

Understanding Fetal Alcohol Spectrum Disorder (FASD)

What Educators need to know

For education staff working with children and young people with FASD





understanding **FASD**

“Children with FASD are 10-second
children in a 1-second world”

(Diane Malbin)



understanding
FASD



Contents

Introduction	4	Cognition	42
What is FASD?	5	Communication Skills	44
Nine brain domains affected by FASD	6	Memory Skills	49
Understanding the needs of children and young people with FASD	8	What pupils want school staff to know	52
Understanding brain differences	9	Parents and school staff working together	53
Executive Functioning	10	The Paradigm Shift	54
Sensory and motor skills	15	Six guiding principles to helping children with FASD reach their potential	55
Academic Skills	26	Secondary risks of being misunderstood	56
Living and Social Skills	32	What educators need to know	56
Focus and attention	38	Addition Information	59

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Introduction

If you work in an educational setting, from early years to secondary school, you will meet children and young people affected by Fetal Alcohol Spectrum Disorder (FASD). The term FASD describes the range of physical, emotional and developmental delays that may affect an individual if they were exposed to alcohol during pregnancy.

This resource provides appropriate strategies and interventions for FASD and is also applicable for use with children and young people who are not yet diagnosed with FASD, but who share some of the same learning needs. We recognise that educational professionals will already have expertise in strategies for additional support needs, however we hope this resource will inform as to why these are required for children and young people affected by FASD. It is acknowledged in FASD, that strategies that may work well one day, may not work the next day. This said, it can be very helpful for educators to simply know that this can be appraised through the lens of FASD. Knowing why a child is not responding as expected can be helpful but it is important as educators to work alongside the child and view the challenges they face through the lens of brain differences and not simply as behavioural issues.

The aim of this resource is to provide educators with a clear understanding of the needs of children and young people with FASD by:-

- Defining FASD.
- Describing the common learning and behavioural characteristics of children with FASD.
- Suggesting strategies that may be helpful in meeting the needs of these children in the classroom.



It is important to recognise that the effects of FASD vary in range and severity for each child. As a result, no two children with FASD learn and function in exactly the same way. Your knowledge and experience, guidance and encouragement are vital to the child's learning to help ensure that they have the best education possible.

Preparation, planning and positive communication helps build the groundwork for effective teaching and learning. By working together with colleagues and parents you can create an intellectual, physical, social and emotional environment which will foster the pupil's development in skills, knowledge, communication, self-esteem and life-long learning.

What is FASD?

The term Fetal Alcohol Spectrum Disorder (FASD) describes a range of physical, emotional and developmental difficulties that may affect a person when they were exposed to alcohol during pregnancy.

Diagnosis of FASD involves assessments by a Paediatrician, Clinical Psychologist, Occupational Therapy and Speech & Language Therapist.

Fetal Alcohol Syndrome

also referred to as FASD *with* facial features*

- Result of exposure to alcohol during pregnancy
- Affects how the central nervous system works
- Distinctive Facial Features:
 - Small head
 - Small eyes
 - Thin upper lip
 - Smooth philtrum
(*area between nose and mouth*)

* Cook et al (2016)

Fetal Alcohol Spectrum Disorder

also referred to as FASD *without* facial features*

- Result of exposure to alcohol during pregnancy
- Affects how the central nervous system works
- Absence of Distinctive Facial Features
 - FASD is often referred to as a 'hidden disability'

* Cook et al (2016)

“Fetal Alcohol Spectrum Disorder (FASD) is a lifelong condition that results from a baby being exposed to alcohol before birth. This exposure to alcohol affects how the baby’s brain and body can develop.

People with FASD may require additional support at home, school and work.”

(Dr. Sally Longstaffe MD, FRCPC Medical Director,
Developmental Pediatrician, Manitoba FASD Centre)

Nine brain domains affected by FASD

There are 9 brain functions that can potentially be affected by alcohol during pregnancy.



Executive Functioning

- May have trouble with planning, sequencing, problem solving and organisation.
- May be impulsive.
- Difficulty controlling emotions.
- Challenges with transitions and change.
- Often repeats mistakes and has difficulty understanding consequences.
- Difficulty with abstract ideas/concepts.
- Difficulty managing time.

Sensory and Motor

- Maybe unable to make sense of what is going on around them.
- May under or over react to sensory input, for example, light, noise, touch, smell and/or taste and movement.

Academic Skills

- May have difficulty in school particularly with maths, reading, time and money.
- May have difficulty with comprehension, organisation and abstract concepts.
- May have difficulty with age appropriate tasks.
- May have normal IQ.
- Learn better with visual or 'hands on' approach.

Brain Structure

- Brain and head circumference may be small.

Living & Social Skills

- May not understand personal boundaries and have difficulty reading social cues.
- May be socially vulnerable and easily taken advantage of.

- May have difficulty seeing things from another's point of view
- Socially and emotionally immature... may behave younger than actual age.

Focus & Attention

- Can be easily distracted, over-stimulated or impulsive.
- May have difficulty paying attention and be over active.
- 'Can't sit still'.

Cognition (*Reasoning & Thinking*)

- Difficulty with attention, learning, memory, planning and organisation.
- Difficulty with understanding complex ideas.
- Wide range of IQ.

Communication

- May speak well but not always understand the full meaning.
- Delayed language milestones for age.
- Difficulty with lengthy conversations.
- Difficulty following instructions.
- May be able to repeat instructions but not able to follow them through.

Memory

- Difficulty with long and short term memory – may seem forgetful.
- Difficulty recalling sequences or complex instructions.
- Relatively better visual memory.
- Easily forget steps in normal daily routine.
- Appear to lie but are really 'filling in the blanks'.

Understanding the needs of children and young people with FASD

How brain domains affect learning and behaviour

Children and young people with FASD must be recognised as individuals rather than as members of a specific group. FASD can affect individuals in varying degrees, from mild to severe. Each child presents with their own individual profile of strengths and difficulties.

Behaviours that result from the effects of FASD can be challenging for even the most experienced educators and caregivers. The response of children and young people with FASD to more commonly used behavioural strategies can be frustrating, since these children are often inconsistent. In one circumstance they may respond positively, on the next occasion, the same strategy may result in a negative response. Children and young people with FASD often have difficulty with cause and effect, reasoning and adjusting to new or unfamiliar situations. This can result in behaviours that are misinterpreted as oppositional rather than the manifestation of confusion and being overwhelmed.

Focused observation is important to gain an understanding of how individuals with FASD experience stress, relieve tension, cope with obstacles and react to change. This can inform us about how to provide a supportive environment that leads to achievement. Additional structure can be provided through the teaching of social skills or patterns of social behaviour. A multi-sensory approach offers individuals the greatest opportunity for understanding. Curriculum is often best taught in the context of daily life. A calm, nurturing, structured learning environment is vital.

Children and young people with FASD provide many strengths to the classroom including humour and creativity along with a desire to please. Through observation educators will be able to develop a plan that draws on the child's strengths to support their educational needs. An essential ingredient throughout the process is developing and supporting children's self-esteem.

Children delight in achieving success through a learning experience. It is important to have a classroom where this happens as often as possible.

Understanding brain differences

How this section works

This section is designed to help educators plan appropriate interventions by identifying the challenges associated with difficulties in each of the brain areas below. Each area of function is explained, with an emphasis on the commonly associated behaviours found in children and young people with FASD. Understanding what brain differences exist will help educators appreciate why certain strategies should be used as part of a whole brain approach.

Areas of brain function are covered in the following order:

.....

- Executive Functioning
- Sensory and Motor
- Academic Skills
- Living & Social Skills
- Focus & Attention
- Cognition (*Reasoning & Thinking*)
- Communication
- Memory

For each brain area, strategies that have proven successful are suggested. Some of these may work with a particular child, some may not. Each child is unique so educators must be creative and persistent in finding their own successful strategies for each child.

It is also important to remember that children and young people with FASD have many strengths. Successful strategies do not focus solely on the child's challenges, they also take their strengths into consideration as well. By developing learning environments that respond to the unique challenges of children with FASD, school staff can provide an important link in the chain of support needed to assist these children to succeed in school and the community.



Executive functioning is a set of higher-order cognitive processes including inhibition, flexibility of thinking, working memory, planning, fluency of thought, predicting, connecting cause and effect, judgement and organisation. Executive functioning has been identified as a particular area of difficulty for children with FASD. Children and young people with FASD may have average intelligence, but may not have the capacity to apply this intelligence to everyday functioning at home and in the classroom. Often, this is the result of difficulties with executive functioning skills.

Executive Functioning

Executive functioning has been identified as a particular area of difficulty for children with FASD.

Executive functioning skills include:

- **Control of emotions:** A child's ability to know how they are feeling and how to manage those feelings. Children with FASD may have difficulty managing stress without getting emotional or staying calm when handling small problems or when there are delays.
- **Cause and effect reasoning:** A child's ability to understand or predict the outcomes of their actions. Children with FASD often have difficulty learning from their mistakes or learning from consequences.
- **Flexibility/shifting:** A child's ability to easily move from one task to another and/or change plans when needed. Children with FASD may have difficulty changing their behaviour as needed and accepting a different way of doing things.
- **Control of behavior:** A child's ability to stop and think before acting. Children with FASD may have difficulty completing a task that takes a long time and keeping a promise.
- **Initiation:** A child's ability to start tasks or activities on their own. Children with FASD may have difficulty starting something without help or being asked to begin.
- **Organisation:** A child's ability to manage their thoughts, work materials, and belongings. Children with FASD may have difficulty finishing one task before starting another, organising tasks well, and completing homework/assignments on time.
- **Planning:** A child's ability to set goals and make up steps to finish tasks. Children with FASD may have difficulty planning ahead, working through problems, and preparing for their schoolwork.
- **Self-monitoring:** A child's ability to watch what they are doing and how they are doing it. Children with FASD may have difficulty noticing and fixing mistakes, or changing a plan that is not working.
- **Working memory:** A child's ability to keep information in mind that is important for knowing what to do and how to do it. Children with FASD may have difficulty remembering important things, having many things in mind at once, and may frequently need instructions repeated.



Understanding cause and effect and use of consequences.

As mentioned earlier, children and young people with FASD have difficulty connecting cause and effect and changing their behaviour as a result of consequences.

