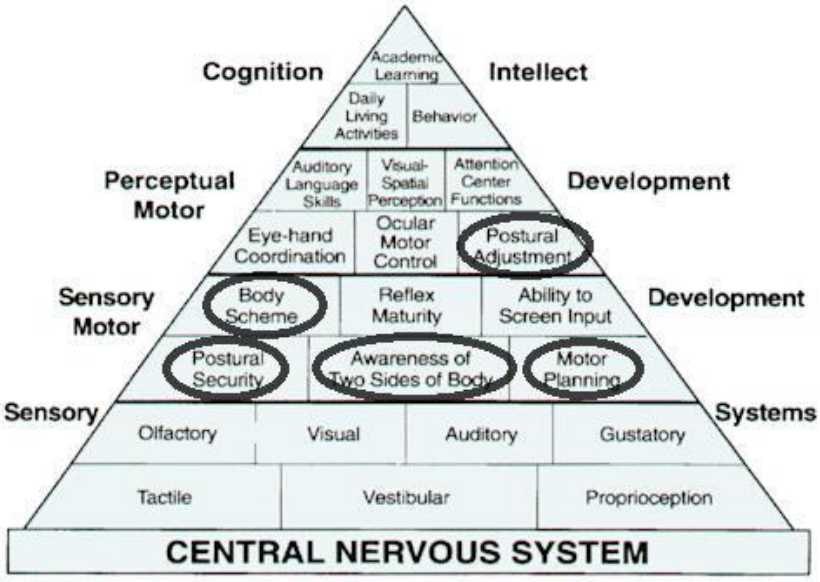


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1

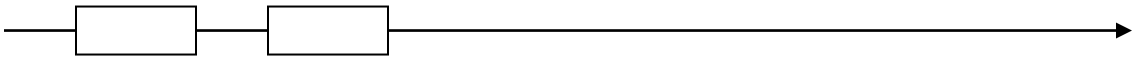
Superman: Kneel on all fours and stretch one arm straight out in front and the **opposite** leg straight out behind. Hold the superman for up to 30 seconds.
If this is challenging for your child build up to full superman pose. Do holding arms and legs straight individually and work on improving strength in each limb until not twisting and/ or collapsing. Make sure they count out loud.

Exercise 2

Stepping stones: Make a set of 2 stepping stones appropriate for your own flooring (not slippy) e.g. flannels, cardboard, table mats, old carpet etc. – the 'stones' should be large enough for your child to be able to place their feet onto them.

Forward steps: Get them to place one step stone down in front of the other, and step two feet forward on to the front stone. They then crouch all the way down to floor with bottom touching their heels. Picks stone up from behind. Ensure they stand upright and then place the stone directly in front of them and step forward with two feet. And repeat.

Side steps: Start with two feet on stepping stone, place next step to side you are going and side step two feet onto next step. They then crouch all the way down to floor with bottom touching their heels. Picks stone up from side. Ensure they stand upright and then place the stone directly by their side and sidestep with two feet. And repeat.



Exercise 3

Balance a ball: Give your child a short handled bat with a large surface area or a book. Hold the bat or book flat and balance a ball. If a ball is too tricky to start with try using a pair of rolled up socks first.

Exercise 4

Dipping toes: Stand on a sturdy step/ bottom stair and pretend you're standing on side of pool – trying to dip toe in water to check temperature! Do not put whole foot onto floor or allow your child to twist at hips. Build up to 20 times on each foot.

Record how many times the child was able to do this without holding onto the banister or wall.

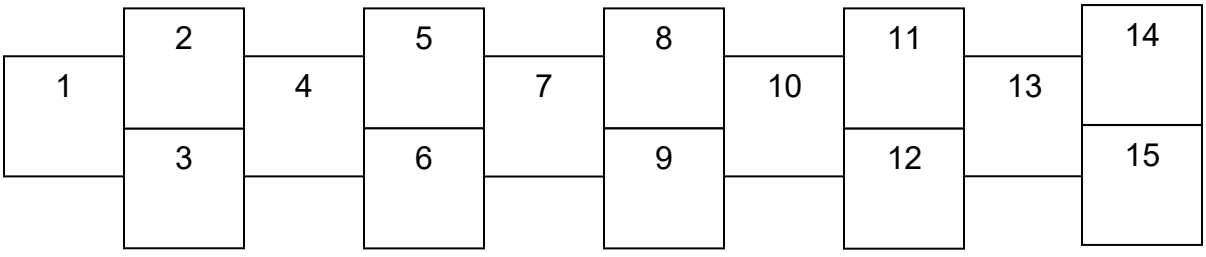
Exercise 5
Ball rolling under foot: Place your foot on a football and roll it back and forward. If too easy, roll it round in circles gradually making circles larger. Try on each leg.

Exercise 6
2 feet jumping: Practice jumping continuously with 2 feet together, within a boundary line e.g. square/ tile, chalked pavement, park playground floor markings etc.
If jumping on the floor is too difficult for your child think about opportunities to get them jumping off things safely in soft play and/ or playpark. You can start with them jumping feet apart, you can allow them to stop in between jumps, whilst working towards jumping two feet together continuously without boundaries, and then with boundaries. To build challenge you can get them to do in straight line, backwards, forwards, sideways, weaving in and out of cones/ skittles etc.

