

## Level 1: ASD/CI

Teaching People with Cognitive Impairments  
and Autism Spectrum Disorder

# Zoom Basics

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- Introductions & Tech support
- Changing your name
- Mute on/off
- Video on/off
- Chat box
- Reactions
- Gallery view & Speaker view & Full Screen
- Questions/Taking a turn to speak



# Learning Objectives

- Understanding Cognitive Impairments and ASD
- Teaching Strategies
  - Fill your toolbox
- Assessment of Abilities
- Communication
- Behaviour/Motivation
- Kinesthetic Learning



# Cognitive Impairments



- What are some **Cognitive Impairments**?
- What are some **characteristics** of these conditions?
- How will this affect a **snowsports lesson**?

# Defining Cognitive Impairment

A group of disorders defined by diminished cognitive and adaptive development.

Individuals with **CI** may have challenges with:

- Agility
- Fatigue
- Muscle tone
- Coordination
- Communication
- Understanding/Processing



# Down Syndrome

A Genetic disorder caused by an extra chromosome, also called **Trisomy 21**.

## May include :

- Endurance challenges
- Adaptive behaviour deficits
- Poor motor co-ordination
- Low muscle-tone, loose joints
- Cardiac, respiratory, digestive, vision and hearing impairments
- Atlanto Axial instability

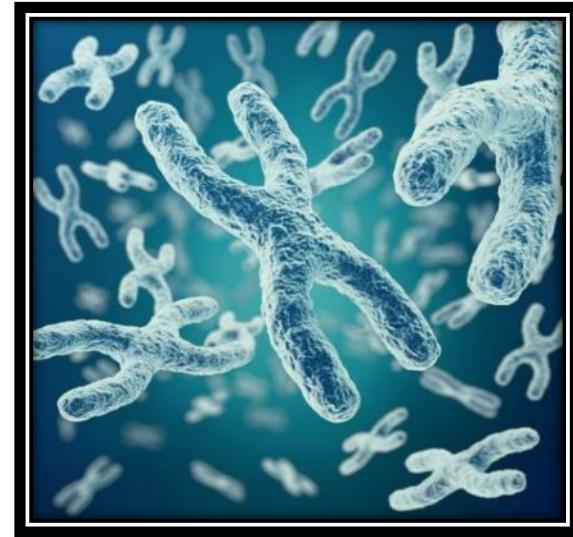


# Fragile X Syndrome (FXS)

A genetic condition that causes intellectual disability, learning and behaviour challenges, and various physical characteristics.

## May include:

- Low muscle tone
- Poor motor co-ordination
- Stereotyped movements
- Tremors
- Hyperactivity
- Memory deficits
- Social & Communication skill challenges  
(Similar to ASD)



# Learning Disabilities

Refers to a number of different lifelong disorders. Genetic or neurobiological factors alter the person's brain functioning.

## **May Include:**

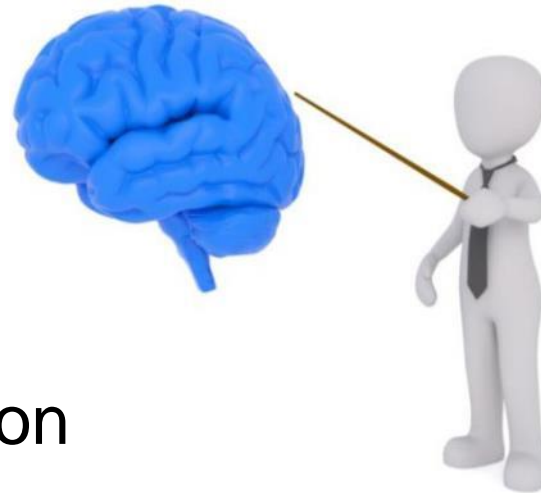
Impacts on the **Learning Process**

E.g. -Acquisition

- Organization

- Retention

- Understanding or use of verbal/non-verbal information





# Brain Injury

An **Acquired Brain Injury (ABI)** is damage to the brain occurring after birth, that is NOT degenerative or genetic, and is classified as either **TBI** or **NTBI**.



