

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



Good morning...
Good morning.

Video 1

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

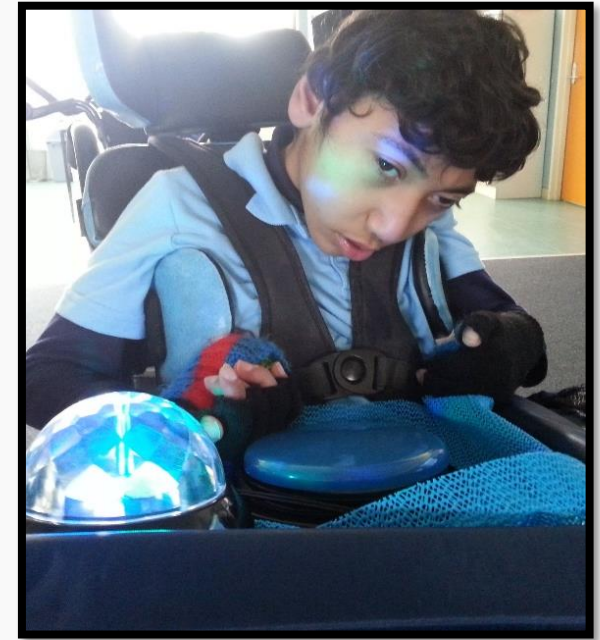
While this is a fantastic lesson in cause and effect: Student presses a switch.. The switch says “Good morning”, the teacher says good morning back.

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.*

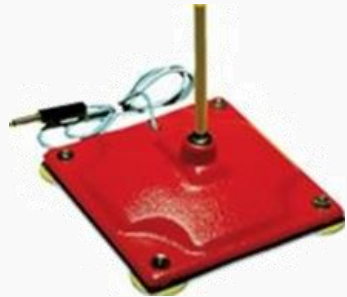
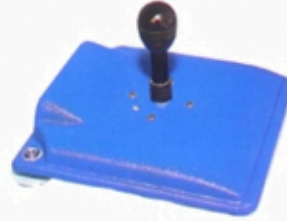
Autonomy Independence Communication



- 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.

Senict
26 June at 19:58 · 🌐

Catching up with a few requested activities. Here's the first of them. The student wanted 'Nanananananana Batman'. Find it here:
https://www.ianbean.co.uk/ss_tv/

SENICT TRAINING AND CONSULTANCY

Batman and Robin

8 likes · 1 comment

Like Comment Share

www.helpkidzlearn.com

- Paid website featuring four different paid areas

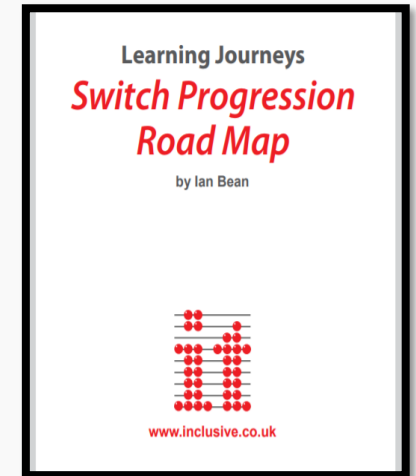
The screenshot displays the HelpKidzLearn website interface. At the top, the logo 'HelpKidzLearn' is accompanied by two award logos: 'THE QUEEN'S AWARDS INTERNATIONAL TRADE 2016' and 'THE QUEEN'S AWARDS INNOVATION 2017'. Below the logo is a navigation menu with links for 'Activities', 'Subscribe', 'Shop', 'iPad & Android Apps', 'About Us', 'Events', and 'News'.

The main content area is divided into four panels, each representing a different paid feature:

- Games & Activities:** Features the title 'Games & Activities' and an illustration of a desktop monitor and a laptop displaying various educational games. The description reads: 'Accessible game-based learning activities to engage and teach a progression of skills.'
- ChooseIt! Maker 3:** Features the title 'ChooseIt! Maker 3' and an illustration of a desktop monitor and a laptop displaying choice-making activities, such as a color selection screen and a solar system diagram. The description reads: 'Create personalised choice-making activities for use in the classroom or with individuals.'
- Readymades:** Features the title 'Readymades' and an illustration of a desktop monitor and a laptop displaying curriculum activities like 'Numeracy' and 'Library'. The description reads: 'Multiple-choice curriculum activities that provide a secure foundation for learning.'
- insight:** Features the title 'insight' and an illustration of a desktop monitor and a laptop displaying assessment activities, including a bar chart and a dinosaur character. The description reads: 'Assess and develop early vision & cognition skills with eye gaze, game-based assessment activities.'

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



The screenshot shows the Spectronics website. The header includes the Spectronics logo and navigation links: Home, Catalogue, Blog, Support & Services, Consulting & Events, About, and Contact Us. The main content area features the product title "Learning Journeys: The Switch Progression Road Map" with social media sharing options (Tweet, Like, Share, RSS Feed, Help, Print version). Below this, there are download options for "Switch Progression Road Map A3 poster" (PDF 1.4 MB, TXT 4.4 KB) and "Switch Progression Road Map Flowchart" (DOCX 95.9 KB, TXT 0.0 KB). A "Related Topics" section lists "Apps for Early Literacy Series" and "Using Clicker Sentences and Clicker Docs on Your iPad to Support Writing". A "Got a question?" section links to frequently asked questions.

The screenshot shows the search results for "switch progression" on the Spectronics website. The search bar at the top contains the text "switch progression". Below the search bar, there are two sections: "Blog Results (4)" and "Support Results (1)". The Blog Results section lists four items: "Learning Journeys: The Switch Progression Road Map", "So much choice with Chooselt! Maker", "Switched onto successful access to mobile tablets", and "Top 10 Websites for Online Switch Activities". The Support Results section lists one item: "Learning Journeys: Switch Progression Road Map, by Ian Bean". A red arrow points from the top of the search results to the booklet cover in the top right image.

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

SENict SOFTWARE ONLINE
Teaching activities, training and assessment resources for assistive technology users

Over thirty carefully designed, highly motivating teaching activities for young people who are learning to access a computer with switches, touchscreens, pointing devices and eye gaze systems.

Assess and Make Progress: Set meaningful targets and work towards greater independence with our comprehensive guides to access skills progression and assessment materials you can personalise.

Supporting Resources: Lots of useful resources including teaching guides and switch caps to print together with training videos and other tools to help you make the most of our activities.

Get Immediate Access: Take advantage of our FREE offer and get immediate access to all of our online teaching activities in your home or school, no credit card is required.

