



Down
Syndrome
Ireland



Supporting Children
with Down Syndrome
in Primary School

INTRODUCTION

We can all picture a child who has Down syndrome. If you are reading this booklet, you probably have a child who has Down syndrome in your class. You will be conscious that they have an intellectual disability, and that they often have speech which is not quite clear. Down syndrome is rather more complex, though, and it may be helpful for teachers and support staff to have an understanding of some of the likely strengths and difficulties. Life is changing for people who have disabilities, as society becomes more inclusive. Mainstream education is becoming more common, and this has brought considerable benefits. We do recognise, though, that it can be challenging at times to include a child who has Down syndrome in the classroom. This booklet is intended to be a brief summary of likely learning issues along with practical advice and suggestions.

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So what do you need to know?

BACKGROUND INFORMATION

Down syndrome is a chromosomal anomaly caused by the presence of all or part of an extra 21st chromosome which affects around 1 child in 454 born in Ireland (DSMIG).

There is considerable individual variation in people who have Down syndrome. However there are also a number of common features. These include:

- intellectual disability,
- cranio-facial anomalies,
- speech and language impairment,
- low muscle tone,
- increased incidence of various medical and sensory issues, including hearing, vision, heart and thyroid disorders. (Bull et al, 2011;DSMIG)

These and other aspects of Down syndrome will be likely to impact on the student's ability to access the curriculum. In this booklet, we cover some of these in more detail and give suggestions for supporting the child to be included and to learn.

WHY SHOULD CHILDREN WHO HAVE DOWN SYNDROME BE EDUCATED IN MAINSTREAM SETTINGS?

Children with Down syndrome have the right to be educated in their local school, and to be given appropriate supports to enable them to access the curriculum and learn effectively. Mainstream schooling has better outcomes for children who have Down syndrome.

Research has shown that students with Down syndrome gain academic, social and behavioural advantages from being educated with their typically developing peers in mainstream schools. (Buckley et al, 2006).

This includes second level schools. There is no research showing any benefit of education in special classes or special schools for children who have Down syndrome.

With appropriate support and accommodations, students with Down syndrome can benefit from mainstream schooling, and inclusive education has benefits for all students.