Could be **caused by** but **not restricted to**:

- Stroke
- Blast Injury
- Illness
- Brain tumors
- Violence
- Meningitis
- Car Accident
- Concussion

# Brain Injury

## Impacts of Brain Injury may include:

### Physical

- Balance, Agility, Coordination, Reaction Time, Fatigue
- Focal paralysis

### Sensory

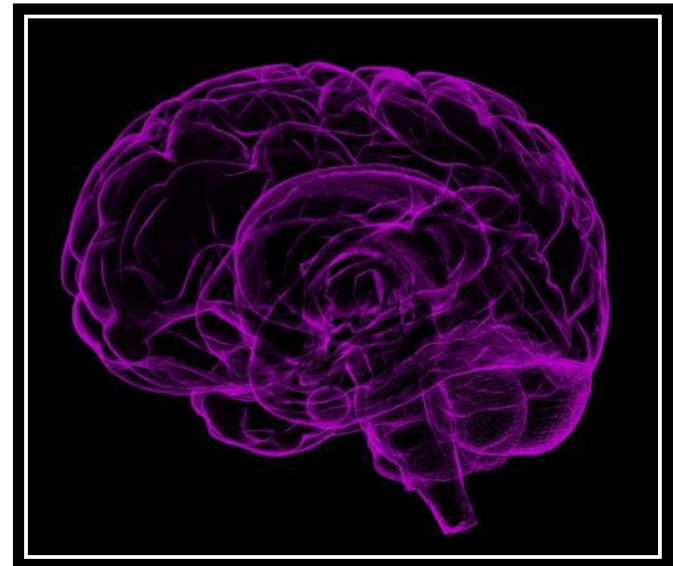
- Vision

### Cognitive

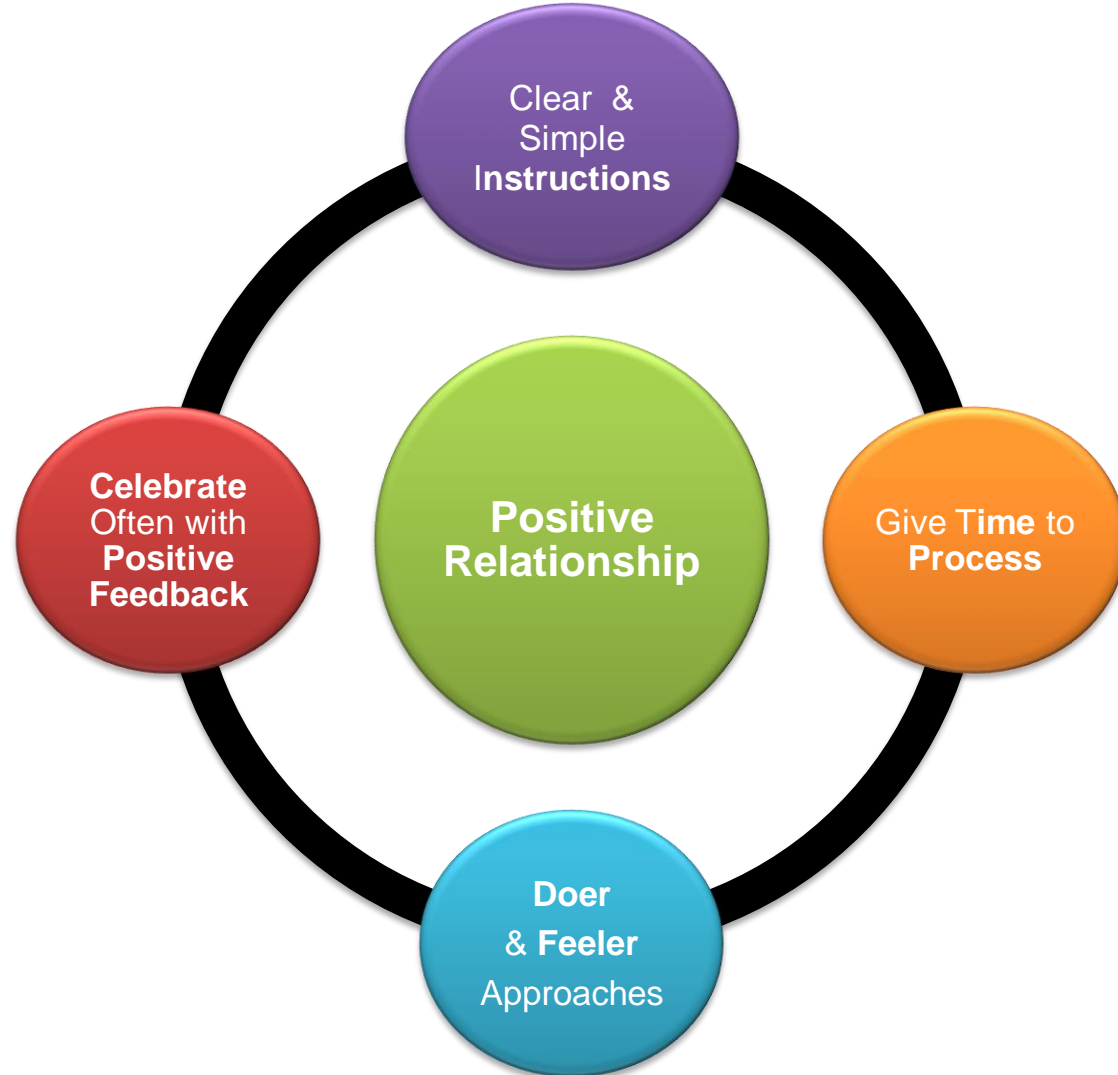
- Learning, memory

### Psychological

- Mood disorder, impulsivity



# Tips to create a **Successful** learning environment for students with CI



# Defining Autism Spectrum Disorder (ASD)

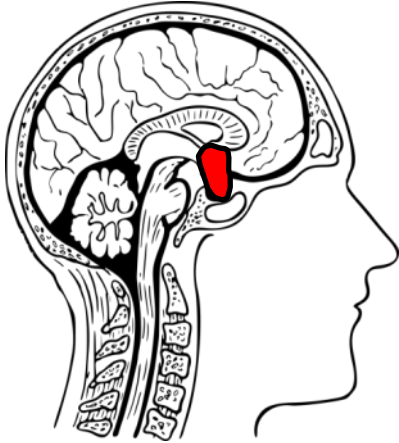


**1 in 59 children**  
**1 in 42 boys**  
**1 in 189 girls**

**“If you’ve met  
one person with  
autism, you’ve  
met one person  
with autism”**

**The term ‘spectrum’ refers to a continuum of  
severity or developmental impairment.**

# Parts of the brain affected by **ASD**



## **Amygdala**

- Emotion
- Aggressive behaviours

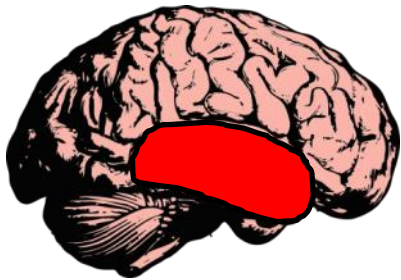
## **Prefrontal cortex**

- Attention
- Planning
- Abstract thinking
- Social behaviour



## **Temporal Lobe**

- Language
- Social perception



## **Cerebellum**

- Attention
- Motor:
  - Coordination
  - Balance
  - Speaking



# Observational Activity

- What are some of Julia's **strengths**?
- What things are **challenging** for **Julia**?
- What are some **tactics** used to **support** Julia?