REACT SHAPES 3, HAPPY SMILES, OUTER SPACE

Assess & Make Progress
Skills progression and assessment materials

Switch Skills, Touch Skills, Mouse Skills, Eye Gaze Skills

Select your access device from the folders above for detailed information about skills progression and our small step level descriptors. School subscribers can download a full range of assessment documents for each access device which you can personalise to help you assess and set meaningful targets for your learners from the **RESOURCES** page.

Touch, mouse and eye gaze skills progression materials are not available to Free Trial subscribers.

Resource Library
More resources and enrichment activities

Switches, Touch, Pointing Device, Eye Gaze, Activity Support, General Support, Downloads, Video Archive

Select from a huge range of supporting resources to help you make the most of our teaching materials. Here you will find teaching guides and switch caps for each of our activities alongside a carefully selected collection of offline tools and extension activities.

Some of our resources are not available to Free Trial subscribers.

Activity Downloads
Download our activities to your computer

Activity Launch Pad
Choose and run online teaching activities

Full Screen: Choose this for the best online experience. Activities will open and run in a new browser window without obscuring menus or links. Best with Chrome / MS Edge. Close the window to choose another activity.

Windowed: This setting works best with Edge and Internet Explorer. Activities will open and run in a new standard browser window. Close the window to choose another activity.

If you experience any problems loading and running these activities online, please visit our **browser help** page for a step-by-step guide.

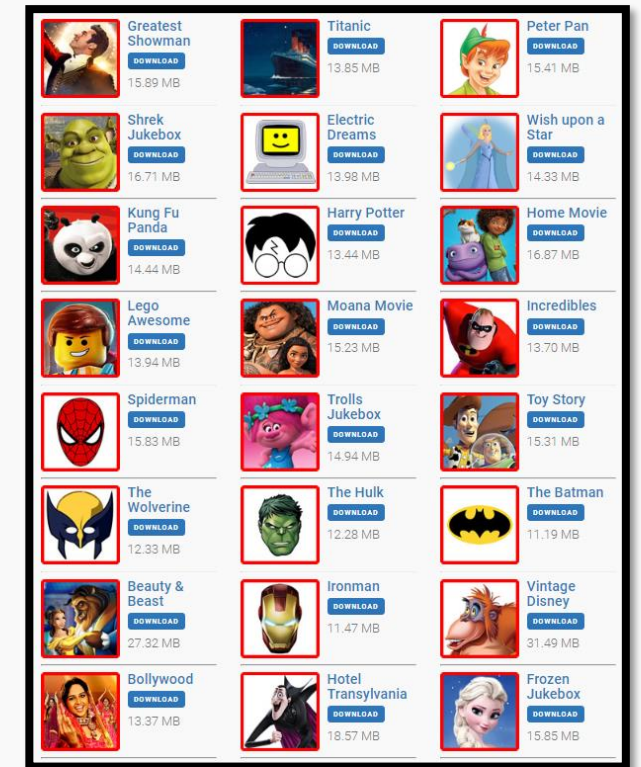
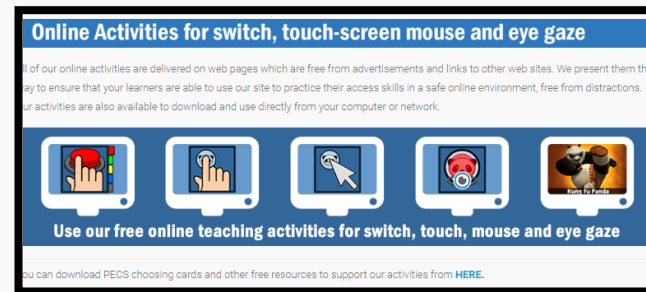
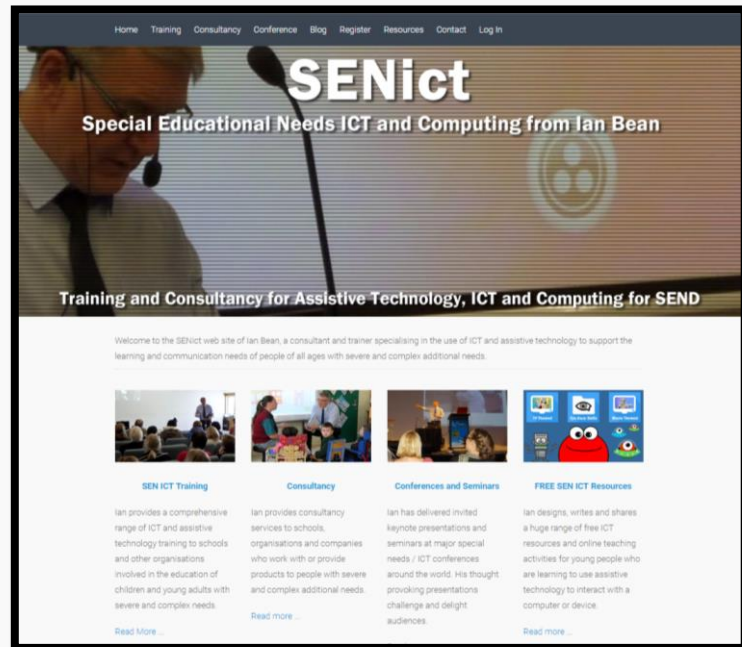
Subscribers can also choose to **download** and run these activities on their computers offline.

Free Trial subscribers may download 'Animal Whimsy' for evaluation.

Color Trail, Spots, Eyegaze Bunnies, Eye Trail, Choose Transport, Swap Transport, Hungry Bunnies, Easy Jigsaws, On the Farm, In the Wild, Naughty Monkey, Positivity Shoot, Festive, Bugs, Flatly, Meme!, Animal Whimsy, Ruler Space, Spaces!, Pop!, Happy Shapes 1, Big Bear, Pea and Watch, Happy Smiles, React: Vehicles, React: Shapes 2, React: Shapes 3, React: Shapes 4, HS Chasing, Peed Me!

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



SENict Resources

Accessible Activities & Support Materials

Switch Skills Resources

Unlocking Abilities Switches

A collection of useful resources covering switch assessment and skills progression. ...

1.82 MB 655

DOWNLOAD



Tarheel Gameplay Interactive Video maker

Create switch accessible activities from any YouTube videos

YouTube Video ID (or URL)



www.tarheelgameplay.org

SPRM

The Switch Progression Road Map together with assessment, recording and other support resources. ...

2.21 MB 3140

DOWNLOAD

SPRM Levels for HelpKidzLearn

HelpKidzLearn activities mapped to Switch Progression Road Map levels. ...

175.83 KB 803

DOWNLOAD



Special Needs Software Play Site

Large collection of online switch accessible games and activities.



www.special-needs-software.co.uk

Make Something Happen

Useful handout from my Cause & Effect Switch Skills Training. ...