Exercise 7
Standing on one leg (static): Ensure they do not wrap foot around leg or hold onto leg that is off the floor. Get them to focus eyes on something on wall directly in front of them and arms out straight to assist their balance. You can time how long they can maintain their standing posture. Practice on both legs.

Exercise 8
Hopping: Practice hopping continuously on one leg in a straight line, within a boundary line e.g. square/ tile, chalked pavement, park playground floor markings etc. You can also make games to get them hopping backwards, sideways, weaving in and out of objects. Make sure you practice on each leg.

Exercise 9
Hopscotch:



Chalk out squares with 5 hops and 5 jumps. The child begins on the single square, standing on one foot, and hops forward, landing with one foot in each double squares. They then jump forward, to land on one foot, in the next single square. Demonstrate the activity to your child. If the child has problem with balance give them a large ball to hold with both hands. This will keep the arms and hands into the body and will improve the child's stability in dynamic balance.

Exercise 10

Jumping jacks: Stand upright with your legs together, arms at your sides. Bend your knees slightly and jump into the air. As you jump, spread your legs to be about shoulder-width apart. Stretch your arms out and over your head. Jump back to starting position. Repeat. Choose a length of time or number of repetitions that will allow your child to maintain good technique throughout all sets and repetitions.

Exercise 11
Skipping: To teach skipping, start by breaking down the steps for the child. Provide a demonstration and simple verbal cues like “Step, hop, switch”. Once the child is able to complete the “step, hop, switch” sequence. This can be a very slow process at first. Use visual and verbal cues to work on the step with one foot, the hop, and the switch to the other foot. Work to improve their fluency and speed of the step, hop switch sequence.

Exercise 12
Tip toe walking: Get your child to walk along a line with their heels raised off the floor so that toes remain on the line all the way along.

Exercise 13
Heel to toe walking: Get your child to walk between two ropes or along a line forwards and/ or backwards on floor. They must place the heel of one foot next to the toe of the other foot keeping their feet straight on the line.

Wirral Children's Occupational Therapy Service

Gross motor session 4 Homework Programme

Leisure and Play

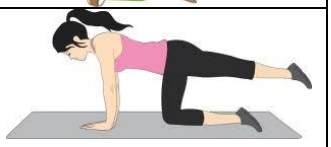
Exercise 1

Static wheelbarrow: Support the lower part of your child's body on a small sturdy stool/ step/ block/ gym ball. Child supports their own weight through their arms whilst always keeping head up, fingers pointed forwards, and palms flat on floor. Start at your child's current level of ability building up to a maximum of 3 minutes. As their tolerance/ strength improves get your child to support self with one arm and carry out an activity with the other hand. Change arms to strengthen both sides.

Exercise 2
Statue game (in sitting): make sure child's feet are flat on floor and they are sitting in an upright position. Can they maintain their statue while you gently push against them sideways, forwards, backwards?

Exercise 3:
Statues: Weight bearing positions
Below is a table of weight bearing positions which can challenge their strength and stability.

Name	Description	Posture Picture
High Kneeling	Kneeling with bottom up away from heels (hips and back straight)	

½ high kneeling	Kneeling as in high kneeling, then bring one lag forwards and place the foot on the ground so that the foot is under the knee and knee is in line with the hip.	
Crawl position with one arm lift	Crawling position (hands under shoulders, knees under hips, back straight), lift one arm forward and up. Keep back straight and shoulders down away from ears.	
Crawl position leg lift	Crawling positions (hands under shoulders, knees under hips, back straight), straighten one leg out behind and lift off the ground. Keep back straight.	
Skydiving/ flying	Lying on front, lift arms, head, feet, knees off ground as is 'skydiving/ flying'.	
Curl up into a ball	Lying on back, curl up into a ball bringing head to knees. Try not to roll to the side.	
Forwards on hands and feet	Leaning forward on hands, lift bottom into the air.	

To help with motivation try the positions through the following games:

- Musical statues. When the music stops shout out one of the statues in the table below. Ask your child to 'freeze' in this position. Can they make up their own statue? Can they maintain their statue while you gently push against them?
- Character game. Younger children may be more motivated by a 'character' game. Ask your child to think up characters for each position for example on an animal theme, high kneeling could be a meercat, forward on hands and feet could be a bear. Can they make up their own ideas? As you call out each 'character' ask your child to get into and hold their chosen position.

Try to ensure your child does not hold their breath while holding any of the positions. With the statues that involve balancing on one side of the body, remember to encourage your child to try on both right and left sides.

Leisure activities:
Try visiting the local park at the weekend and climbing on the play equipment. Make a list of leisure activities your child has completed this week.

Examples:
Outdoor walking
Indoor rock-climbing wall
Swimming
Going to the local park and climbing on the play equipment. Make a note of play equipment used e.g., monkey bars, balance equipment, climbing frame.

Please make a note on the homework sheet of any changes that you notice, for example, changes in their stamina, confidence, tolerance of equipment, emotional response.

Please note down what have they achieved this week and what needs more practice.

