Switch Progression in the Contemporary Classroom: Beyond the Good Morning BIGmack

Implementing Ian Bean's Switch Progression Road Map

Helen Muir & Krista Forsstrom 2019

Holroyd School for Specific Purpose, Merrylands NSW

Video 1

The BIGmack switch with a “Good Morning” message is a switch resource that many of us are familiar with.

While this is a fantastic lesson in cause an effect: Student presses a switch.. The switch says “Good morning”, the teacher says good morning back.

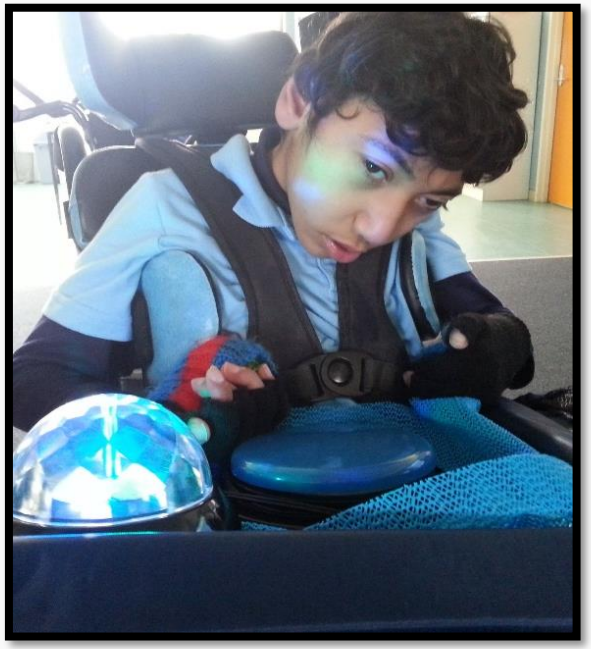
We would like to explore the opportunities that exist beyond this classroom staple.

We dedicate this presentation to our students,
who have taught us so much about what is possible.

Autonomy

Independence

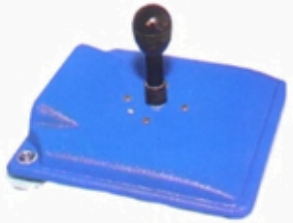
Communication



- Students with complex learning needs engaging in activities that empower them to take initiative in their learning
- Providing greater opportunity for cognitively challenging activities
- Providing greater scope for functional communication
- Lifelong potential and benefit for a person with complex needs moving through switch progression

Different Switches with Different Features

During this presentation, as a new switch is featured in a video, the name will be captioned at the bottom of the screen.



Different Mounts with Different Features

Different Toys with Different Features

Ian Bean

Teacher based in the UK who works independently to raise awareness and deliver training to support the communication and learning of people with special educational needs and disability.

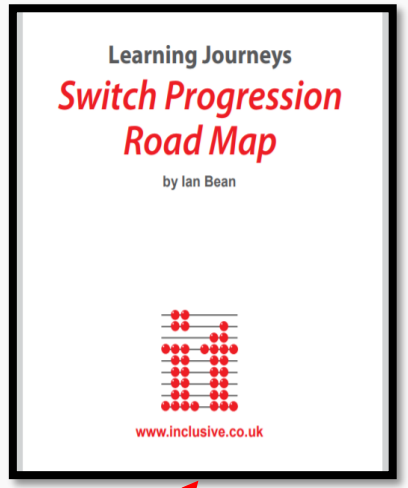
Provides teachers and students around the world with a multitude of teaching, learning and assessment resources.

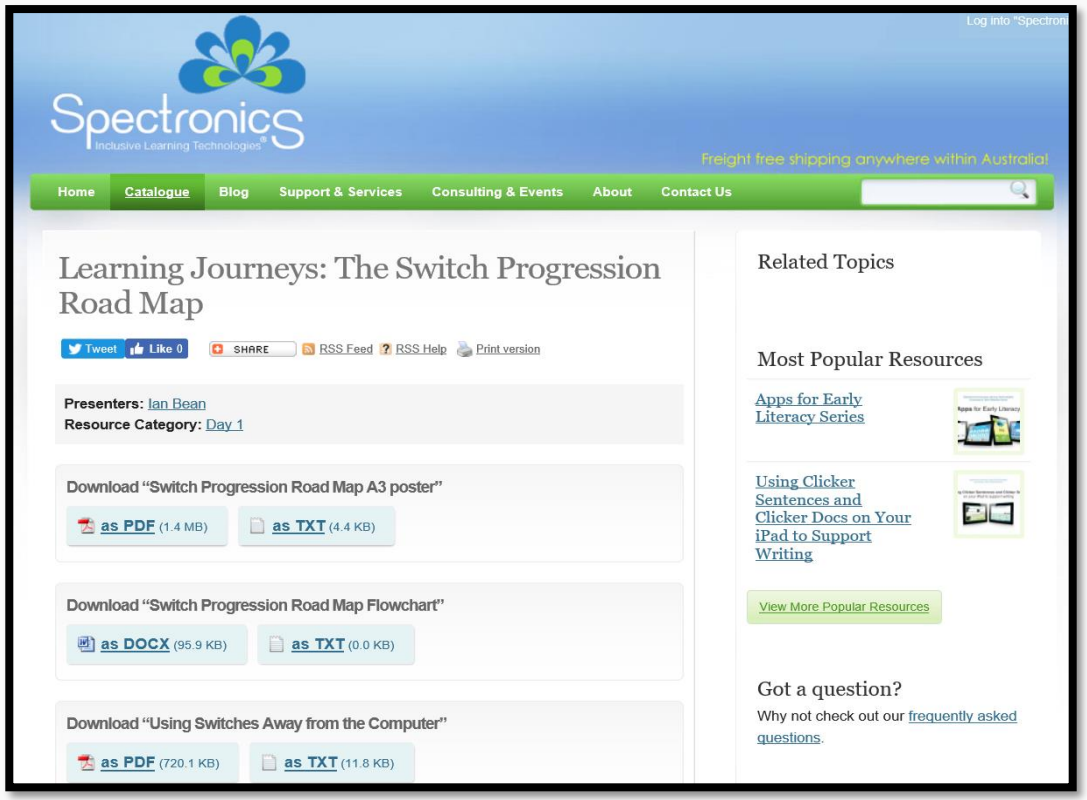
www.helpkidzlearn.com

- Paid website featuring four different paid areas

www.spectronics.com.au

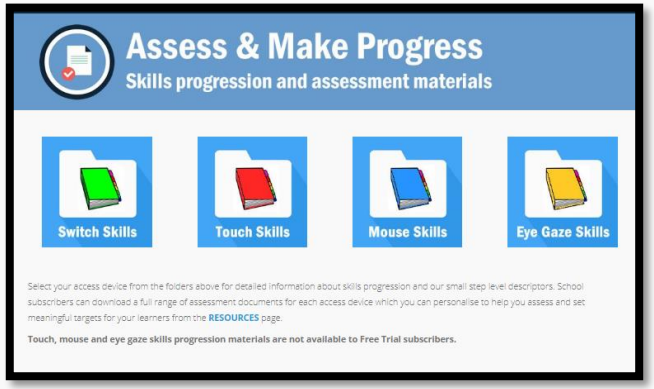
- Free access to website with some free resources and some resources for purchase
- Online copy of The Switch Progression Road Map Learning Journeys Booklet
- Type ‘Switch Progression’ into the search bar to find free switch resources