753.21 KB 980

DOWNLOAD



ACCESS: YouTube Safe, accessible YouTube

YouTube made safe. Switch and touch screen accessibility too.



www.accessyoutube.org.uk

Switches away from the computer

Useful handout from some of my switch skills training. ...

720.06 KB 734

DOWNLOAD

Battery Toy Adapter

Step-by-step guide to making battery toy adapters for less than £1. No soldering required. ...

1.69 MB 2169

DOWNLOAD

SPRM Levels for Slideshow Maker

Slideshow Maker switch settings mapped to the Switch Progression Road Map. ...

353.87 KB 602

DOWNLOAD

Beyond Cause & Effect

Useful handout from my Switch Skills Training. ...

996.77 KB 1196

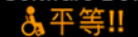
DOWNLOAD



One Switch Switch games and advice

100s of free switch accessible games plus lots of info about switches.

Switch Software Downloads



www.oneswitch.org.uk

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

SEN Software

Brief outline of project.

Keys to remember:

M : Takes you back to the menu screen once the games are running
Alt +F4 (PC), Apple +W (Mac) : Closes the launched activity window

Experiential

Level 1 : Shapes
10 animated shapes which do not require user input. The shapes range from a single star to a square morphing into a triangle. [Launch](#) →

Level 2 : Patterns
10 animated patterns which do not require use input. The patterns range from linear stripes which track up the screen to tunnelling concentric circles. [Launch](#) →

1 press

Level 1 : Patterns
1 press activated animations. [Launch](#) →

Level 2 : Objects
1 press activated animations. The 10 objects are ball, kite, clock, drum, cloud, running man, rainbow, rocket, football, sun. [Launch](#) →

3 press

Level 1 : Patterns
10 animated patterns which build with 3 presses. The patterns range from squares building left to right, to rings building up the screen. [Launch](#) →

Level 2 : Objects
10 animated objects which build across the screen with 3 presses. The objects are drums, telephone, jelly, crisps, clock, whistle, bomb, ghost, balloon and musical notes. [Launch](#) →

5 press

Level 1 : Linear Patterns
10 animated linear patterns which built up with 5 presses. The emphasis is on directional movement (up/down, left/right) [Launch](#) →

Level 2 : Tunnelling Patterns
10 animated tunnelling patterns. A range of shapes which build in a variety of ways. [Launch](#) →

Level 3 : Scenes
10 animated scenes. The scenes are based around the following objects: spaceship, parachute, car, aeroplane, skiing, ufo, fish, tractor, lift, fairground. [Launch](#) →

Popup

Level 1 : Shape/Animals with sound
4 animated shapes and 4 animated animals from the activities below which are activated when the user presses when the shape pops on screen, accompanied by a sound. [Launch](#) →

Level 2 : Shapes
8 animated shapes which are activated when the user presses when the shape pops on screen. The shapes are circle, star, four directional arrows, triangle and diamond. [Launch](#) →

Level 3 : Animals
8 animated animals which are activated when the user presses when the animal pops on screen. The animals are horse, cow, dog, pig, duck, frog, bee and mouse. [Launch](#) →

Targeting

Level 1 : Shape/Objects
10 shapes and objects which move in a variety of directions across the screen with animations that are activated if the user presses when the object moves into the target area. [Launch](#) →

Level 2 : Scenes
10 scenes where the user receives an animation reward if the user activates at the right time. Objects align in both horizontal and vertical directions. [Launch](#) →

Scanning

Shape/Objects
8 activities which involve making a choice. Activities range from choosing between a circle and square to selecting a bomb from 1 of 3 slots. [Launch](#) →

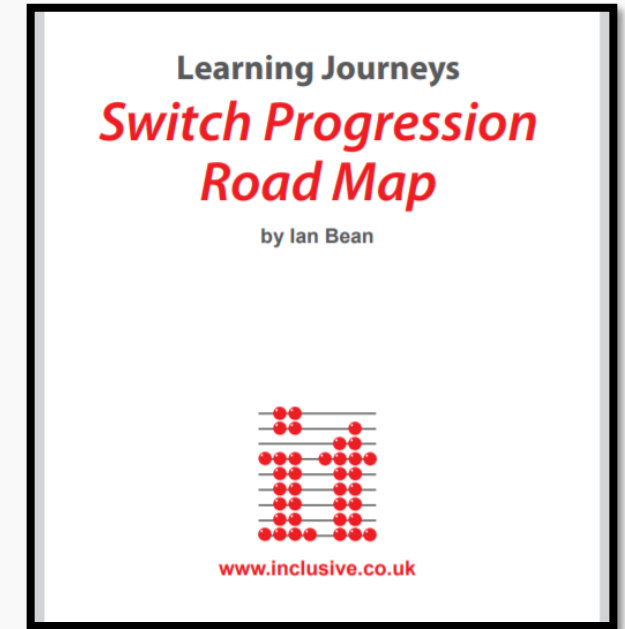
The Switch Progression Road Map

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 through the switch progression road map.



