

# Successfully *including* Children with Down Syndrome in a preschool setting



# Auckland Down Syndrome Association



[www.adrsa.org.nz](http://www.adrsa.org.nz)

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1866 John Langdon Down

1959 Discovery of the chromosomal link





How do you see  
people with  
Down syndrome?

Part of a family.






Part of our community







Difference  
Have  
delayed  
speech...



Similarity  
But will try to  
speak and want  
to communicate.



Find it hard to  
join in with  
games



But need friends, self  
esteem and a  
purpose in life.





*They have the same  
emotional needs as  
everyone else.*



Own personality

-placid or  
extravert

Family traits

Down  
syndrome





Opportunities to learn,  
create, contribute

EQUIP

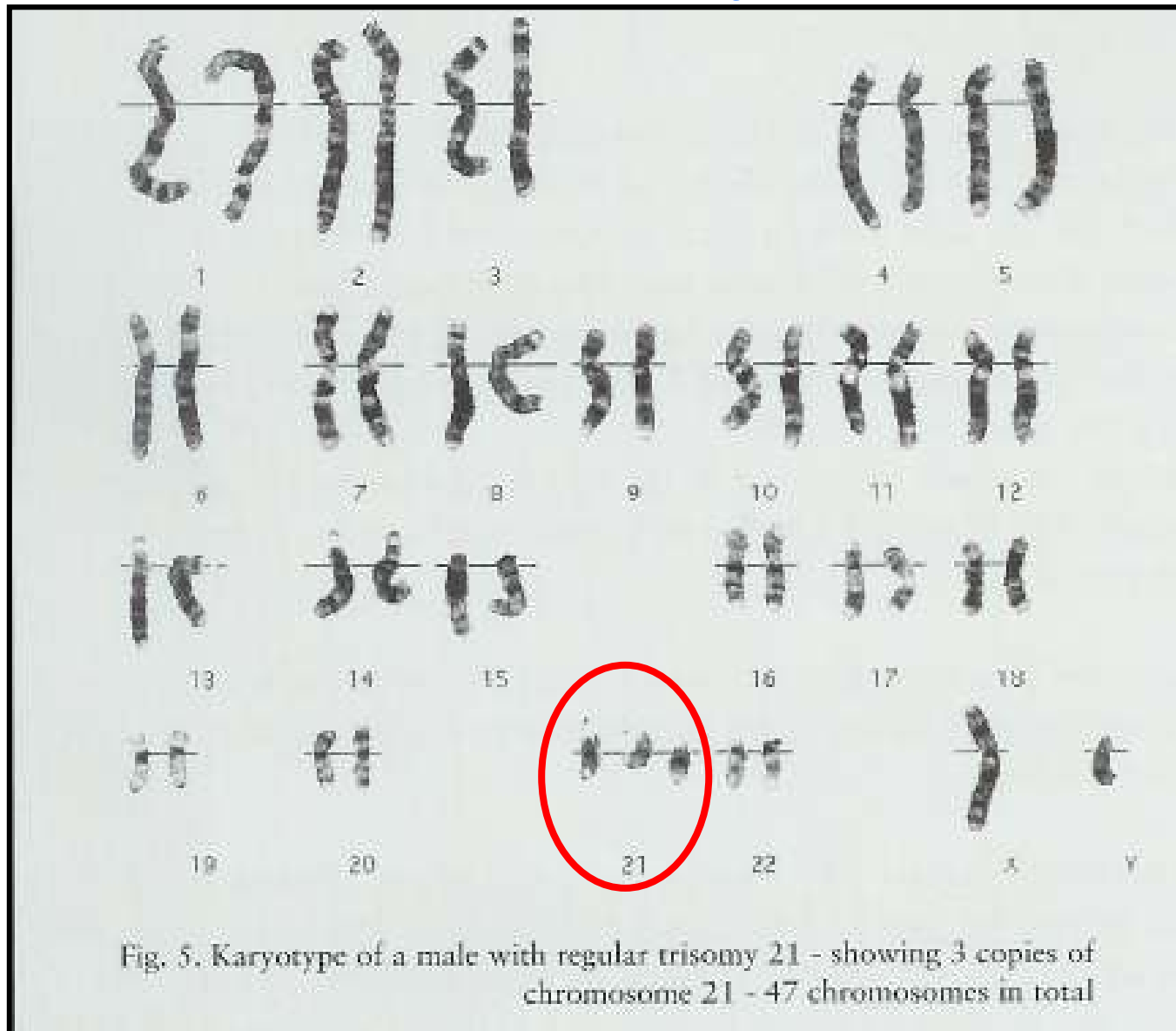
Parents, family, community,  
preschool, preschool teachers,  
ESW's, clubs, music, sports

Are children first



with Down  
syndrome

# What is Down syndrome?





# The impact of that extra chromosome!

- Hypotonia



# Hypotonia

- Floppy
- Strong
- Not walking
- All muscles
- Frustration
- Parent exhaustion
- Skills to learn- like 8+ months child