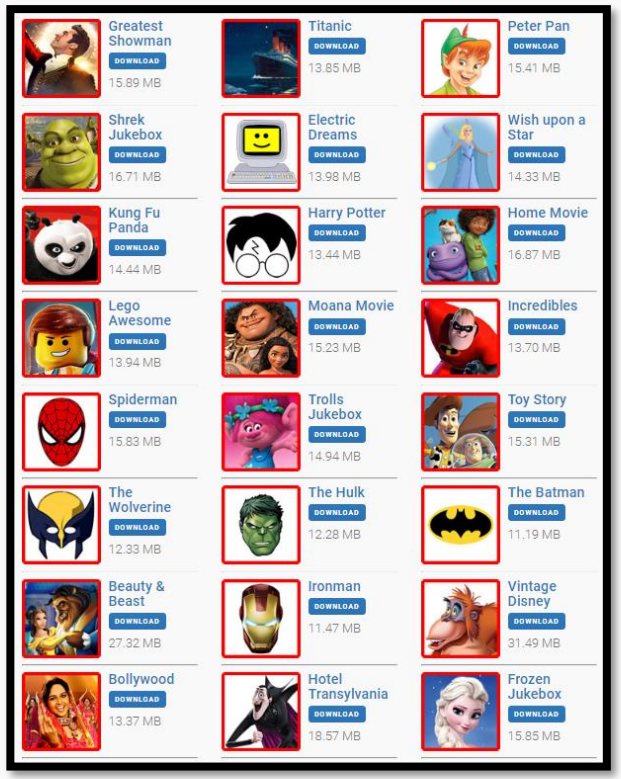
www.senictsoftware.com

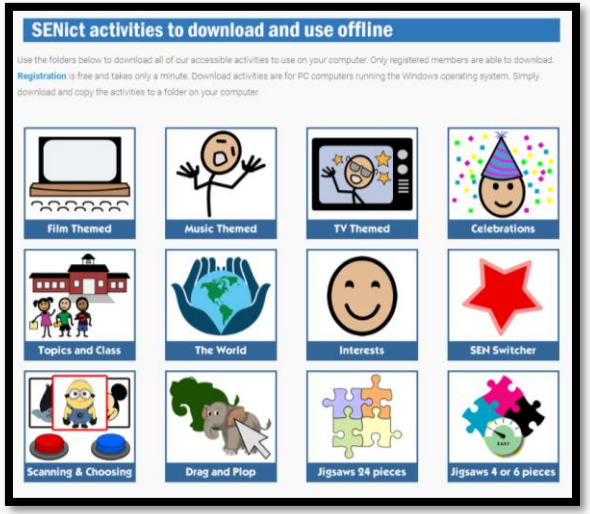
- 1 week free trial then one year school paid subscription
- Activities based on learning progression
- Professional development and student assessment resources
- Download all activities to be used from your PC



www.ianbean.co.uk

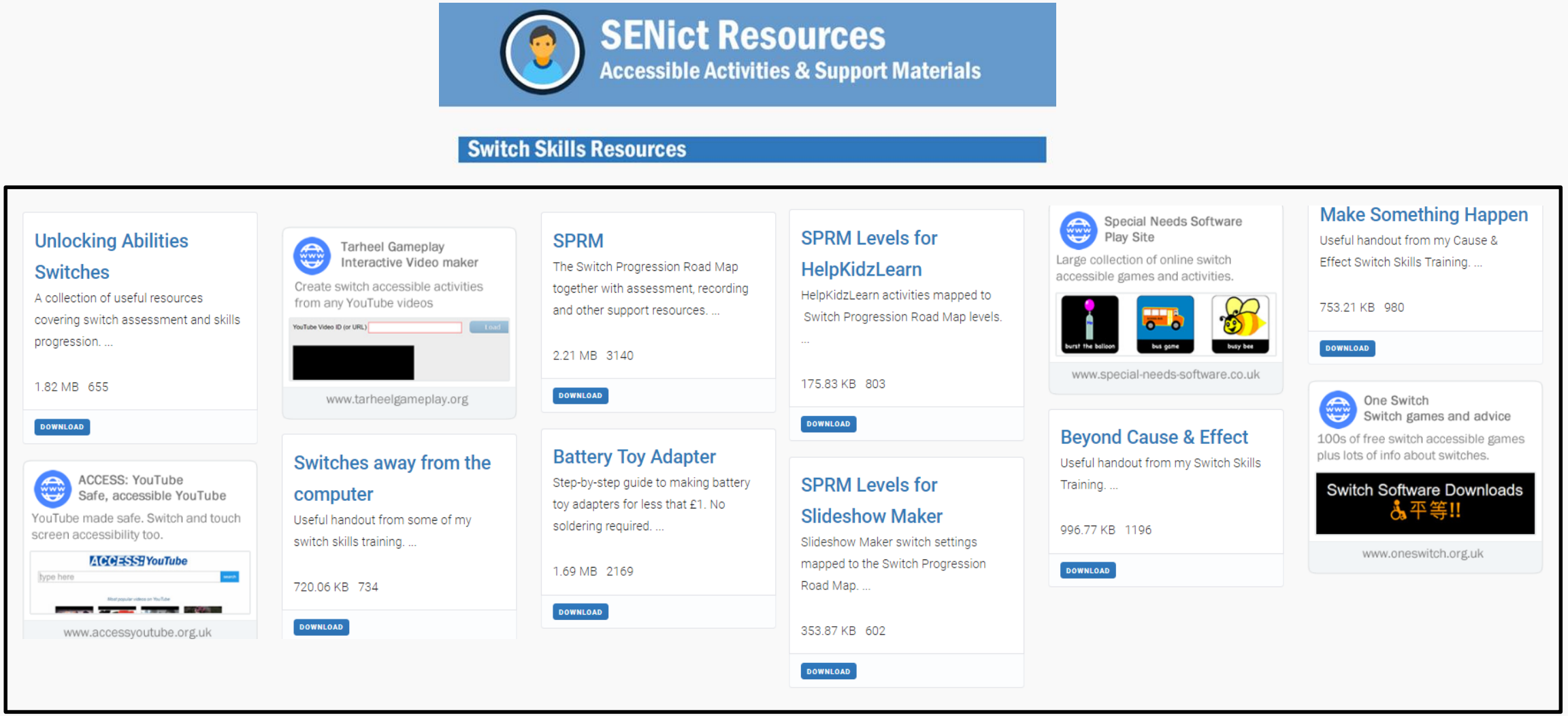
- Free subscription run by donations with option to download all activities to be used from your computer
- Supporting resources such as printable PCS and request an activity for a particular interest or event
- Podcasts for your Professional Development