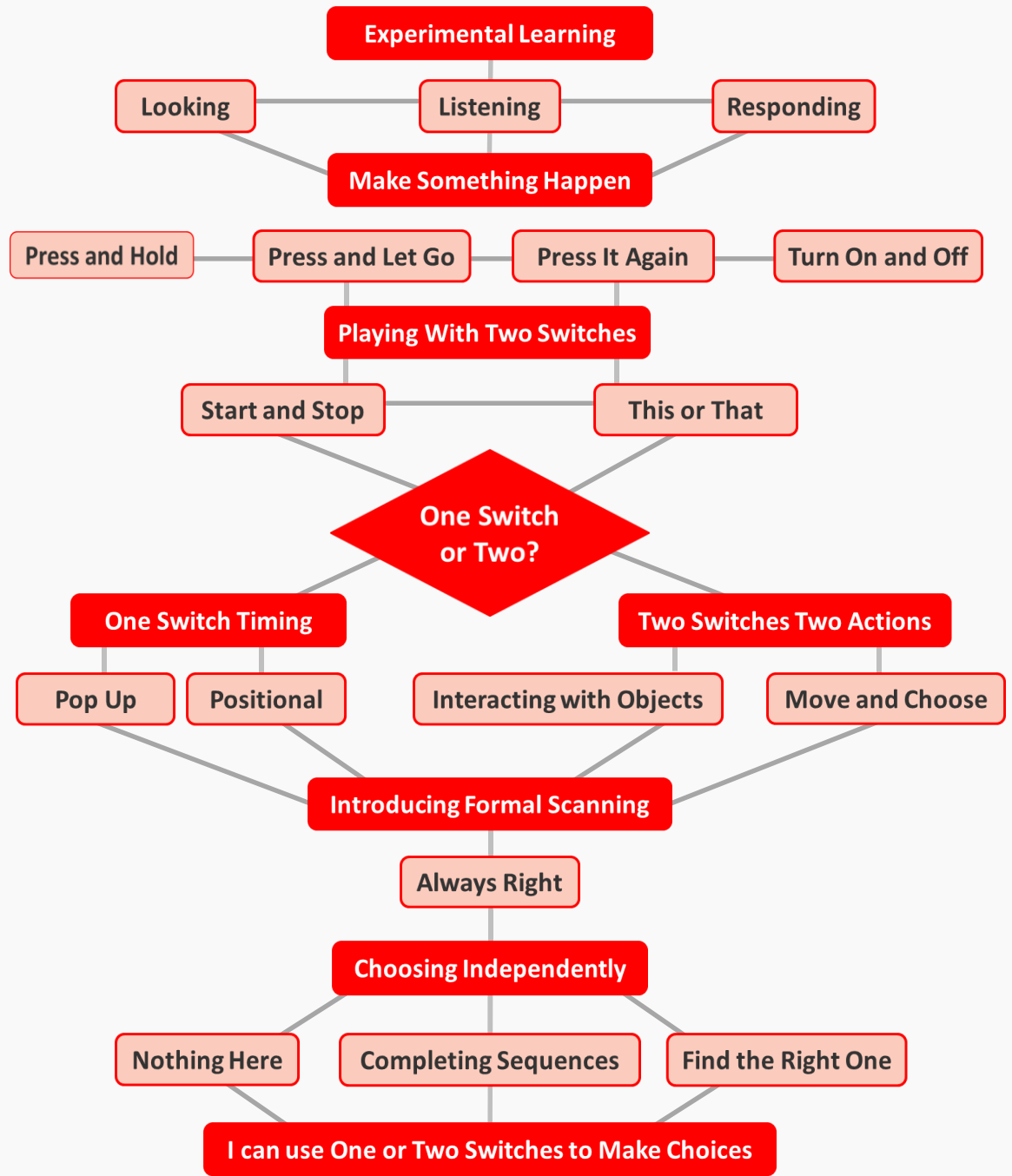
Learning goal according to Switch Progression Roadmap

press a switch a number of times to keep an activity playing



leaf switch mounted to standing frame table

A new switch introduced



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

press a switch a number of times to keep an activity playing



[Video 6](#)

leaf switch mounted to standing frame table

press a switch a number of times to complete a sequence



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.



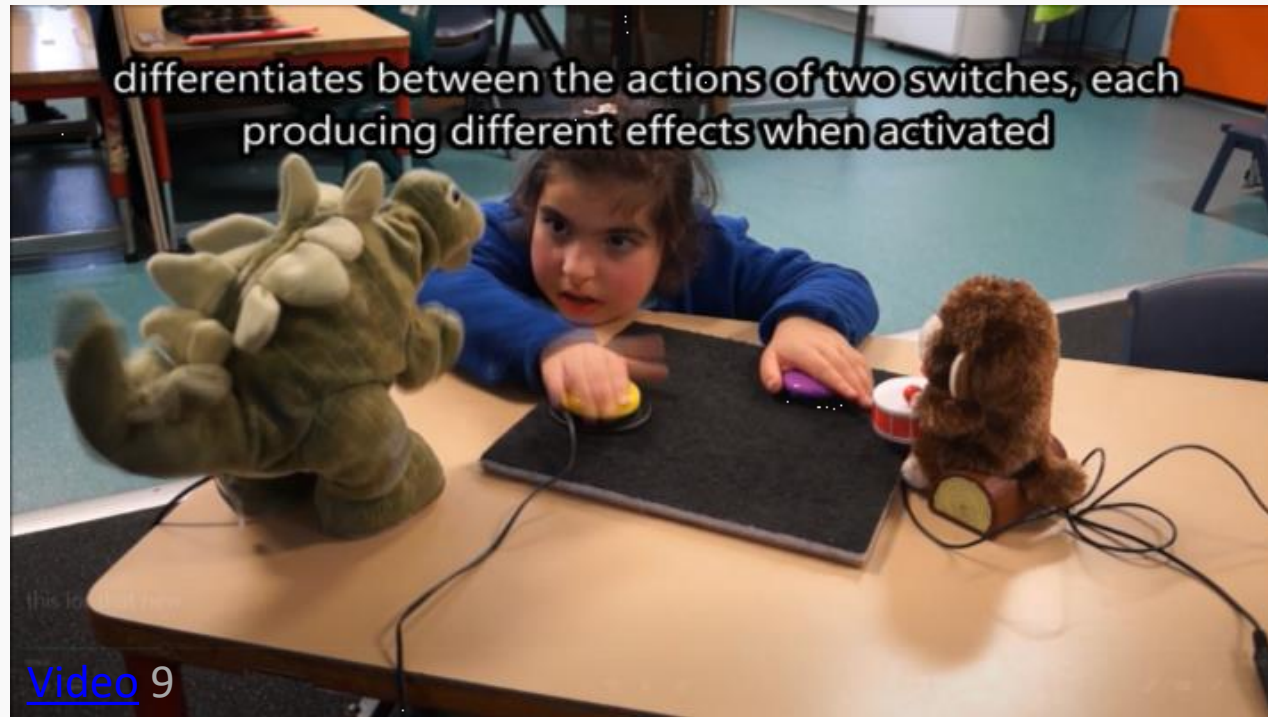
Playing With Two Switches

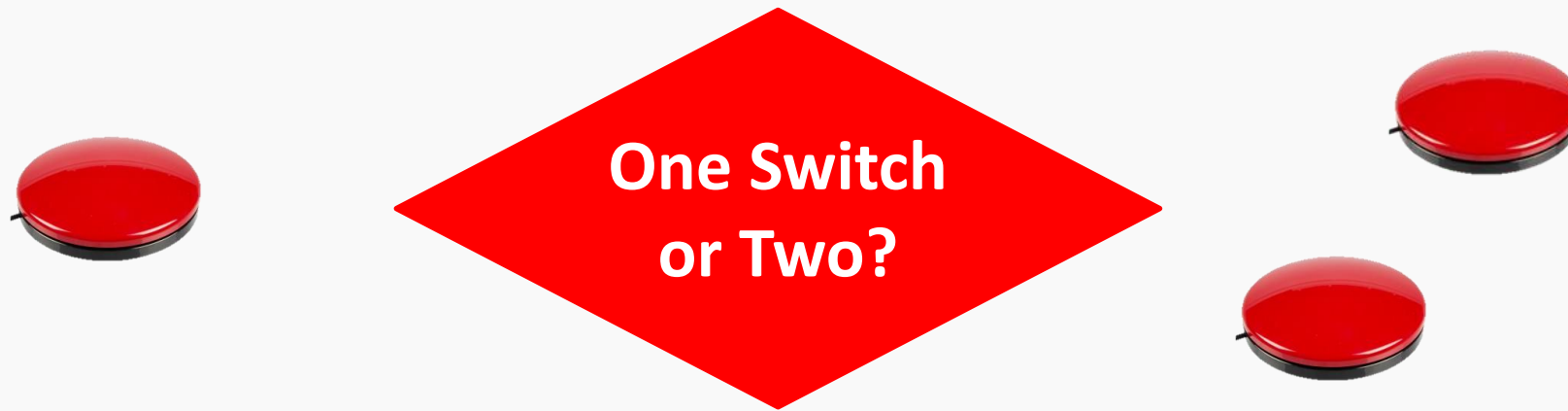
Start and Stop

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





“Irrespective of whether 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.



