

# Fetal Alcohol Spectrum Disorders (FASD)

Compiled by Laura Cathery, May 2017

## Definition

“Fetal alcohol spectrum disorders (FASD) is a non- diagnostic umbrella term that is used to cover the full range of possible birth defects and developmental issues that can be caused by prenatal exposure to alcohol.” (McLean, McDougall and Russell, 2016)

“Fetal Alcohol Spectrum Disorders (FASDs) are sometimes referred to as “hidden disabilities” because diagnosis often does not occur until a school-aged child is referred for either a learning disability or attention deficit disorder.” (National Organisation on Fetal Alcohol Syndrome)

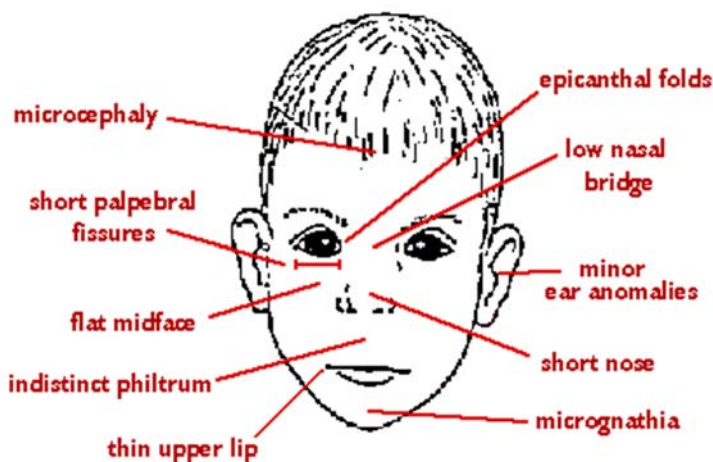
FASD cannot be reversed. Each person is affected by FASD in a unique way, physically, developmentally and/or their neurobehavior. (National Organisation on Fetal Alcohol Syndrome)

Children affected by FASD process the world in a different way to other children. (Australian Institute of Family Studies, 2016)

“A FASD diagnosis in Australia requires evidence of prenatal alcohol exposure and impairment in 3 or more domains of the central nervous system or function.” (Bower, Elliott, 2016).

The physical features of FASD are divided into two sub categories:

1. FASD with three sentinel facial features (see diagram below)(Bower, Elliott, 2016)
2. FASD with less than three sentinel facial features (Bower, Elliott, 2016)



(<http://www.acbr.com/fas/fasmain.htm>)

## **Symptoms**

The symptoms of FASD are divided into two main categories

### **Primary symptoms**

These are caused by the impact of alcohol on the developing brain of the foetus while in utero. Deficits in all or some of the following neurodevelopmental domains: (Bower, Elliott, 2016)

Brain structure/Neurology, Motor Skills, Cognition, Language, Memory  
Attention, Executive Function, Adaptive Behavior, Social Communication, achievement.  
(Bower, Elliott, 2016)

Deficits in these neurodevelopmental domains can result in difficulties in all or some of the following:

- Organization and planning, carrying out problem solving, memory, learning from past experiences, generalizing from one task or setting to another. (McLean S, McDougall S, Russell V, 2014)
- Language skills, speech, receptive and expressive language (McLean S, McDougall S, Russell V, 2014)
- Problems with everyday language, words with double meanings/metaphors.
- Social skills – turn taking, social impulsivity, applying social rules from one situation to another, seeing similarities and differences between situations, predicting the consequences of their actions. (McLean S, McDougall S, Russell V, 2014)
- Slow to grasp new tasks, organizing themselves, thinking in abstract terms. (McLean S, McDougall S, Russell V, 2014)
- Attention (disrupted) and activity levels, poor time management. (McLean S, McDougall S, Russell V, 2014)
- Mainstream classroom environments where primary interaction is verbal or written (McLean S, McDougall S, Russell V, 2014)

### **Secondary symptoms**

These can develop over time due to the mismatch of the child's needs and the environment they are living and learning in. Symptoms can include

- problems with peer relationships
- fractured education
- fractured placement options and experiences
- increased likelihood of issues with youth justice system

(McLean S, McDougall S, Russell V, 2014)