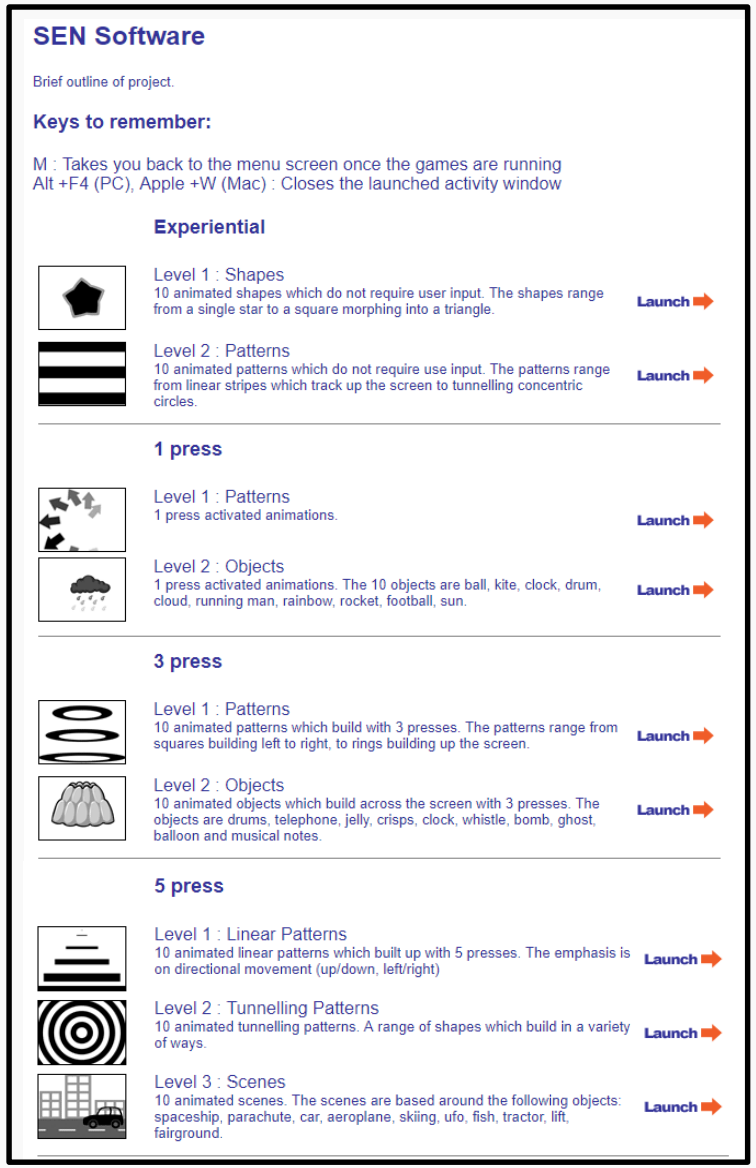
www.ianbean.co.uk

- Free subscription based on donation

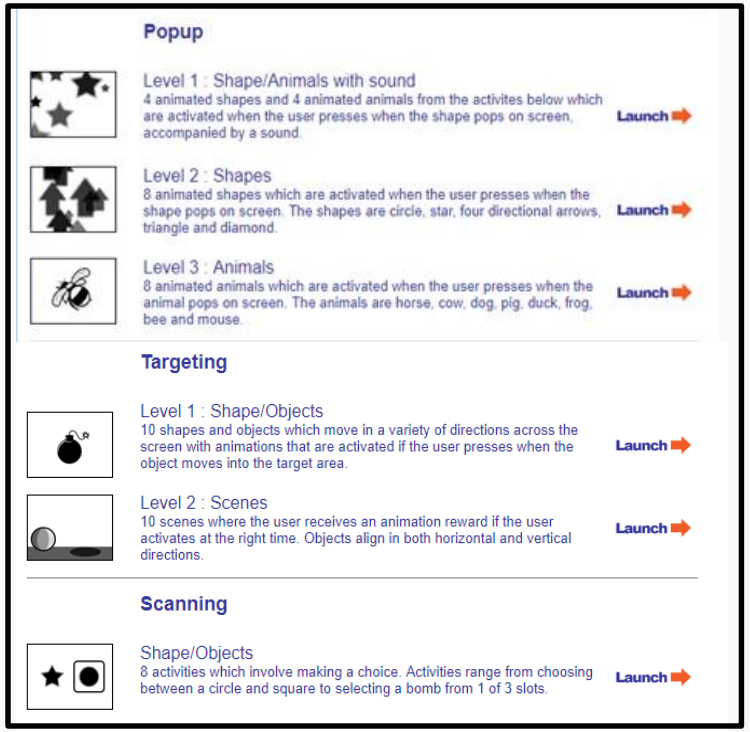


SEN Switcher

www.niee.ufrgs.br/eventos/CIIEE/2007/software/Offline_Index.htm



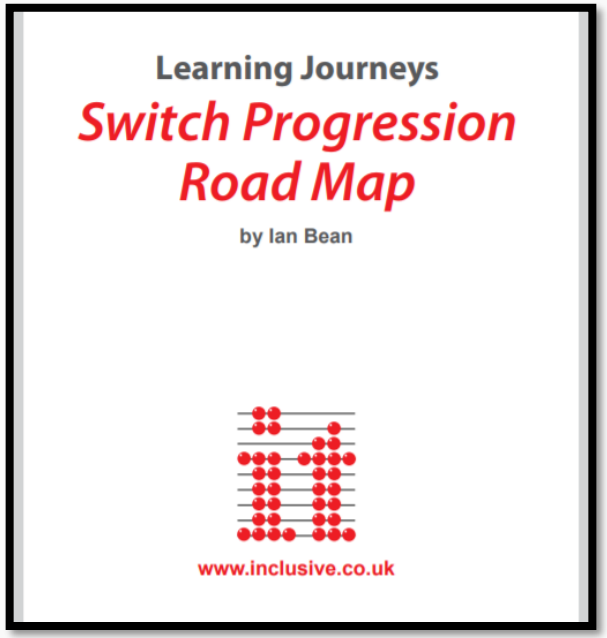
- Free online resource that is available through ianbean.co.uk also found at the above address
- Captivating set of activities that works through the Switch Progression Roadmap
- Great to use as baseline assessment tool



The Switch Progression Road Map

Catering for the needs of diverse learners

The Switch Progression Road Map



- Developed and written by Ian Bean based on research and classroom observations from around the world
- First published in 2011 by Inclusive Technology in a full Learning Journeys Booklet
- Full booklet details every stage of switch skill acquisition
- Full booklet helps to assess students, set learning goals and give examples of activities available for each skill

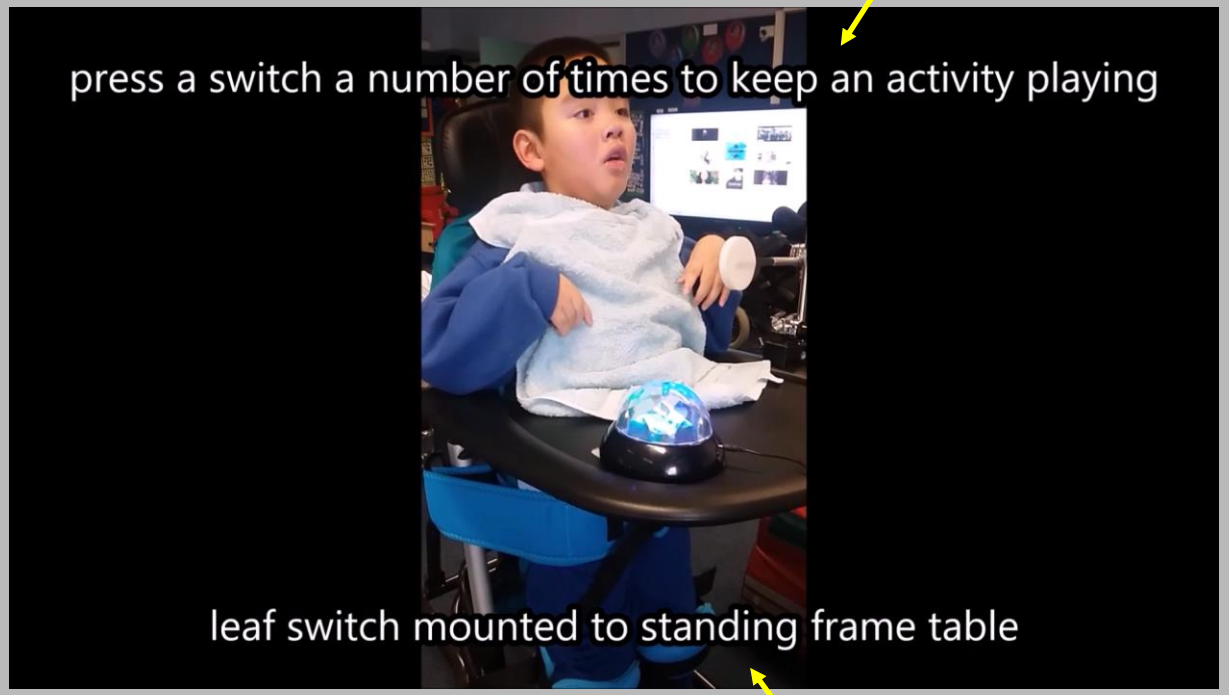
The Switch Progression Road Map

Teaching students to use a switch is like teaching any formal learning process.