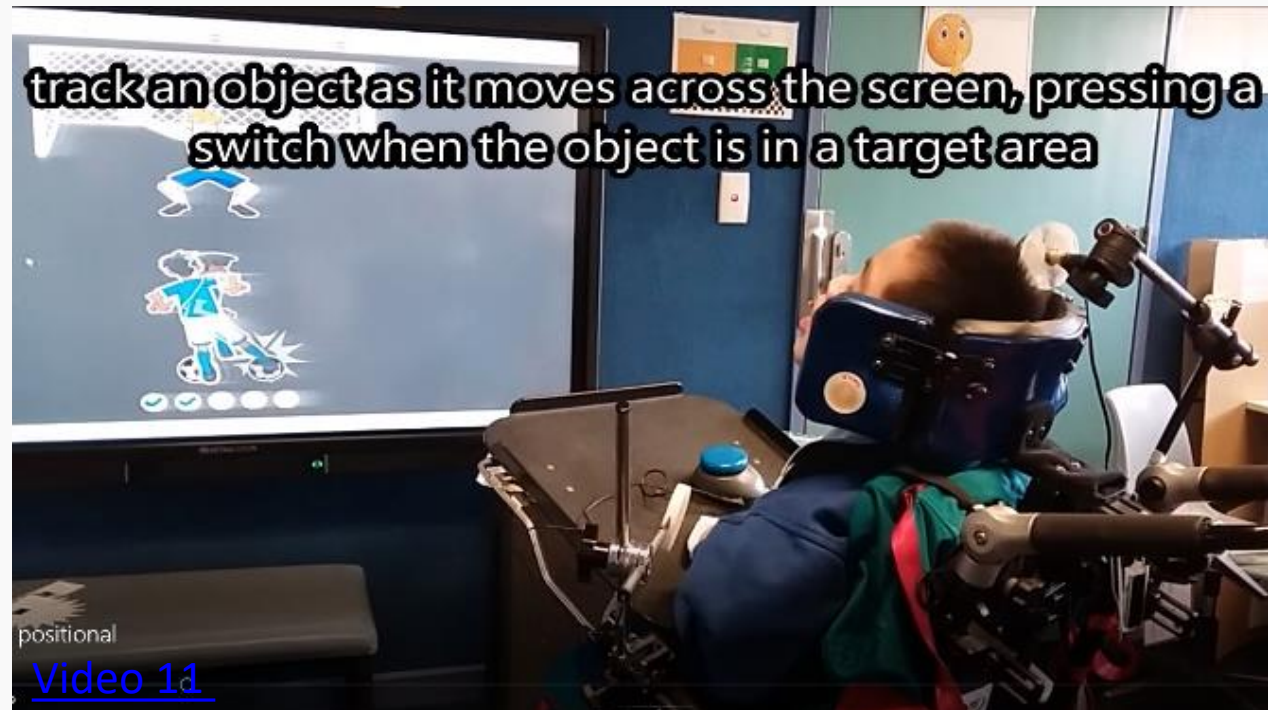
One Switch Timing

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.

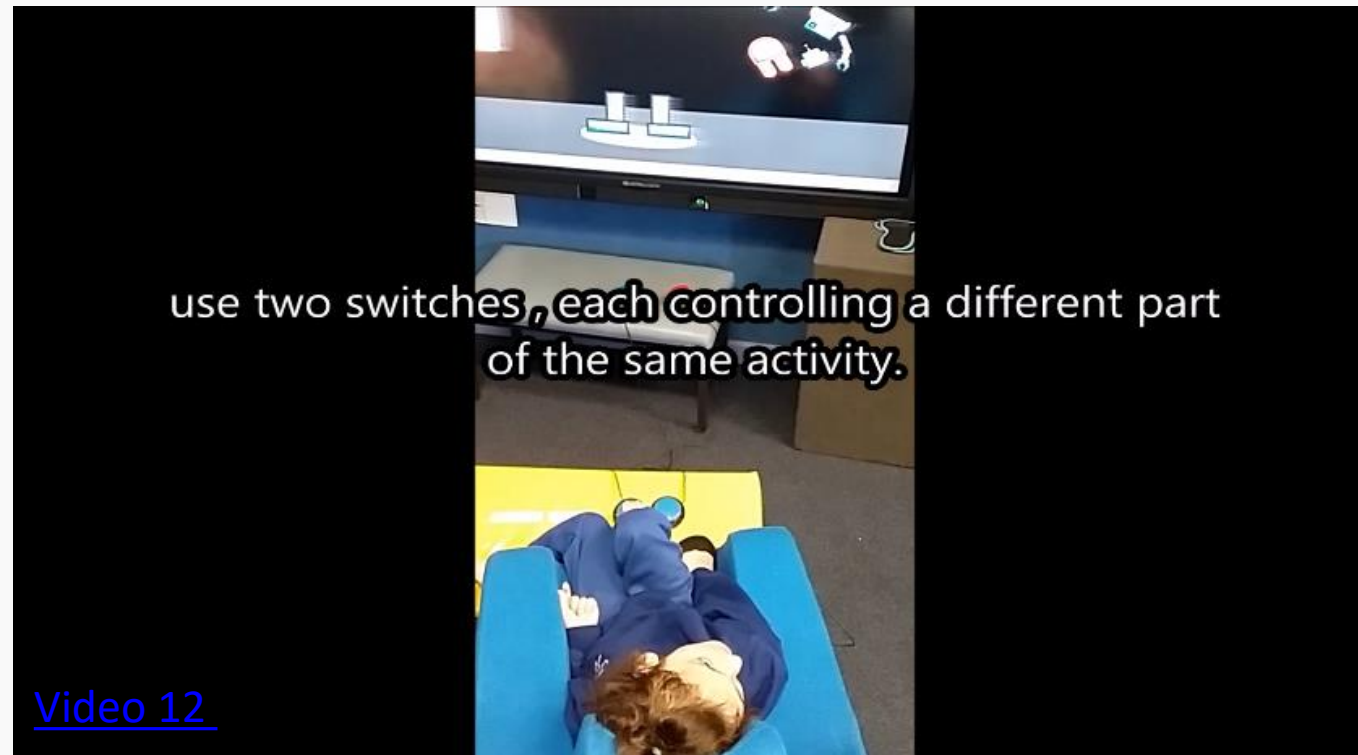


Two Switches Two Actions

Interacting with Objects

Move and Choose

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



Two Switches Two Actions

Interacting with Objects

Move and Choose

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



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.