Balance equipment:
Make a list of balance equipment your child has used this week e.g. scooter, bike, space hopper, skateboard, stilts etc.
Any changes in their stamina, confidence, tolerance of equipment, emotional response. In addition, what have they achieved this week, what needs more practice.

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Gross motor session 5 Homework Programme

Aiming and catching

The following activities are aimed at improving ball skills, which involves the ability of the hands and eyes to work together. These skills are needed in activities such as catching and throwing balls as well as handwriting, colouring between lines, stacking blocks and using tools. Children need to learn to keep their eyes focused on the target in order to judge distances, gauge speed and respond with well-timed rhythmical movement.

Poor eye hand coordination can be improved by practicing activities that require repetitive movements. The teaching of skills needs to be approached carefully and sympathetically graded at a level so the child can experience success.

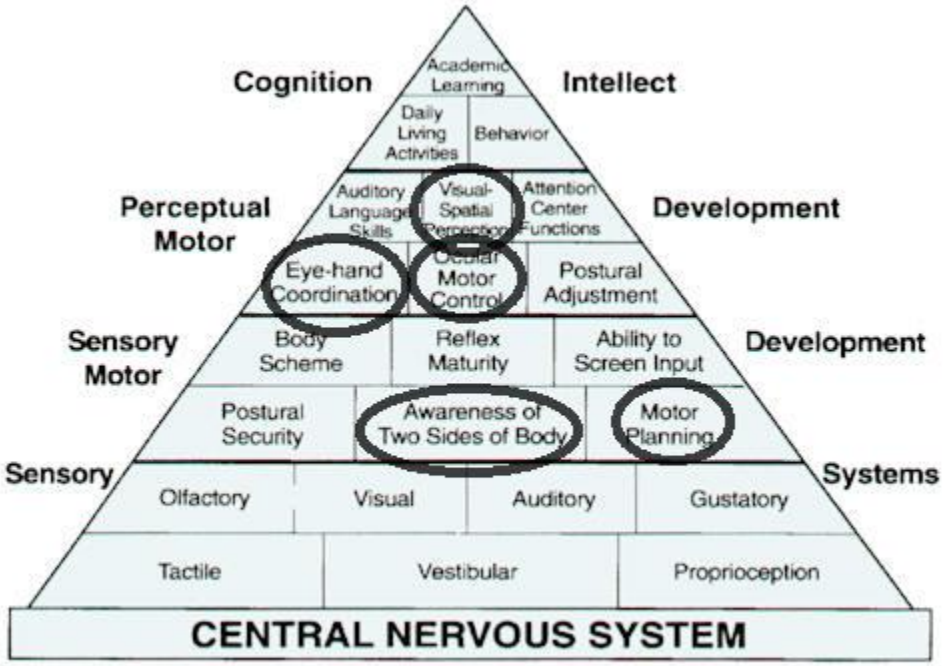

Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1

Balloon keepy uppy: Get child to hold hand flat with palm up towards ceiling see picture). Get them to gently pat balloon up (to eye level), get them to watch the balloon, allow balloon to come down to child's waist level and then time movement for balloon to travel up again. Move on to other hand, then to alternate hands (pat left hand, then right hand, then left hand and so on). See if they can increase number of successful hits. Don't let them run around after it, try to encourage them to stand still. If palm flat to the ceiling, then balloon should travel upwards.

If your child finds balloon patting difficult then try to get them to pop blowing bubbles. Blow a large number of bubbles into an open space. Ask the child to pop them by clasping their hands together on each bubble. Blow the bubbles within easy reach of the child to reduce the need to chase after them. Record how many bubbles are burst in 3 minutes.

Exercise 2
Bounce and catch:
Bounce a large ball off the floor and catch with two hands. Encourage them to hold ball at waist height, bounce it once, and child needs to look at the ball to help with judging speed and return of bounce. Reduce the size of ball until child can catch a tennis ball. Build up to bouncing and catching with one hand.

Exercise 3
Bounce a ball repeatedly on the floor:
Encourage your child using the palm of their hand to bounce a ball repeatedly up and down from the floor. Try with one hand and then the other. Then alternate hands. Record how many times the child can bounce the ball consecutively before stopping.

Exercise 4
Throw and catch in the air:
Get child to stand still and throw a bean bag or large ball up in the air (to eye level) and catch it. Once skill developed the height thrown can be increased, different types of balls can be tried, and try throwing/ catching with one hand. Start with throwing up in air and then progress onto throwing and catching with another person.

Exercise 5
Ball bounce to another person:
When able to bounce and catch, allow them to throw the ball with a single bounce to another person. The ball is then returned back to child in the same way. Once this is achieved progress onto a smaller ball. Increase the distance between each other. Encourage catching between two hands not against chest or tummy.

Exercise 6
Throw and catch in pairs:
Then throw and catch without bounce. Remember to try different size balls and adjust the distance. Encourage catching between two hands not against chest or tummy.

Exercise 7
Throwing and catching against the wall:

Practice with large soft ball and throw underarm back and forth, add a bounce, try it against a wall. Practice with two hands. As skills progress try reducing size of ball and using one hand.