There is a set progression that students move through in order to achieve their greatest potential.

With some help from our students, we are now going to move you though the switch progression road map.

Learning goal according to Switch Progression Roadmap



A new switch introduced

Experimental Learning
Looking
Listening
Responding
Make Something Happen
Press and Hold
Press and Let Go
Press It Again
Turn On and Off
Playing With Two Switches
Start and Stop
This or That
One Switch or Two?
One Switch Timing
Two Switches Two Actions
Pop Up
Positional
Interacting with Objects
Move and Choose
Introducing Formal Scanning
Always Right
Choosing Independently
Nothing Here
Completing Sequences
Find the Right One
I can use One or Two Switches to Make Choices

Experimental Learning

Looking **Listening** **Responding**

"During the experimental stage we are using technology to provide our students with stimulating experiences designed to help awaken their senses and model what may be expected of them when they move to controlling the activity itself". Ian Bean, Switch Progression, SENICT Software 2018

“Cause and effect is not something that can be taught directly, rather our students develop their understanding through experiencing it in a range of different contexts”

Ian Bean Switch Progression, SENICT Software 2018

When they are ready, we transition our students from experimental learning to making something happen!

Make Something Happen

Press and Hold | **Press and Let Go** | **Press It Again** | **Turn On and Off**

Make Something Happen

Press and Hold | Press and Let Go | Press It Again | Turn On and Off

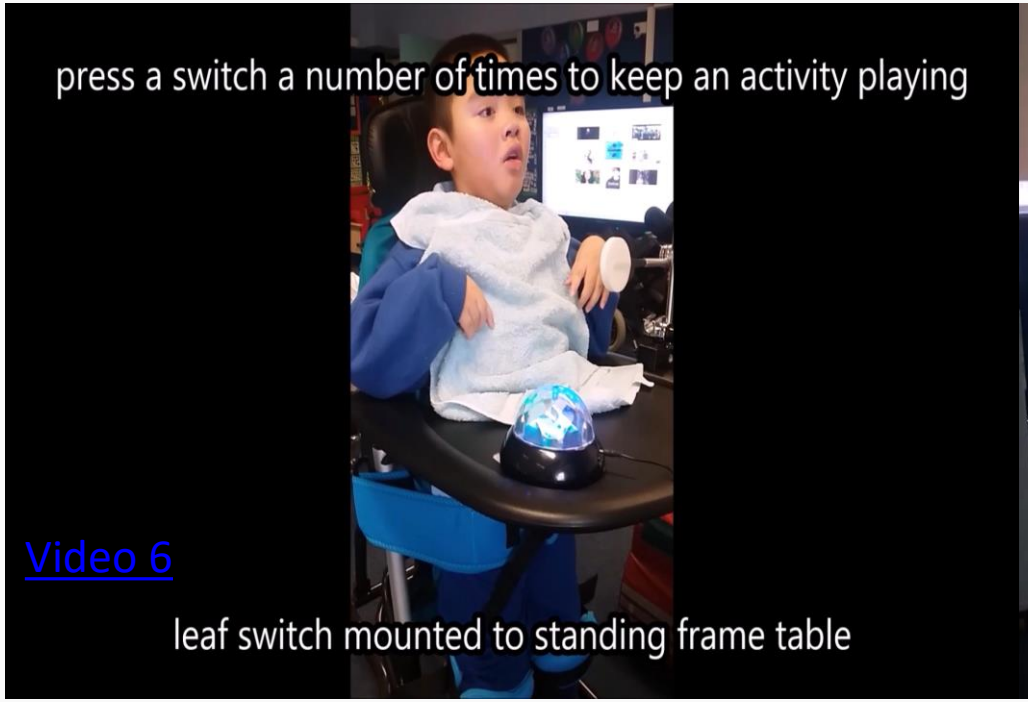
Make Something Happen

Press and Hold | **Press and Let Go** | **Press It Again** | **Turn On and Off**

The position of the switch can assist students in letting go. The last student in the video had a habit of resting on the switch to keep the activity playing, so the switch was moved a little out of reach.

Make Something Happen

Press and Hold | **Press and Let Go** | **Press It Again** | **Turn On and Off**



Make Something Happen

Press and Hold | **Press and Let Go** | **Press It Again** | **Turn On and Off**

A power box/power link and an electronic are great for teaching ‘turn on and off’.

“We are helping our students understand that they are able to extend influence and control over their immediate environment”

-Ian Bean Switch Progression, SENICT Software 2018

Playing With Two Switches

Start and Stop

This or That

“These activities require the use of two switches; however, they do not necessarily require the student to activate them both independently” -Ian Bean Switch Progression, SENICT Software 2018

In this video the student in control of ‘stopping’ the activity does not often have ‘social control’, due to hearing loss.