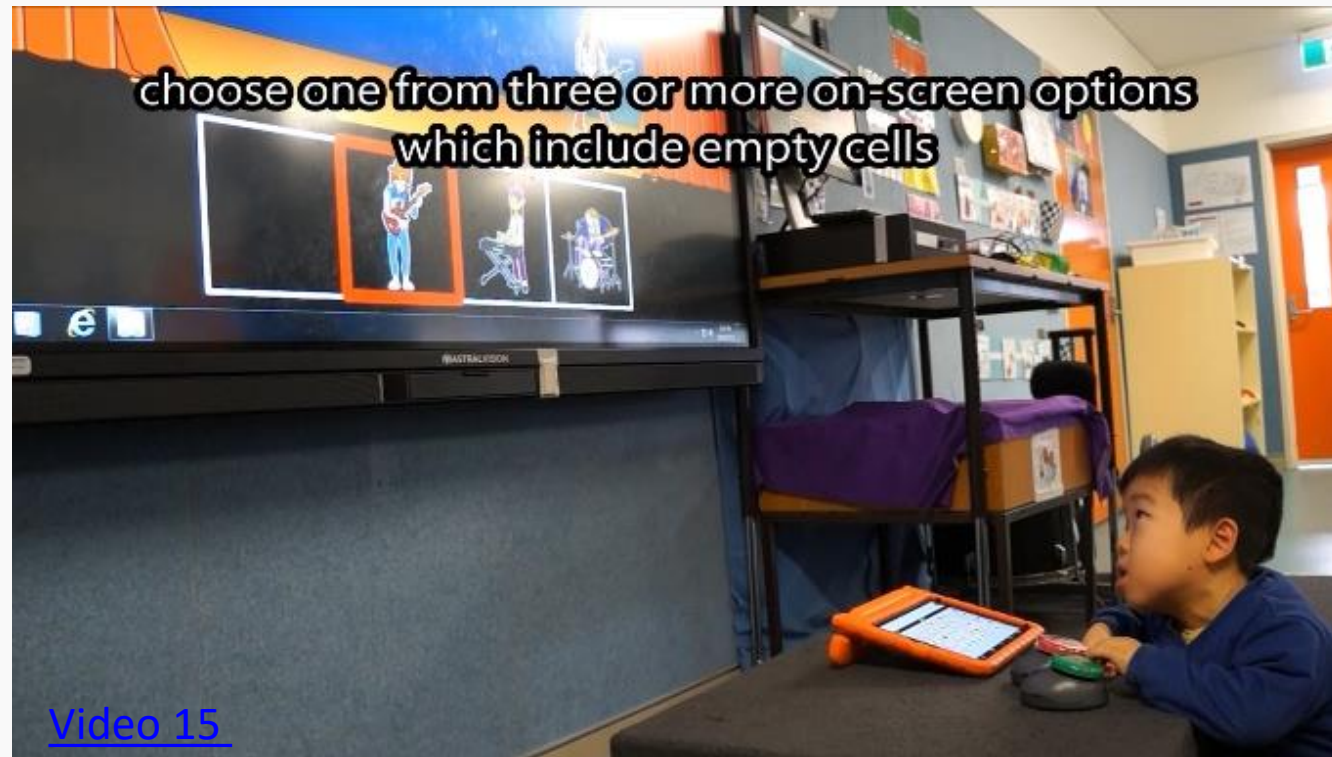


Choosing Independently

Nothing Here

Completing Sequences

Find the Right One



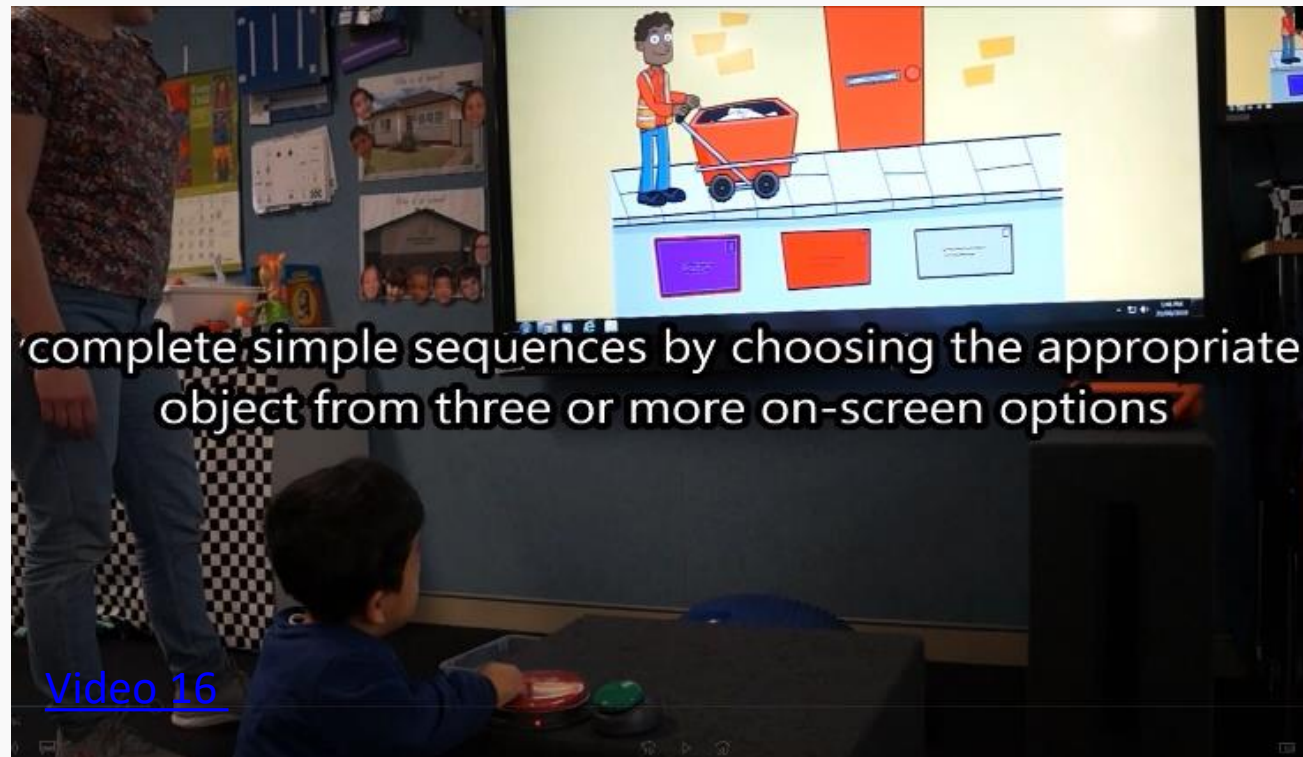
[Video 15](#)