Exercise 8
Target throwing:
Make some balls from rolled up socks or use bean bags. Throw them into a hoop/ bin/box. Vary target size and distance away from target. Start with underarm throwing, and progress onto a chest pass and overarm throwing.

Exercise 9:
Rolling ball:

Roll ball towards a goal, start with a big goal and reduce target size. See how many points they can score in a minute etc. Progress to skittle type games – start with large ball close to goal and then increase distance and decrease size of ball.

Motor skills group programme – keeping track of my child checklist!

- Secure = consistently able to complete independently.
- Emerging = developing skill. Performance may vary. Some adult prompts required.
- Needs practice = struggles/ takes effort – needs a lot of adult support.

Fine motor – Session 1 – Shoulders, wrists, and finger strengthening

Exercises	Secure	Emerging	Needs practice
1: Arm wrestle.			
2: Tug of war.			
3: Popping bubble wrap			
4: Water play			
5: Opening and closing – jars, bottles, containers, packets			
6: Working on a vertical surface			
7: Theraputty			
8: Postural stability exercises – push ups, superman, bridge, planks			

Fine motor – Session 2 – Hand and finger strength

Exercises	Secure	Emerging	Needs practice
1: Pegs – clothes/ bulldog clips			
2: Stapler / Hole punch			
3: Tweezers			
4: Paper tearing			
5: Paper folding			

Fine motor – Session 3 – Developing pincer grip & use of tools

Exercises	Secure	Emerging	Needs practice
1: Use of ruler			
2: Stencils			
3: Penny dropping (into slot).			
4: Penny collecting (translation)			
5: Finger isolation			
6: Dropping small items into container			
7: Transferring small objects			
8: Threading skills			

Fine motor – Session 4 – Scissor Control

Exercises	Secure	Emerging	Needs practice
1: Scissor control – Snipping			
2: Scissor control – Cut along thick straight line			
3: Scissor control – Cut along thin straight line			
4: Scissor control – Cut around corners			
5: Scissor control – Cut along curve lines			
6: Scissor control – Cut out squares & triangles			
7: Scissor control – Cut out circles			

Please note the homework activities in the programme are designed to give you ideas to get started. Here are some more ideas you may wish to consider:

- Art activities games - Hama beads, aqua beads, collages with scraps of paper (torn and cut), lentils, pasta, material, etc.
- Using stickers – regular or reversible – sticking on pictures etc.
- Commercially available games - tiddly winks, Connect 4, threading, Kerplunk, Operation, Jenga etc.
- Travel games with very small pegs.
- Pegboard kits – an activity which involves picking up and placing small plastic pegs into a board with holes. Child can make own design or copy instructions that come with kit.

- Construction games (multi-link games, Lego, Duplo, brick building, Meccano, etc).
- Board games involving dice and counters. Dice games encourage the hands to be placed into a cupped position to shake the dice, which is good for developing hand arches.
- Playing card games.

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Fine motor session 1 Homework Programme

Shoulders, wrists, and finger strength

The following activities are aimed at improving shoulder, wrist, and finger strength. We need strength in these areas of our body to control our movements to complete all fine motor activities.

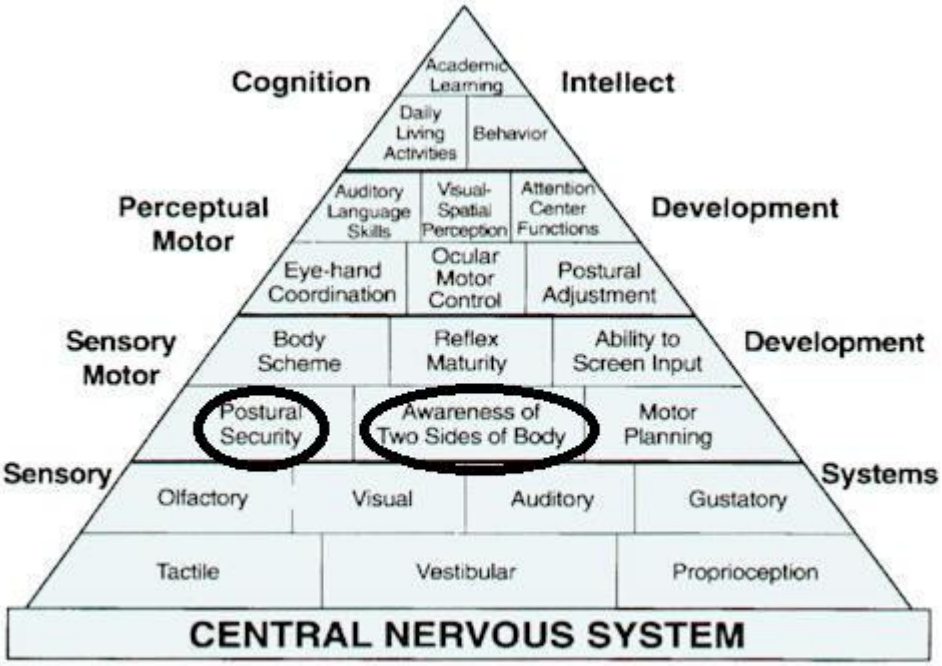
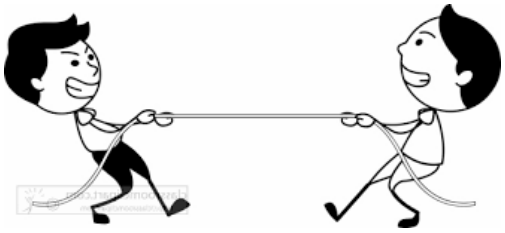


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1

Arm wrestle: Sit opposite the child with elbows on the table. Hold each other's hand and encourage the child to push against resistance. Record the amount of time spent of this activity.