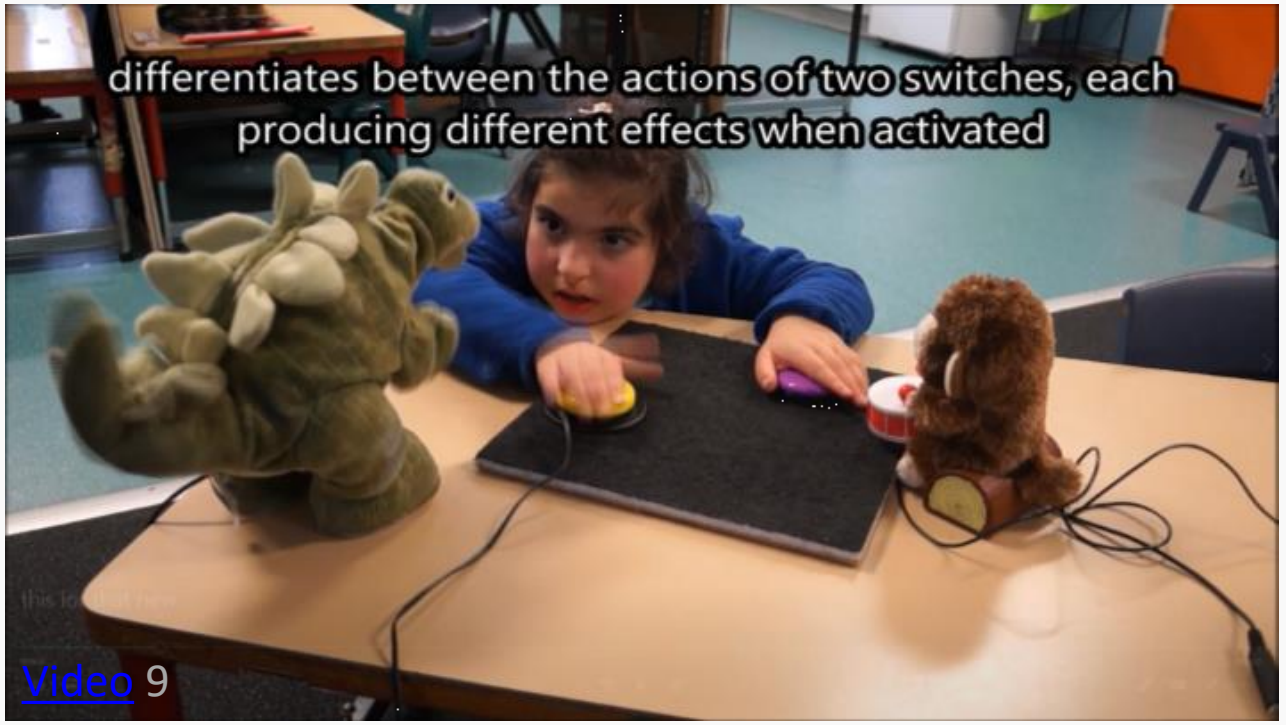
Playing With Two Switches

Start and Stop

This or That

“Introducing the use of two switches in a free play environment, where our goal is to allow the student to experience using two (or sometimes more), switches, and there is no expectation of formal scanning”

-Ian Bean Switch Progression, SENICT Software 2018



One Switch or Two?

“Irrespective of wether we choose to proceed with one or two switches, our goal is the same: to enable the learner to make independent choices”

-Ian Bean Switch Progression, SENICT Software 2018

One Switch Timing

Pop Up

Positional

Pop up timing develops the skills in waiting and reacting required to use switch scanning.

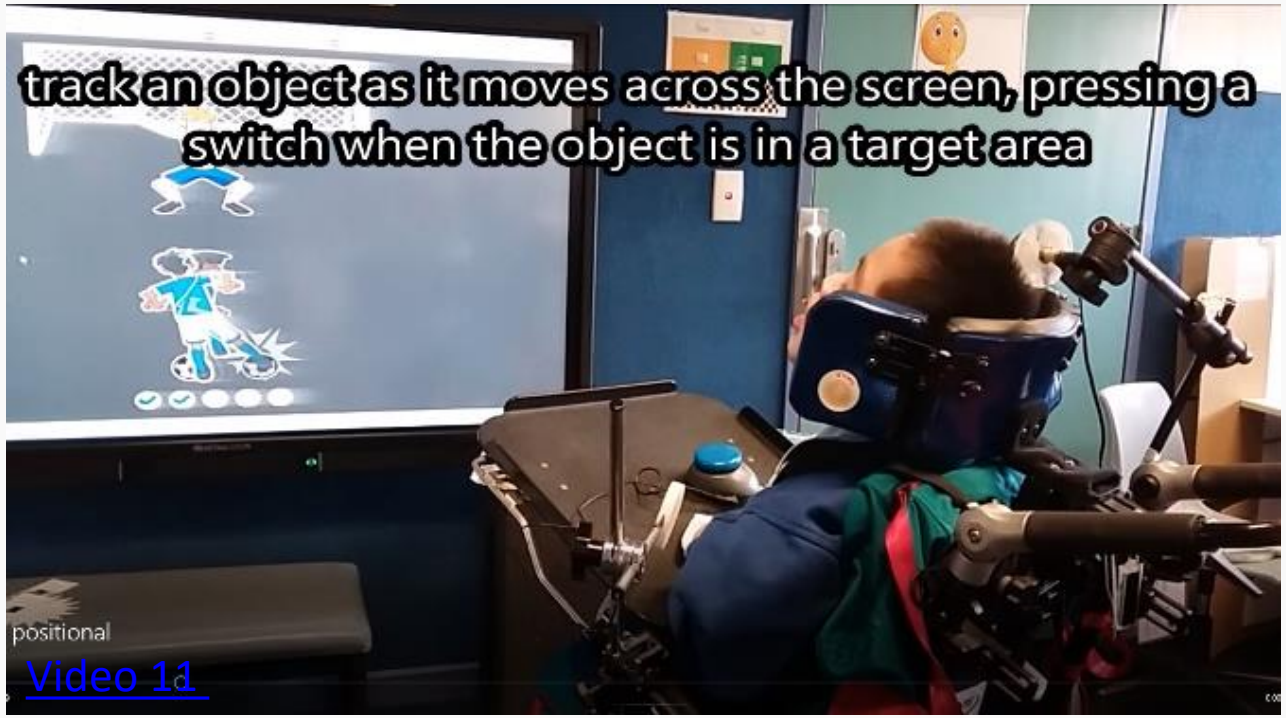
Video 10

One Switch Timing

Pop Up **Positional**

One switch timing teaches the concept of tracking a scan box and pressing to select.

The first student in this video is using auditory tracking due to CVI. He is using two switches for one switch function to reduce fatigue.