Advance Slide to START VIDEO





# ASD and Sesame Street

Video: <https://www.youtube.com/watch?v=dKCdV20zLMs>



# Social Skills

## Possible Challenges:

- Little to no **Eye Contact**
- Struggle with **Perspective Taking**
- Difficulties with **Expected Social Behaviour**





# Communication

## Possible Challenges:

- **Repetitive** language
- Back and forth **conversation**
- **Non-verbal** communication



# Restricted or Repetitive Behaviours

## Possible Challenges:

- **Perseveration**
- Dependence on **routine**
- Difficulty with **transitions**



## Sensory Sensitivities

- **Hyper-reactivity** (Greater than expected reaction)
- **Hypo-reactivity** (Lesser than expected reaction)

# Frequently associated Challenges



- Sleep
- Gastrointestinal
- Eating/diet
- Motor skills
- Anxiety
- Focus and Attention

# Strengths (vary by individual)

Individuals may have strengths in these or other areas:

- Exceptional memory
- Visual and Spatial abilities
- Music
- Drawing
- Reading
- Computer skills
- Non verbal reasoning, e.g. Chess.
- Perceptual Motor skills, e.g. Baseball



If Stephen was taking a lesson. What are some questions we would like to ask Stephen to make the lesson more successful?

**VIDEO LINK:**

[Stephen Wiltshire video](#)

## Meet Stephen Wiltshire



# DSM Diagnostic Criteria: ASD

A. Persistent deficits in social communication and social interaction across contexts

B. Restricted, repetitive patterns of behaviour, interests, or activities

C. Symptoms must be present in early childhood

D. Symptoms together limit and impair everyday functioning

# Assessment of Abilities (AOT)

**Ask** Questions, **Observe**  
and do **Tests** to discover:

- Diagnosis
- Mobility
- Balance
- Strength

**Specifically for students  
with **ASD** and **CI**:**

- Find ways to **Connect** with your student
- Determine Best **Communication** strategies
- Learn about possible **Triggers**
- Discover **Motivation** and **Support** Strategies

## Key Questions for parent/care-giver

- What does your child **like**?  
(For rapport)
- Is there anything I should **avoid**?
- Is there one **support strategy** you would recommend I definitely use?





# AOT Activity

2 min exercise in pairs



**Scenario 1:** One person is the student's parent and one person is the instructor doing the introductory AOT (after already connecting with their student).

- Jack is 8, with Down Syndrome; communicates in 1-2 word sentences and uses some simple signs. Jack loves minions and has a full-time Educational Assistant at school at all times.

**Scenario 2:** One person is the student and one person is the instructor doing an introductory AOT (parent dropped and ran).

- Kazeet is 14, ASD, highly social, strong verbal language skills. They love unicorns and motorbikes. Shares an education assistant at school to help keep focus.

- **Talk Less – Do More**
- Use **Show and Say** strategies
- **Avoid Yes/No** questions
- Give time to **Process**
- **Match** their communication style
- Say it **Back** to me

