ChildVision
National Education Centre for Blind Children

Equine Therapy Unit

Newsletter

Welcome to the 5th Newsletter of the Equine Therapy Unit in ChildVision!

Well our horses are still in the field and working away each day to stay

fit and healthy for their return to work!

In our lineup above we have Bull standing on the left, Fred having a little rest,
Dolly (our retired companion horse), Echo lying, and Blue having a roll in the front!
The picture below shows Blue doing his workout.

We are continuing to work in the background planning how we will return to providing our service again over coming months. We will continue to keep you updated on this process as it progresses.

ChildVision
National Education Centre for Blind Children

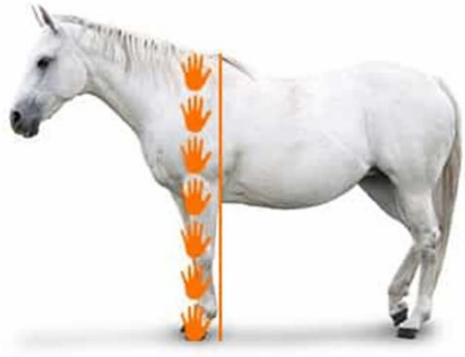
Equine Therapy Unit Newsletter

Introducing Blue

This week we introduce Blue.

Blue is our tallest horse here in ChildVision. He is like a gentle giant – he is very tall and strong but also very sociable and kind.

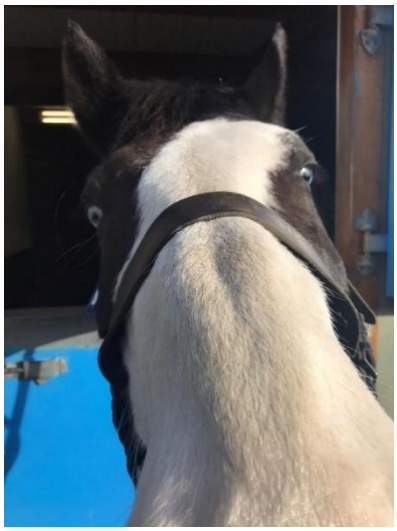
Horses height is measured in 'hands'. They are also measured from the 'withers' to the ground, rather from the top of their head as shown in the picture.



Blue is a whopping 18.1 hands high! That is all of 5ft 9" up to the back of his neck!

As he is so tall and strong, he is excellent for back riding – where an instructor rides on the horse with the child to provide support, extra proprioceptive input, or just maximise the movement of the horse to benefit the child.

Although Blue is really big and strong, he is very gentle. He is naturally interested in people and likes to stand with his head out the stable door to say hello to anyone who is nearby. In this photo he was trying to say hello to the camera!



ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Blue also loves to make friends with the smallest animals and people in the yard. Even on his break from ChildVision, he is making friends with Patch, who lives nearby!

In this picture, Blue was guilty of leading his friends astray – wandering off to have some fresh grass instead of heading straight to bed! When he was found – he looked up, and then just started to eat again as if he was doing nothing wrong!

Although he can be mischevious, you can count on Blue once he has his bridle on and is 'working' with his human friends. He has learnt a lot over the past few months since he joined us, and is now good at listening, compliant and cooperative. He truly is gently giant.

Using Horses for Therapy – Educational benefits

Occupational Therapists assess the development of children and where they have difficulty progressing through developmental stages, they provide support and intervention to help them move on to the next stage. In ChildVision, we are lucky enough to have horses as the therapy medium. We have looked at some of the reasons why using horses for therapeutic input is valuable, including the physical, sensory, psychological benefits and social development. This week we look at how therapy with horses helps **educational development**. There is less resistance to learning when it is part of a riding lesson as the focus of the session is not on learning but on having fun!

<u>Differentiation</u>

This skill is about being able to filter out all of the information coming at us at any particular moment. Attention and concentration are forms of this skill. Due to the huge calming sensory input of being on a horse, coupled with support from therapist and staff to direct attention to particular activities, the focus of the child increases over time.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Sequencing, patterning and motor planning

Something as apparently simple as holding and using a pencil requires a great deal of motor planning. Knowing which comes first in a sequence of events is an important part of most activities. These and other similar skills are taught on horseback though the use of obstacle courses, pole bending, and many other games and activities.