SUMMARY OF THE TYPICAL LEARNING PROFILE OF A CHILD WHO HAS DOWN SYNDROME

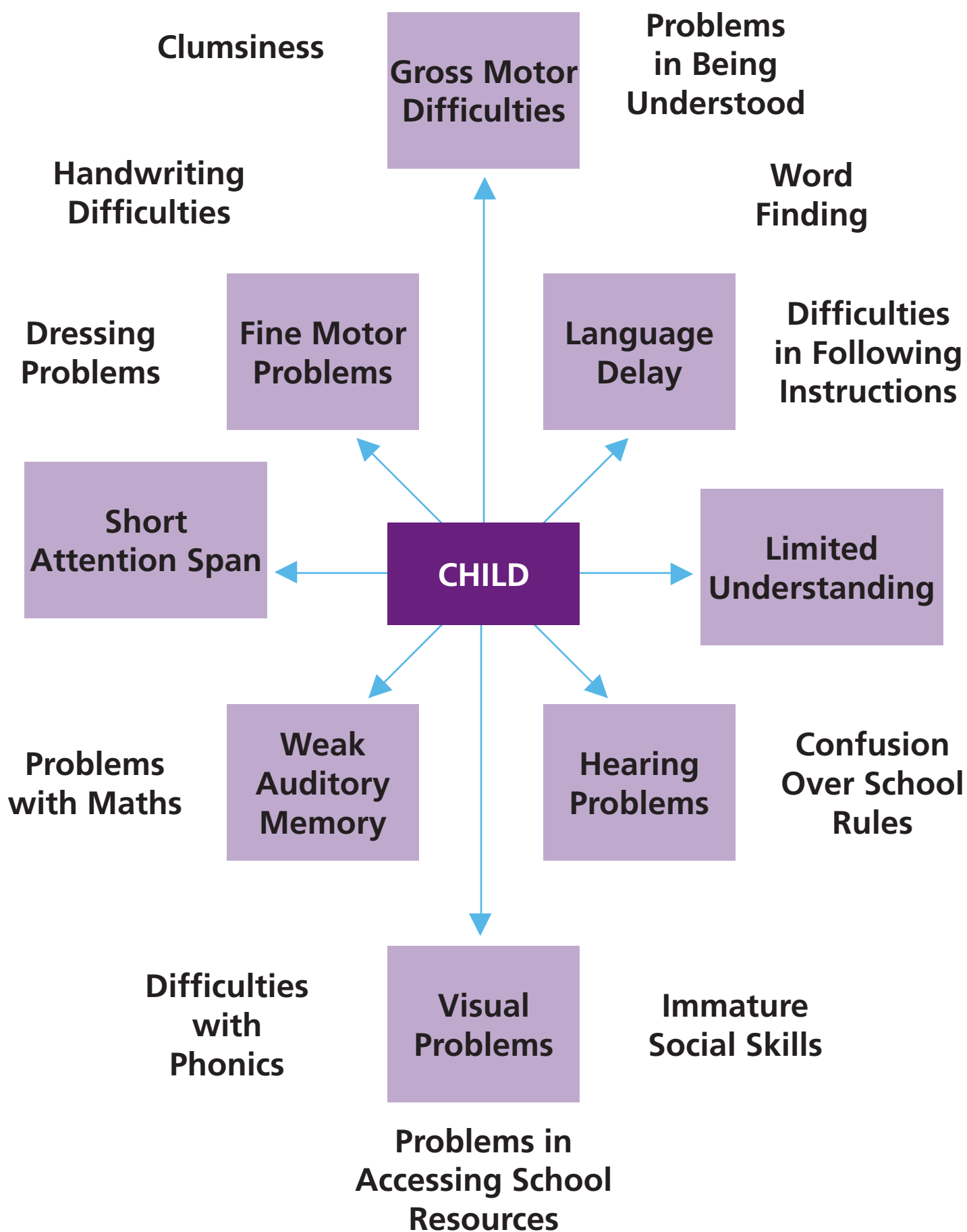
- Strong visual awareness and visual learning skills.
- Ability to learn and use sign, gesture and visual support.
- Ability to learn using the written word.
- Strong desire and ability to learn from their peers, to imitate and take their cue from them.
- Delayed motor skills, fine and gross – leading to clumsiness and manipulation difficulties
- Auditory and visual impairment – leading to hearing and sight loss
- Speech and language delay. Problems with articulation, comprehension and expression

Poor short term auditory memory. Problems with consolidation and retention. **Short term auditory memory** (the working memory) helps us to make sense of language. We use this memory to hold, process and assimilate spoken language. It influences the speed at which children learn new words and learn to read. Generally, long term memory is not impaired, neither is visual memory, which is often far stronger.

Difficulties with generalisations, thinking and reasoning.

Concentration is sometimes an issue. Children with Down syndrome are rarely lazy but often tire easily due to the pressure of work and effort required, lack of understanding of the task involved, the time of day, the amount of work already completed, lack of sleep or poor quality of sleep (maybe sleep apnoea) or other medical issues like thyroid, ear infections, chest infections or colds.

HOW DOWN SYNDROME AFFECTS LEARNING



HEARING

Around 80% of children with Down syndrome have some form of hearing impairment at least some of the time. Even a mild hearing impairment can mean that around one third of speech sounds are not easily heard. This could rise to a half or two thirds of speech sounds in a noisy classroom environment.

Between 50% and 70% of children with Down syndrome suffer from fluctuating hearing loss caused by middle ear fluid. (Bull et al, 2011). This means that hearing can be adequate one week, inadequate the next. Long intervals between hearing tests mean that these fluctuating problems are often overlooked, although they can have a significant impact on a child's ability to access the curriculum.

What can you do?

Make sure that the child is sitting near the front of the classroom.

Ensure the child is wearing their hearing aids if needed.

Give the child the benefit of the doubt if they appear not to be listening.

Cue the child by name when giving an instruction or asking a question.

Provide visual materials to support the spoken word, including visual timetables and pictures of the topic at hand.

Use a buddy system, so that the child with Down syndrome is not left behind just because they missed an instruction.

Pre-teach new material in a quiet setting, such as individual resource time.

Alert the parent if there seems to be a change. Reduced hearing is more evident in a noisy classroom than at home.