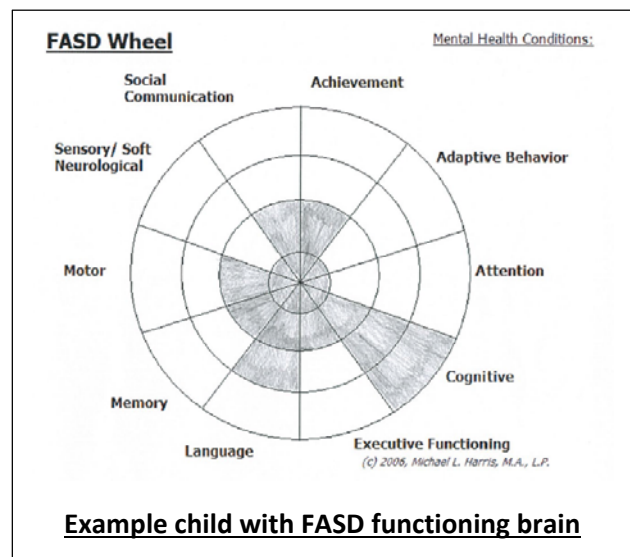
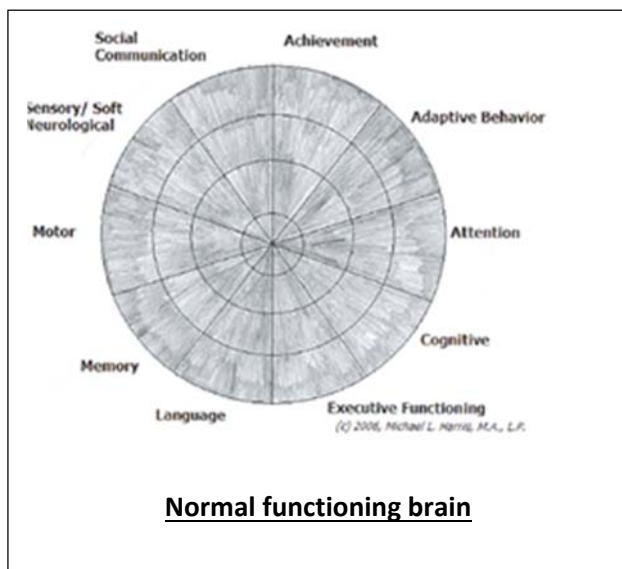
## Diagnosis

A formal diagnosis of FASD requires a medical assessment and appropriate assessments and consultation by a multidisciplinary team using the Australian FASD Diagnostic Instrument 2016. Another resource on diagnosis is the Australian Guide to Diagnosis of FASD 2016.

However, a FASD checklist and information sheet on the lifespan characteristics of FASD is available on the National Organisation for Fetal Alcohol Spectrum Disorders Australia website for you to use as a starting point. [file:///C:/Users/client/Downloads/FASD+-+a+checklist%20\(1\).pdf](file:///C:/Users/client/Downloads/FASD+-+a+checklist%20(1).pdf)

US Psychologist Michael Harris developed a 'FASD wheel' identifying 10 brain domains a person needs to function normally. He used the formal assessments by a multidisciplinary team, including a student's cognitive capacity to develop a FASD wheel specific for individual students.

Below are diagrams demonstrating the difference between how a normal brain functions and an example child with FASD and their capacity in the 10 brain domains. The darker coloured areas are the parts of the brain that are functioning normally. Using the results from your student's formal assessments by a multidisciplinary team and this wheel you may be able identify which of the 10 brain domains they require intervention strategies for.



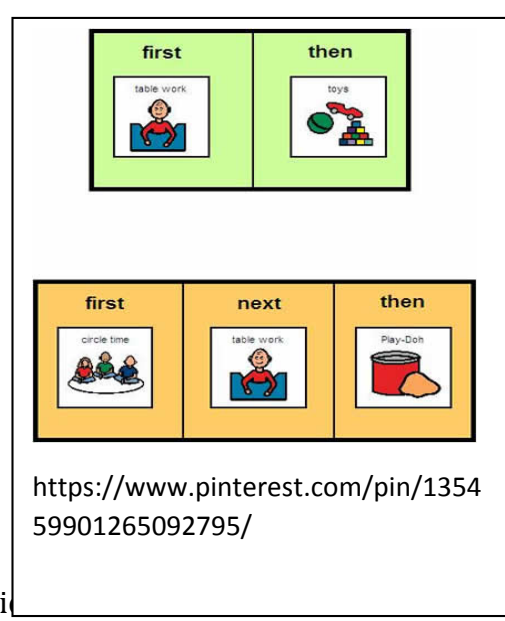
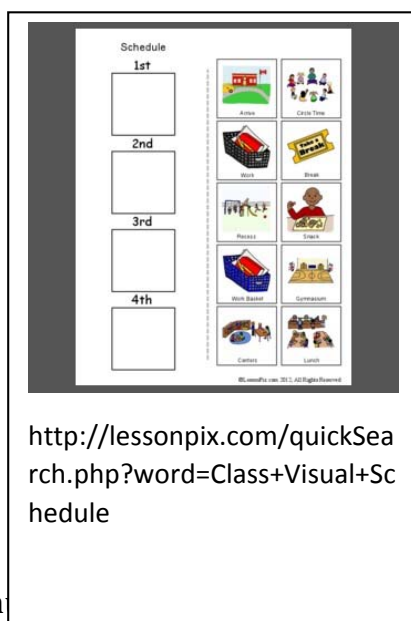
## Intervention Strategies