Exercise 2



Tug of war: Can be done either sitting, kneeling, or standing, using a rope, a twisted bathroom towel, scarf etc.

Exercise 3

Popping bubble wrap:
Pop bubbles between pad of thumb and index finger. You can then do the same with thumb and each finger in turn.

Exercise 4

Water play: Wringing out cloth/ sponge - Activities such as car washing, cleaning windows.
Squeezing sponges – Fill a container with water and see how quickly they can empty it by putting sponge in and squeezing into another container.
Can also encourage polishing furniture, cleaning glass/ mirrors.
Pouring activities – pouring liquid from one vessel to another. Increase the size of vessel or amount of liquid being used to increase their strength.
Squeeze toys/ water blowers/ basters.
Use of spray bottles.

Exercise 5

Opening and closing jars, bottles, containers: Encourage your child to open jars, screw lids, bottles etc. Get your child to make fresh orange juice using manual orange squeezer to squeeze orange halves.

Exercise 6

Working on a vertical surface: Encourage your child to work in a vertical position about eye level – on an easel, white board, chalk board, paper stuck to the wall, water on paintbrush on an outside wall/ fence.

Exercise 7

Theraputty – some ideas for use:

- Roll ball between palms.
- Flatten with heel of palm to make a ‘pizza’.
- Roll small pea shapes between fingertips. Flatten with index finger.
- Roll into sausage shape.
- Pinch using pincer grip along the top of sausage try and squeeze so pads of fingers touching.
- Practice cutlery skills.
- Pulling of small bits with pincer grip.
- Pull fingers through to stretch out putty.
- Push fingers through to stretch out putty.
- Burying beads or small objects for your child to find.
- Lots more ideas on internet search.

Please make sure that theraputty is used on a hard/ flat/ protected surface and is used under adult supervision.

Please Note – It is important to continue with postural stability exercises from Gross Motor Sessions. Which include:
Push up
Superman
Wall press
Static wheelbarrow
Ball rolling on tummy

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Fine motor session 2 Homework Programme

Hand and finger strength

The following activities will improve hand and finger strength. Having strength in the hands and fingers allows you to hold tools, grasp/ manipulate/ release objects effectively.

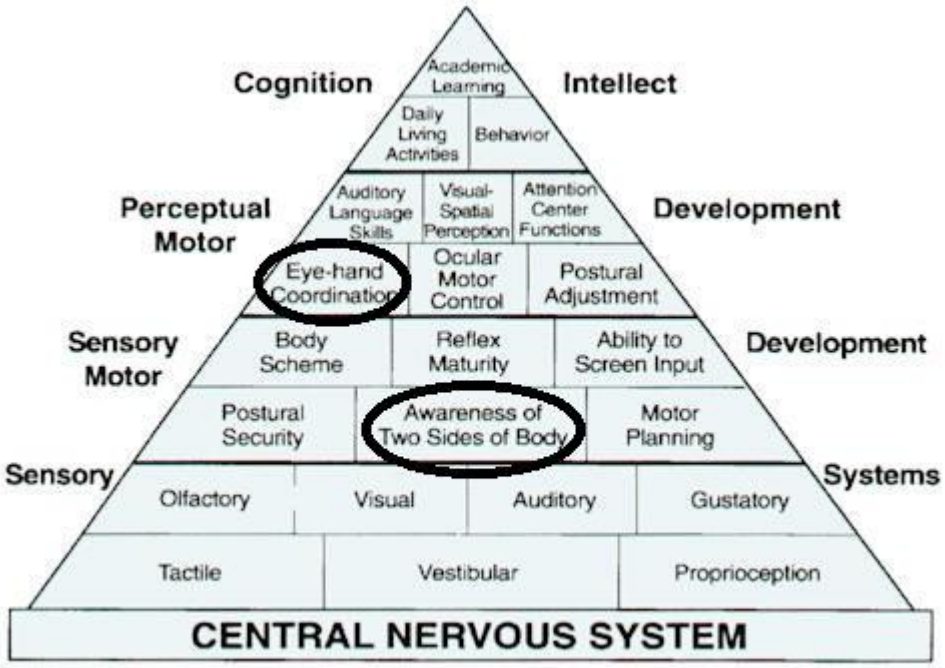


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1

Pegs:
Using 20 clothes pegs, see how quickly you can pick them up and put them onto a piece of cardboard. You are only allowed to open the pegs using the pads of your thumb and index finger. Record how long it takes.

Exercise 2

Stapler/ hole punch:
Use a hand-held stapler or hole punch to punch and make a picture. The child makes random holes in the paper/ card with punch, and then joins the holes with laces/ crayon, and/ or draws a path. Then ask the child to punch holes along the path. Encourage your child to hold stapler/ hole punch in hand rather than press on tabletop.