# The impact of that extra chromosome!

- Hearing
- Vision
- Heart & digestive tract defect
- Motor skills



# **The impact of that extra chromosome!**

- Delayed cognitive development
- Learning disability
- Sensitivities



# Sensitivities- fearful

- Sounds
- Touch- textures
- Visual overload
- Over busyness
- Emotions
- Movement
- Crowds

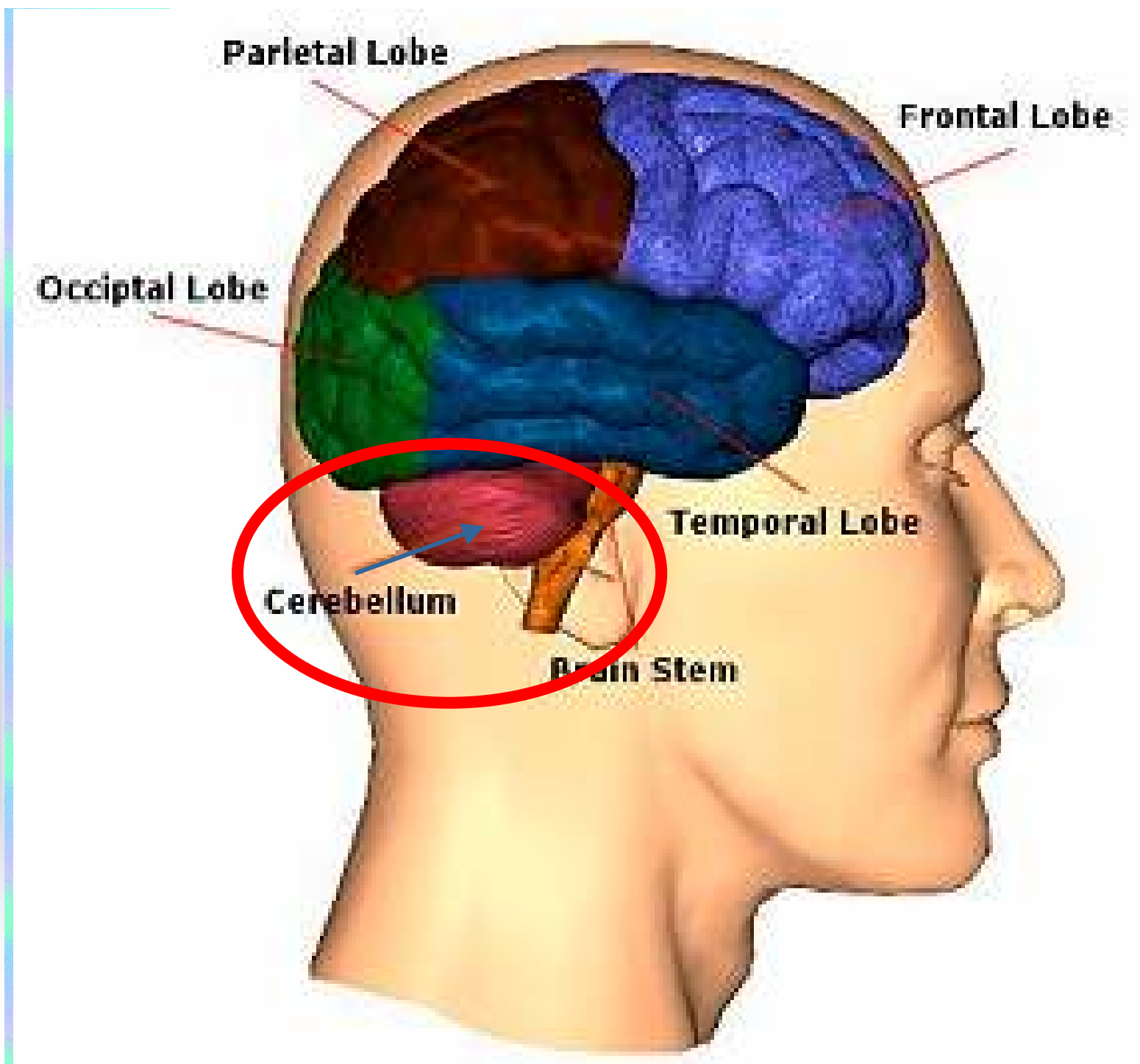


- Routines, settled room
- Look through window
- Wear footwear, de-sensitise
- Ear muffs
- Self-control, predictable
- Avoid ride-on machinery



# **The impact of that extra chromosome!**

- Auditory processing difficulties
- Chance of another disability e.g.autism



**Parietal Lobe**

**Frontal Lobe**

**Occipital Lobe**

**Temporal Lobe**

**Cerebellum**

**Brain Stem**

A vertical decorative bar on the left side of the slide, featuring a colorful, abstract pattern of green, blue, and purple. A small, multi-colored triangle (pink, purple, blue) is positioned at the top left of the bar.