Here are some strategies that may help a student with FASD to navigate in a classroom: This list is not exhaustive but a starting point for teachers of students with FASD. Intervention strategies for one brain domain may also work for another.

### Executive Functioning, Adaptive Behaviour, Attention, Memory

(The Child and Youth Working Group, 2015)

- Use of visual schedules both class and individual
- Use 'First, Then, Then' cards



- Limiting the number of instructions given at one time
- Use visual or written labels in the classroom
- Use verbal/visual cues to assist with understanding and routines
- Reduce visual and auditory distractions in the classroom (National Organisation On Fetal Alcohol Syndrome, 2009)
- Provide opportunities for guided choice making
- Embed reflection of tasks and behaviour into learning activities
- Move to Learn Program <http://www.movetolearn.com.au/content/move-learn-movement-program>

## **Communication (Language) and Social Skills**

- Complete an informal plan for individual students, highlighting their difficulties and strengths in receptive and expressive communication.
- Work with the multidisciplinary team who assessed the student to implement the appropriate Alternative and Augmentative Communication (AAC) method (if identified as appropriate)
- Get the students full attention before talking to them. Use their name. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Attempt to use consistent language across all environments and staff (National Organisation On Fetal Alcohol Syndrome, 2009)
- Always recognise a student's attempt at communication (National Organisation On Fetal Alcohol Syndrome, 2009)
- Model the appropriate intonation/articulation rather than correct the student. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Use of music activities to help student expand their vocabulary. (National Organisation On Fetal Alcohol Syndrome, 2009)
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## **Behaviour**

- Consistent and clear instructions and expectations (presented both verbally and visually)
- Set one or two clear consequences for misbehaviour and stick to it. (The Child and Youth Working Group, 2015)
- Explicitly teach how to successfully start and stop an activity. Use cues and rewards to achieve this. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Use visual schedules and 'First and Then' cards to assist with transitioning from one environment/task to another
- Remind them daily of the rules without singling them out. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Use positive re-enforcement - assess the student's desired activities and use 'working for' cards to assist with task persistence



## **Academic Achievement**

- Frame questions to provide guidance towards the required (The Child and Youth Working Group, 2015)
- Use concrete examples (The Child and Youth Working Group, 2015)
- Use play as part of the learning program. (The Child and Youth Working Group, 2015)
- Explicitly teach/demonstrate the routine for learning activities. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Plan the steps of the learning activity with a staff member before beginning the task.
- Chunk or cut learning activities into more manageable sections, include breaks between sections (National Organisation On Fetal Alcohol Syndrome, 2009)
- Use visual cues for learning activity components. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Colour code subject books and materials (National Organisation On Fetal Alcohol Syndrome, 2009)
- Use timers to assist with pacing of activities and to reduce anxiety for the student. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Multisensory teaching, which is the integration of visual, auditory and kinaesthetic-tactile senses. (National Organisation On Fetal Alcohol Syndrome, 2009)
- Determine if your student is a visual, auditory or kinaesthetic learner
- Teach students to visualise what they are learning (National Organisation On Fetal Alcohol Syndrome, 2009)
- Visual Scaffolds to support writing tasks, E.G Venn diagrams

## **Catering for the student's sensory needs**

- Assess the student's sensory needs and cater for these as is practicable in the classroom.
  - Resources available include the 'Happiness Audit' from Sensory Learning Kit NZ (this can be adjusted to be both a happiness and unhappiness audit) <http://www.sensorylearningnz.com/engage>
- Practical strategies to cater for different sensory needs can be found in *FASD Strategies, Not Solutions*.  
<http://www.humanservices.alberta.ca/documents/FAS0040-strategies-not-solutions.pdf>
- Sensory Programs such as "The Traffic Jam in my Brain" by Occupational Therapist Genevieve Jereb. <http://sensorytools.net/PDF/TrafficJam-Online.pdf>
- Alert Program <https://alcoholpregnancy.telethonkids.org.au/our-research/research-projects/current-research-projects/alert-program/>

## **Resources available at the Special Education Resource Unit (SERU)**

### **Motor Skills (Gross and Fine)**

Please contact SERU for a full list of teaching resources and student developmental learning materials available on this topic.