Choosing Independently

Nothing Here

Completing Sequences

Find the Right One

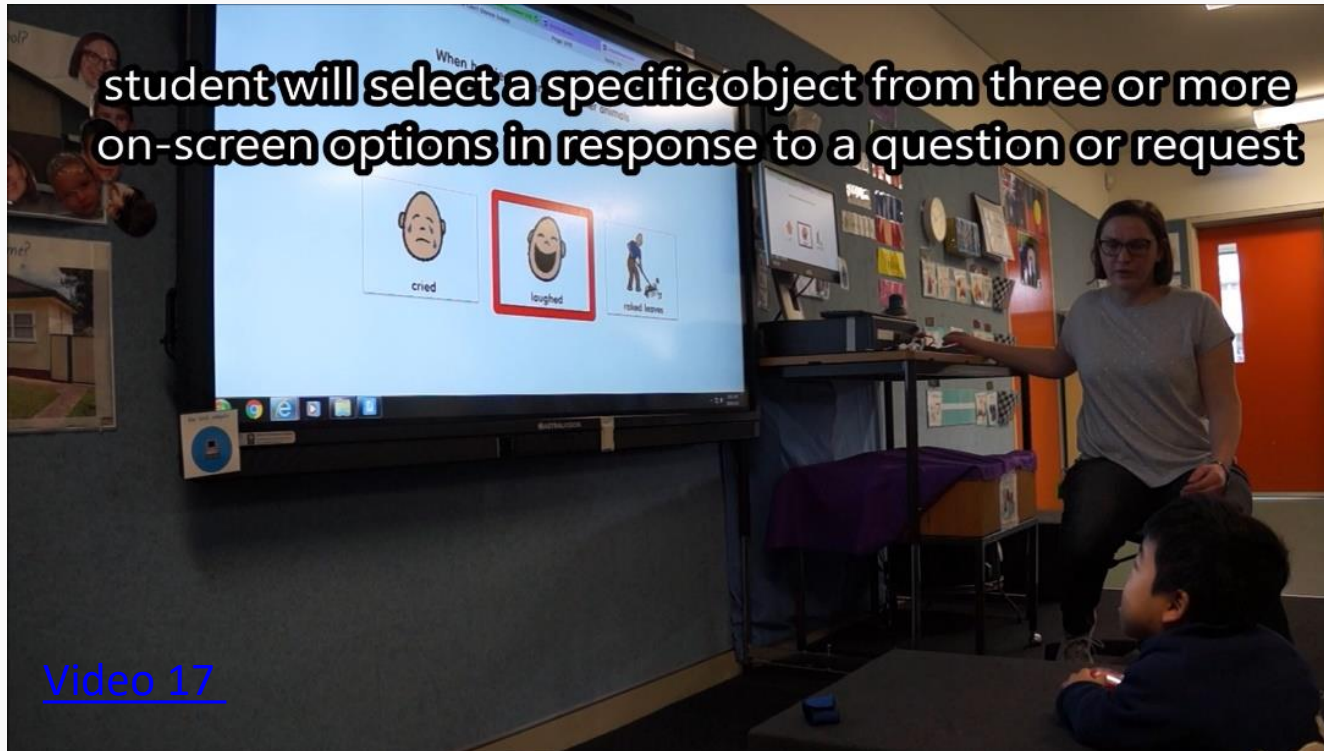


Choosing Independently

Nothing Here

Completing Sequences

Find the Right One



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 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

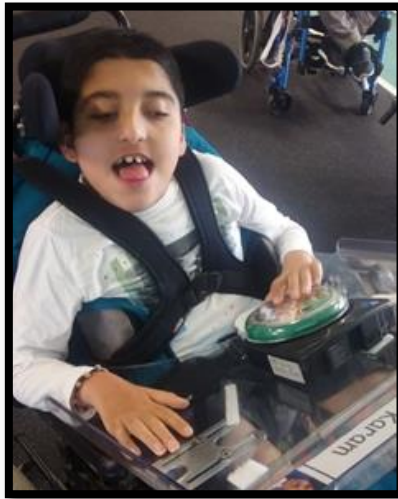
2018: year 3

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

Two Switches Two Actions



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

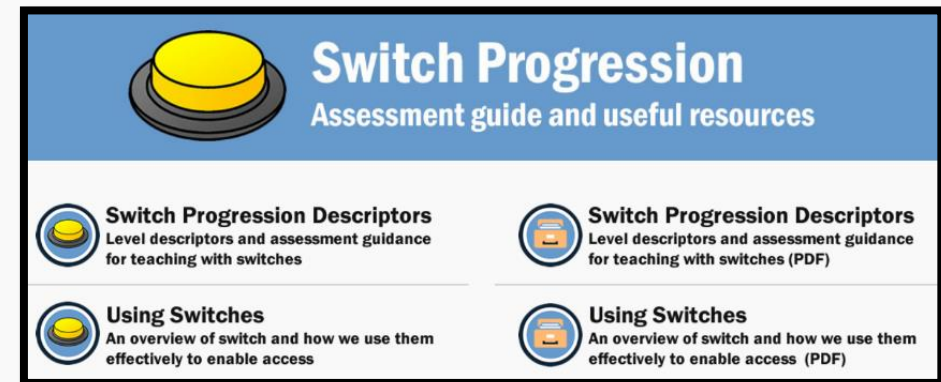


Assessment

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

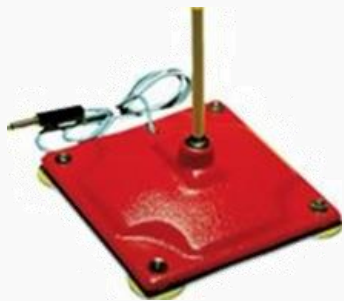
You will find student assessment tools at senictsoftware.com