Visual/spatial perception

This includes our awareness of form and space, and our understanding of relationships between forms in our environment. Included in this area are

- directionality (knowing right from left)
- space perception, which allows us to differentiate between items close in shape but spatially different (i.e. “h” versus “b”); form perception (i.e. differentiating “h” and “m”)
- figure ground (picking out an object from the background)
- visual sequential memory (such as remembering symbols in a particular sequence or pattern)

Both reading and math concepts involve visual spatial perception. Through the games we play on horseback we provide multiple opportunities to support development of these skills

Improved eye-hand coordination

Eye hand coordination is necessary for such skills as writing. These skills are reinforced through many activities we carry out as part of the sessions here.

Basic Maths Skills

Are learned by counting the horse’s footsteps, objects around the arena, or even the horse’s ears and legs. Number concepts are gained as the rider compares the number of legs on a horse to the number of his own legs. Addition and subtraction are taught through games involving throwing numbered foam dice and adding or subtracting the numbers. Because the concepts are taught through games, resistance to learning is decreased.

Early Reading

Early reading skills involve shape, colour and size recognition. These skills are reinforced through the games we play on horseback. Through the use of signs placed around the arena, letters can be taught, and reading of individual words by word recognition can also be learned. Games involving signs for “exit”, “danger”, “stop” etc., help to teach important life skills involving reading.

Reading motivation

There are many programs available whereby children are encouraged to read to their pet. This takes the focus away from them performing, and supports more fluid and relaxed practicing of reading skills. This concept has also been expanded to trained dogs in the community and even with horses!

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Equine Assisted Occupational Therapy

The role of Occupational Therapists working with children and young people is to provide intervention, support and/or advice to children and their families, where there is disability or impairment which impacts on their performance and participation in everyday activities of life. Occupational Therapy is most useful to children/young people who are having difficulty joining in with the activities they need and want to do every day e.g. dressing, using cutlery, completing jigsaws, riding a bike, writing, integrating with others etc. These difficulties may be due to poor gross and fine motor co-ordination, poor core stability, poor motor planning skills, visual perceptual difficulties, cognitive skills such as concentration and attention, or sensory difficulties.

As sensory processing is something that needs support for a lot of the children who attend our service, in this section we have been focusing on learning about the different sensory systems and how we can support their development.

This video is an introduction to sensory processing difficulties and how we can recognise and start to understand difficulties your child may be having. Its worth a watch!

https://www.youtube.com/watch?v=TWRICUdRbho&feature=youtu.be

Sensory difficulties are helped through carrying out sensory based activities which are tailored to support your child's individual needs. Equine Assisted Occupational Therapists help children with sensory processing difficulties through the use of equine related activities. Equine activities and being on horse are wonderfully sensory experiences that can be tailored to meet the individual needs of each child, and as such provides a very powerful therapeutic tool.

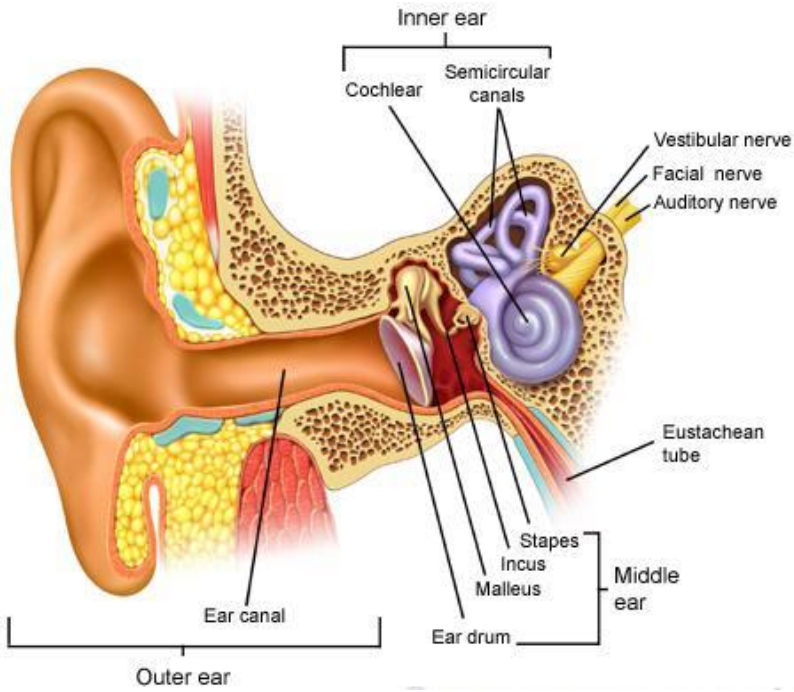
Last week we had a look at the sense of hearing. This week we are looking at our sense of movement, also known as the Vestibular sense, and how this sense can be supported and developed at home.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