<b><u>Barcode</u></b>	<b><u>Title</u></b>	<b><u>Author</u></b>
18018701	The Out-Of-Sync Child Has Fun	Carol S Kranowitz
18025001	Learning in Motion 101+ Activities for the Classroom (2 <sup>nd</sup> )	Patricia Angermeier
26017101	Early Years Movement Skills	David Sudgen, Mary Chambers.
43005402	Gross and Fine Motor Skills	
43005403	Gross and Fine Motor Skills: Level 2	J Crawford, H Short
43009401	Animal Fun movement Program	Curtin University
66079601	Motor Skills and Movement Station	K Burridge, M Landy

### **Sensory Integration**

Please contact SERU for a full list of teaching resources and student developmental learning materials available on this topic.

<b><u>Barcode</u></b>	<b><u>Title</u></b>	<b><u>Author</u></b>
25016701	Brain Breaks: Improving Learning	A Smith
18019302	Learn to Move, Move to Learn (DVD)	Jenny Clark Brack
19037401	A Buffet of Sensory Interventions	Susan Culp
18016601	An Introduction to Sensory	
69032001	Jumpin' Jellybeans (CD)	Genevieve Jereb
18008201	Understanding Sensory Integration	
66122401	Alert Program	S Schellenberger

## FASD

<u>Barcode</u>	<u>Title</u>	<u>Author</u>
0901800101	Fetal Alcohol Syndrome: A Guide For Families and Communities	Streissguth, A
0901860101	Fetal Alcohol Syndrome and Effects: Strategies for Professionals	Malbin, D
0901870101	Fetal Alcohol Syndrome Information Pack	
0901880101	The Challenge of Fetal Alcohol Syndrome: Overcoming Secondary Disabilities	
0901890101	The Broken Cord	
0901950101	Damaged Angels: A Mother Discovers the Terrible Cost of Alcohol in Pregnancy.	
0902060102	Educating Children and Young People with Fetal Alcohol Spectrum Disorders	Carpenter, B; Blackburn C; Et Al
0902070101	Fetal Alcohol Spectrum Disorders Interdisciplinary Perspectives	Carpenter B; Et Al
0902090101	Teaching Students with Fetal Alcohol Spectrum Disorder	Alberta Learning

### Multisensory Teaching

Please contact SERU for a full list of teaching resources and student developmental learning materials available on this topic.

<u>Barcode</u>	<u>Title</u>	<u>Author</u>
1801000301	Multisensory Teaching of Basic Language Skills, 3 <sup>rd</sup> Edition	Judith Birsh
1801000201	Multisensory Teaching of Basic Language Skills Activity Book	Judith Birsh
36021801	101 Reading Activities: A Multisensory Approach	C McSweeney, A Hanrahan
18011201	The Hickey Multisensory Language Course	
36028101	Toe by Toe	Harry Cowling, Keda Cowling
63328801	Active Alphabet	Smart Kids
18016501	101 Activities for Kids in Tight Spaces	Carol Kranavitz