Take advice from visiting teachers for the hearing impaired, and use a radio aid or soundfield system if recommended



SPEECH AND LANGUAGE

As Down syndrome selectively impairs speech and language, all children with Down syndrome will have speech and language disorders over and above what would be expected for their intellectual ability. Read that sentence again, and try to imagine how frustrating it must be to be continually underestimated because of poor speech and language.

Speech and Language need to be considered separately. The easiest way to think of them is in terms of form and content.

Language is the content of the message: receptive language is what the child understands, expressive language is what message the child is trying to convey.

- It can be difficult for a child with Down syndrome to process language, to understand the message. It can be difficult to think of words, and to organise them into a phrase or sentence in order to respond. It can be difficult to learn new vocabulary just by exposure, like the other children in the class.

Speech is the usual form: how the child is trying to get the message across.

- Speech may be unclear for various reasons. It can be difficult for the child to hear all the sounds in a word; difficult to make those sounds; difficult to remember the order of sounds and syllables; difficult to coordinate movements and breath; difficult to say words fairly consistently so that people can understand. Many children will supplement their speech with signing, at least in the early years.

Speech and Language impairments affect access to all areas of the curriculum, not just language tasks. Language impairment is probably the most significant disability for the majority of children with Down syndrome in schools.

What can you do?

Accept that language is a significant difficulty, and adjust your own language to compensate.

Use short, simple sentences.

Allow processing time: count to 10 before you say anything else!

Use positive sentences. It is much easier to understand “we walk in the corridor” than “don’t run in the corridor”. In the first sentence the key word is WALK. In the second sentence, the key word is RUN.

Think about word order. “ We will go to the yard after you have finished your snack” will probably be understood as “yard, then snack” by a child who has difficulty processing language, leading to frustration all round!

Don’t give multiple instructions in one sentence. The child with Down syndrome is likely to pick up on either the first or the last, and be oblivious to the others. (You may think you don’t do this but—Ok everyone, time to finish your work, put your books in your bag, get in the line, we are going to the halla is actually 4 instructions)

Use visual supports, visual timetables, lists, pictures, etc. to support understanding. (And make sure to include the written word along with any pictures, as repeated exposure to the written word will help develop sight word recognition)

Pre-teach vocabulary, ideally in resource time, ahead of classroom topics. Using resource time for preparation, rather than catch-up is one of the most important ways of supporting a child with Down syndrome to succeed.

Over time, developing good literacy skills is one of the best ways we know to overcome some of these difficulties. Language and literacy tend to develop in tandem. Being able to see the words increases awareness of sounds and of word order. Having things written down means you can process language at your own pace.

For children with Down syndrome, gold standard literacy instruction is essential. This is for two reasons. The first is that the majority of children with Down syndrome have clearer speech when reading, and the second is that written language is a rich, flexible way of communicating. It requires minimum equipment and it is widely understood. Literacy skills were almost unheard of in children with Down syndrome 40 years ago, whereas now the vast majority acquire at least functional literacy, probably due to higher expectations and better teaching, so you play a vital role in helping the child with Down syndrome to succeed.



WORKING MEMORY

Working memory is a temporary storage system under attentional control that underpins our capacity for complex thought. (Henry, 2012). We need to be able to hold information in working memory in order to manipulate the information in any way.

If you have ever worked with a child who listens to an instruction, walks obediently to the appropriate part of the classroom, then looks blankly at you (or the cupboard) when they get there, you will understand the importance of working memory!

Processing and storing verbal information and learning from listening is especially difficult for children with Down syndrome.

Impairment in working memory means that children with Down syndrome learn and remember skills and information in a different way to other children, and this needs to be taken into account in the classroom. Visuo-spatial working memory is usually relatively good, and so visuo-spatial information is likely to be conceptually easier, but children with Down syndrome also need a supportive environment to overcome major difficulties with visual acuity, as discussed below.

What can you do?

Present materials visually.

If the class is doing oral language work, give the child a list with a small number of key points that are mentioned repeatedly to listen out for (in words or pictures)

Use physical prompts or lists. If the child is going to fetch the paints, he is more likely to remember if he is carrying a paint brush. Children with good literacy skills could bring a note with the word "paints" on it.

Practice! Working memory improves with practice. Play games where the children listen to 3 words and identify the odd one out.