Educators and parents report that children with FASD often make the same mistakes over and over no matter how many times they are corrected and given consequences. Children with FASD have difficulty perceiving consequences for a number of reasons.

First, the behaviour is often impulsive and children with FASD do not always think about the possibility of a consequence, or the implications of their actions. Certain rewards or consequences are often effective in the beginning, but then lose their effectiveness. Second, consequences are often abstract scenarios. They are used to prevent an outcome that may happen: "If you throw a ball, somebody might get hurt." "Do not run out in front of traffic because you might get hit." There are many times (fortunately) when dangerous behaviour does not have a consequence, or at least a natural consequence. Nobody gets hurt. The child runs out in the street in front of the car and does not get hit. At times, it seems that it is not enough to warn children with FASD about what might happen, they need to experiment and find out for themselves. This can lead to serious outcomes. To avoid this, educators may wish to incorporate visual learning tools, for example, social stories to facilitate learning about consequences

Using a more proactive, preventative approach to behaviour before it happens often reduces the need for imposing consequences.

such as crossing the road. Third, situations are never exactly the same. Children with FASD may not generalise the behaviour in one setting to the same or similar behaviour in another setting. Sometimes they generalise too well. Instead of remembering the rule, they remember the one-time-only exception to the rule. Children with FASD often have a very rigid and egocentric notion of what is fair.

Using a more proactive, preventative approach to behaviour before it happens often reduces the need for imposing consequences. However, when parents and educators must provide consequences, the child's executive functioning abilities need to be taken into consideration.

For example:

- Be as consistent as possible when using consequences. Make them as immediate as possible and remind children what the consequences are for, keeping in mind that they may not retain this information. For example, imposing consequences at home for something that the child did at school, or vice versa, will not be effective in teaching the child due to challenges in generalising from one environment to another.
- One must use a positive attitude in applying consequences. Consequences should be directly related to the behaviour and used as a means of correcting and not punishing.

- Consequences must be short, concrete and applied in context.
- Be aware of the impact applying consequences has on children. If children are confused about the consequence, and it leads to isolation, this may affect their self-esteem and give them the message that they are being bad.
- Keep in mind that children and young people with FASD may not necessarily learn from the consequence, or may forget this learning from one moment to the next. This must not be seen as defiant or intentional behavior or personally directed at the adult, rather a result of their brain functioning differences.



Executive functioning strategies

- Clear and consistent routines in the classroom, during break times and transitions.
- Continued guidance and reminders about remembering and carrying out daily tasks.
- Assistance breaking tasks and projects down to small component parts.
- Take time to talk with children with FASD. You will find out how they think. This can help you develop an appropriate strategy. Invite them into the process of formulating a plan.
- Decide what is most important and what is within a child's control.
- Be as consistent as possible in imposing consequences. Make them as immediate as possible and remind the child what the consequences are for, keeping in mind that they may not retain this information.
- Help children to problem solve:
 - "Where did the problem start?"
 - "What did I do?"
 - "Who did I affect?"
 - "What else could I have done?"
 - "What else could I do next time?"
- Write down what is said so that they can follow the conversation. Social stories work well.
- Help children take another person's point of view.
- Consider the child's verbal and memory limitations in working through an incident and deciding what an appropriate, natural consequence should be. Invite children into this process, asking for their feedback as to what they feel might work for them.
- Allow a cooling down period in a safe, calming space in the classroom, prior to debriefing. Be careful not to use too much language as a child with FASD may find this too difficult to process and may tune out. Using fewer words and more visual cues.
- Anticipate and prevent problems through close supervision or partnering with peers, for example, buddy system or peer tutor.
- Provide strategies for organisation in the classroom, for example, detailed daily visual schedules. Help in organising school work by breaking down a task or set of instructions into smaller, more easily attainable steps.
- Try to give instructions about what to do, rather than what not to do so that they are recalling the desired behaviour rather than recalling the action they've to inhibit.

**Take time to talk with children with FASD.
You will find out how they think. This can help you
develop an appropriate strategy. Invite them into
the process of formulating a plan.**



Sensory and motor skills

Sensory processing skills

Every moment of every day we are taking in information through our senses. Nerves throughout our body take in the information and our brain processes the information and tells us what to do with it, for example, respond or ignore.

Children and young people with FASD who have sensory processing difficulties will be confused by everyday sensory information such as touch, sight, sound, movement and smell. Some children may feel bombarded by sensory information, others seek out intense sensory experiences or have other challenges.

Classrooms are overwhelming places for children with FASD because there are many things to see, movements to observe, sounds to hear, things to smell, and things to feel (from accidental bumps in line, to the feeling of clothing and labels on skin). The overwhelming feeling of being bombarded by all this sensory information may affect a child's inner sense of calm and their ability to organise themselves and process the information being presented in class. Consequently, children may appear disorganised, confused, emotionally upset, scared, shut down or become out of control. Frequently, caregivers and educators interpret this behaviour as hyperactive, defiant, resistant, avoidant or aggressive. In reality, their nervous systems are having difficulty making sense out of the world around them.

“Children with FASD may be under or over sensitive to their surroundings.

They may not be able to communicate their responses to the environment clearly and directly, not having a language to say what’s different for them. They will more likely communicate their response to their environment through their behaviours... environments need to be modified to support people with FASD.

Behaviours often change as environments are modified.”

(Diane V. Malbin).

Sensory strategies

- When setting up a learning or classroom environment for children and young people with FASD, always start with the physical environment.
- Structure and routine are of utmost importance in the classroom.
- Less is best for children with FASD when it comes to visually appealing classrooms.
- A tuned down class is one tuned into the child, not a result of lack of interest or effort on the educator’s part.

For most people (without sensory processing difficulties), the processing of sensory information is automatic. Most people can screen, filter, and selectively attend to different sensory information. However, children and young people with FASD often have difficulty with these processes. They may be over-responsive to some forms of sensory input and under-responsive to others. They may become overloaded by the sensory information they receive and, as a result, are unable to organise their behaviour.



Here are some examples of sensory processing difficulties:

Sight/Visual

- get easily upset in a busy place, such as a school corridor.
- frequently can't find their belongings.
- frequently distracted.

Hearing/Auditory

- easily upset by noise such as school bell or fire alarm.
- cover their ears, overreact with anger or run away when they hear loud noises.
- may create noise to drown out other upsetting noises.
- misinterpret a regular speaking voice as yelling.

Touch/Tactile

- bothered by labels on clothing.
- overreact when touched, especially if it is unexpected, for example, may respond by hitting, or report being hit and pushed.
- may not feel hot or cold, for example, goes outside in winter without a hat or gloves and does not feel cold.
- constantly exploring their environment, for example, touching every button on appliances, flicking switches, touching other people's belongings.

Taste/Oral

- fussy eater.
- chew on clothing.
- put everything in their mouth.
- overstuff mouth with food.

Smell/Olfactory

- strongly dislike smells that are often undetectable by others.
- refuse certain foods because they "smell bad".

Joint Sense and Movement

- becomes motion sick easily.
- fears their feet leaving the ground.
- struggles with co-ordination, may be seen as clumsy.
- has poor danger awareness.
- has trouble with pressure and movement, may be too rough during play.
- has poor body awareness, for example, stands too close to others, tend to get "in your face," constantly touching others.

Children who are struggling with sensory processing differences often communicate these challenges through their behaviours as they often do not have the language to tell you how they feel.

Remember: Children and young people with FASD can have a range of sensory behaviours. They can be sensitive to auditory input but seek out movement. They also may be okay managing sensory input one day but are distressed the next day. For example, a child can manage all the conversations at lunch one day, but then be upset and unable to eat lunch the next day.

Structure and routine are of utmost importance in the classroom.

Calming spaces

When children and young people become overwhelmed by all the sensory stimuli around them in the classroom, a safe quiet place or calming space should be available for them to retreat, calm and organise themselves. It is not meant as time out or punishment, but a safe place to calm down. Initially, they may need permission or guidance to use this space. This must be done in a non-threatening and rewarding manner. The aim is to teach children to self-regulate by going to this safe place on their own when needed. This is a life skill, which will benefit them throughout their lives. It must be a safe and inviting place to retreat to before their behaviour escalates and becomes out of control. When constructing a calming space, it should be easily identified and accessible within the classroom setting



Once in the quiet space, children are provided with a sensory helper to calm them down. The sensory helper will vary from child to child. It can be anything from a warm fleece blanket, to looking at a book, drawing or doodling on paper, listening to music or soft soothing sounds, manipulating a hand held toy, or watching a slow-moving oil and water toy.

Self-regulation

Self-regulation helps children develop a way to express emotions when feeling upset or overwhelmed. It also helps children identify and talk about an emotion. Sometimes, using a simple visual showing five or six feelings is a good tool. Visual schedules, feelings charts, real photos of the child or people around them are often more effective than picture symbols.

The following section describes strategies that may help manage the sensory experience of children and young people with FASD.

Visual strategies

- Visual stimuli within the classroom can be very distracting and can easily lead to over stimulation. Children in classrooms with reduced visual stimulation have much less hyperactive behaviour and are better able to pay attention.
- Natural lighting is preferable to electrical lighting. Windows should have blinds to adjust the amount of direct sunlight or block out outside stimulation. Sensitive children may see a flicker and hear a hum in fluorescent lighting that the average person does not. If you can, reduce the amount of information on the walls in the classroom.
- Use visual strategies to enhance comprehension and retention of learning as children with FASD are often visual learners and possess visual processing strengths.
- Children often find it challenging to follow the steps involved in a routine or task. Breaking tasks down into smaller, more attainable, visual steps assists in comprehension and memory of everyday life skills and classroom routines/tasks.

Morning



Get dressed



Breakfast



Clean teeth



Schoolbag



School

After school



Snack



Gymnastics



Homework



TV



Bed time

- Use visual routines and timetables for daily routine and to prepare a child for the day including any changes that will occur.
- Add picture symbols to classroom routines, or photos to support understanding.
- Use visual timers to help children prepare for transitions and assist in awareness of periods of time.

Learning becomes more difficult when children become so overwhelmed by the environment that they tend to tune out or shut down. Children with FASD need more opportunities to calm their nervous systems than the average child, therefore many sensory tools and strategies should be available, depending on which sensory system helps calm them.