The Vestibular System

The vestibular system is often called our balance sense and this kind of input is incredibly powerful. Vestibular processing is nearly always at work in everything we do, arguably more than any other sensory system. Vestibular activities, when used correctly, have the ability to calm and soothe a child, as well as improve many aspects of development like coordination, handwriting, attention, and even reading! The system itself is located in the part of our inner ear called the vestibule, this is how it gets its name. The vestibule is attached to the cochlea, the part of the inner ear that helps with hearing. Inside the vestibule, there are two organs, the semi-circular canals, and the otoliths.



Vestibular input is received in the brain every single time we move our head. The vestibular system is made up of canals that are lined with tiny little hairs and these canals also have some fluid in them. When we move, the fluid swishes around in the canals and touches the hairs. The brain gets the message about what hairs the fluid has touched and we know how and where to move. That means that we get vestibular input, albeit mildly, when we turn our head or walk across the room.

The greater the movement, the more vestibular input we receive because that fluid is swishing around on the receptors more! This is why our vestibular seeking kids are always trying to get lots of movement. They want bigger, more powerful vestibular input and they'll get it when they move fast, climb high, hang upside down, swing, or spin.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Our vestibular system is so very important because it links to our vision, auditory and proprioceptive systems, and more. Because of that connection, vestibular processing affects eye-hand coordination (visual motor skills) and how we move our bodies (body awareness). If the vestibular system is under-developed or there are processing problems, you might see surprising difficulties in your child:

- Difficulty sitting still (very wiggly)
- Poor handwriting
- Poor core strength (w-sitting, hard-time sitting with good posture)
- Poor balance
- Poor motor planning (figuring out how to move the body in a new way like riding a bike for the first time)
- Difficulty problem solving
- Poor organizational skills
- Poor attention
- Clumsiness

How the vestibular system helps day to day

Balance and the vestibular sense

Balance is essential for all of our movement. Without balance we would not be able to roll over, sit up or walk. We rely heavily on the feedback from our inner ear to make sure we don't fall over if the ground is uneven or on steps. We can also keep our bodies steady if the surface underneath us moves, for example on escalators. When we roll over in bed, it is our vestibular system that makes sure we don't roll out! Majority of the body movements we make rely on good balance and postural control.

Postural control

Postural control is all of the small adjustments our body is constantly making to ensure it doesn't over or under balance. Our postural control allows our bodies to move in different directions whilst remaining stable. For example, when we bend forward our back muscles and our stomach muscles work together to make sure we don't go too slowly, or crash down too quickly, or fall over. When we throw a ball we can move our arm without our whole body going forward with it and without losing our footing. We can stay sitting on a moving horse without falling off!

Reaching across the table to get the salt, also requires good postural control. Without it, we might fall out of our chair into the person next to us or into our food. We can twist and turn and bend our bodies in any number of ways without falling over when our vestibular system is working well.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Muscle tone

Muscle tone refers to the constant little contractions our muscles are making when we are still. These little contractions allow our bodies to increase or decrease tension as required when we are still and moving. Our vestibular system supports this tension. Muscle tone can be affected by diseases that damage the brain, such as a stroke, head injury or cerebral palsy. In these cases, muscle tone might be very tight or very low and this makes movement much more difficult. Some children with Sensory Processing Disorder might have lower than average muscle tone and this can affect their postural control and stability.

