

The 'Physical/sensory' component of the learning profile for students with WS encompasses both motor and perceptual skills. This component links with Physical Education (PE) and with handwriting, as well as with behaviours. This section contains information on the following areas

- Gross-motor skills and Physical Education (PE)
- Fine-motor skills
- Auditory sensitivity
- Tactile sensitivity

Gross-motor skills in the classroom and for Physical Education (PE)

Profile: Learners with WS usually avail of physiotherapy and occupational therapy (OT) due to physical difficulties. Joint contractures and weak muscles mean there are challenges with gross-motor skills. Gross-motor skills are the large movements of the body and include gait and balance. Parents are more likely than teachers to rate the learner as having good gross-motor skills. At home, these children frequently learn to cycle a bike or play outdoor games with siblings and friends. Many are also involved in sports clubs in the community or in local Special Olympics clubs. Teachers are more likely to be aware of specific skill development and find the learner is behind her peers in this regard.

Younger children with WS can be unsteady on their feet. This has implications for classroom organisation. The learner's movement around the classroom can cause great difficulty. She will often find it difficult to gauge if she can pass through a space (e.g. between two tables) due to the impairment in visuo-spatial processing associated with WS. So she can sometimes be seen apparently bull-doing her way through the classroom or walking over bags or books or painting left on the floor. This is not mischief or opposition; she quite simply is not processing what she sees as you would!

During PE, the learner usually engages well and enjoys the activities. Some teachers report that the gap between the learner with WS and her peers widen through the primary-school years in PE activities, sometimes due to the learner's cognitive understanding of how certain games work. Perhaps of greatest interest is the fact that learners with WS frequently report games and sports as favoured school activities despite the reported deficits in this area. This would appear to connect to the over-activity associated with WS (Tynan, 2014). It may help release tensions in the body or it may help the learner to feel socially included.

Strategies:

1. Check with parents if the learner is availing of physiotherapy or occupational therapy. If not you may wish to suggest a referral if you feel it is needed. If the learner has reports from these professionals you should follow the

recommendations as laid out and seek advice at any stage with regard to gross-motor skills. If a programme has been developed clarify with parents who does what. If parents are doing the programmes at home it may be worth including this on the child's homework list. Children frequently do what teachers want, it's harder when an instruction comes from a parent.

2. Be mindful of where you put her sitting. She should have plenty of space for getting in and out.
3. In the classroom show her how to organise her belongings ... a place for her bag, a place for her books, pencil case etc. It may be helpful to draw the outline of her objects on the table onto which she then can place her belongings.
4. Specifically teach how to walk in the classroom and what to look out for to prevent injuries and accidents. She may need a verbal 'script' to remember e.g. 'When I go to the toilet I check the floor is clear, I check I can pass through the tables by using my hands and I say excuse me if someone is blocking my way'.
5. Give her jobs to help develop gross-motor skills: wiping the board, being the paint 'leader' (pouring out paints for each table), cleaning paint brushes, putting returned library books on the shelves with spine outwards, watering a class plant. Many of these involve the maintenance of balance as well so they are particularly useful.
6. During a PE lesson ensure the learner has a chance to develop key skills such as balance and co-ordination at her level. This may be included during the warm-up and cool-down activities done with the whole class.
7. Expect full participation in all PE activities as physical activity is very important for the learner. Differentiate activities as necessary to ensure she can engage in the tasks. Don't just make this up on the day, plan differentiated activities.
8. Losing a game during PE may be very difficult for a learner with WS to cope with and links with the emotionality of WS. You may need to remind everyone at the beginning of the lesson that they are winners if they follow the rules, help their team mates and try their best. At the end check and see who is a winner! Parents should also be involved in playing games with her at home where it can be planned for her to lose, with her consent. This gradual exposure to losing allows her to build up skills. Giving her skills to praise the 'winner' particularly is she is very sociable as she will get peer and teacher approval for this behaviour.
9. Moving into certain positions e.g. sitting on the floor for circle time or getting down on all fours during PE may be difficult for the learner with WS. Similarly getting up can be difficult. While she is usually able to do this, she will be slower or may complain of finding it hard to do.

Fine-motor skills:

Profile: almost all learners with WS avail of occupational therapy throughout primary school and many into post-primary and beyond. Parents and teachers describe significant issues with fine-motor skills and the learners frequently dislike activities requiring the use of such skills as reported for handwriting. However, it is very interesting to note that many learners

with WS who find it very difficult to close buttons or write can play the piano or the violin! What makes the difference? It would appear to be the motivation.

Strategies

1. Give the learner 'jobs' to do that develop fine-motor skills: stapling hand-outs together, punching holes in paper, giving out pencils or paint brushes, putting little stickers on the spines of books for the library, etc.
2. Develop fine-motor skills specifically by having a box of activities for her to do. They can be done independently if you have a visual schedule showing the order in which they should be done. Have the work to be done on the left of her table and encourage her to put them on the right hand side of the table when completed (this is based on the TEACCH approach used for learners with autism). Activities might include pegs and pegboard, threading 3-d shapes or buttons, tying buttons, weaving or sewing with laces, putting coins in a money box etc.
3. Anecdotally the regular bouncing of a basketball builds up strength in the hand muscles very quickly and this aids with fine-motor skills (I can personally vouch for this!).
4. Check with parents if the learner is availing of occupational therapy. If not you may wish to suggest a referral if you feel it is needed. If the learner has an OT report you should follow the recommendations as laid out and seek advice at any stage with regard to fine-motor skills. If a programme has been developed clarify with parents who does what. If parents are doing the OT programme at home it may be worth including this on the child's homework list. Children frequently do what teachers want, it's harder when an instruction comes from a parent.