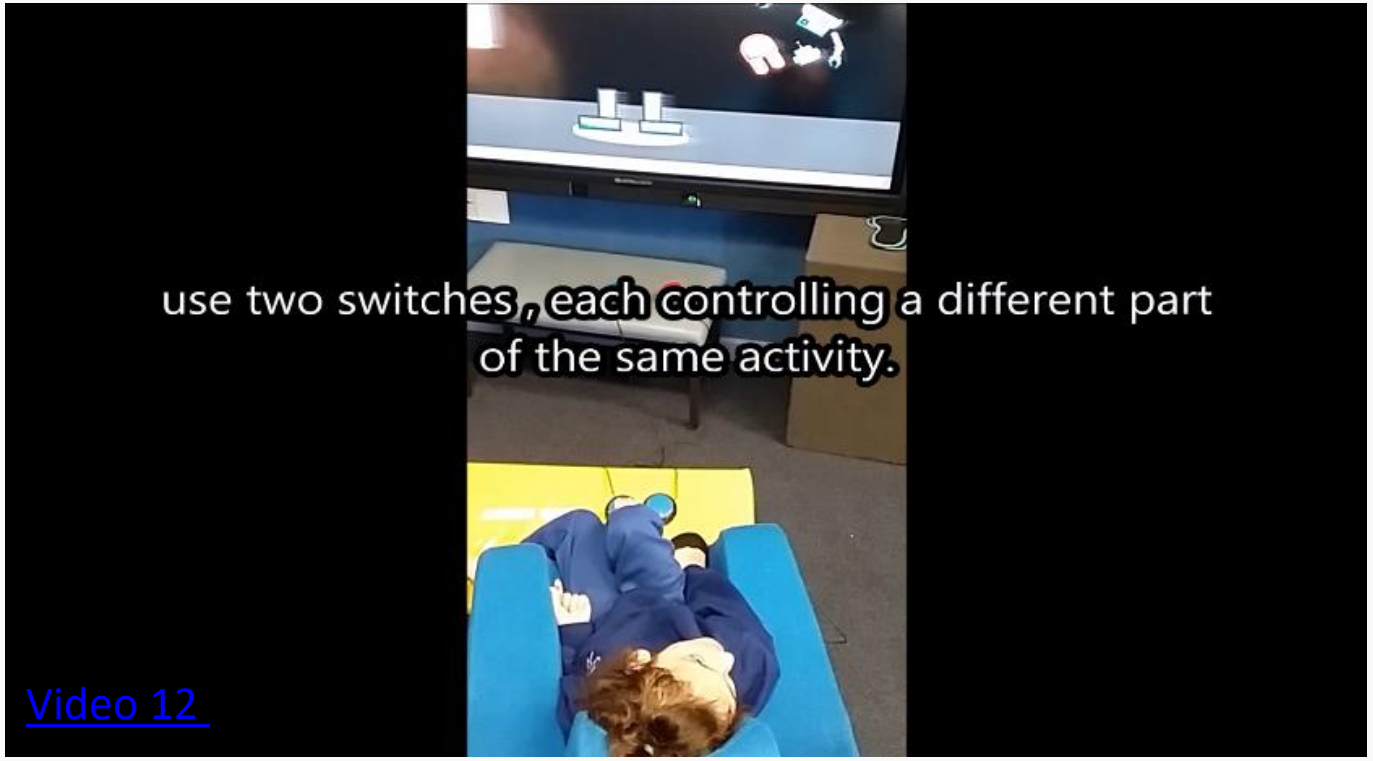
Video 11

Two Switches Two Actions

Interacting with Objects

Move and Choose

Introducing the concept that each switch has a role to play in completing the activity.



Video 12

Two Switches Two Actions

Interacting with Objects

Move and Choose

Press one switch to move and the other switch to select.

Video 13

Introducing Formal Scanning

When formal scanning the student can use one or two switches…

Introducing Formal Scanning

Always Right

Students can make choices without there being a wrong answer.

The student in this video is using auditory scanning due to vision impairment.