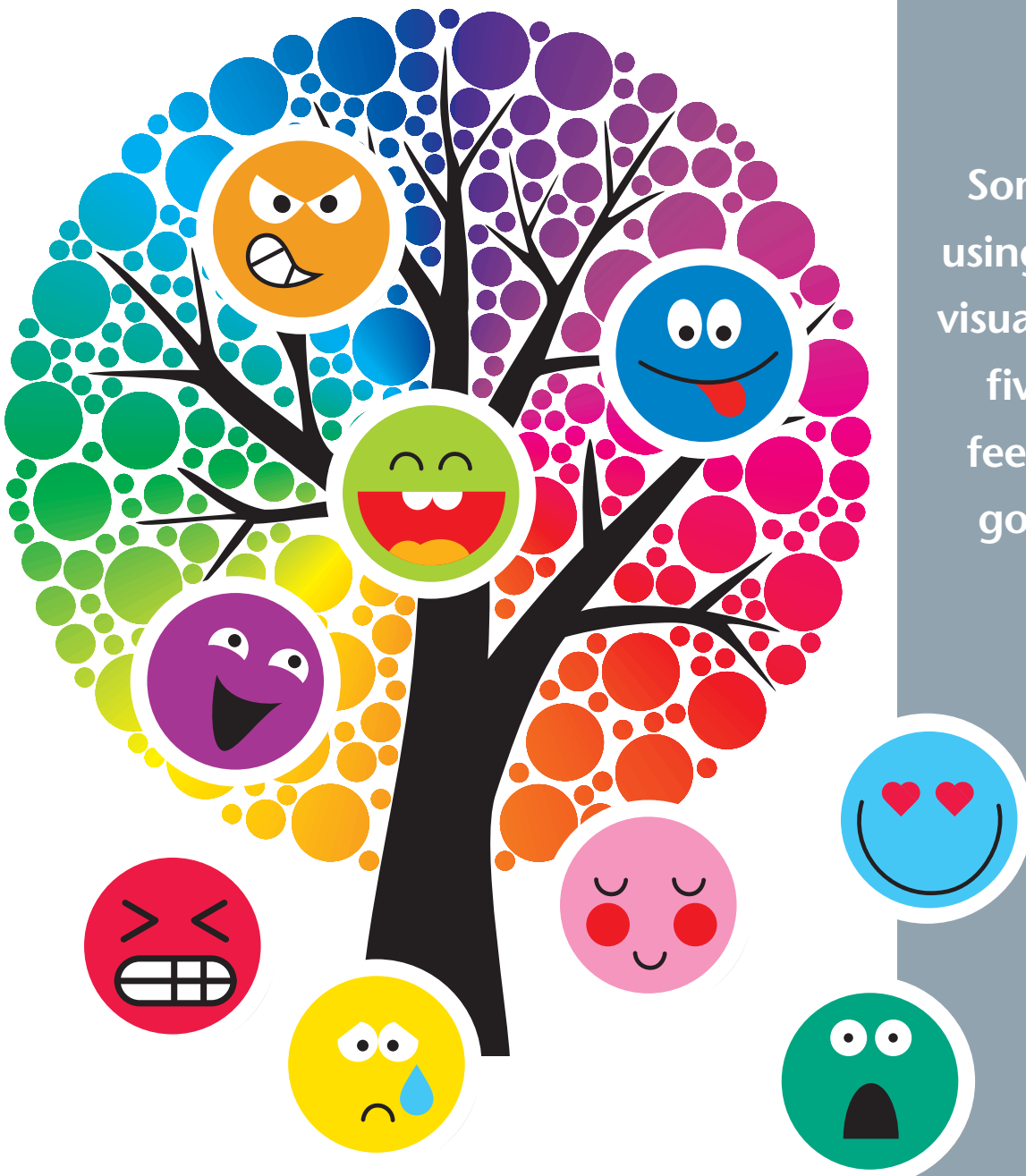
THE WEEKLY TO DO LIST

MONDAY	TUESDAY
WEDNESDAY	THURSDAY
FRIDAY	SATURDAY
	19

Below is an example of an emotions chart

Be creative! Print a picture of a tree and some faces with different emotions (these can be real photos of your child). Children with FASD can stick them on the tree to let you know what emotions they are feeling at that time.

As you adapt different environments and begin using various self-regulation strategies, point out to your child how they are using 'brain-tools' to help stay calm, settled and focused.



Sometimes, using a simple visual showing five or six feelings is a good tool.



Auditory strategies (noise and hearing)

Children with FASD may experience difficulty in screening out background noise. This may result in their becoming unfocused and overloaded in a noisy classroom environment or anxious when exposed to sudden unexpected sounds such as the fire alarm or school bell.

- Children should be prepared ahead of time for fire drills. Visual prompts can support this routine of what will happen.

- Use ear defenders or headphones to filter out sounds allowing pupils to focus better.

Tactile strategies (touch)

Children with FASD may be oversensitive or under-sensitive to touch. A variety of sensory tools or strategies may help children to self-regulate based on what works for them. Stress balls, soft stretchy key chains or any other soft, manipulative hand-held objects are examples of what may help with self-regulation. These tools can enhance learning and attention during class time or other seated activities. The effectiveness of these strategies can vary from child to child and also can vary on a daily basis.

The sense of touch through the mouth is also a part of our touch system and plays an important part in calming and organising the nervous system. Some children may benefit from sucking on a straw or water bottle as this can often help children focus and organise themselves while working on class activities. Children may be given printed or visual instructions to help them remember how to use these correctly.



Sense of body position and movement/balance strategies

Our sense of body position consists of sensory receptors in our muscles, skin and joints that unconsciously provide information about the position of our body parts.

Children and young people with FASD often have difficulties with body awareness and body boundaries, causing them to look disorganised, enter other people's personal space, trip or stumble over things, bump into peers or furniture, play destructively or break toys or other objects, because they have difficulty adjusting their muscle movements appropriate to the task.

- Visual boundaries in changing room areas and corridors can help children organise themselves and their physical space during transitions and while changing into, or out of, outdoor clothing.
- A visual line using tape on the floor in the classroom or corridor helps children line up. Painted floor tiles can help provide children with visual cues and boundaries when lining up in the classroom, at the door and sink.
- Incorporating movement breaks into a child's day can help them self-regulate. Movement breaks can take a variety of forms such as walks outside of the classroom, running errands for school staff, stretching, rocking etc. Slow, repetitive movement (rocking, swinging, bouncing) can be calming and organising, whereas fast movements in all directions (running, spinning etc.) may further over-stimulate the child.
- An air-filled chair cushion placed on the chair or the floor can provide children with much needed movement within a physical boundary.

Motor skills

Children and young people with FASD have a wide range of fine and gross motor skills. Some excel in physical motor skills, particularly in individual sports such as swimming, running and ice skating. Success in these areas is a great way to build self-esteem and progress in sports and leisure activities. Involvement in organised team sports may be more challenging, due to poor memory for rules, impaired judgment and problem solving skills and immature social skills. Children may require more support and understanding as well as repetition, practice, and individual coaching to succeed in a sports team.

Some children with FASD have significant problems with fine and gross motor development that can interfere with daily functioning at home, school and in the community.

Incorporating movement breaks into a child's day can help them self-regulate.

Fine motor skills

The delayed development of some fine motor skills, such as tying shoe laces, handwriting, using scissors and opening food packages at lunch time can cause additional stress. Children may have difficulty sustaining the motor activity required in a typical school day without adaptation to reduce the demands on their muscles. As they learn motor skills, the motor skills may become automatic, but it often takes longer



for children with FASD to reach this automatic state. Even then, there may be days when they forget a skill that they have previously learned. The effort it takes to remember what a letter looks like and how to form it detracts from writing the message or remembering how to spell a word.

Several of the neurological outcomes of FASD may include:

- immature grasp and manipulation patterns (including pencil, scissor grasp and the ability to manipulate small objects).
- decreased hand strength, low muscle tone in hands, instability of joints in hands, all of which may cause children to tire faster than their peers while engaging in fine motor activities such as pencil use.
- fine motor tremor.
- poor bilateral hand use - using one hand for movement and the other as a helping assist.
- no established hand dominance, rather a switching of hands during an activity such as cutting or pencil use.

Fine motor skills strategies

- Ensure that children have supportive seating in a properly fitting desk and chair. You may wish to contact Occupational Therapy for additional support and advice.
- Allow extra time for writing, but recognise children's difficulty in sustaining the motor activity of writing. Children may only be able to do small amounts of writing before needing a break.
- Reduce the amount of copying required. Provide a photocopy of the information for children to use at their desks, use a scribe or buddy system for copying. Help older children determine what information in the notes is most relevant by having them highlight the sentence or information.
- Encourage the early development of keyboard skills and laptop use.
- Provide extra practice in handwriting and printing and decide whether to encourage cursive writing or continue with manuscript form.
- Watch to see if children grip their pencils too tightly, which is tiring. Use soft slide-on pencil grippers. Molded pencil grips can also help develop a more efficient tripod grasp.
- Provide a brief time for seat breaks. Vary seat work with physical activity such as taking a short walk, watering the classroom plants, delivering a parcel to another part of the school. This will help keep the body and mind more alert and increase productivity.
- Provide hand strengthening activities such as rolling play dough and clays of various densities and squeezing sponges or squishy balls.
- To reduce fine motor tremor, increase resistance or the weight of the pencil. A softer lead pencil (2B, 3B or 4B) provides more resistance to the paper and a pencil topper adds weight.



Abnormal muscle tone (usually tightness in the arms and legs)

Poor central or postural stability of the core body or trunk muscles can affect children's balance and functioning in the classroom. Often, static or stationary balance is more affected than moving or dynamic balance. The child may constantly be on the move around their environment to help maintain an upright posture. They will often depend on momentum to keep themselves upright. An analogy of this would be to try riding a bike very, very slowly. It is much easier to ride a bike fast to maintain balance or prevent falling over. To help compensate for poor postural stability, children with FASD will often fix at the neck and shoulder area to help improve their stability. This can interfere with use of their arms and hands during fine motor activities and cause them to expend a great deal of energy trying to remain seated. Children with FASD may constantly move in their chairs, fall off their chairs, avoid sitting or only remain seated for short periods of time during class activities. Children will often try to lean against a wall, furniture or other people for support in a constant effort to keep upright.