Exercise 3

Tweezers:
Get child to pick 50 small objects e.g. bead/ dried peas/ cheerios and put in a container, one at a time, using their pincer grip to hold the tweezers. Time how long it takes them to put them all in the container.

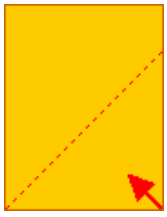
Exercise 4
Paper tearing:
Tearing paper into strips and crumple into balls using pincer grip. Use ball to flick with thumb and index finger into a goal/ container or use balls to create a collage.

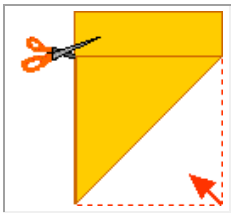
Draw shapes such as circle, square, triangle. Get your child to tear around the shape placing it between the thumb and index finger. This should be small, controlled movements moving hands down as children will tend to rip without control.

Exercise 5
Paper folding: Origami fortune teller.

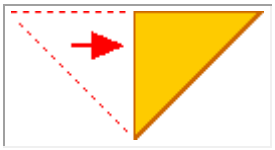
Supplies needed:

- Construction paper
- Scissors
- Pen or pencil

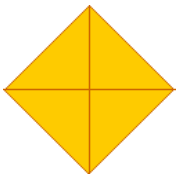
	Start by making a square piece of paper. To start making the square, fold one corner of a piece of paper over to the adjacent side.



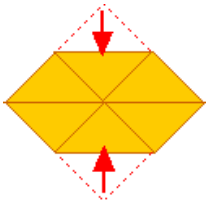
To finish making the square, cut off the small rectangle, forming a square (which is already folded into a triangle).



Fold the two opposite ends of the triangle together, forming a smaller triangle.



Open the paper up (unfolding all the folds).



Fold a corner into the central point. Repeat with the opposite corner.

Repeat with the other 2 corners. You'll end up with a square.

Flip the paper over.

Fold a corner over to the centre. Repeat with the opposite corner.

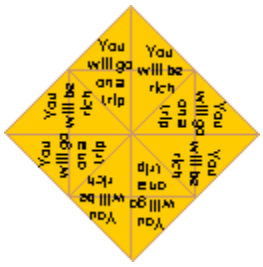
Fold over the 2 remaining corners. You'll end up with a smaller square.

Fold the square in half. Unfold and fold in half the other way.

Unfold and pull the four ends together, making a diamond-like shape. Pick up each of the four square flaps, and put your fingers inside. You will be able to move the four parts around.

Write any four colours on the four flaps.

Flip it over, and write 8 numbers on the triangular flaps.



Write 8 fortunes inside the flaps (underneath the numbers). Some examples of fortunes include:

- You will get an "A" on a test.
- You will be rich.
- Good fortune will be yours.
- You will have many friends.
- Do a good deed today.
- Someone will call you today.
- You will go to a party soon.
- Be careful on Tuesday.
- You will have very good luck today.

You can now be a fortune teller. Have a person choose one of the four colours. Spell that colour out, while moving the fortune teller in and out.

Then have the person choose one of the numbers that is showing. Move the fortune teller in and out the right number of times. When you finish, have the person choose one of the four visible numbers. Open up the flap they choose and read their fortune.

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Fine motor session 3 Homework Programme

Developing pincer grip & use of tools

The following activities will help develop use of a pincer grip. The pincer grip is important for precision movements of small items.

The following activities will help your child to develop skills with coordinating both hands to effectively use tools they will use in everyday life.