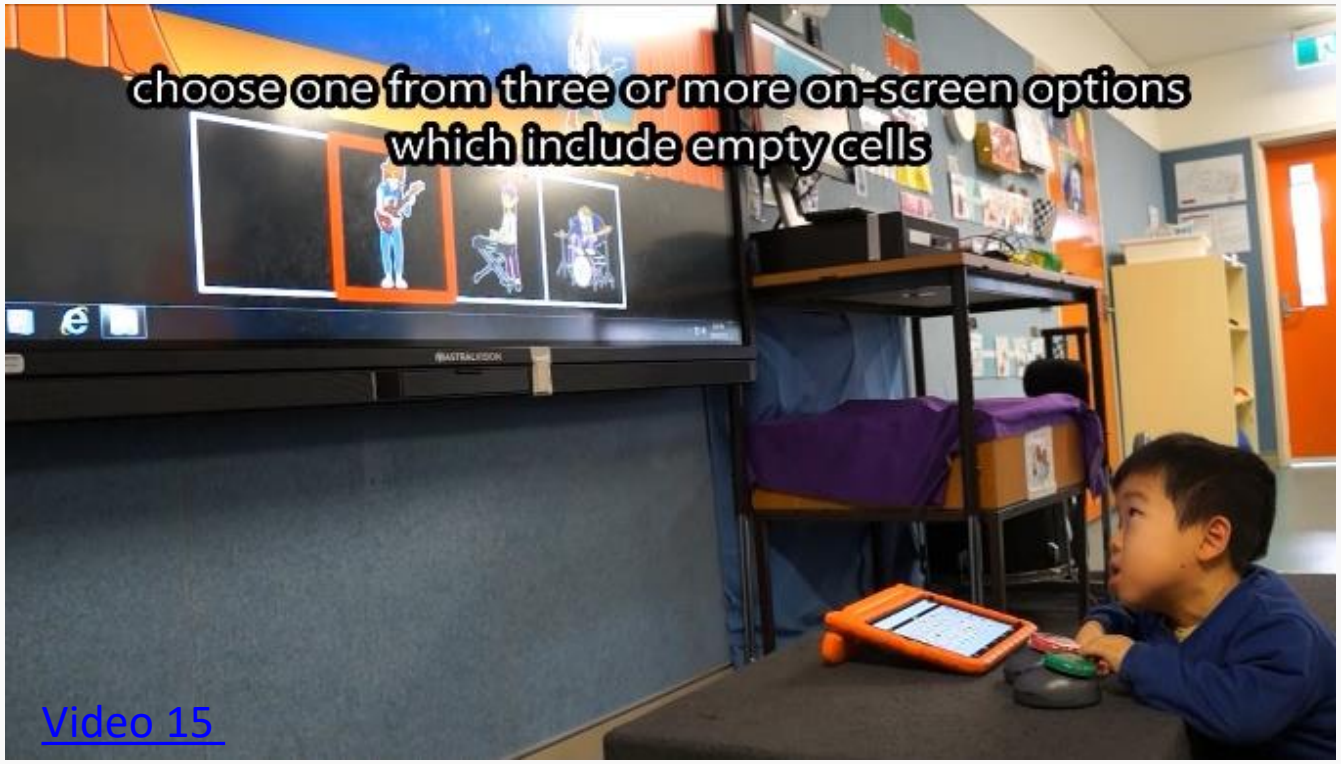
Video 14

Choosing Independently

Nothing Here

Completing Sequences

Find the Right One



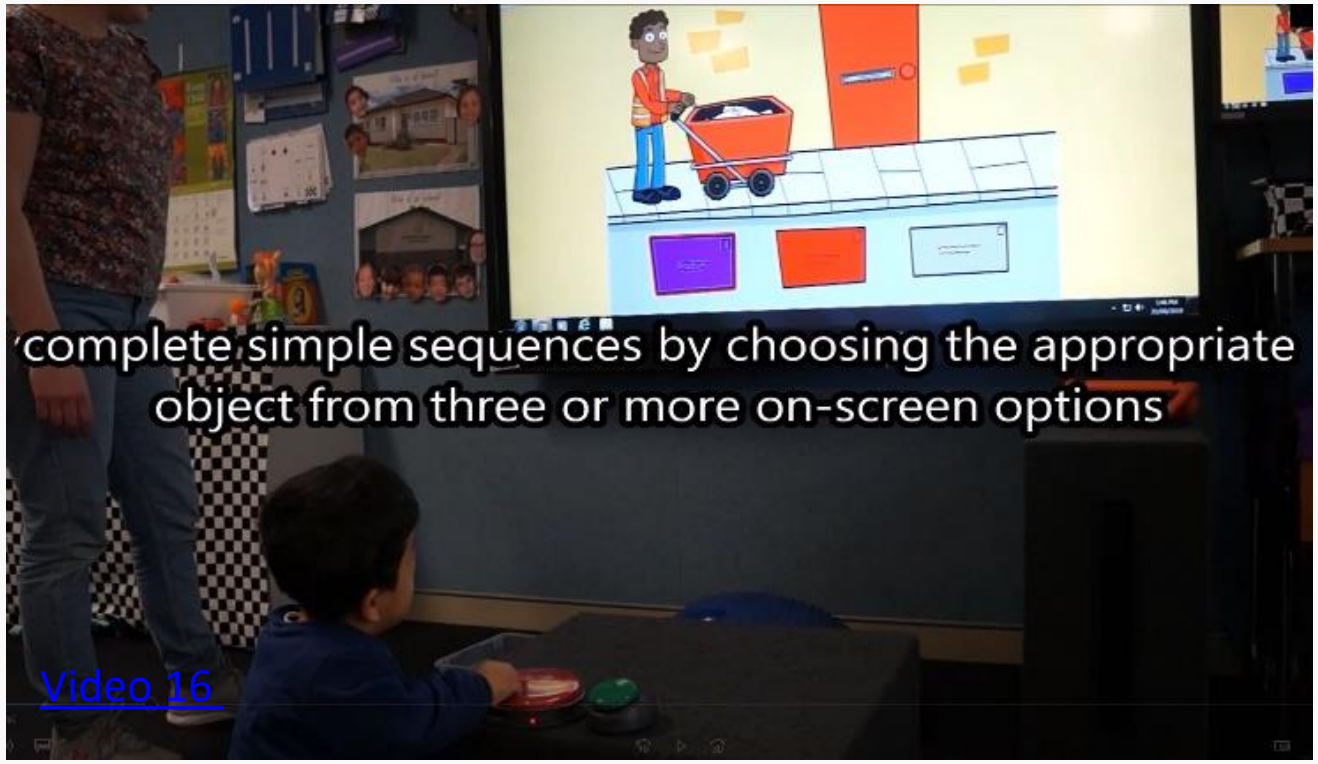
Video 15

Choosing Independently

Nothing Here

Completing Sequences

Find the Right One

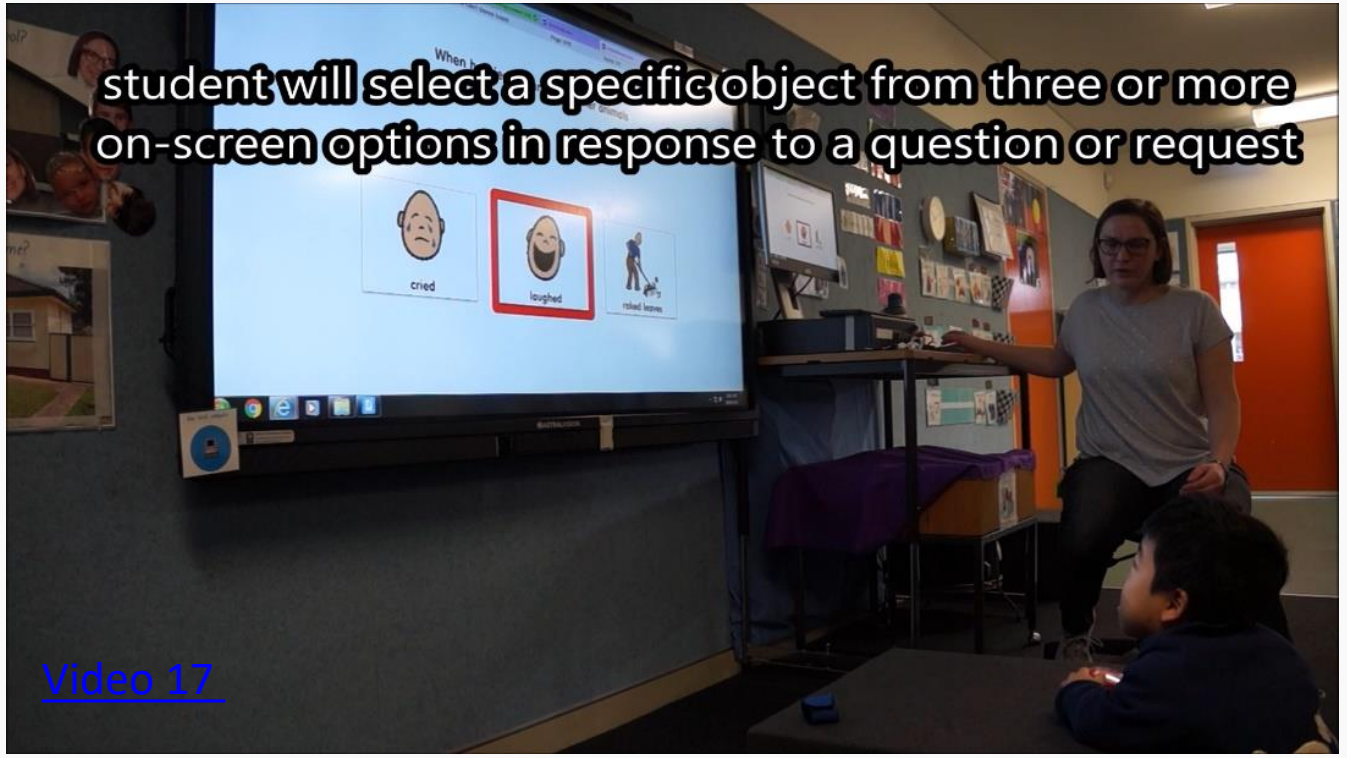


Choosing Independently

Nothing Here

Completing Sequences

Find the Right One



Video 17

Choosing Independently

Information about the student seen in previous three videos.

Martin: Moving through switch progression from start to finish.

- Year 1 student who started school a with no switch skills, minimal technology skills, three spoken words and able to follow one step instructions.

- Began working through the switch progression road map at experimental learning, moved on to making something happen, went through to two switch use and so on.

- Using the switch progression road map has supported him into mouse and keyboard use, supported his use of an iPad with proloquo2Go and using a joy stick switch with 4 separate activities built the skills he needed to operate a power wheelchair.

- Foundation steps of making something happen have supported later understandings that he has been able to apply to basic functional activities that we do every day, that will expand his opportunities in life.

Karam: The journey from experimenting to choosing

2016: Year 1

Experimental Learning

Looking | **Listening** | **Responding**

Make Something Happen

Press and Hold

Karam: The journey from experimenting to choosing

2017: Year 2

Make Something Happen

Press and Hold

Press and Let Go

Press It Again

- Built his confidence in using a switch and could successfully use the switch in a number of positions on his tray top.
- Increased the array of ‘making things happen’ tasks he could achieve.
- Expanded the different types of activities he engaged in.

Karam: The journey from experimenting to choosing

Late 2017: year 2

Playing With Two Switches

Start and Stop

This or That

Karam: The journey from experimenting to choosing

2018: year 3

One Switch or Two?

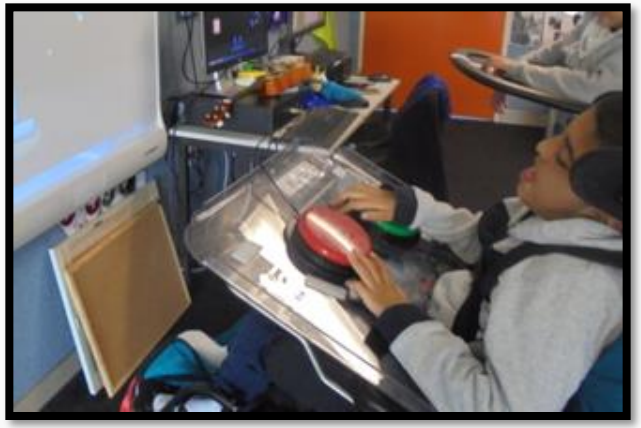
- Rapidly increased his switch skills.
- Mastered the use of different switches and positioning which required higher levels of accuracy.

- Began basic one switch timing tasks.

Karam: The journey from experimenting to choosing

2018: year 3

Two Switches Two Actions



- Continued to build playing with two switches skills including more complex IWB activities.

Introducing Formal Scanning

- Began transitioning from communicating choices using real objects to using auditory scanning with two BIGmack switches and an iTalk2 switch.

Karam: The journey from experimenting to choosing

2019: year 4

- Working on developing skills in formal scanning.

Introducing Formal Scanning

Choosing Independently

It will take some time for Karam to fully expand and consolidate his use of formal scanning. However, for some activities he will soon begin to move toward choosing independently.

I can use One or Two Switches to Make Choices

With well developed skills in making independent choices using one or two switch scanning a wide range of opportunities become available to our students using technology that already exists and is in development.