Gross motor skills

Children and young people with FASD may experience difficulty with:

Poor co-ordination (including eye-hand co-ordination)

The co-ordinated movements required for physical activities such as running, bike riding, ice skating and playing ball games may be delayed. Physiotherapy can be helpful, as can physical activities such as swimming, dancing and gymnastics, provided the goals set for these activities are realistic.

Children may require more support and understanding as well as repetition, practice, and individual coaching to succeed in a sports team.

Poor body awareness

Poor sensory processing of information from the muscles and joints results in decreased understanding and feel of body position and movements. Children may have difficulty using the right amount of pressure or force to do a job. For example, they may not control their muscles appropriately to hold a pet gently, tag a classmate without hurting, or throw a ball with the correct amount of force to a partner.

As a result of poor body awareness, decreased muscle control and poor co-ordination, children often seem clumsy, careless or physically aggressive. They may bump into peers and furniture, trip over their own feet when crossing the room and play in an apparent rough or aggressive manner, often hurting peers or breaking toys. This is not intentional or defiant behavior, rather a result of neurological impairment which causes impaired motor skills and poor body awareness.



Gross motor skills strategies

Caution: Closely supervise children during these activities as they often don't have a sense of danger and have poor body awareness.

- Ensure children are provided with stable seating when doing work at a table or desk. The best seating position for children is to sit on a properly fitted chair which lets their backs rest against the chair back. Hips, knees and feet should be at about 90 degrees of flexion with feet resting solidly on the floor or a footstool if the chair is too high.
- Use a variety of positions throughout the day to do work. Suggestions include lying on their stomachs on the floor, standing, sitting on a therapy ball, etc.
- Perform structured gross motor activities, prior to fine motor activities, to give muscles a wake-up call. Try scheduling gym lessons first thing in the morning or have individuals run a few laps around the gym or school, or run up and down a set of stairs before starting academic work. Vary seat work with physical activity throughout the day, to help keep the mind and body more alert. An air filled "wobble" cushion or wedge that provides movement helps challenge and strengthen postural muscles.
- Provide activities to improve balance and co-ordination skills. Set up obstacle courses during gym class or movement breaks. This could involve climbing over, under, through; jumping or hopping on one or two feet.
- Structured, organised activities which provide children with heavy work to their muscles tend to have a calming effect. Avoid doing these activities in loud, unstructured environments as this tends to increase the activity level even more.



Academic Skills

Compared to other children, children with FASD need more practice (*over learning*) to learn basic tasks and to make tasks automatic.

Some of the challenges a child with FASD may experience are:

- Problems with language.
- Poor short-term memory.
- Inability to grasp instructions.
- Mixing reality and fiction.
- Difficulty with group social interaction.
- Poor problem solving and planning.
- Hyperactivity and poor attention.
- Poor co-ordination.
- Difficulties in comprehension.

There may also be some evidence of the following difficulties, most commonly associated with dyslexia:

- Auditory and/or visual processing of language-based information.
- Phonological awareness.
- Oral language skills and reading fluency.
- Sequencing and directionality.
- Number skills – especially time and money.
- Organisational ability.

Academic skills strategies

- Identify how children learn best – what is their learning style? Visual, auditory kinaesthetic or is it a mix? Do they have a profile of strengths/difficulties?
- Learners will benefit from early identification, appropriate intervention and targeted effective teaching.
- A Individualised Educational Programme (IEP) developed in partnership with children, parents and staff and should reflect clear and achievable targets for Literacy, Numeracy and Health and Wellbeing in relation to the Curriculum for Excellence.
- Every child has a Named Person who will be the first point of contact in school and, working with the Pupil Support staff, will be able to work together on strategies that can be implemented both at home and school.
- Be alert to the possibility of children “freezing” under the pressure of working fast in timed situations. Make allowances for extended time on tests and assignments.
- Consideration should be given to what assessment arrangements are needed for preliminary exams and exams and discussed with the young person, school and caregiver.
- Use a highlighter to help children follow instructions, such as where to start and where to stop.
- Encourage children to work for short period and provide regular movement breaks.
- Use visual prompts.
- Use multi-sensory approaches.
- Consider seating position in the class and the use of ear defenders.
- Provide writing frames.
- Give short, clear instructions and allow processing time.
- Provide opportunities for over-learning.
- Use memory aids to facilitate recall – notes, pictures, recordings.
- Use IT equipment such as laptops and computers.



Homework tips

- Consider the need for homework, or tailor the content given. Children with FASD are often very fatigued at the end of a school day.
- Set a routine for homework.
- Set homework tasks into manageable chunks.
- Encourage and praise what is done well.

Reading and writing

A child with FASD may experience difficulty with:

- learning sound/symbol associations.
- identifying main ideas, making inferences, making predictions.
- getting started, organising thoughts and details, and putting them in written form.
- understanding figurative language, some forms of humour.

Children and young people with FASD may not learn sound/symbol associations easily without systematic and repeated instruction. Comprehension levels may reach a plateau (not advance, or advance more slowly) and individuals in secondary school frequently require adapted reading materials. At secondary school level, pupils are expected to read more, to be able to identify the main idea of a story, make inferences when the facts are not stated directly and make predictions. For children with FASD, who are slow to develop abstract thinking and problem-solving skills, these become problem areas that require specific planning.

Children with FASD may have difficulty getting started writing, organising thoughts in a sequential manner, knowing details to include and translating their ideas to written form. At a basic level, pupils may have difficulties with spelling, capitalisation and punctuation. The reference resources that individuals may use (such as encyclopedias and websites)



often have reading levels that are too advanced for individuals with a reading disability. Educators may need to select materials that will be meaningful for individuals.

Reading and writing strategies

- Keep the number of instructions, and the explanations, short.
- Stop at key points to check for comprehension.
- Make sure children understand what to do. Having pupils repeat back the instruction does not ensure understanding. It is better to have them explain the instructions in their own words or demonstrate what they should do.
- Give instructions in more than one way: verbal and visual.
- Use lists, such as a print or pictorial checklist for daily routine or daily work. Children need to learn how to use a list.

- Slow the rate and wait at least 10 seconds for pupils to process and organise a response.
- Use gestures and visual aids. Exaggerate the signals when the message is important.
- Use visual aids to accompany language messages.
- Be concrete and specific. Show pupils what is expected and how to begin the task. Non-compliance may mean that the message was too ambiguous.
- Recognise that pupils may not understand or may misunderstand complex language, for example, negatives, passive verb construction.
- Enlarge font and spacing on worksheets. Reduce the amount of text and put few questions on a page.
- Help children to feel comfortable asking questions (and asking again, if necessary) when they do not understand.
- Use sequential, repetitive teaching strategies which builds on pupil's prior knowledge base.
- Check in periodically with pupils to ensure that they understand the task.
- Consider use of adaptive technology to support expression of ideas.



**'Stop at key points
to check for
comprehension.'**

**'Slow the rate
and wait at least
10 seconds for pupils
to process and
organise a response.'**

**'Check in periodically
with pupils to ensure
that they understand
the task.'**



The FASD brain has to work harder than other brains, so it may take your child or teenager longer to complete assigned tasks.

Mathematics skills

Many children with FASD have difficulty learning mathematical concepts. They may have problems with calculations and problem-solving and with the life-skills concepts of time and money.

A child with FASD may experience difficulty with:

- understanding symbolism, meanings of symbols.
- responding to a large number of maths questions on a single page.
- learning multiplication tables and other mathematical concepts.
- memorising maths facts.

Time concepts

Many children with FASD have trouble with time concepts such as before/after, yesterday/tomorrow, telling time and judging the passage of time. Telling a child with FASD there are five minutes left to complete the work can be meaningless.

Five minutes and five hours may mean the same to them. Certain vocabulary can be confusing, for example, quarter to, half-past, 9:45. Even when children learn how to count by five minute intervals to determine the time, they may still read 3:20 as 3:40. Children may even become lost in the day, not knowing whether it is before lunch or after lunch. Using calendars and written schedules can reinforce time sequences. Concrete visual representations, such as sand timers, or stop watches emphasising how much time it takes to complete certain activities in the day can help children develop a sense of time.



Money concepts

Children and young people with FASD may have problems handling money concepts such as the names and values of coins, computing the value of a pile of change, knowing how much change to get back for a purchase and judging the value of items. They may be at risk of being taken advantage of by others because of this problem. Banking and budgeting are an important emphasis in the school curriculum and are essential skills for independent living. Many adults with FASD continue to need a degree of assistance in the management of money throughout their life.



Mathematics strategies

- Children may need to continue using concrete visuals such as number lines and objects.
- Children may need to practise maths facts daily for short periods throughout the school year for the facts to become automatic.
- Be alert to the possibility of children freezing under the pressure of working fast in timed tests. Make allowances for extended time on tests and assignments.
- Reduce the number of questions on the page so children are not overwhelmed.
- Enlarge the font size and spacing of the questions.
- Put all the questions of one kind on one page and add different kinds of questions to the same page gradually.
- Use a highlighter to help children follow instructions, such as where to start and where to stop.
- Children with difficulties in spatial organisation can use graph paper to keep columns and figures straight.
- Allow children to use a calculator for basic calculations.
- Be creative in presenting maths concepts and problem solving with concrete examples (including time and money).
- Find ways to help children get organised and take on responsibility.