Help children to develop their own strategies.

This is likely to be a long term problem, so learning to write (and use) a reminder or a list will be essential.



VISION

Even though children who have Down syndrome often learn better from seeing than from listening, over 70% will have some level of visual impairment.

Some children may need bifocal lenses, as they find it difficult to focus on things which are near. Visual difficulties in people who have Down syndrome are often not fully corrected by wearing glasses.

One of the leading researchers on vision in Down syndrome is Margaret Woodhouse, based in Cardiff. She says:

“It is important for teachers to acknowledge that, even if children wear glasses (including bifocals) successfully, or if they focus accurately without glasses, their visual acuity will still be below normal. Thus reading materials, for example, do not look the same to a child with Down syndrome as they do to his/her classroom peers. The material does not appear to have the same level of detail. Enlarging the print may help the child to access print more easily, but does not restore a “normal” appearance to the material” (Woodhouse, 2005).

Woodhouse further recommends that all children with Down syndrome, whether they wear glasses or not, receive input from teachers for the visually impaired, to ensure that classroom materials are adequate.



What can you do?

Use large print with good contrast (18-20pt font size, black on white).

Use good, clear, colourful pictures. Bold, saturated colours are better than pastels.

Remember this applies when the child is writing as well as reading. The child who is writing with pencil may not be able to see what they have written and the pale blue lines in copy books are probably virtually invisible. A black marker pen on thick black lines is needed.

Be alert to changes in font size. For example, moving to more complex reading books often means smaller print. It's easy to think the child has reached a plateau, when actually they are struggling to see the words.

Consult a teacher for the visually impaired.

MOTOR ISSUES

One of the primary features of Down syndrome is low muscle tone. This causes delays in gross and fine motor development.

Children with Down syndrome may need occupational therapy support in order to participate in the classroom.

For example, it may be difficult to maintain posture while sitting in a chair, or to manipulate a pencil while maintaining sufficient pressure to write and draw.

What can you do?

Use marker pens, rather than pencils, so that the child doesn't have to maintain downward pressure (And move on to typing relatively early)

Consult with an Occupational Therapist regarding seating etc. (If all your attention is focused on balancing on your chair, it's hard to learn!)

Take frequent movement breaks – taking the Rolla to the office, fetching something from the back of the room, helping someone to find something. These are all unobtrusive movement breaks. The balance between “sitting and working” and “moving around” changes as children move up through the classes, but because motor development is slower in children who have Down syndrome, they may struggle to concentrate if they don't have regular breaks.



MEDICAL

Down syndrome affects multiple organ systems, leading to increased incidence of medical conditions. Some of the major conditions are outlined below.

Sleep apnoea affects 30% to 60% of children with Down syndrome. (Bull, 2011). This causes poor growth, further delayed development, as well as concentration and attention and sometimes behaviour problems. (It is difficult to focus and to behave appropriately when you are exhausted)

Cardiac issues occur in 40% to 60% of children with Down syndrome.(DSMIG) These can also affect growth, development and concentration. (Exhaustion can arise from poor cardiac function, as well as poor sleep.)

Hypothyroidism occurs in between 4% and 16% (rising in adolescence)

Childhood leukaemia is around 20 times more frequent in children with Down syndrome (Bull,2011)

Auto immune diseases like coeliac disease and inflammatory arthropathy are all considerably more common than in the general population.(Bull, 2011)

Medical issues may not seem directly related to learning, but they are likely to lead to exhaustion and increase vulnerability to minor infections which are common in school settings. Absences due to minor infections and general exhaustion, along with frequent medical appointments (to monitor various conditions) lead to poorer school attendance than their peers and hence fewer opportunities to learn, so it's important to make the most of the times when the child is well.

What can you do?

Be aware of possible exhaustion. Tackle new concepts early in the day, leaving easier activities for when the child is tiring.

Have a few, favourite activities at hand for when the child is really not able to cope. In the early years, a quiet corner for a short nap might be helpful.

Give well targeted, differentiated homework. If the child is already exhausted going home from school, they are unlikely to be able to complete lengthy homework.

Be aware that if a child has a cold, hearing is likely to be impacted.

Be observant and communicate any concerns promptly. Sometimes changes in energy, vision or hearing can be more evident in the classroom.