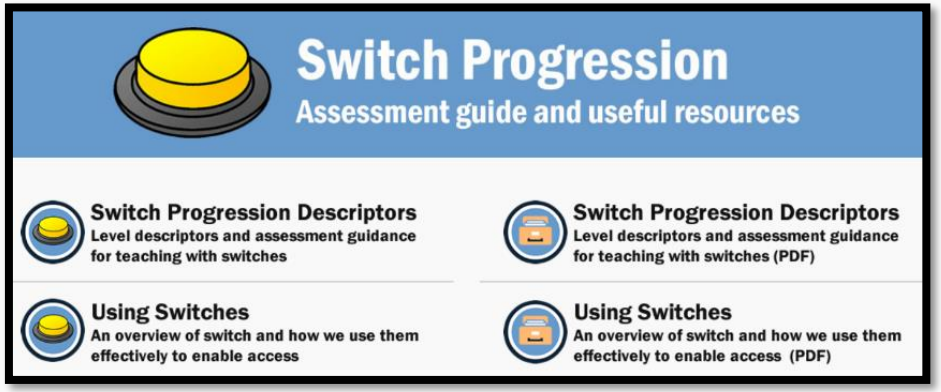
- Independently make choices and locate on-screen options on a computer or tablet
- Advanced communication such as tablet access for apps like ProloQuo2Go
- Operating environmental control accurately such as using a TV remote or accessing a smart home app via switch
- Complex computer access such as navigating computer games and accessing websites

Assessment

Before starting and when using switch technology we are continually assessing and developing pre-requisite skills including:

- Tolerance of equipment
- Acceptance of the positioning of their body in relation to equipment

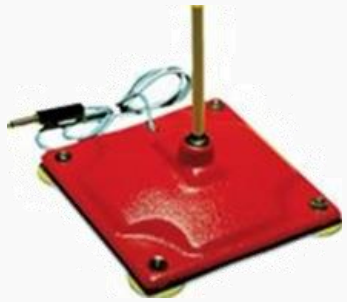
You will find student assessment tools at senictsoftware.com



At Holroyd School we have used the Learning Journeys Switch Progression Roadmap Booklet to develop the switch component of Holroyd School's Communication Profile which we use for our ongoing student assessment.

Which Switch to use?

- Assess physical and sensory strengths
- Focus on strengths to determine switch and position
- Identify a reliable, consistent and repeatable movement that the student makes
- Consider equipment: wheelchairs, side-lyers, standing frames
- Holroyd School use supplier: Technical Solutions Australia www.tecsol.com.au



Right Switch and Right Position to Maximise Independent Use

Switches:

- Is the area of the switch big enough?
- Can the student apply enough pressure?
- Will they use sight or known position to locate the switch?

Microlight switch
-10 grams of pressure

Articulated Switch Mount
-attached to wheelchair

Right Switch and Right Position to Maximise Independent Use

Mounts and Positioning:

- Work with students' needs and strengths
- A variety of purpose built mounts and positioning arms available
- Mounting solutions can also be fashioned with equipment from around your classroom

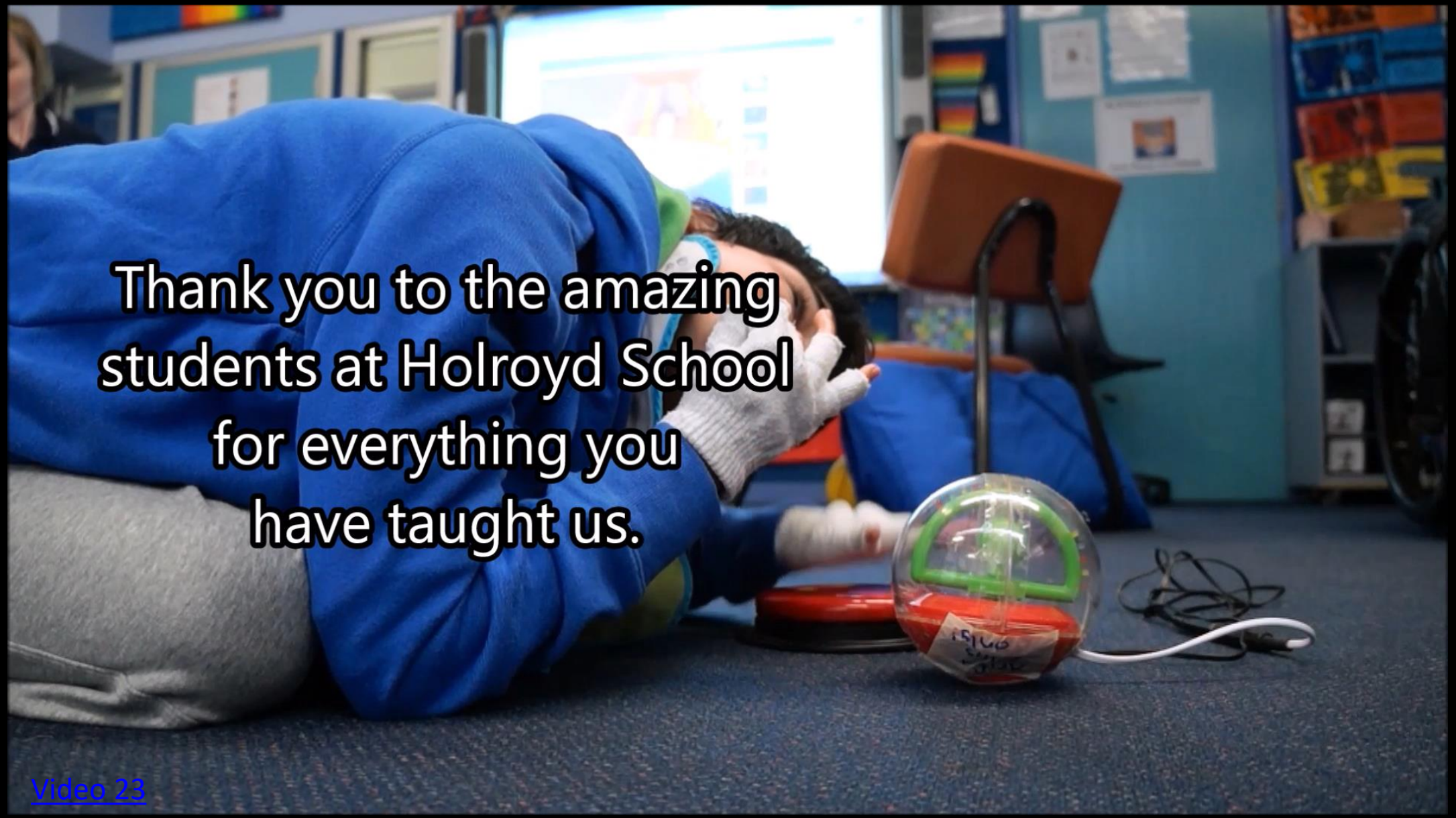
Spec Switch
-3cm diameter

“Selecting the right switch and equipment is important, but positioning it well can make the difference between a functional system and frustration” Technical Solutions Australia website

It Doesn’t Always Go Right!

Our advice…

- *Observe -film if possible*
- *Assess according to Road Map Key Milestones found at: www.spectronics.com.au*
- *Identify student interests*
- *Realise when it doesn’t go right*
- *Listen to student feedback*
- *Adapt to student needs and strengths*
- *Try again, and again, and again*


Thank you to the amazing
students at Holroyd School
for everything you
have taught us.

Video 23