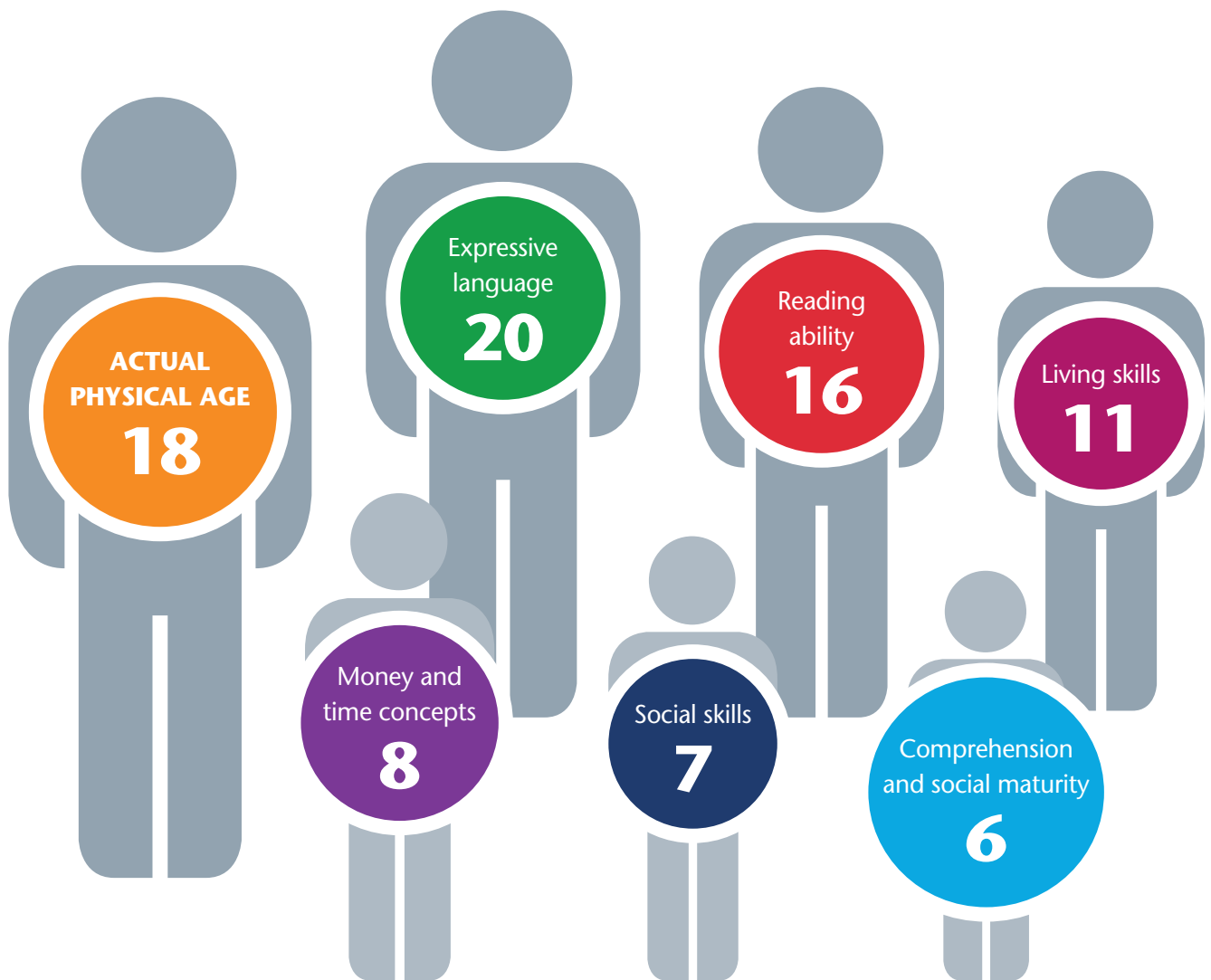
Living and Social Skills

Social skills are defined as the skills we use in every environment that includes two or more people.

There are brain-based reasons children with FASD have difficulty with social skills. Children with FASD are often developmentally younger than their chronological age, and as a result their behaviour may be misinterpreted. The following diagram is an example of the developmental timeline for one individual with FASD. It is intended to show the variation in abilities that can exist, and how some challenges may be masked by other strengths, for example, emotional immaturity may be hidden by what appears to be good expressive language skills.

Conflict can develop when it is assumed that an individuals' development matches their chronological age, when they are actually developmentally much younger.

It is necessary to look at difficulties with social skills through an FASD lens and reframe behaviours to determine appropriate expectations, teaching approaches and intervention strategies.



Example of developmental stages of 18 year old child with FASD

Here is an example:

Due to memory deficits, the inability to predict future events and impulsivity, Andrew, a primary 6 pupil, often experiences conflict with classmates. In one instance Andrew grabbed a pencil away from a classmate. This behaviour escalated into conflict with the classmate and the teacher.

At Andrew's age the teacher expected Andrew to know how to politely ask to borrow the pencil. However, due to brain differences, he is unable to perform this social skill consistently. This behaviour is frustrating for Andrew, his classmates and his teacher.

Using the chart on the next page we can begin to reframe behaviour to determine how best to educate and support children.

Reframing social behaviour

Social skill	Requires the ability to	What you might see	Support suggestions
Asking for help or asking for permission	<ul style="list-style-type: none"> – Generalise – Interpret cause and effect relationships – Predict outcomes 	<ul style="list-style-type: none"> – Grabbing items away from others – Interrupting – Negative behaviour 	<ul style="list-style-type: none"> – Check in with the child frequently to avoid behaviour challenges. – A visual cue that the pupil requires assistance
Listening	<ul style="list-style-type: none"> – Process auditory information – Filter sensory information – Store and retrieve information 	<ul style="list-style-type: none"> – Lack of focus – Poor eye contact – Fidgeting – Distracting others 	<ul style="list-style-type: none"> – Using listening tools – Reduction of environmental distractions
Following directions	<ul style="list-style-type: none"> – Remember what is said – Translate auditory or visual information into appropriate action 	<ul style="list-style-type: none"> – Lack of follow-through – Non-compliance – Defiance 	<ul style="list-style-type: none"> – Break tasks into small steps. – Repeat – Visual cues
Reading social cues	<ul style="list-style-type: none"> – Generalise – Interpret body language – Process visual information 	<ul style="list-style-type: none"> – Acting silly – Inappropriate responses – Laughing at the wrong – Time 	<ul style="list-style-type: none"> – Assist with interpretation of non-verbal communication. – Concrete representations for emotions. – Social scripting
Manners	<ul style="list-style-type: none"> – Generalise – Interpret cause and effect relationships – Remember 	<ul style="list-style-type: none"> – Rude behaviour – Defiance – Inappropriate responses 	<ul style="list-style-type: none"> – Guided practice – Teach and re-teach – Prompt – Praise good use of manners – Social stories

Social skill	Requires the ability to	What you might see	Support suggestions
Waiting patiently	<ul style="list-style-type: none"> – Understand and internalise the concept of time – Attend for extended periods of time 	<ul style="list-style-type: none"> – Impulsivity – Disruptive behaviour 	<ul style="list-style-type: none"> – Reduce waiting times – Use of a visual timer
Sharing/taking turns	<ul style="list-style-type: none"> – Understand the concept of turn taking – Not be impulsive 	<ul style="list-style-type: none"> – Disruptive play – Arguments 	<ul style="list-style-type: none"> – Guided practice – Visual cues – Demonstration – Supervision – Social stories
Apologising	<ul style="list-style-type: none"> – Understand abstract concepts. – Understand and process the issue – Understand and process cause and effect reasoning 	<ul style="list-style-type: none"> – Defiance – Insincerity – Refusing to apologize 	<ul style="list-style-type: none"> – Explain the incident concretely – Social scripting – Demonstration – Guided practice – Social stories
Problem-solving and resolving conflict	<ul style="list-style-type: none"> – Hold opposing views and weigh options – Reasonably predict what may happen – Understand and process abstract thought – Be empathic – Understand and process cause and effect 	<ul style="list-style-type: none"> – Conflicts with peers and adults – Inappropriate responses to situations – Frustration 	<ul style="list-style-type: none"> – Guided intervention to assist in working through problem-solving – Supervision to prevent conflict

Adaptive skills

Children and young people with FASD may experience difficulty functioning independently and acquiring daily living skills.

The term adaptive skills refers to the ability to perform skills necessary to function independently in everyday life.

Adaptive skills may include but are not limited to:

- eating, feeding self, using utensils, ordering a meal at a restaurant.
- table manners.
- performing basic hygiene, bathing, brushing teeth, grooming.
- using the toilet.
- taking care of clothing and dressing appropriately.
- sense of direction.
- the safe use of transportation.
- vulnerable to strangers' suggestions or overfamiliar with strangers or acquaintances.
- crossing the street safely.
- using the telephone, placing and answering a call and taking a message.
- knowing your home address and telephone number.
- taking care of money, saving, budgeting, banking and shopping.
- literacy skills such as basic reading, speaking and spelling.
- basic housecleaning tasks and care of possessions.
- being on time for school, appointments and work.

Adaptive skills need to be taught, and the nature of the neurological challenges children with FASD face may make it particularly difficult to master these skills. No matter how effective, creative or prolonged the instruction, there is no guarantee that children with FASD will be able to use what is taught without

support. It is essential this area be addressed with expectations that match pupil's ability.

Children with FASD may also require more supervision than their peers to ensure their safety as they learn adaptive and social skills, such as road safety and talking to strangers.

The ultimate goal is to help develop children's self-esteem, a critical ingredient for success and resilience. Self-esteem is built when pupils have concrete evidence of their own competence in terms of either performing the task independently or knowing how to ask for support to achieve the task.

Adaptive skills strategies

- Visual routines and prompts may be necessary as an ongoing strategy for learning day to day routines as repetition often does not lead to retention.
- Include pupils in the process of developing solutions to problems.
- Set limits and consistently follow them.
- Encourage children to use positive self-talk. "I can do this." "It's okay to ask for help."
- Develop a visual routine with the child, which can be followed when the child is feeling overwhelmed by the environment. Help children learn to identify when they are becoming overwhelmed, and what to do.
- Develop consistent routines for each part of the school day.
- Review and demonstrate classroom rules as needed.
- Ensure children and young people access the Relationships, Sexual Health and Parenthood curriculum, so that they develop and understanding of their body, its functions, personal hygiene and healthy relationships.
- Encourage children to help as valued members of the classroom.

- Be aware that unwanted behaviour is a cue that some element of the environment needs to be adapted. Since children with FASD are unable to change their neurological challenges, it is up to the educator to make the necessary changes.
- Introduce the concept of touch in terms of hugs with family and close friends, high five with friends and teachers, and no touch with strangers. This can be discussed with the child or young person and can be presented pictorially or with photos. Children and young people should learn to ask if they hug people and if others can touch them (whether friends or by medical professionals).
- Mistakes are learning opportunities so that further practice or adjustments can be made in the home, learning environment and community.

Develop a visual routine with the child, which can be followed when the child is feeling overwhelmed by the environment.





Focus and attention

Attention represents a set of behaviours and skills that allow a child to focus on relevant information over time, and accomplish age-appropriate tasks without distractibility, restlessness, or over-activity.