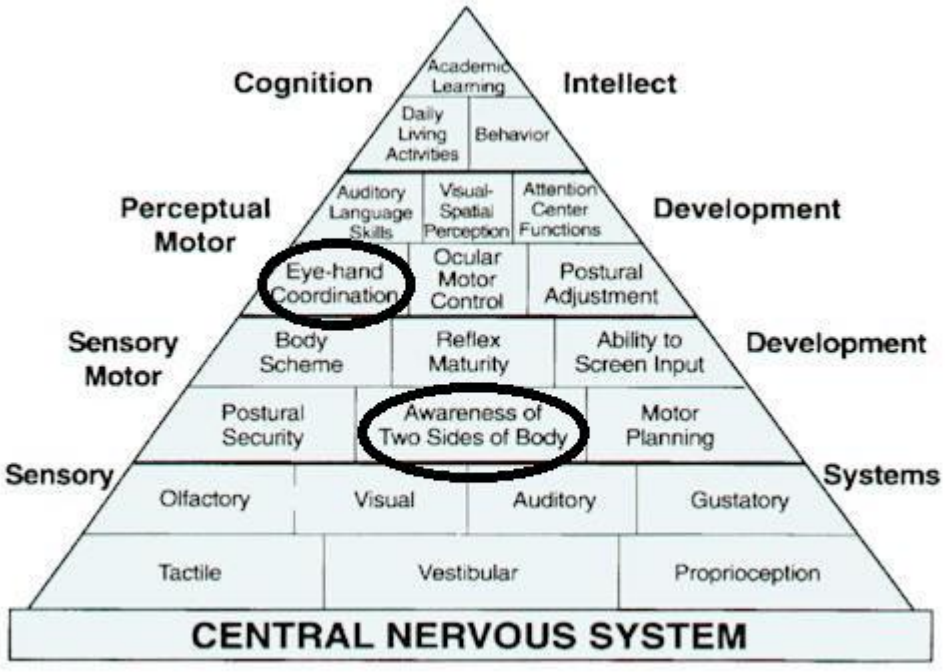


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

Exercise 1
Use of ruler:
Practice using a ruler:
Underlining words and sentences.
Join dots together.
Draw 10 lines all going in different directions.
Draw different sizes of different shapes e.g. square, rectangle, diamond etc.
Draw a picture using a ruler to make all the lines.

Exercise 2
Stencils:
Find different objects in the house to draw around such as a cup, a box, a bottle, your hand, your foot. Make sure that you keep the pencil pressed against the object you are drawing around so that the shape you draw is exactly the same as the object.

Bring 5 examples in that you have done. Don't tell us what it is, see if we can guess it!

Exercise 3

Penny dropping (into slot):
Get them to put 25 pennies into a money box or slot. Ensure they use a pincer grip and time how long it takes them.

Exercise 4

Penny collecting – palm to finger translation:
Picking up coins using pincer grip get them to slide the coin using their thumb up the back of their index finger and push into their closed palm – hide in palm. Do not let them turn their hand – keep palm facing the table. Repeat until 5 coins are held in closed palm. Then retrieve each coin individually using thumb to slide it back down the back of their index finger onto the table - without turning hand and dropping coin out of palm.

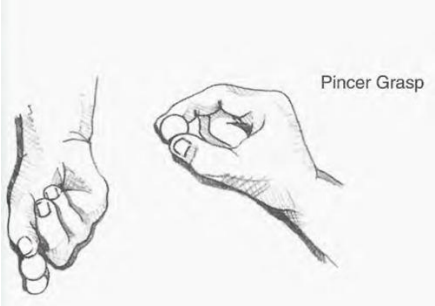
Exercise 5

Fingers isolation: With palm facing up to ceiling. Place each coin on fingertip. Then individually starting with thumb move each finger to put coin into palm.

Exercise 6

Dropping small items into a container (in between fingers): Place marbles, small piece of rolled up paper, or similar small object in the web space between each finger. Get them to drop one at a time in a controlled manner into a container. Ensure you try with both hands.

Exercise 7

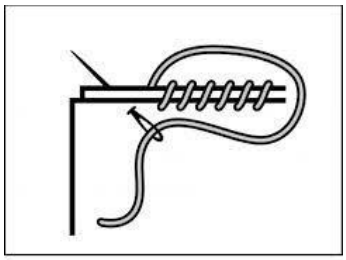


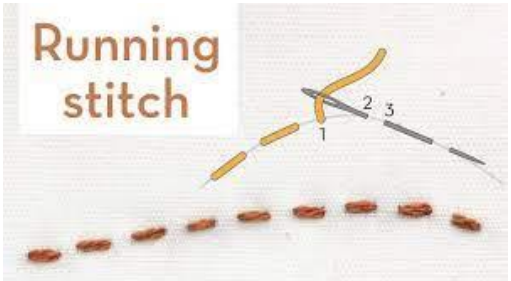
Transferring small objects: Grasp objects between pads of thumb and index finger, pick up 50 small items such as grains of rice, frozen peas, or small beads. Record how long it takes to pick them all up and put them into another container. Using a container with a small opening such as an empty plastic bottle improves control of movement.

Exercise 8: Threading skills
Thread dried pasta or beads onto string. Make sure the bead is picked up between the pads of the thumb and index fingers. Build up to making jewellery and friendship bracelets.

Exercise 9: Threading skills - Puppet
Puppet given in session.

1. Thread needle with wool/ yarn provided. Tie knot at the eye of the needle to prevent the wool/ yarn coming unthreaded.
2. Take the 2 pre punched puppet shapes and place them together with the right side of the fabric facing outwards.
3. Begin stitching in running stitch or an overcast stitch.
4. When you have sewn all the way around the puppet, go back over the last stitch twice to ensure that the wool/ yarn is secure.


Overcast Stitch



Please bring puppet back next session to show.
Please return the needle to staff.

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Fine motor session 4

Scissor skill development

Set up

- When sitting to use scissors, the furniture should allow feet to be flat on a firm surface and forearms supported on the work surface to maximise stability. The table ideally needs to be 1 inch above the child's elbow. For adult dining table consider the use of booster seats and/ or stable support under the child's feet.
- Ensure you choose scissors which are appropriate for the child's hand dominance, and hand size.