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

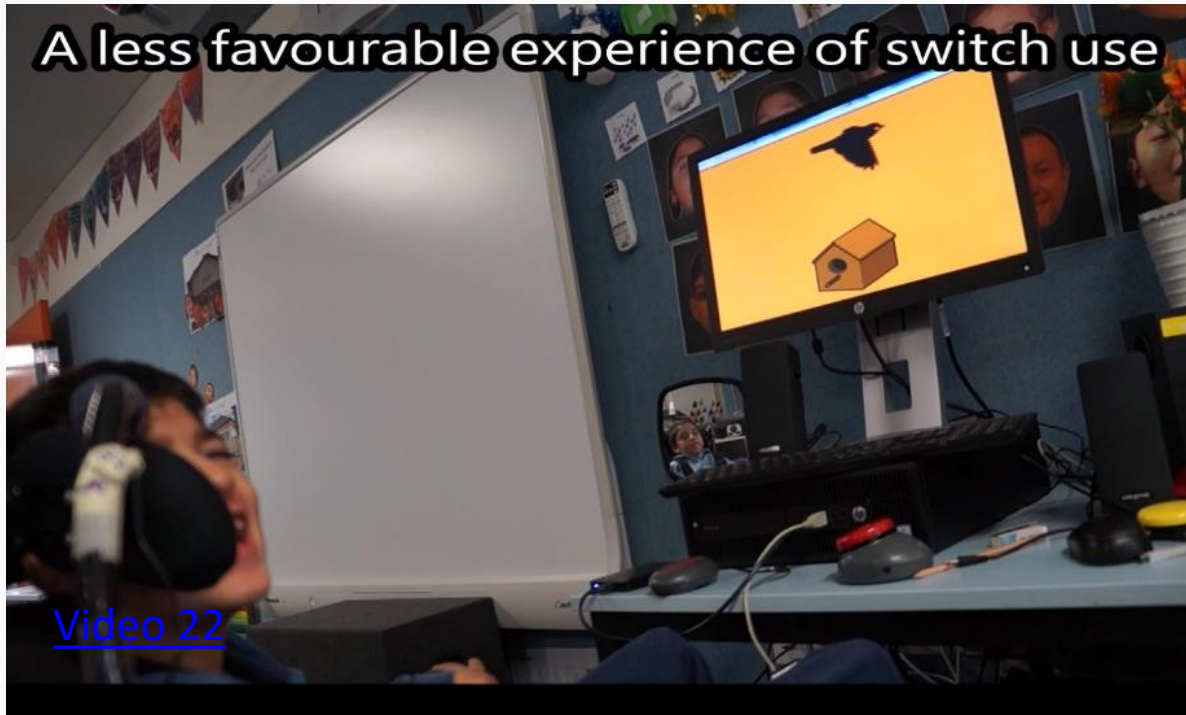
“Selecting the right switch and equipment is important, but positioning it well can make the difference between a functional system and frustration” Technical Solutions Australia website

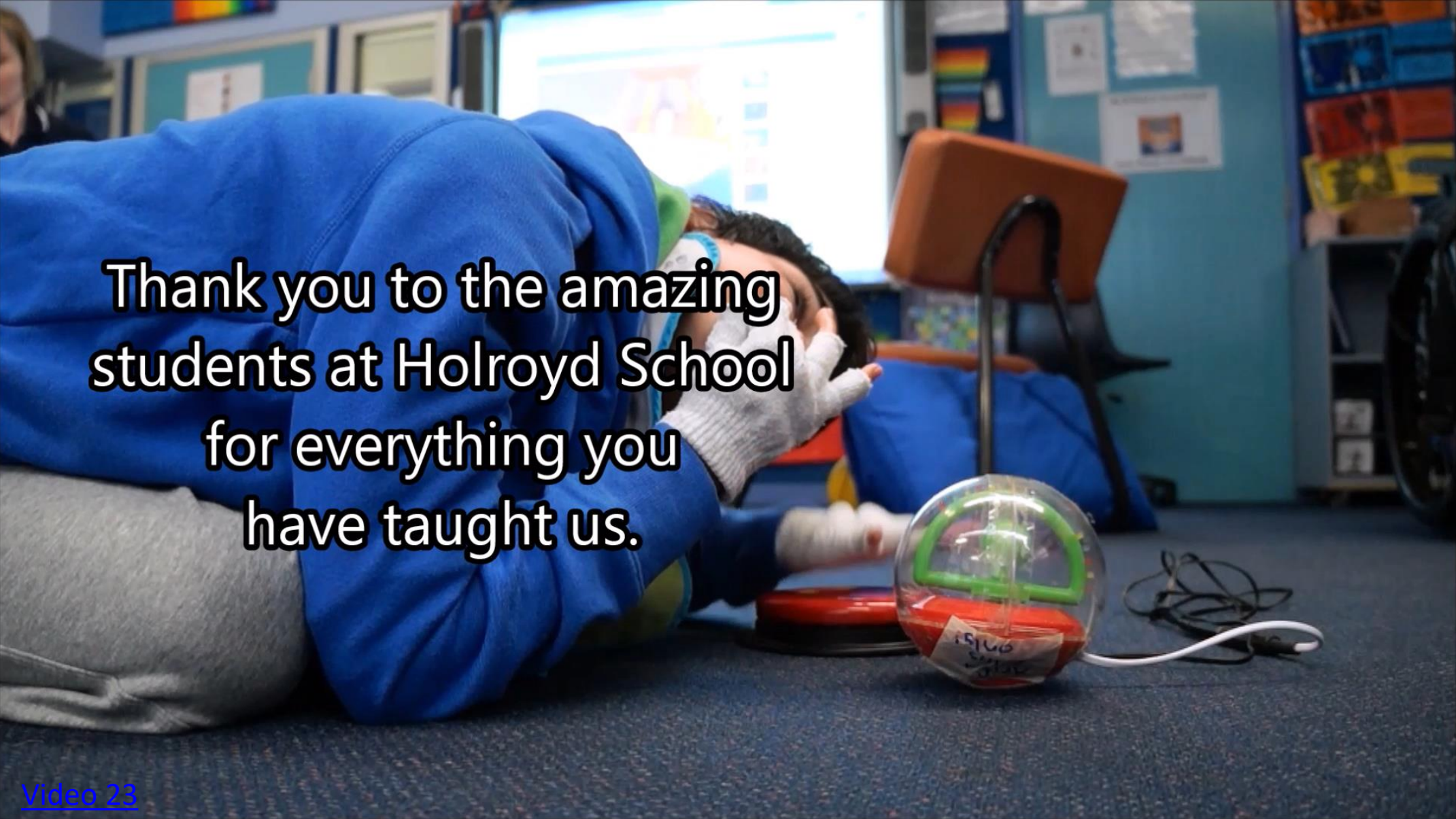


It Doesn't Always Go Right!

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.