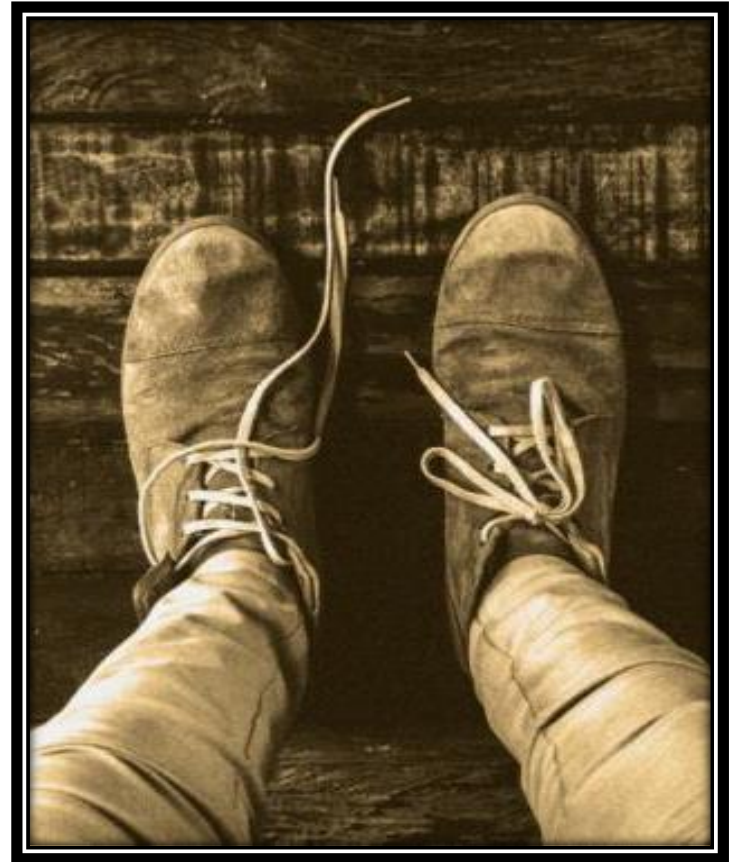


## Communication Strategies

# Communication Activity

You have **90 seconds** to  
complete the next task

Write or type how to tie your  
shoes in the fewest number of  
words possible



**I need 4 Volunteers...**



**BREAK TIME**

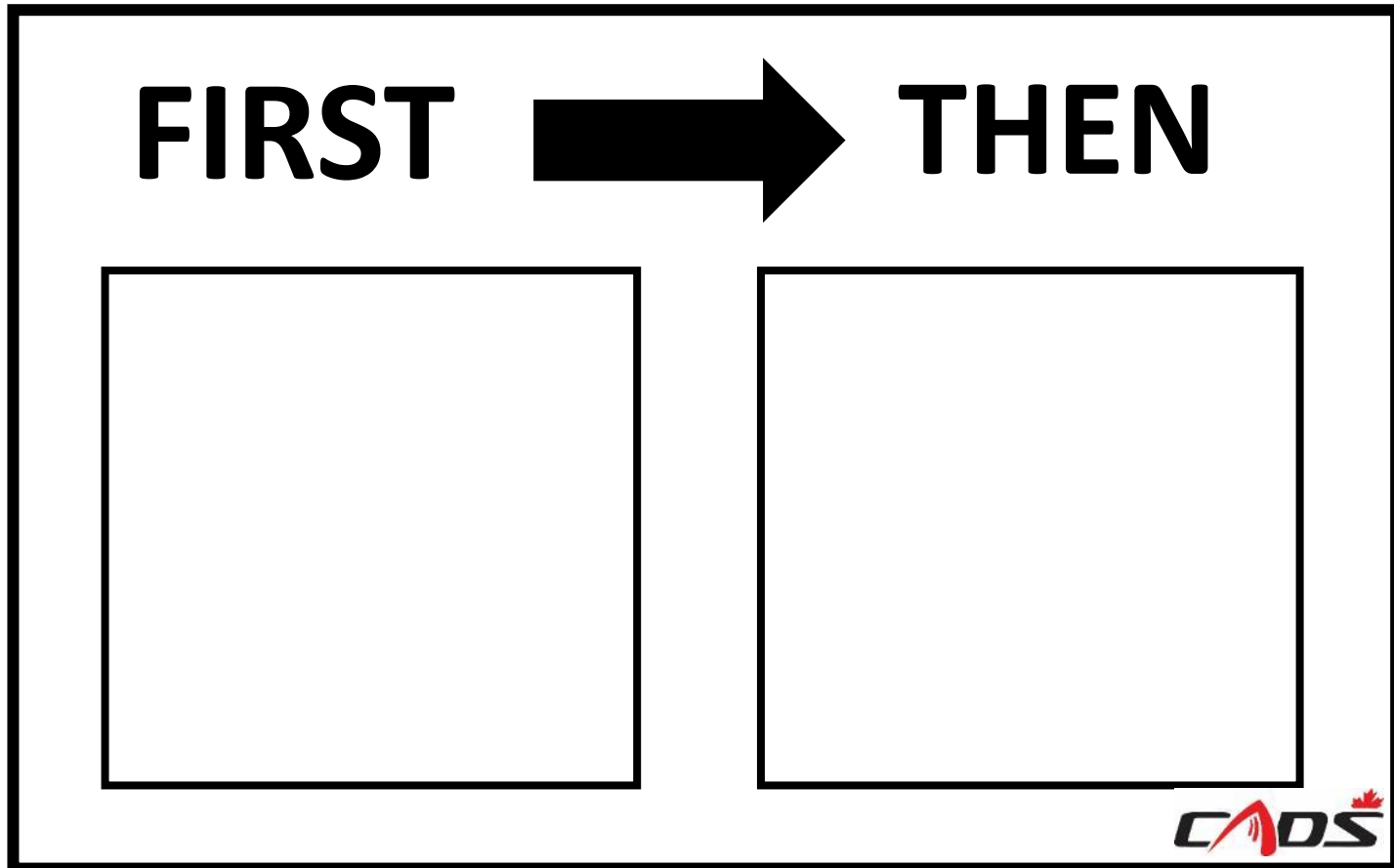
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# **Behaviour & Motivation Strategies**