COMMUNICATION BOOK/JOURNAL

Many teachers, SNAs and parents use a communication book to great advantage. Used effectively, it allows for understanding and continuity—especially if verbal communication is difficult. It is another form of pre-teaching, with vital information being passed between the various important people in the child's life. The use of a communication tool (eg. a journal, an ipad, book or text) is preferable to a conversation at the school gate.

If the child hears that conversation, then they have no need to communicate what happened.

The school gate is not an appropriate place for such conversations.

To be effective, the communication should be regular, short and focused on supporting the child's communication across environments.

DIFFERENTIATION

Differentiation is simply reducing the amount and reducing the level of work presented to children with Down syndrome.

What can you do?

It could mean learning 5 or 10 sight words instead of the class requirement of 20.

It could be 3 words for spelling test instead of 10.

It could be having 2 comprehension questions as homework instead of 8.

It could be going to the computer and finding/printing instead of writing.

The level of work should always be age appropriate. Much of the extra work taught in the resource room can be taught through focusing on the child's interests (materials are available).



USE OF RESOURCE TIME

Children with Down syndrome who have a Moderate assessment receive 3.5 teaching hours (reduced by 15%), while children with a Mild assessment receive 2.5 hours resource teaching time. As this goes to print, the system of allocating resources is changing, and we will wait to see how these changes impact on children who have Down syndrome.

Resource teaching is usually delivered in a combination of 3 ways: one to one, in small groups or through team teaching, with the greater part of the time usually given to the child on a one to one basis.

Using this time for pre-teaching themes or concepts is very valuable. (Pre-planning between class teacher and resource teacher is required). The child is learning, but will also be enabled to participate successfully in upcoming class work leading to increased confidence, better self-esteem but very importantly aiding and enabling inclusion.

Proper use of resource teaching hours to pre-teach vocabulary allows children to access mainstream classes in a confident, meaningful way. Use of resource time to pre-teach ten words for a topic eg. Autumn, will achieve a number of objectives:

- The child will know the words
- The child will engage in communication/ conversation with peers, classmates, friends and parents about Autumn
- The child will be involved in mainstream class because class teacher will know that this work has already been done in resource
- Peers in mainstream class will view the child as someone who knows those words
- Child grows in self- esteem and confidence because they can partake in class work just like everyone else.

As per NCSE guidelines, Principals will allocate resource hours based on need but also on what is considered best practice for such a complex disorder as Down syndrome.



INDIVIDUAL EDUCATION PLAN (IEP)

The IEP amounts to proper planning by class teacher / resource teacher/ SNA / parent.

It should be short term – about 6/8 weeks with simple goals in the areas of language/ communication, literacy, numeracy, independence, motor skills and behaviour (if necessary). Each goal has a strategy. A review date is set.

We have included a template which can be photocopied (see page 23). Opposite are two sample IEPs, for a child in senior infants and a child in second class.

See sample 1 for a child in Senior infants settling in to reading simple topic books, developing an understanding of numbers 1 to 7, using Lámh to help communication, learning to come back to classroom after lunchbreak and learning a tidy up skill.



Date	Subject	Target	Strategy: Who, where, when?	Attempted	Achieved	Comments
	Concepts (related to classroom topic)					
	Language and communication	Child will sign and say 2-3 new lámh words per week based on topic and sight words used in classroom.	Staff will attend lámh course. Same signs will be used at home and school. Signs of the week taught to other children, staff. Sign reminders printed and put in prominent places			
	Literacy	20 specific sight words related to different topics planned for the classroom e.g. Autumn, Farm, Halloween.	Use of camera to take photos. Use of flash cards to match-select-name. Use of computer to make a book on each topic. (2 words and one picture to each page e.g. 'the witch')			
	Numeracy	Counting 1-7. Ordering 1-7. Composition of numbers 1-7.	Use of Numicon and other concrete materials. Use of items like conkers (related to autumn) pumpkins (related to Halloween)			
	Independence	Child will learn to tidy after lunch	Identify sequence: put leftovers and packaging in lunchbox. Close lunchbox. Place in school bag. Use other children as role models.			
	Motor skills	Child will manage own lunch- drinks, yogurt, fruit etc	Use other children as role models.. Praise for job well done (or part of job well done!)			Yogurt very difficult- splatters everywhere when opened. Ask mum to decant into screw top pot for now.
	Behaviour	Child joins line at end of break	Place child at head of line. Give them an item to return to classroom. Allow child to ring bell. Place children in pairs.			