Auditory Sensitivity

Profile: A majority of people with WS exhibit auditory sensitivity, usually described as hyperacusis, although this appears to decrease significantly with age and with interventions. Typically, you'll see young children with WS holding their hands up to their ears when they hear a sudden loud noise or when they anticipate a loud sound like the school bell. It can cause very significant distress and the anticipation of the sound can cause very high anxiety. This auditory sensitivity is reported more by parents than by teachers which means some children with WS are 'hiding' this anxiety at school which can lead to other difficulties (see [behaviour](#)). Parents and teachers describe triggers as the school bell, clapping (school assemblies can be very distressing), doors banging, shouting, cheering, fire alarms, car alarms and sometimes even loud laughing. To really understand this think of yourself sitting comfortably reading a book and someone comes up behind you and blows a whistle in your ear ... it's very unsettling, and it's hard to settle back into to the book wondering if it will happen again. It is likely that adrenalin floods your body. You know the feeling! Now imagine living in fear of a loud noise every day ...

Another aspect of this profile is the ability of many individuals with WS to be able to distinguish different tonal qualities. One teacher described her pupil's distractibility was frequently caused by sounds which the learner heard but she could not hear. The learner could distinguish what make of tractor was coming down the hill by the school minutes before it was within sight! Parents also describe their child's ability to distinguish between makes of lawn-mower or vacuum-cleaner!

There is a strong link between auditory sensitivity and distractibility, anxiety, behaviours and emotions.

Strategies:

1. Talk to parents about any auditory sensitivity the learner may have and find out their strategies for dealing with them.
2. Get heavy-duty head-phones for anticipated sounds such as the school bell if the learner is fearful.
3. If the learner is afraid of the school bell, explain why the bell rings, allow her to be in the office before it rings and if possible allow her say '3, 2, 1 ring!' before it rings. This gives her an element of control (think of a toddler with the Hoover!).
4. Use the countdown technique if you know the bell will only last for e.g. ten seconds, as the bell is ringing you count from ten to one aloud. Even if the learner has head-phones on or hands up to her ears let her see you counting down. Reinforce 'it only lasts to the count of ten'.
5. Class clapping should be kept to a minimum and again the learner may be asked to give the instruction so she feels in control of the noise.
6. It can be useful to have a draft excluder to leave in the door to prevent it from banging. You'll have to weigh this up against health and safety issues! You will need to explicitly teach the children how to close the door so it doesn't bang.
7. If school assemblies are done where there is a lot of clapping, the learner may actually refuse to go. Don't force this. She may wear headphones and be happy with that. If not, she should be encouraged to slowly participate. This may start with her being in her classroom with an adult with the classroom door opening and listening for sounds from the assembly. Draw their attention to singing or music if it can be heard, if there's clapping say something like 'oh someone must have done something good' so they understand clapping is part of celebration. Each week bring them a little closer. If you force them to attend the assembly they are likely to develop a phobic reaction to school assemblies ... this has happened!
8. Reassure her when she hears an unexpected loud noise, let her know you are all safe and explain what the noise was.

Tactile Sensitivity

Profile: There is a high level of tactile sensitivity among the WS population but it varies significantly between individuals. It is reported by both parents and teachers. Some teachers feel tactile sensitivity can hamper the learner's social inclusion as some tactile seeking behaviours involve her touching the hair, clothes or belongings of her peers. Tactile

sensitivity falls within two groups: tactile seeking behaviours (wanting to touch or feel something) or tactile defensive behaviours (rejecting or avoiding the touch or feel of something). Some learners have both aspects of tactile sensitivity. This can contribute to the emotional and behavioural characteristics exhibited by the learner. Tactile sensitivity can also aid in stress reduction for the learner: if you give them certain sensory experiences they are likely to be calmer or more focused on learning. In some cases, a learner who doesn't get appropriate sensory stimulation may engage in skin picking activities. This whole area of sensory integration is an area on which an occupational therapist can give the best support and advice.

Strategies:

1. Check with parents if the learner is availing of occupational therapy. If not you may wish to suggest a referral if you feel it is needed. If the learner has an OT report follow the recommendations as laid out and seek advice at any stage with regard to the suggested resources or approaches (some may require training). If a programme has been developed clarify with parents who does what. If parents are doing the programmes at home it may be worth including this on the child's homework list. Children frequently do what teachers want, it's harder when an instruction comes from a parent.
2. Take note of any sensory issues you notice ... both tactile defensive behaviours and tactile seeking behaviours. Try to avoid any triggers!
3. It can be useful to have a piece of material pleasing to the learner available on her table. She can rub this when distracted or for reassurance. Attaching a piece of Velcro on the side of the table will elicit a tactile response that will be subtle. This approach needs little input from you on an ongoing basis. She can seek out the tactile feedback herself.
4. You may need to teach appropriate social behaviours where there are tactile seeking behaviours that interfere with the learner's peers. One teacher described using the imagery of a magic bubble so no one could touch another child while waiting in a line. Another used hula hoops lined up to show the amount of personal space required between children when lined up! The results were worth it as it greatly reduced inappropriate behaviours while waiting in a line.
5. Reinforce the behaviour of 'good hands', show pupils how they can e.g. rub their jumper cuff between their fingers or hold the waistband of their jumper between their fingers to get sensory feedback. This may reduce other tactile seeking behaviours. I have personally used this quite successfully to reduce one learner's skin-picking tendencies.