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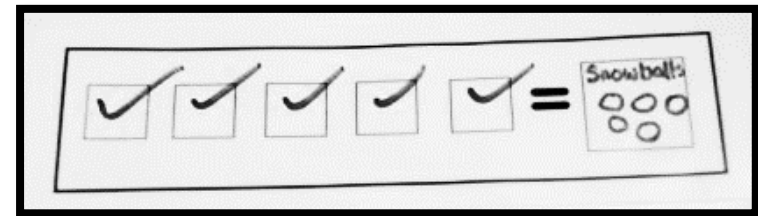
## First-Then (Motivation & Frontload)



# Behaviour & Motivation Strategies

## Token Boards / Points System

- Motivation
- Positive feedback



## Countdown Strips

- Shows how many more
- Help stretch the First/Then



# Behaviour & Motivation Strategies

## Timers

- Good for transitions between activities

## Breaks

- Recharge, refresh, have a break proactively





# Behaviour & Motivation Strategies

## Choices

Play with Snowballs



Build a Snowman



Take a Break



**Choices can be:** Verbal, Written or Pictures in a choice board









# Behaviour & Motivation Strategies

## Visual Schedule Or 'Shape of the Day' (Frontload)

### My ski day - morning

 bye	 AM make a morning ski-plan
 Get organized	 skiing
 gondola up	 In the hut
 stairs up	 gondola up
 In the hut	 lunch in the Roundhouse

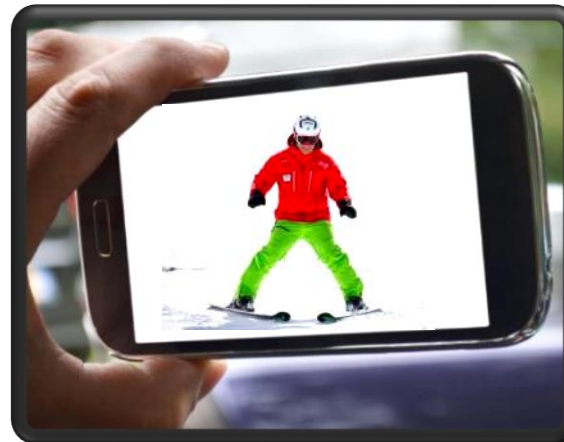
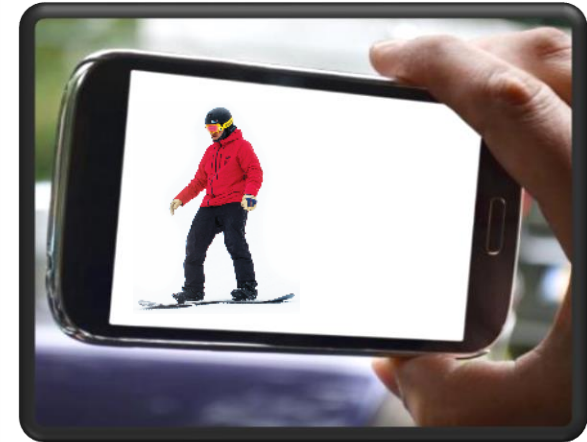
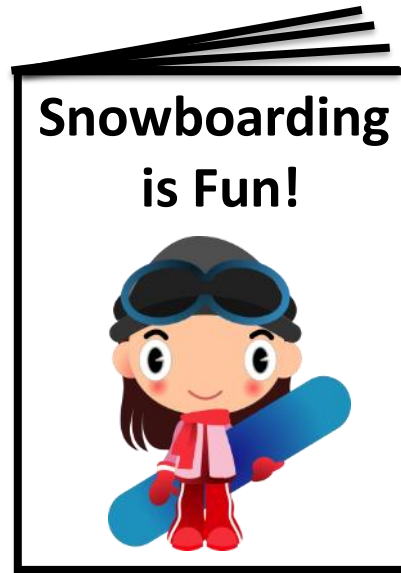
### My skiday - afternoon