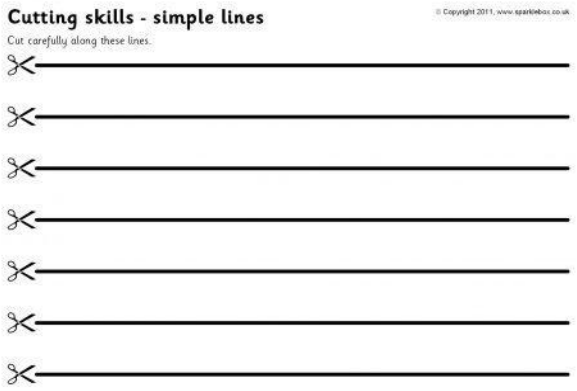
Position

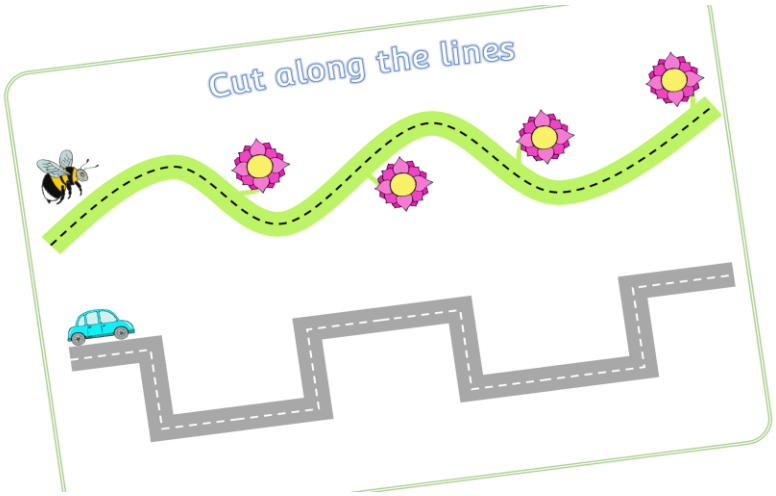
- Thumb should be on the top loop and can use either index finger or middle finger or both in the bottom loop depending on size of the scissors and your child's hand. To encourage thumb on top you can place a sticker on their thumb to remind them.
- Paper should be held parallel to the table with helping hand with thumb on top of paper.

- The child is also able to manoeuvre their helping hand to support the cutting by turning the paper (not turning the scissors). Scissors should be pointed forward and parallel with the table (not pointing up to ceiling).
- Encourage your child to cut slowly and to remain on the line.

Stages of scissor skills development

- Child is able to snip paper. Child holds scissors in one hand (dominant hand is not likely established at this stage).
- Child is able to cut along a thick straight line.
- Child is able to cut along a thin straight line.
- Child is able to cut around corners.
- Child is able to cut along curves.
- Child is able to cut out a range of squares.
- Child is able to cut out a range of triangles.
- Child is able to cut out a range of circles.
- Child is able to cut out a range of large, simple shapes e.g. stars.
- Child is able to cut out pictures, use skills in arts and craft projects etc.





Hobbies to develop out of school

The activities outlined in this section are general ideas for extra curricular activities that provide children who have coordination difficulties the opportunity to practice to continue to develop their skills. Any hobby that a young person pursues should be one that they have chosen that provides motivation and enjoyment and will boost self-esteem and confidence.








Some ideas:

Horse riding

This activity promotes postural stability. It also helps the child to balance and feel rhythm. It is a good idea to choose riding schools that understand the needs of your child and allow them more time to gain the necessary skills.

Swimming

This activity allows the child to strengthen both upper and lower body. It also helps two-sided coordination skills.

Cookery

Preparing food, baking, stirring - it can help improve both fine and gross motor skills, whilst organization skills are practiced in the preparation and following of instruction from recipes with adult supervision.

Trampolining

Trampolining can help with posture and balance. It can also make the pelvic girdle more stable, promoting increased postural stability and improving motor planning.

Cubs/ beavers/ scouts/ brownies
With an understanding facilitator a child will benefit from group activities incorporated in these clubs, and at the same time improve their social skills. It is recommended to advise the facilitator that your son/ daughter may find certain activities hard to do, to ensure their success and boost self esteem.

Martial arts
This requires self control and discipline. It also requires the following a sequence of commands. The benefit of these activities is in gross motor skills, self-esteem, and body awareness.

Badminton
This would be a first choice of racquet sports because the racquet is light and the shuttlecock moves relatively slowly.

Rock climbing
Indoors or outdoors. Good for improving motor planning and organisational skills. Helps with strengthening muscles both upper and lower body. Good form of exercise to improve overall aerobic fitness.

Some useful resources

WATCH ME DO IT - There is a free video library resource with demonstrations recorded from a first-person viewpoint which can help children learn everyday movement skills. Website - https://watchmedoit.mmu.ac.uk/

SENDLO – Wirral local offer websites which sets out what services, support, and advice are available for children in Wirral who have additional needs. Website – https://www.sendlowirral.co.uk

BRANCH is an online mental wellbeing hub for children and young people in Wirral, for children and young people aged 0 to 18 (and up to 25 with additional needs). It does not deliver services directly but offers a guide to help people find the best tools and support available locally. Website – https://branch-wirral.co.uk

ADDVANCED SOLUTIONS - provide open access, community-based, solution-focused learning, coaching and mentoring programmes, featuring health, wellbeing and enrichment activities to support the special educational needs, specific learning difficulties and associated mental health needs of neurodivergent children and young people. Website – www.addvancedsolutions.co.uk