Spatial orientation

Spatial orientation lets our brain know where our body is in space. It helps us to know if we are lying down or standing up or sitting. Or, if we moving forwards, backwards, sideways, up or down. It also gives feedback to let us know how fast are we moving.

This would include examples like: Are we high off the ground on a ladder or are our feet on the ground? Is there a slope or are we on the flat? Is a lift without windows moving up, down or stationary? Our vestibular system is constantly sending this type of information to our brains to let us know where we are in space.

Alertness

Alertness relates to our ability to pay attention. Surprisingly, our vestibular system plays a big role in our attention and focus. Typically, if you have been for a run or been exercising you will be more alert and focused. This is because of the extra vestibular input your brain has received from the movement. If you have spent the entire day seated, you are more likely to feel a bit more sluggish.

Eye movements and the vestibular sense

Finally, our vestibular system controls our eye movements. It allows us to look in the direction we want to look. We can look up to the board or teacher and then back to our work. Or look over at the clock and then back to our TV, without getting dizzy or losing focus. When we walk, what we see doesn't bounce up and down, it stays focused. Our brain is constantly processing the information about our head movements to adjust our eye movement to match.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

What might it look like if the vestibular system isn't working well?

When the vestibular system doesn't process the information it receives very well, some typical responses are outlined below

- Some children are **sensitive to vestibular input**, which means their brains respond to only a small amount of movement, and they can become overwhelmed quite easily.
- Other children are **slower to respond to the input**, which means they need more movement to understand the information their vestibular sense receives. These children could either respond by *seeking out more movement* or by *just being slow to respond* and a bit sluggish.
- There are also children who might display a **combination** of the two responses.

Some typical traits seen for each type of response are listed below.

Sensitivity to vestibular sensory input:

For kids that are sensitive to movement, the brain is getting too many signals! It's on overdrive and even the little movements can seem much bigger. In more extreme cases, when kids are incredibly fearful of any type of movement, it's called gravitational insecurity because they're literally afraid to leave the ground in any capacity. It's a frightening feeling for kids when they get picked up or are moved unexpectedly. They may feel dizzy, as if they are falling, or lose their balance. Nobody likes that and that's why they work hard to avoid experiencing it.

Some common signs for avoiding vestibular input are:

- Refuses to ride swings
- Won't climb playground equipment
- Scared of movement
- Doesn't like rough-housing
- Overwhelmed or cautious walking down stairs

It's very important that we respect a child's wishes to not participate in these activities, but helping them learn to tolerate vestibular input is equally as important.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Seeking out vestibular sensory input:

Seeking vestibular input isn't necessarily a bad thing, some kids simply like it and enjoy the sensation. However, if your child is constantly, almost obsessively looking for ways to get vestibular input, it can start to interfere with life. This fixation on movement happens because their brain is under-processing the vestibular input. Basically, that means that the signal isn't getting through that they've gotten vestibular input, so they keep trying to get it. That's where vestibular activities come in, because they can help the brain start to process the input that it is getting even better.

These are some signs that your child is seeking vestibular input:

- Climbs dangerously high, can't seem to get high enough
- Spins frequently (while standing, on swings, in swivel chairs)
- Seeks out swinging
- Never seems to get dizzy
- Always moving, running - constantly 'on the go'

Kids that seek vestibular input also often seek proprioceptive input.
These two senses are the powerhouses of the whole sensory system, and they work closely together.

Slow response to vestibular sensory input:

As opposed to being sensitive to vestibular input and being easily overwhelmed by it, or seeking out more and more vestibular input, some children respond slowly to the input. This means they might not seek it but generally need lots of it for it to take effect.

If they dont get enough vestibular input you might notice the following:

- Bump into things
- Falls over objects
- Loses balance unexpectedly
- Poor muscle tone (appears more floppy then others)

Why is the vestibular system important for learning and work?