Some examples of attention include:

Inattention

Some children with FASD have difficulty maintaining the focus of their attention which makes it difficult for them to learn. The regular classroom can be overstimulating. This does not mean that the classroom should be barren and uninteresting, but it does mean that school staff should try to keep visual and auditory distractions to a minimum.

Selective attention

A child's ability to focus on the relevant information needed to accomplish a task and ignore the extraneous information. Children with FASD may have greater difficulty ignoring visual or auditory stimuli in the environment, or identifying and disregarding extraneous information when completing maths problems or reading passages to answer questions with accuracy.

To reduce visual distractions, materials not in use should be stored in boxes or cupboards, not on counter tops. Avoid spinning mobiles hanging from the ceiling and similar distracting decorations. The brightness of the lighting may need to be adjusted. For some children, even a pencil smudge on the paper can be a distraction when they are trying to complete work. Distractibility increases with the difficulty of the task. It helps to seat children near the source of the information.



Over time, children should learn to recognise when there are too many distractions and go to a quieter working area. It should be clear, however, that this is not a punishment. The educator needs to anticipate problems before problem behaviour escalates. One way to do this is to provide children with a signal to be used to tell the teacher when time out is needed. Eventually children may learn to self-regulate. Pupils who cannot cope in an open classroom often do well one-on-one.

Sustained attention

A child's ability to keep focused without getting distracted or quitting. Children with FASD may have greater difficulty paying attention and working well for a long time, as well as finishing tasks they consider boring.

Attention and executive functioning skills often go hand-in-hand. Strategies that are helpful for one are often also helpful for the other. Please see the Executive Functioning section for additional strategies.

Focus and attention strategies

- Teach children to use self-talk to help stay focused (the first thing I have to do is...) and curb impulsive behavior, for example, stop and think. Model this behaviour in order to encourage the pupil to do this.
- Use visual reinforcements or gestures (the use of stop hand-signals) to help children change problematic behaviour such as calling out in class.
- Consequences for inappropriate behaviour need to be immediate.
- Some children are calmed by quiet, background music.
- Arrange a quiet area to use when distractions are too great.
- Make each activity brief.
- Ask pupils for feedback about helpful learning behaviours and not so helpful learning behaviours, for example, "what can we do to make this work?" and "if this was not helpful, why not?"
- Consider alternative reasons for inattention, for example, not comprehending instructions, motor or sensory difficulties making it difficult to remain focused.

Focus and attention summary

Possible challenges	Strategies to support
<p>Easily distracted</p> <p>Over stimulated</p> <p>Impulsiveness</p> <p>Inattentive</p> <p>Hyperactive</p> <p>Can't sit still</p>	<ul style="list-style-type: none"> – Fidget Toys – Brain break activities – Timers used for child to achieve small, attainable targets – Visual timetables to keep them on task – Visual prompts for learning/rules – Range of teaching approaches used to address different learning styles – Ear defenders – Brain gym/yoga/mindfulness activities – Massage in schools – Nurture Groups/Hubs – 1-1 and small group work – SLA support – Quiet space provided in or outside classroom – Positive behaviour strategies/restorative practice – Child seated away from distractions – Clear instructions given, broke up step by step, use the child's name – Safety programmes – online safety, road safety, RSHP (section on keeping self safe from abuse), stranger danger – Anti-bullying programmes – Programmes to develop self esteem and resilience – mental health programmes, bounceback, growth mindset, Scottish mental first aid training (SMHFA) for educators – Child seated away from distractions – Wobble cushions



Possible challenges	Strategies to support
Hearing impairment	<ul style="list-style-type: none"> – Support from SLT – Language/Phonics programmes – Visual prompts – Variety of teaching approaches used to cater for different learning styles – Checking for understanding
Auditory processing problems	<ul style="list-style-type: none"> – Visual Timetables to keep them on task – Clear instructions given, broke up step by step, use the child’s name – Visual instructions and prompts used – Support from SLT – Language/Phonics programmes – Visual prompts – Variety of teaching approaches used to cater for different learning styles – Checking for understanding



Cognition

Cognitive functioning is an area that can impact many children and young people with FASD.

Cognitive functioning refers to a child's thinking or reasoning skills, which are expressed both verbally and nonverbally. Verbal reasoning skills include how they understand and use language to describe what they know. Nonverbal or perceptual reasoning skills rely less heavily on verbal communication and include visual-spatial skills, being able to solve problems using visual and tactile methods, and quantitative reasoning ability. Cognitive functioning also refers to a child's cognitive proficiency, which refers to abilities associated with completing tasks quickly, efficiently, and accurately. It includes auditory and visual working memory skills, as well as processing speed, which refers to how quickly or accurately a child is able to take in and use information from their environment.

Many children have significant differences within their cognitive functioning, such as better perceptual reasoning skills than verbal reasoning skills. A child's level of cognitive functioning depends on a number of factors, including genetics, maternal general health, prenatal exposure and care, environment and exposure to trauma and other psychosocial stressors.





There is often a lot of variability in the child's strengths and difficulties. Even a child with FASD and an average IQ may still have difficulty meeting their potential due to significant difficulties in other areas, for example, language, executive functioning. Some children have more difficulty using language to understand what they are supposed to do or in their ability to express what they know. Providing the child an opportunity to demonstrate knowledge (instead of tell you what they know) can also be a helpful way to understand what they know and where one will need to help them fill in the gaps. Some children know the answers but require much more time than others to be able to tell or show you the answer (slower processing speed). Some children will know the answer in one setting, for example, the classroom but will not be able to answer the same question in another setting. Others will learn the information one day and appear to have forgotten the next.

Cognition strategies

The following in class strategies may assist a child with FASD:

- Teach how to ask for help by getting them to practice asking for help.
- Use of visual timetables to indicate to the child the structure of the day.
- Repetition of learning and checking retention.
- Opportunities to demonstrate knowledge/ understanding of rules/instructions.
- Allowing more time to complete assignments and tests.
- Providing short and simple verbal instructions.
- Limit distracting stimuli.
- Clear and simple visual prompts.
- Help at transition times.
- Visual timers – clocks, timers on Smartboards.

As with any child, understanding the pupil with FASD's areas of strengths and difficulties will help in developing expectations at a level that the child can be successful, reducing frustration and increasing the child's openness to learning at their optimal level. If a pupil does not currently have an established profile of difficulties, this may be useful to explore with multidisciplinary colleagues.

Understanding the pupil with FASD's areas of strengths and difficulties will help in developing expectation



Communication Skills

Children and young people with FASD usually show some degree of language difficulties or delayed language development. They can often have significant problems in communicating regardless of whether or not their overall development is delayed. These difficulties with language can affect both their social communication and academic learning.

Children with FASD can often develop language skills at a slower rate and difficulties can present in a variety of ways:

Expressive language development

Children with FASD often develop language skills at a slower rate than normal. They may not use the vocabulary or grammatically complex language structures expected for their age. Often they know the word but cannot retrieve it from memory.

Receptive language development

A child with a receptive language difficulty will have difficulty processing information. In particular, receiving information accurately, being able to interpret it and then remember it. They will need support to understand the words, sentences and meaning of spoken and written language around them. Difficulties with listening encompass many aspects that affect children's ability to follow directions and complete tasks.

Children and young people with FASD may not be able to keep up with the normal pace and complexity of the language of instruction and discussion, remember what has been said and translate that into action. Younger children may have difficulty following when the teacher reads a story unless it is accompanied by pictures or a concrete representation, for example, puppets or models.

Children with FASD may understand language messages in a concrete and literal way. They may not respond when the teacher says, "It's time to get ready for the school trip," or "It's time to get down to work." These messages may be too abstract for the child to interpret. Instead they may respond to more precise, concrete instructions such as "We are going to the zoo today. You need to put your shoes on." or "You need to open your maths book. Please turn to page two." Instructions like these are more simplistic and there is less room for misinterpretation.

Children with FASD may have difficulty understanding the intent of the other speaker. Children with this type of language issue may be described as egocentric because they cannot take the listener's point of view. They may go off-topic because they respond to internal associations or experiences that the listener does not know about. They may use pronouns incorrectly or give so few details that a story does not make sense. Children who struggle with knowing how to respond, or to what they should respond, may experience many conflicts in a day. The child's anxiety may increase, and they may have outbursts. Children who seem to have difficulty responding to a request may actually be unable to understand the task being asked of them. What appears to be willful disobedience may actually be an inability to translate verbal directions into action. Educators need to be aware that children and young people with FASD often can repeat verbal directions accurately but have difficulty putting the verbal request into action.

Pragmatics

The pragmatics of language refers to the ability to use language appropriately. For example, they include such things as a child's ability to take turns, understand conversational rules, greet people appropriately and ask and answer questions correctly. Children with FASD may have difficulty starting a conversation and may not respond appropriately in conversational dialogue. Superficial language can mask challenges with listening and understanding language. Some children with FASD can have very serious communication deficits but seem very chatty, to the point of talking excessively. It is important to give these children feedback about their expressive language abilities to help them see what they are doing and create insight into how this affects others in a group.

Speech sound development

Children and young people with FASD may have articulation problems that make it difficult for them to be understood in conversational speech. This may cause problems with the development of social skills.

It is important to remember that some children may present with more than one of the above difficulties.



Communication strategies

Challenge: Difficulty following and understanding language

Strategies:

- Choose simple materials with illustrations
- Speak face-to-face with the child
- Use the child's name to gain their attention first
- To help ensure that a child has understood a verbal request, the teacher can ask the child to show them what needs to be done as well as asking them to verbally repeat the instructions
- Visual timetables to help keep on task
- Clear short instructions given, broke up step by step
- Visual instructions and prompts used
- Support from Speech and Language Therapy
- Variety of teaching approaches used to cater for different learning styles
- Give instructions one step at a time. Repeat information as needed. You may need to re-teach information multiple times.
- Use verbal cues, such as songs or chants to remind children what to do next.
- Show rather than tell. Demonstrate so that children know exactly what to do.
- Minimise distractions around the child
- Give them plenty of time to respond.