Date	Subject	Goal	Strategies	Attempted	Achieved	Comments
	Concepts	Topic: geography, rivers. Goal: understanding of Liffey, river, sea, Dublin	Resource: videos and concepts. Classroom: word picture matching. Home: walks by the river	✓	✓	Got concepts: river, sea, Dublin. Can read the words: sea, Dublin
	Language and communication	'Where' questions	Resource: teaching where=place. Classroom: interviewing others (where do you live? Where did you go in the holidays?) Home: reading books like 'where's spot?'	✓	✓	Getting better at answering questions. Come back to asking questions after mid term.
	Literacy	RLI level 1 books about home and school. New words: play, work, book, the, can	Resource: consolidate previous words. Match & select new words. Make books with new words in short sentences (e.g. 'I can play' 'dad can work') Classroom and Home: practice and consolidate			
	Numeracy	Recognise number 2	Resource: match and select number 2. Classroom and Home: consolidate concept. (Have two pieces of cheese; do two pictures; make two holes in the sand; walk two steps; bring me two pencils)			
	Independence	Walk into school and find classroom	SNA meet child at gate and send ahead to classroom. Class teacher waiting in room.			
	Motor skills	Extending sitting time	Check with OT if chair is suitable. Observe for 2 days to see average sitting time and longest sitting time. Work backwards from a break. If child is able to sit for 10 mins- sit down 12 mins before bell with a manageable activity. Praise and encourage sitting and working until break. Use peer modelling. Don't attempt at the end of day when child is tired.			
	Behaviour	Reduce hugging of younger children	Devise an alternative (e.g. High five, wave or shake hands) Model good behaviour. Use peers to model behaviour. Prompt using description of desired behaviour (so 'remember to shake hands or wave nicely' rather than 'remember, no hugging')			

LITERACY

READING:

A structured approach by class teacher and resource teacher will help the child.

The visual element of the Learning Profile is best served by using the sight word approach to Reading. Begin with nouns and verbs (action words). Dolch words can be added when the child starts to use sentences. Use of phonics alone is not recommended in the early stages of learning to read and particularly when it comes to blending, due to difficulties with auditory processing. (This doesn't mean that the child should be excluded when the others are learning Jolly Phonics sounds.)

Reading Recovery approaches can also be helpful.

There are two reading programmes especially designed for children who have Down syndrome. These are:

- SEE and LEARN, which is an excellent sight word resource for use with younger children to progress reading and language.
- The READING and LANGUAGE INTERVENTION programme (RLI) is suitable for children from late 1st class and 2nd class onwards .

Available from: dseinternational.org

WRITING:

Motor skills will slow the process of learning to write but using different mediums eg. whiteboard and markers, chalkboard and chalk, wet sand, big crayons, paint programme on the computer will all help to make writing more interesting and possible. Fluency will continue to be an issue so moving to typing in 2nd/ 3rd class will ease frustration. (For Typing Programmes see Resources).

Comprehension of text can be helped by Role play/ puppet play, by retelling, by using picture supports and by teaching W words---What, Why, Who, Where and When.

Don't underestimate a child's understanding of text just because they can't answer questions about it. The problem may be in understanding the questions rather than understanding the text! Children with Down syndrome often need to be specifically taught that:

- Who questions require a PERSON answer
- Where questions require a PLACE answer
- When questions require an understanding of language around Time/ Tenses/ Sequences / Before/ After, etc, which are often particularly difficult for a child who has Down syndrome

NUMERACY

Language difficulties can also impact on number work. It's hard to follow what's happening if you don't have language concepts like more, less, most, least, etc. Numeracy also needs working memory skills, and all of these things combine to make numeracy a difficult area for most children who have Down syndrome. It's important to introduce time and money into children's daily experience as early as possible, for example, by adding digital time to the child's visual schedule or timetable, and by using those times in conversation (e.g. "It's almost 10.40, so we're going to the halla for PE)

- Use of concrete materials is essential.
- Numicon is one of the best materials and training is available.
- Introduce the concept of time into very early visual schedules.
- Work through the child's interests eg. Football, with interest led textbooks, particularly in the Resource room.
- Include the child in all classwork at differentiated level.
- Introduce the calculator in 3rd class.
- Encourage family to include and involve the child in everyday shopping trips to develop an understanding of money and its' value.
- Concentrate on a functional approach to Time and Money, focusing on large coins and notes, rather than small coins, and digital clocks rather than analogue.