## References:

<http://www.mona.uwi.edu/fpas/courses/physiology/neurophysiology/Cerebellum.htm>

Dyslexia: the miracle cure, Wynford Dore

<http://www.multiple-sclerosis.org/cerebellum.html>

<http://www.newhorizons.org/neuro/leiner.htm>



# Learning disabilities

Dyscalculia

Delay

Bi-polar

Premature

Dyspraxia

Dyslexia

Dysgraphia

ADHD

ASD

Need to 'see' and 'do' to learn with  
a structured, multi-sensory  
programme.



# The Learning Profile





# A varied cognitive development!



**It all depends on the genes!**



# Strengths



- Visual learners
- Kinaesthetic learners
- Relationship-oriented
- Eager to please
- Willing to communicate



Learning may be slower

Respond best with a structured approach

[www.standards.dfes.gov.uk/](http://www.standards.dfes.gov.uk/)


Learningmentors/downloads

Support pack

ADSA website



1. Short term & working memory  
-a processing issue



## Auditory sequential working memory

Impact on all

- relationships
- communication
- thinking- problem solving, planning, reasoning, remembering
- activities



## Visual sequential working memory

- Good
- Visual aids
- Visual overload
- Makaton/Australasian signing



## Use visual supports for:

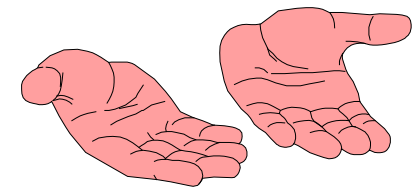
- Thinking and learning
- Spoken words, instructions
- Planning
- Managing their environment
- Behaviour and learning
- Needing help
- Eating and toileting

***'Access their strengths'***



## 2. Speech & Language delays

- Allow time for response and use of sign, cards, body language
- Face the person
- Simple, but not baby talk






## Conversation skills

- Greeting, farewelling
- Listening and responding
- Conversation starters
- Good manners



## Friendship skills

- Joining a group
- Asking for help
- Play within the rules
- Being friendly



### 3. Fine motor skills, hand/eye coordination, visual perception delays

#### Managing skills

Scissors, Painting, ...

Clothing...

Toys, outside equipment

- Demonstrate
- Assist them after trying
- Occupational therapist



## 4. Progression of development is slower

- Appropriate for their age group
- Begin school in their fifth year
- Already established class



## Activities to improve attention and increase **processing** abilities

- Sitting still
- Choosing activities
- Following instructions
- Waiting for a turn
- Reading books with others
- Playing with others



Working as a partnership-

Minimal withdrawal

Independence

Co-operative learning


Teacher to work directly with student every day

Mother knows a lot!



## Are ESW's qualified teachers?

- Communication
- Time
- Early childhood teachers do not know about special needs



The ECE teacher will  
identify what the child needs to learn,  
you will help them access that learning.

Parents and others will assist you in  
how they learn

You may learn more than the ECE staff

Share your learning

17 hours assistance



The wonder of learning,  
exploring the environment  
along with others  
for a life time!

Preparation for school and  
community living



## Learning to learn

Knowledge of:

- how they learn
- teachable moment
- how long
- when they don't cooperate
- relating to others
- managing self





Spontaneous  
learning

+

Planned  
learning

Knowledge and skill

Child-centred and intervention





# Planned Learning

- Explicit, simple, sequential
- Repetition
- Review
- Fluency
- Emphasise memory learning



## Examples

- In, on, under, over
- Colours
- Using the toilet

Explicit and simple- 1 concept at a time,

In order of difficulty

Repeated for understanding,

Memory

# Language

- interaction skills
- vocabulary
- listening and saying speech sounds
- matching speech sounds to alphabet
- pre-reading skills-visual matching skills
- books
- crayoning, painting
- handwriting



# Maths

- patterns
- sorting
- sequencing
- colours, size, time, comparisons
- awareness of number
- memorising patterns of numbers
- reading numerals





## Resources

- [www.see-and-learn.org/](http://www.see-and-learn.org/)
- [ADSA.org.nz](http://ADSA.org.nz) and [Downsed.org](http://Downsed.org)
- Transition to school DVD- NZDSA
- [www.visualaidsforlearning.com](http://www.visualaidsforlearning.com)



- ‘Handwriting Without Tears’ from [www.akoranga.co.nz](http://www.akoranga.co.nz)
- ‘Numicon’ from [www.numicon.co.nz](http://www.numicon.co.nz)
- PM readers from [www.cengagelearning.com.au](http://www.cengagelearning.com.au)
- Speech language and internet support [www.elr.com.au](http://www.elr.com.au)

A vertical decorative bar on the left side of the slide, featuring a colorful, abstract pattern of green, blue, and purple. At the top of the bar is a 3D-style triangle with a blue-to-purple gradient.

## Summary:

- Working memory
- Auditory memory
- Speech and language delays
- Gross and fine motor challenges
- Delayed development
- Frustration and behaviour issues
- Visual learners
- Kinaesthetic learners
- Relationship lovers