Challenge: Difficulties understanding the social use of language around them

Strategies:

- Avoid using figures of speech, euphemisms, and sarcasm. Abstract language often is very difficult for children and young people with FASD to understand.
- Limit the number of questions you ask. Questions can often be abstract and difficult to answer.
- Help children learn a skill by teaching it in the environment in which they are expected to perform the skill.
- Give instructions one step at a time. Repeat information as needed. You may need to re-teach information multiple times.
- Break large tasks into smaller steps. Remember to keep instructions simple and short, and use the same key words or phrases for particular tasks.
- Use positive communication and set expectations for behaviour; instead of saying "Don't run", say "Walk". Use exaggerated facial expressions and gestures to give the pupil clues as to your meaning.
- Social stories are often very useful in helping children understand certain situations or events that otherwise may be too overwhelming or difficult.
- Social stories provide a visual personalised story that helps support children's understanding through a given situation. They provide reassurance and predictable texts
- Praise to reinforce appropriate behaviour
- Support to build friendships
- Provide opportunities for small group work



**Speak face-to-face
with the child.**

**Give instructions
one step at a time.
Repeat information
as needed.**

Challenge: Difficulties learning new vocabulary and concepts

Strategies:

- Break large tasks into smaller steps. Remember to keep instructions simple and concrete and use the same key words or phrases for particular tasks.
- Create key word and sight word cards for vocabulary building, phonic strategies, etc. Encourage children to develop a vocabulary word wall.
- Show rather than tell. Demonstrate concepts so that pupils know exactly what is expected.
- Provide opportunities for discussion of new concepts before they are introduced in the classroom and check understanding afterwards.
- Provide opportunities for new learning to be connected to existing knowledge.
- Use art/photographs/graphics to make abstract concepts more concrete.
- Use everyday words to explain new words and concepts.
- Display information that you want children to remember on, or close to, their desk so that they can refer to it. This includes daily timetables/items that need to be taken home at the end of the day.
- Communicate with parents/carers regularly by email/phone/home-school link diary.
- Provide opportunities for small group work.

Challenge:
Listening/attention difficulties

Strategies:

- Plan multi-sensory experiences based around the individual's sensory strengths and needs, including activities involving movement.
- Remove as many distractions from the environment as possible to enable the individual to concentrate on the teacher/task in hand
- Games/activities that encourage listening (for example sound location activities)
- An individual work task board/check list on child's desk to help them stay on task (with visual representation of the 'reward' for completion of task)
- Use of a 'secret cue' to help keep child on task (hold up a picture/cue for child to see if you notice from across the room they are off task)
- Provide pre-teaching for new concepts
- Start small, begin by giving one or two easily accomplished tasks to complete and use visual prompts
- Chunk task into shorter segments

Challenge: Difficulties expressing their needs

Strategies:

- Give the child time to think without feeling under pressure to respond
- Allow them to use gesture/visuals if they need to help get their message across
- Support from Speech and Language Therapy
- Plan around the child's strengths and interests and provide immediate, frequent praise for each achievement.
- Be flexible about how achievement is recorded, consider video, photographic evidence and provide a scribe where necessary
- Teach key vocabulary, this may need consolidated on multiple occasions
- Accept and encourage what the child is able to give you
- Provide key words/pictures in an easy to access area
- Give time and attention
- Give feedback showing whether you have understood
- Provide a correct model (correctly say word/sentence the child attempted) but don't put them under pressure to repeat it
- Provide opportunities for small group work



Memory Skills

Memory skills are often a major concern for children with FASD. In the classroom these children may not be able to respond to questions, they may forget how to do a task that they've done a hundred times before, it may take a couple of weeks of daily practice to memorise a line for the school show, or they may get into trouble in the playground because they didn't follow the rules.

Each of these scenarios represents a different problem with the memory process and each has strategies that will improve learning. If we find the right approach children with FASD can learn despite their memory challenges.

The memory process requires we focus on, and select, the relevant material to be learned (encoding), then organise the material utilising short-term and long-term strategies (storage) and then access the material when it is need (retrieval).

In general, children with FASD are concrete learners and remember better when they use their senses - touch, sight, taste and hearing.

Problems can occur at any stage of this process. It is important for educators to carefully observe to ensure that the specific problem area has been accurately identified. For example, some children with FASD may be viewed as having behaviour problems when in fact they need daily reminders and visual pictures to help them remember the rules.

Others may have good memories, but need strategies to better organise the material so it can be retrieved more easily. Using cues to allow learning to be demonstrated often helps to reduce frustration,

for example, when asked to write an answer, using a picture that may prompt the response.

In general, children with FASD are concrete learners and remember better when they use their senses - touch, sight, taste and hearing. Experiential learning has been shown to be very effective and visual learning is generally more effective than oral learning. Abstract material is usually the most difficult for children with FASD to learn and remember.

Memory strategies

Challenge	Strategy
Difficulty independently starting or completing a task.	<ul style="list-style-type: none"> – Break the information into smaller chunks. – Keep instructions short and check understanding. – Provide memory aids and visual supports. – Provide step by step guides. – Encourage note taking, repeat key facts verbally and explain back what they have to do.
Difficulty retaining new words and remembering prior learned vocabulary.	<ul style="list-style-type: none"> – Ensure child can link prior learning. – Pre-teach subject specific vocabulary. – Supply a word bank for topics. – Play visual and auditory memory games. – Present concepts in a variety of forms, using visual prompts.
Difficulty following a sequence of steps, verbal instructions or tasks.	<ul style="list-style-type: none"> – Play auditory/visual memory games. – Reword instructions, using short sentences. – Use a recording device or app: child or teacher records next instruction. – Give extra processing time. – Provide memory aids and visual prompts – pictures, diagrams, photographs etc.

Challenge	Strategy
Difficulty remembering factual knowledge and mathematical procedures.	<ul style="list-style-type: none"> – Personalise planning tools, memory aids and routines. – Repeat information in a variety of ways, making connections to other concepts and visual supports. – Ask child to repeat the steps in the task back to you. – Keep new information brief and direct, repeat it concisely. – Use rule cards, for example, for learning how to carry out a maths calculation. – Display visual supports for key concepts which teacher and child refer to regularly.
Difficulty transferring concepts the child has learned to other situations.	<ul style="list-style-type: none"> – Revisit prior learning, making connections to other concepts. – Chunk instructions down into several short steps. – Provide opportunities for child to repeat the task, adding details. – Provide information in a variety of ways – in writing, with visual supports, using modeling.
Difficulty remembering what the child has just read, heard, wants to say, or was told to do.	<ul style="list-style-type: none"> – Present concepts in a variety of ways, with visual or auditory supports. – Chunk instructions into short phrases. – Provide written instructions, posters and graphics as reference tools. – Provide oral clues for problem solving, writing out key words. – Repeat information in a variety of ways, for example, visual or verbal.
Difficulty arriving at an overview of a complex situation (poor attention to detail, forgetting or skipping words and writing shorter sentences).	<ul style="list-style-type: none"> – Keep instructions to a minimum. – Repeat information and make connections to other concepts. – Present concepts in a variety of different ways, using visual aids that allow encoding.
Difficulty with personal organisation. For example, loses or forgets his/her personal belongings.	<ul style="list-style-type: none"> – Develop precise routines and procedures for daily activities. – Supply checklists/visual timetables to help with personal organisation.

What pupils want school staff to know

The following is an example profile which may help school staff better understand some of the learning needs of a child with FASD. It is important to remember that not all children have these same strengths and challenges.

There are all kinds of minds:

- Some minds learn best by looking.
- Some minds learn best by doing.
- Some minds learn best by listening or talking.
- Some minds learn best when you do several things at once (listen, do, see).

This is my kind of mind:

- Some things are easy and some things are tricky.
- What is easy for me is reading, maths, physical education.
- What is tricky for me is writing and getting my ideas down on paper.

What my brain really likes is:

Figuring things out by looking:

- I enjoy designing and making things, building, or drawing.
- I can be good at understanding what I see (puzzles, maps, pictures, games, knowing where things are).

This means showing me things is a good way to teach me.

My brain is good at understanding what I hear

- if it is interesting.
- if I know I've to pay attention.
- if you keep the talking short. Too many words and my brain tunes out.

My brain is also good at learning by doing:

- I am good working with my hands.
- I like to keep busy and am good at some sports.

- I am good at making things and drawing or designing with a pencil.

I am an amazing hands-on learner!

What is tricky for my brain:

- paying attention during class time (especially when people are talking lots).
- remembering what I see and hear (sometimes when you don't tune in long and strong enough it is hard to remember new things).

Ideas for school:

- Let me use a computer for writing and stories unless I feel like handwriting.
- Sometimes letting me talk while someone else writes it down works (let me try this with key words written down or a drawing, diagram or chart).
- Talk less and show me more about what I am supposed to do.
- Give me things to look at when you are teaching or to help me remember (pictures, maps, drawings, charts, notes, write it on the board, lists, computer programs).
- Make sure I am paying attention before you give important directions or information.
- You can use my name and say "I am going to tell you something, are you ready to listen?"
- You can give me a good work space without lots of junk or clutter.
- You can ask me to repeat what I need to do for a task to check if I understood it.
- Make sure I am looking at you before you start talking.



Parents and school staff working together

Open communication goes a long way in building strong relationships. Parents need to know that their children are safe and that you support their children and the family unit. The following is a list of helpful hints for school staff generated by parents raising children with FASD.

- **A Team Approach** works best in supporting a child with FASD. Parents know their children better than anyone and want to be included as working members of the school team. Parents want to give the school information that will be helpful in creating a learning environment that works for their child. It may take time and practice for a team to work well together. Parents will need time to learn the language used by the school and the school will need time to learn the language used by the parents. Ideally, this will be a mutually beneficial relationship where parents and school staff learn from each other.
- **Planning for success** helps reduce stress for the child, the family and the school. Parents want to be part of a proactive approach to avoid problems and unwanted behaviour. Behaviour is a sign that the environment needs to be adapted to accommodate the needs of the child. It is often most helpful to look at patterns of behaviour instead of the details of an isolated incident. A parent usually knows the triggers for some behaviours and can help the school to avoid them.
- **Open communication** - When an issue occurs with the child at school, parents ask that the school to communicate with them. Many children with FASD have poor short-term memory, and the inability to link cause with effect. Often children with FASD will forget unwanted behaviour before they leave school for the day. Let parents know when a significant issue occurs. Build relationships with honesty and open communication.
- **Acknowledge struggles** - Educating children with FASD is both rewarding and challenging. No two children are alike and strategies will change regularly with some children. Include parents in the problem-solving process. No one expects the school to have all the answers.
- **Highlight successes** - Parents need to hear about their child's successes as often as possible. No matter how small the success, it can be celebrated. Happy notes are incredible self-esteem builders for the children.
- **Participation** - Children need to be allowed to participate in school trips and fun activities. Parents want to help the school devise ways to allow children with FASD to be included.
- **Asking questions** - Parents are an excellent resource to help identify if there is something else going on in their child's life that might be contributing to negative behaviours. For example, parents can tell school about bullying, stress in the family, sickness, school work that may act as a trigger.