Alertness and focus

Learning firstly requires good attention and focus. You have just learned that the vestibular system helps with alertness and therefore a student's ability to attend. Without good attention, it is very difficult to stay on task or to listen to your teacher. If you can't stay focused at work it will take a lot longer to get your work completed.

ChildVision
National Education Centre for Blind Children

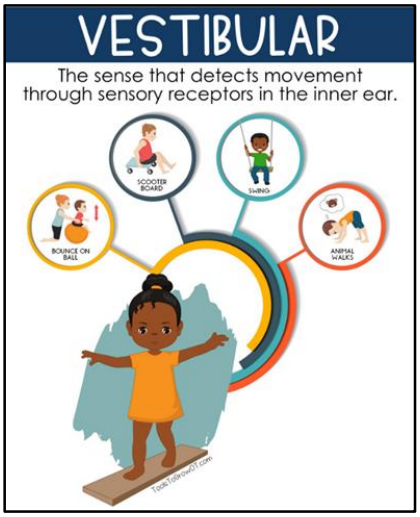
Equine Therapy Unit

Newsletter

Balance and postural control

Balance and postural control are essential for all motor skills. Sitting at a desk requires good postural control. So does sitting on the carpet. Without it, you will likely start leaning into your peers. Using a pencil or a computer also require good postural control. Playtime and PE are also much more difficult without good balance and postural control.

Children who are more sensitive to movement may avoid activities and reduce their opportunities for learning. These children might present as preferring table top activities and sit quietly in the corner. Those who seek out extra input often are too quick and have poor control over their movements. They often get in trouble for constantly being on the go. Those with slower responses often have poor coordination and tire more easily as they need to use more effort to sustain positions than their peers.



Spatial awareness

Spatial awareness is firstly important to ensure you don't bump into others and are successful in moving around. It is also important for subjects like math and essential for times tables. It plays a role in making sure you get your letters and numbers facing the right way and on the line. Visual processing is also important for these things, but the vestibular system helps to lay the foundation.

Eye movements

Good control over eye movements is, again, essential for most learning tasks. When reading, you need to be able to scan from left to right, then move your eyes back to the left without skipping lines. When attending to a presentation or looking at the teacher, you have to be able to look at the presenter or teacher then the board then your work, ideally with smooth transitions between each. To catch a ball you need to be able to track it and keep focused on it to allow your hands to be ready to catch. If you're running you also need the image to stay steady rather than bounce up and down.

When a child is getting lots of vestibular input, for example on a trip to the playground, it is important to remember that vestibular input lasts about 8 hours in the body. So if your child was on the spinning roundabout in the morning and not feeling well at bedtime, it may be that this experience was too much for them all those hours ago!

What can we do to help?

As with any sensory system that is out of kilter, the way to support its development and maturity is to provide controlled sensory input on a regular basis.

Vestibular activities can be extremely calming and soothing, often times perfect to help get kids ready for bed or winding down after school. They can give the body a chance to re-charge and relax. At the same time, other vestibular activities may be very stimulating and arousing. This may be good thing if your child is lethargic or difficult to get energized.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

As always, how your child responds to these activities will be unique, and to make them successful you'll want to watch for that response. Pulling together what activities are helpful is exactly what a sensory diet is all about. We will be looking at sensory diets in an upcoming newsletter. Below is a list of several vestibular activities, those that tend to be more calming are listed in the beginning. Try some of these with your child and see how they respond, whether they have a calming of alerting effect, do they seek or avoid them? Encourage them to engage with a range of vestibular activities throughout their day within their tolerance level. The ones I like the best are marked in bold!

- Sitting in a rocking chair
- Rocking on a yoga ball (sitting or tummy down on the ball)
- Rocking in a hammock
- Swaying or slowly dancing to music
- Yoga (especially inversion poses)
- Sitting on a gliding chair or couch
- Riding a rocking horse

Wheelbarrow walk.