## **Internet Resources on FASD**

- National Organisation for Fetal Alcohol Spectrum Disorders Australia  
<http://www.nofasd.org.au/>  
<http://www.nofasd.org.au/resources/multi-media-resources-and-books>  
<http://www.nofasd.org.au/resources/useful-links>  
<http://www.nofasd.org.au/resources/what-is-fasd-1>
- Telethon Kids Institute Australia  
<https://alcoholpregnancy.telethonkids.org.au/>
- Australian Guide to the Diagnosis of FASD  
<https://alcoholpregnancy.telethonkids.org.au/alcohol-pregnancy-and-breastfeeding/diagnosing-fasd/australian-guide-to-the-diagnosis-of-fasd/>  
[https://alcoholpregnancy.telethonkids.org.au/contentassets/6bfc4e8cd1c9488b998d50ea4bff9180/australian-guide-to-diagnosis-of-fasd\\_all-appendices.pdf](https://alcoholpregnancy.telethonkids.org.au/contentassets/6bfc4e8cd1c9488b998d50ea4bff9180/australian-guide-to-diagnosis-of-fasd_all-appendices.pdf)
- Alert Program (Telethon Kids Institute)  
<https://alcoholpregnancy.telethonkids.org.au/our-research/research-projects/current-research-projects/alert-program/>
- Russell Family Fetal Alcohol Disorders Association  
<http://www.rffada.org/>
- Supporting Positive Behaviour in Alberta Schools  
<https://education.alberta.ca/diverse-learning-needs/social-participation/everyone/supporting-positive-behaviour-resources/>
- What Educators Need to Know about FASD  
[https://www.gov.mb.ca/healthychild/fasd/fasdeducators\\_en.pdf](https://www.gov.mb.ca/healthychild/fasd/fasdeducators_en.pdf)
- Engaging All Learners, Supporting Students with Fetal Alcohol Spectrum Disorders  
<http://www.engagingalllearners.ca/il/supporting-students-with-fasd/#0>
- The Hidden Disability, Fetal Alcohol Spectrum Disorders  
[https://www.gov.mb.ca/healthychild/fasd/fasd\\_hiddendisability.pdf](https://www.gov.mb.ca/healthychild/fasd/fasd_hiddendisability.pdf)

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Harris Michael (2006), *The FASD Wheel, A New Model for Achieving Consistent and Creative Interventions That Work*, National Behavioral Health Conference, USA. Retrieved from: [https://mofas.org/wp-content/uploads/2011/03/IHS - FASD Wheel Workshop 08-09.pdf](https://mofas.org/wp-content/uploads/2011/03/IHS_-_FASD_Wheel_Workshop_08-09.pdf)

Lang J (2006), *The Brain Domains: A Proposal for Functional Central Nervous System Parameters for Fetal Alcohol Spectrum Disorder Diagnosis and Follow Up*, Journal of FAS Institute International, 4, pp1-11

Mclean, S., & McDougall, S. Russell V, (2014). *Supporting Children Living with Fetal Alcohol Spectrum Disorders: Practice Principles*, Australian Institute of Family Studies. Retrieved from: <https://aifs.gov.au/cfca/publications/supporting-children-living-fetal-alcohol-spectrum-disorders-practice-princ>

Kimberly Success Zone (2014), *Understanding and Addressing the Needs of Children and Young People Living With Fetal Alcohol Spectrum Disorders (FASD), A Resource for Teachers*, National Curriculum Services, VIC. Retrieved from: [http://kimberleyfasdresource.com.au/pdf/FASD\\_ResourceForTeachers.pdf](http://kimberleyfasdresource.com.au/pdf/FASD_ResourceForTeachers.pdf)

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National Organization on Fetal Alcohol Syndrome South Dakota (NOFAS-SD), Fetal Alcohol Spectrum Disorders Institute, Center for Disabilities (2009), *Fetal Alcohol Spectrum Disorders Education Strategies*, South Dakota, USA.

Ritchie B (1991), *Fetal Alcohol Spectrum Disorders*, Ontario, Canada, Faslink. Retrieved from: <http://www.acbr.com/fas/fasmain.htm>

Russell Family Fetal Alcohol Disorder Association (2014), *Essential Tips*. Retrieved from: <https://www2.fasdoutreach.ca/elearning/essential-tips>

Telethon Institute for Child Health Research. (2009). *Making FASD History in the Fitzroy Valley*. Perth: Telethon Institute for Child Health Research. Retrieved from: <https://www.telethonkids.org.au/news--events/news-and-events-nav/2016/may/making-fasd-history-in-the-fitzroy-valley/>

Telethon Institute for Child Health Research. (2009). *Alcohol and pregnancy and fetal alcohol spectrum disorder: a resource for health professionals*. Perth: Telethon Institute for Child Health Research

The Child and Youth Working Group (2007), *FASD Strategies Not Solutions*, Alberta, Canada. Retrieved from: <http://www.humanservices.alberta.ca/documents/FAS0040-strategies-not-solutions.pdf>

US Office of Special Education Programs, *Intervention IDEAS for Infants, Toddlers, Children and Youth Impacted by Fetal Alcohol Spectrum Disorders (FASDs)*, USA. Retrieved from: <https://www.osepideasthatwork.org/sites/default/files/IDEAsIssBrief-FASDs-508.pdf>