BEHAVIOUR

A teacher who has high expectations of the child with Down syndrome and who differentiates the classroom curriculum appropriately to support them to learn will give the child the best chance of behaving appropriately in the classroom. A child who is engaged at the right level and included in the class topic will be involved and busy. A child who is bored and disengaged may be more of a challenge.

See the classroom accommodations sheet on page 23 of this book for some ideas of things to try. Make sure to persist for a while if you make a change, so that the child has a chance to get used to a new system and adapt their behaviour.

What can you do to help if behaviour becomes a challenge?

Expect age-appropriate behaviour.

Have consistent expectations which are Firm, Fair and Flexible (3 F's).

Use clear, concise instructions.

Giving a CHOICE to the child often avoids frustration.

Praise for good behaviour will work wonders.

Modelling of good behaviour by other children and staff will always help (tone of voice / response to rules, etc.)

Using techniques like First/Then or using written/picture lists will also help.

If a particular behaviour becomes an issue use ABC (Antecedent, Behaviour and Consequence) or use a Behaviour Checklist.

Relationships with peers or other adults are often at the root of unacceptable behaviours.

Always look at the situation from the child's point of view.

Remember that the adult behaviour often needs to change before the child's behaviour will change.

A change of person, place or subject can often defuse a situation. These work better than a battle of wills. (Anything works better than a battle of wills!)

Asking families to deal with school behaviours at home is not good practice, and often backfires. The parent is likely to remind the child the next day as they come in, for example: "now remember, no pulling Ciara's hair!" which means the child is walking in the door thinking about Ciara's hair. This is unlikely to end well!

Persistent behavioural issues are best addressed in face to face meetings.

Medical issues eg. Hearing, vision, thyroid, bloods, sleep apnoea, coeliac disease all need to be checked regularly, as these can have implications for behaviour.

INDEPENDENCE

The whole school approach to Independence should be about enabling the child to succeed, to promote the idea of errorless learning, to have expectations, to challenge but above all to include.

What do you need?

- A knowledge of Down syndrome is required
- All staff (teachers, SNAs and ancillary staff) are familiar with the Learning Profile.
- All staff are familiar with the STRANDS book.
- Use booklet: " Down syndrome : What is it all about?"
- Include the child in all conversations
- Allow the child to learn from experience
- Support the child to become the problem solver
- Encourage appropriate physical contacts
- Avoid hugging, handholding etc.
- Be supportive rather than over protective
- Children with Down syndrome copy, so it is important to use good role models, peers and classmates etc.
- Classmates and peers learn from a focused approach .
- Independence leads to Inclusion.

INCLUSION

All of the above will support social inclusion.

Use of pre-planning, pre-teaching by the resource teacher/ parents and good differentiation will lead to academic success and classroom inclusion.



PEER GROUP

Interaction with same age peers who are good communicators is of huge benefit to the child who has Down syndrome. Children who have Down syndrome are often socially aware, and will learn social behaviour and language by watching other children. As the other children move up through the classes, they may begin to ask questions about Down syndrome, and the booklet 'Down Syndrome-What's it all about' which is available from our National office is a good starting point for an SPHE lesson.

- Children with Down syndrome will imitate.
- Good modelling is essential. (Refer to Learning Profile)
- Use of a buddy system or mentoring system will contribute to the child's learning.
- Such a system can be used in the classroom as well as the school yard.

MANAGING TRANSITIONS

Transitions can be difficult for all of us. We get used to people and routines, and often resist change. There are many transitions during primary school life: from pre-school, from class year to class year, from teacher to teacher, from SNA to SNA and then onto 2nd level. The secret of a good transition is PREPARATION.

What can you do?

Gather information.

Learn as much as possible about the new setting—the place, the needs, uniforms, books and materials.

Learn about the people. Talking, visiting, naming, identifying—all will increase the comfort levels and will decrease the anxiety.