- **Hanging upside down** (from playground equipment or over a couch/bed)
- Rocking back and forth to Row, Row, Row, Your Boat with a Partner
- **Riding a swing** (ones that rotate like ones hanging from the ceiling or a tree are the best for this)
- Swinging in a blanket swing (have child lay in blanket and have two adults each hold an end and lift to swing back and forth)
- Spinning in large circles on a tire swing **(***Spinning is extremely powerful vestibular input, make sure you read the caution warning below***)**
- Spinning on a swivel chair (allow child to do themselves)
- **Riding a scooter board** (one of my favorite activities because it's portable, easy to store, and is really effective. Try while sitting and lying on the tummy)

- Skipping
- Galloping
- Running
- **Cartwheels**
- **Gather things off the floor and put them in a bucket / basket while on a scooter board**
- **Walking across a balance beam**
- Jumping rope
- Playing leap frog
- Moving across monkey bars
- Riding a see-saw
- **Wheel-barrow walking**
- Standing upside down with feet up against wall
- Rough-housing
- Sliding down slides

Do push ups.

- **Log rolling** (across the floor or down a hill)
- Jumping (try on a couch, bed, bouncy house, or trampoline for more intense input)
- Riding a bike/scooter

- Riding rollerblades/roller skates
- Riding push toys/bikes/scooters down a hill
- **Playing twister**
- Singing and hand motions for “Head, Shoulders, Knees, and Toes”
- Using a sit and spin
- **Obstacle course that requires jumping, crawling, rolling, etc**.

Bunny hop.

Use CAUTION with Spinning

Many vestibular input seekers LOVE spinning, they can’t seem to get enough of it. So it only seems natural to want to give it to them, right? Well, its not that simple. Spinning is the most intense sensory experience and after a short amount of time it causes the vestibular system to literally shut off. Or, as a response to not being able to handle the input, the brain goes into protective mode and your child will get nauseous or even throw up. The effects of spinning can last up to 6-8 hours later, and if it was too much input those effects might not be what you had in mind. It could be a meltdown because their sensory system is just off! Focus on teaching your child to spin for 10 seconds in one direction and then to stop and spin 10 seconds in the other direction. That’s it. Lastly, avoid spinning your child. Allow your child to spin themselves and if they’re still fixated on spinning more redirect them to another vestibular activity. You have lots of inspiration above!

How to Help Kids Tolerate Vestibular Input and Activities

As you read above, its important to help kids that avoid vestibular input to tolerate and eventually accept it through vestibular activities that will help them process it better. However, we never want to force a child to participate in a sensory activity, especially vestibular. Here are some suggestions for helping your child accept vestibular activities:

- Start with movements that keep a child’s feet securely on the ground. Think about yoga poses, hand motions to “Head, Shoulders, Knees, and Toes” as great starting points for them to get their head inverted.

- Take small steps, allowing them to get comfortable with the activity slowly over time. For instance, you may start with just pushing a swing, then leaning against it, then sitting with one leg touching the ground, etc. You can break down many of the vestibular activities above in similar ways. It may take weeks or months before your child readily participates.

- When using equipment that they are unsure of like a trampoline, large ball, or scooter board, keep a very firm hand or two on their shoulders, waist, or arm. This deep pressure that you give them will be very grounding and help them feel more secure.

- Let your child know that you are there to help them, and they can let you know if they are feeling scared or dizzy.

ChildVision
National Education Centre for Blind Children

Equine Therapy Unit Newsletter

Activities of the Week

Game 1: The Jumping Game

What you need:
Paper, Paint, Tape / blutac

Preparing the game:
Paint your childs feet and hands to create prints on the paper, like seen in the picture (at least 12 -16 prints in 4 rows makes the game more fun!). If your child doesn't feel comfortable with paint on their body, you could also print hand- and footprints from the internet. Once you are finished making the prints, you can stick them to your floor, with three in each row. Make sure, that no picture appears twice in one row - like two right hands, two left feet). Now the game is ready to play!

The idea of the game:
The child moves from row to row, matching their body parts to the pictures! It takes a lot of co-ordination!

Playing the game:

<u>Option 1:</u>
Ask your child to move slowly from row to row matching the correct body parts to the correct pictures. They need to differentiate right and left!