 Gondola down	 In the hut
 In the hut	 pack up
 PM make an afternoon ski-plan	 Gondola down
 skiing	 bye skiinstructor

# Behaviour & Motivation Strategies

**Social Scripts**  
(Front load)

**Video-modelling**  
(Front load)



# Behaviour & Motivation Strategies

**Wait Cards**  
(visual cue)

**Stop and Go Cards**  
(visual cue)



# Behaviour & Motivation Strategies

## Review

Let's review the behaviour & motivation strategies.





## Equipment Activity

One person is the student.

3 people will volunteer to be the Instructor to assist the student to put on helmet, goggles and gloves using 3 different behaviour/motivation strategies.

**AOT:** Student doesn't really like wearing things that put pressure on their skin; uses few words to communicate; and loves Team Canada in hockey.



## **STOP & THINK:**

**Why am I using this?**

**What are the safety concerns?**

## **Kinesthetic Learning**

- Hands-on Techniques
- Tethers
- Tip Connectors
- Pole
- Hoop/ski-pal/sno-wing
- Slider and Rider-bar





# Hands-On

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# Tether

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# Tip Connectors

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# Poles

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# Hoop/ Sno-wing/ Ski-Pal







# Slider / Rider Bar

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# Adaptive Tools



Should tools be used as a **safety** device?

How are tools used to manage **fear**?

How do we test the **success** of the tool?

## Warning:

Excessive use of any adaptive tool  
may cause reliance!



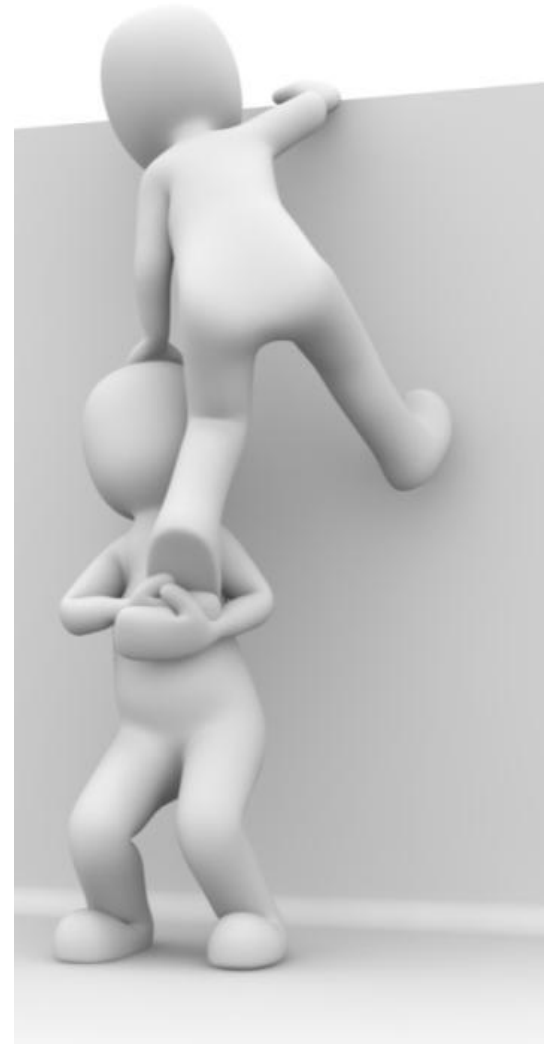


**Key Questions for parent/care-giver**

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# How to be Successful in a Lesson

- Continually use your AOT
- Build Rapport
- Remember your Toolbox
- Stay Safe
- Have Fun!
- Teach a snowsports lesson first then adapt as you need.







# Final Game...

May I please have 4 volunteers come to the front of the room!



Thank You

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