Take pictures of new people and new environments, so that the child can discuss them at home.

Keep families involved if there are changes, particularly unexpected changes. A child may become anxious if a teacher is out sick, or there is a sudden change of SNA, and it may be hard for them to explain why.

CONCLUSION

Children with Down syndrome have the right to be educated in their local school, and to be given appropriate supports to enable them to access the curriculum and learn effectively.

A teacher who has high expectations of the child with Down syndrome, and who differentiates the classroom curriculum to support them to learn, will give them the best start.

RESOURCES

Many resources are available to schools

- Handover information from pre-school, assessments and reports
- STRANDS----Strategies for Teachers to Respond Actively to the Needs of Children with Down Syndrome is available from Mary Immaculate College of Education at the University of Limerick
- Down Syndrome- What's it all about' booklet (available from DSI national office)
- Classroom accommodations suggestions (attached)
- IEP blank template (attached)
- NEPS----National Educational Psychological Service
- SENO---Special Education Needs Organiser
- HSE --- particularly School Age Teams (SAT)
- Websites like dseinternational.org (Sue Buckley)
- Support from Education Consultant in Down Syndrome Ireland
- Patricia Griffin, patricia@downsyndrome.ie or 083 4000226
- See and Learn materials for literacy and language
- Numicon
- Apps for Learning
- Typing programmes eg. Nussy Fingers, typingweb.com, [ninjatyping](http://ninjatyping.com)
- Story Creator, Clicker
- Reading and Language Intervention programme (RLI)
- SESS----Special Education Support Service
- Lámh and other forms of assistive/augmentative technology



Date	Subject	Target	Strategy: Who, where, when?	Attempted	Achieved	Comments
	Concepts (related to classroom topic)					
	Language and communication					
	Literacy					
	Numeracy					
	Independence					
	Writing and typing					
	Other					

Classroom Accommodations

Environmental changes	Tried	When? How long for?
Change seating	☐	
Change classroom position	☐	
Change grouping	☐	
Change class	☐	

Learning style	Tried	When? How long for?
Limit oral presentations	☐	
Teach note taking skills	☐	
Give a copy of notes	☐	
Use cooperative learning groups	☐	
Consider alternatives to writing	☐	
Use strengths and learning preferences	☐	
Vary approaches	☐	
Ensure materials are similar to peers	☐	
Use interests and preferences to motivate	☐	

Teaching style	Tried	When? How long for?
Vary speaking voice	☐	
Increase eye contact	☐	
Hand on shoulder	☐	
Circulate around room	☐	
Use visual cues	☐	
Provide more examples	☐	
Use positive reinforcement	☐	
Teach through child's interests	☐	
Model expectations	☐	
Use peer tutors	☐	
Individualise instructions	☐	
Repeat instructions	☐	
Give a written or picture list	☐	

Schedule	Tried	When? How long for?
Change schedule	☐	
Regular movement breaks	☐	
Free time after task completion	☐	
Reinforcements built into schedule	☐	
Choice of order or tasks	☐	
Work with child ahead of topic	☐	

Materials	Tried	When? How long for?
Timer	☐	
Learning games	☐	
Computer or iPad	☐	
Personal word bank	☐	
Concrete materials	☐	
Visual and tactile presentation	☐	
Interactive whiteboard	☐	
Personal spelling dictionary	☐	

Assignments (classroom or homework)	Tried	When? How long for?
Simplify	☐	
Shorten	☐	
Use clear, concrete simple language	☐	
Pre-teach vocabulary	☐	
Break into sections	☐	
Brainstorm connected words before starting	☐	
Enlarge materials	☐	
Large bold text	☐	
Colour and contrast	☐	
Fold paper in half or quarter	☐	
Highlight key parts	☐	
Use mind maps to make visual connections	☐	
Provide alternative assignments	☐	
Cooperative projects- each child does a part	☐	
Alternative presentation (photo, video or typed)	☐	

Help and support	Tried	When? How long for?
Discuss with colleagues	☐	
Discuss with family	☐	
Consult other professionals (SLT, OT, psychology)	☐	
Consult Down Syndrome Ireland	☐	
Consult STRANDS book	☐	
Look at online resources and research	☐	
Consult other schools	☐	

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