Make this more challenging by asking them to jump from row to row – meaning that they have to plan three body parts in advance and move them all onto the right pictures while jumping!

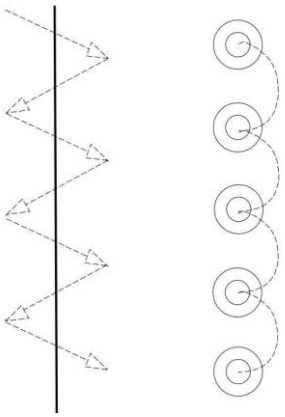
<u>Option 2:</u>

By using just feet pictures, you can put a right and left foot together in different directions, and your child has to jump and land on the feet in the right direction.

The further your child has to turn, the more challenging is the game!

Game 2: The Chalk Game

What you need: Chalk, a small space to draw on the ground



Preparing the game:
Use chalk to paint a jumping template on the ground. In the picture you can see sample templates you could try, but we are only limited by our imaginations in this one!

In the left picture the dotted lines show how your child could jump over and back along the straight line. In the right picture they could jump from ring to ring. Another option is to draw a range of wavy / straight / zigzig lines. Your child can walk along them heel to toe Between the balancing and jumping parts, you could also leave short running spaces.

Here is a link to a super Chalk Template with loads of great ideas to challenge your child as much or as little as they might be able!

https://m.facebook.com/story.php?story_fbid=539605866700926&id=651723751612052?sfnsn=wa&d=w&vh=e

Playing the game:
Once you have drawn the template, do a trial run with your child, explaining each part. Then try ti for real – maybe against the clock… and they can try to beat their score!

Game 3: Walking cans

What you need:

- 2 empty food cans per child (beans / corn etc)
- Cord/string
- Something with a point to make a hole in the cans (a nail / scissors / screwdriver)

Getting ready:

Poke two holes in opposite sides of the cans near the end that is still closed. Measure how long you need the string – twice the length of the measurement from their foot to their hip is about right! Feed the string through the holes in the can and tie both ends together with a double knot. Your child could paint them or put stickers on them to personalize them at this stage!

Playing the game:

Help your child to stand on the cans and show them how to hold the cord so that their feet stay on the cans as they walk. Have fun!

ChildVision
National Education Centre for Blind Children

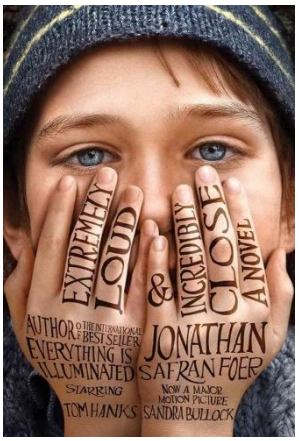
Equine Therapy Unit Newsletter

Activity Video

Lucy's video this week is about Vestibular activities you can carry out at home, and contains some lovely ideas and demonstrations. Sadly the link was not ready for sending with this email, so I will forward the link later in the week.

Cool information for this week!

How does the world appear for people with autism? Why are some things in our daily life so challenging for some people?



The movie "Extremely Loud & Incredibly Close" tells the story about a young boy with autism. Oskar is trying to cope with the loss of his father and starts lashing out at his mother and the world. Until a year later, he discovers a mysterious key in his father's belongings and embarks on a scavenger hunt to find the matching lock. On this journey he must often go beyond his own boundaries, is bound to meet a lot of people and learn a lot about himself and his family, but will he ever find the lock?

The story of Oskar has touched us very much and therefore we would like to recommend it to you this week. With the following link, you can watch it for free: https://www.youtube.com/watch?v=P6yT_Q6r4Dk

As you may have seen on the ChildVision Facebook page, the Occupational Therapist in the Equine Therapy Unit is available to you for support or help with home programs whilst we are not seeing you regularly in the yard. We can do email, phone or video link consultations as is easiest for you. Please feel free to contact me at audreydarby@childvision.ie if you would like to arrange this.

Do stay safe and we look forward to when we can be together again.

The Equine Therapy Unit team.