The Paradigm Shift

The shift is from seeing a child as one who won't do something, to one who possibly can't. The shift includes moving from:

From seeing child as	To understanding child as
won't	can't
bad	frustrated, defended, challenged
lazy	tries hard
lies	confabulates/ fills in blanks
doesn't try	exhausted or can't start
mean	defensive, hurt, can't show feelings
doesn't care, shut down	overstimulated
refuses to sit still	oversensitive
fussy, demanding	doesn't get it
resisting	can't remember
trying to make me mad	needing contact, support
trying to get attention acting younger	being younger
thief	doesn't understand ownership
doesn't try	tired of always failing
inappropriate	may not understand proprieties
not trying to get the obvious	needing many re-teachings

Personal shift from	To feelings of
hopelessness	hope
fear	understanding
chaos, confusion, anger	organisation, meaningfulness
power struggles	reframing perceptions,
frustration	defusing working with, rather than at trying differently, not harder
exhaustion	re-energised, new options to try seeing, supporting strengths networking, collaboration
no good outcomes	seeing, supporting strengths
isolation	networking, collaboration

Professional shift from	To
traditional	recognising brain differences
applying consequences	preventing problems
traditional interventions	expanding professional options
changing people	develop effective strategies, changing environments

Beliefs dictate behaviours. The belief that many primary learning and behavioural characteristics associated with FASD are the result of willful, volitional or intentional behaviours often leads to punishments of these symptoms. The key... is linking the idea of brain functions with presenting behaviours, reframing perceptions and moving from punishment to support.

Source: Diane V Malbin

Six guiding principles to helping children with FASD reach their potential

Adapt the environment - Children with FASD have an invisible brain-based condition. This means the best strategies are ones that change the child's environment rather than focusing on changing the child. Creating a calming physical space, having clear and consistent schedules and routines, and communicating appropriately can be helpful. Being supported and supervised by people who understand and have adapted their expectations of the child will create the best environment for children to reach their potential.

Think younger - Children with FASD develop differently than their peers. It can be helpful to think about our expectations and adapt these to 'think younger.' Children with FASD may be socially immature and need more support and supervision than what is expected of their chronological age. Using simple language and concepts will help.



Build on strengths- Every child with FASD is unique and will have their own strengths and difficulties. Identifying their strengths and using these when planning daily-living, learning and leisure activities will enable children to grow in self-esteem and be successful in their learning. Praise children when they make even small achievements - they have often worked hard to get there.

Keep it simple - Children with FASD can become overwhelmed easily. Therefore, it is important to keep things simple. Break down more complex tasks into simple steps so that children don't need to "fill in the blanks." Allow time for breaks and be aware of spending too long on a task. It can help to do only one task at a time, give one instruction at a time and say exactly what you mean. Keep the environment uncluttered and focused on the task at hand.



Be patient - It can take many tries for a child with FASD to learn and sometimes they can forget even once you think they've got it! You will often have to repeat instructions again and again. It's important to be patient and calm. Finding someone to talk to, ways you can be supported and what helps you cope will help you to achieve this.

Work as a team - Children with FASD may have many family, friends and professionals helping them to achieve their potential. These people are often important for providing the extra supervision and structure that children with FASD need. Children will learn best if there is consistency in language, routine, rules and expectations from all these people. This means communication between everyone, including the child, should be open and clear.

Secondary risks of being misunderstood

In the field of FASD, it is common to hear the terms primary difficulties and secondary risks.

Primary difficulties are those that a child was born with, and are a result of prenatal alcohol exposure. They reflect differences in brain structure and function, such as those discussed in the previous section *Understanding the Needs of pupils with FASD*.

Secondary risks are consequences of the mismatch between the person and his or her environment. These can arise later in life, often during adolescence, but sometimes earlier.

Some examples include:

- fatigue, frustration.
- anxiety, fearfulness.
- rigid, resistant, argumentative behaviour.
- becoming overwhelmed, shut down (withdrawn).
- a poor self-concept, feelings of failure and low self-esteem.
- isolation.
- acting out, aggression.
- family and/or school problems.
- depression and other mental health problems.
- trouble with the law.
- drug and alcohol problems.
- problems with employment.
- homelessness.

When children with FASD are provided with appropriate supports, it is possible to reduce, and in some situations even eliminate the impact of not being understood. The challenge for educators is to foster the skills, strategies, and techniques the children need to live as independent a life as possible.

What educators need to know

Preparing for school

If you have a child with FASD in your class, or have been informed that one may be joining your class soon, we hope your concerns are addressed here. No one expects you to do it all alone. Consider the following process in preparing for, and working with, your pupil.



Step 1: Collect Information

Ask the question: What are the child's learning strengths and needs?

Check the child's history

The child's record may include vital information indicating previously identified strengths and needs of the child. Sources of information could include:

- report cards from previous years.
- summaries of assessments.
- reports.
- family.
- a recent Personal Learning Plan (PLP).
- a recent Individual Education Plan (IEP).

Involve parents

The parents or carers of a school-age child with FASD have valuable information about the strengths and needs of their child. They are an integral part of the school team and essential to the planning of the PLP. Listening to the parents is an important first step in establishing a relationship.

Questions to ask

The following are questions you may want to ask parents, previous years teachers, or other school staff familiar with the pupil. These questions may assist you in planning strategies to meet his/her needs:

- What part of the day appears to be most productive for this child? Least productive?
- What skills and interests are strengths for this child?
- Which class activities does this child enjoy the most? Can these activities be alternated with those he/she finds more difficult?
- To what extent is this child able to follow classroom routines independently? How can he/she be assisted to develop more independence in this area?
- To what extent is this child able to work towards the learning outcomes curriculum? In which areas can the instruction and assignments be adapted to support the child's learning?
- How does this child interact with their peers in the classroom?
- What kinds of events or activities seem to cause the most anxiety for this child?
- How can the child be helped to cope with these situations?
- What are the child's triggers? What helps the child to calm down?
- Are transitions hard for the child?
- Is the child sensitive to sensory issues?

What Educators need to know

Step 2: Make a plan and carry it out

Ask the question: What does the child need to achieve success in the classroom?

Consult with professional peers

Educators can consult with colleagues when planning classroom interventions for children and young people with FASD.

Try something

Prioritise the child's needs from most to least important and select activities that will address the most important needs first. Record the supports to be provided.



Step 3: Evaluate the plan

Ask the question: Is the child achieving success in the classroom? If the plan is working, ask:

- How do the parents and child feel about the plan?
- Will the plan continue to be effective on its own?
- Can these supports be paired with others to lengthen the period of effectiveness?
- How often will the plan's effectiveness be evaluated?

If the plan is not successful:

- What part of the plan is working and why?
- Do you have other ideas you would like to try?
- Should the child be referred for additional assessment?



Step 4: Make a referral

If the child continues to struggle in the classroom after adjustments have been made, the teacher, in consultation with the parents, may decide to refer the child to education psychology to initiate a formal Individualised Educational Programme (IEP).

Step 5: Develop an Individualised Educational Programme (IEP)

After the referral process the school team including the parents may begin a formal IEP process based on the assessments results and other new information provided by team members. The appropriate programming will be developed to meet the individual needs of the child based on supports and services available.

Supports and services

All children are unique, and as learners have individual areas of strength and weakness, as well as individual interests and preferences.

When a teacher is informed that a child diagnosed with FASD will be in his/her class, they should begin by gathering information to develop a child profile. A child profile is a summary of what is known about a child, including current and historical information. The child profile should clearly outline the child's strengths and difficulties and will be used to identify priority learning needs that will guide the team in determining appropriate strategies. Again, children and young people with FASD will be similar in some ways, because they share characteristic features, and quite different in other ways.

Useful resources and websites

Although you will have many resources within your establishment which can be utilised, you may find those listed below useful:

Communication:

www.talkingpoint.org

www.ican.org.uk

www.afasic.org.uk

www.hanen.org

www.twinkl.co.uk

(good for visual timetable resources)

Memory:

Findel Education: Working With Memory Skills

level 1-4: Designed to develop visual memory skills and improve working memory.

Memory Skills Board Games: Practise linking techniques for memorising lists.

Visual Memory Skills: The book is divided into handy sections, each of which is designed to improve a different aspect of visual memory.

Auditory Memory Skills: Auditory Memory Skills enables children to improve their auditory recall ability in a focused, innovative and enjoyable way.

Cogmed: An intervention for improving working memory. This is an evidence based online programme which helps develop different aspects of working memory. For further information visit:

www.cogmed.com

Some useful websites offering ideas, interactive games and downloadable resources:

www.senteacher.org/searchsenteacher/memory+skills/

www.communication4all.co.uk

www.tes.com/resources/search/?q=memory%20skills

<http://www.teachhub.com/classroom-games-winter-brain-breaks>

www.twinkl.co.uk

www.teachhub.com/classroom-games-improve-student-memory

www.speechlanguage-resources.com/working-memory-activities.html

www.pinterest.co.uk/explore/working-memory/

www.readingrockets.org/article/10-strategies-enhance-students-memory

www.junglememory.com/

www.callscotland.org.uk/blog/apps-for-memory-and-organisation/

Other useful websites:

FASD Hub Scotland:

<https://www.adoptionuk.org/fasd-hub-scotland>

Dyslexia: For further information on dyslexia and supporting children who display dyslexic type difficulties, please refer to the following website:

www.dyslexiascotland.org.uk

Getting It Right For Every Child (GIRFEC):

<http://girfec-ayrshire.co.uk/>

<http://girfec-ayrshire.co.uk/training/>

www.gov.scot/policies/girfec/

Education Scotland:

www.education.gov.scot

