

Beyond Cause & Effect



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What is our goal?



Using switches is a means to an end. Our students use them to interact with the world around them.

Our goal for every student is to teach them the skills they will need to use switches to make **independent choices**. Everything we do, every activity we provide should lead toward that goal.

It's not enough to simply give a child a switch, we need to give them a reason to use it.

Observe and record. Keep simple notes after each session. What worked? What didn't?
Be reflective.

Every student is on a journey.



Has the student got C&E?



An understanding of cause and effect underpins everything that we do in these next stages.

We need to be sure that the student has good understanding of cause and effect before moving on.

Is it enough to observe a student press a switch on one specific task?

The student needs to generalise the skill.

Create opportunities to use switches in a wide variety of contexts. Big Macks are our best friend at this stage of learning.

Don't move on until the child has demonstrated a good understanding of cause and effect.



More than a single press



SwitchIt! Weather (Inclusive TLC)

Completing simple sequences, noticing and responding to changes.

Record story sequences on a step-by-step communicator...

Create talking stories in common 'open framework' tools.

Some people believe that the next stage should be 'switch building' – pressing a switch a number of times to 'build' a picture, pattern or scene.

Is the skill here really that the student can press a switch three, five or more times? What are we trying to teach?



SENSwitcher (Northern Grid)



SwitchIt! Maker 2 (Inclusive TLC)

Moving on with one switch



Single switch scanning requires the learner to be able to track a scan box as it moves around the screen and press the switch when the scan box is highlighting the object they want to choose.

There are two skills here. **Timing** and **Tracking**. We need to work on both of them.

Very often students use a single switch because they have severe difficulties with gross and fine movement and only one reliable and repeatable movement can be identified. This group of students will find these activities challenging. **We need to be creative!**



Responding to an event



Often described as **POP UP**, this level requires our student to press the switch in response to an event. This could be something happening on the computer or an activity we may create away from the computer.

The key skills here are attending, noticing the event and responding by pressing the switch.

Some students will really struggle with this. Who are these students?



For these students we need to engineer ways to give them more time to respond. Use the 'timing' settings in the software or create activities where you decide how long the student has to respond.

Remember many outside factors can influence the student's ability.



Tracking and Targeting



The key skill at this level is to be able to track an object as it moves and press the switch when that object is in a specific place. This models how a student might track a scan box as it moves across the screen then pressing the switch when the scan box is highlighting the object that they want to choose.

There is very little software available which addresses this stage of learning. Remember that some students will find this difficult and you may need to be creative.



Creating activities away from the computer can be lots of fun and they give YOU control over the timing aspect. There will be more ideas for you to try in our next webinar.



When you are sure your student has a good understanding of both of these skills, you can move on to more formal scanning.

Moving on with Two Switches



At this level we provide the student with two switches which each produce a different effect. Essentially, each switch operates a different cause and effect activity.

This gives our student the opportunity to 'experiment' with switches, often demonstrating a preference for specific activities.

Be careful with questioning.

Don't restrict yourself to the computer. Use your Big Macks, Powerlink, battery operated toys and the multi-sensory room. Providing breadth and lots of practice is important at every stage of learning to use switches.



One Activity, Two Functions



At this level our students are using two switches to interact with one activity. For example, we might use one switch to build a tower of bricks and another to knock it down.

The key skill here is understanding that each switch affects only one part of the activity and that they need to use both switches to have full control.

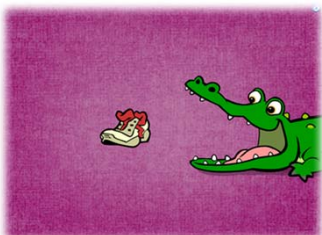
In this music activity, one switch moves to the next track and the other will play the music.



There is very little software that addresses this skill level. You will need to be creative. Try using the Powerlink2 to create a Disco. Once switch controls the lights and the other the music.



Move and Choose



Here we introduce the concept of 'move and choose'. Essentially this means that one switch will move through the options and the other will choose that option.

In the example opposite, one switch moves the shoe closer to the crocodile's mouth. The other switch make the crocodile snap its jaws. The student can press either switch at any time but they receive a bigger reward if

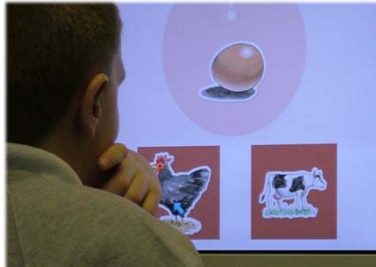
they press the choose switch when the shoe is in the crocodile's mouth. This models using one switch to **move** a scan box through a series of options and selecting one of the options by pressing the **choose** switch.

Remember that the student will be pressing the **move** switch many times and may get tired. Start with short sessions and build them up.

When you're sure your student has demonstrated a good understanding of the process, you can move on to more formal scanning activities.



Learning to Scan



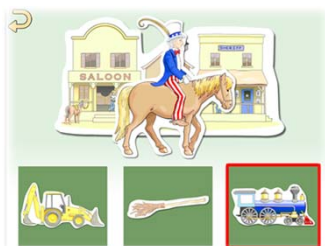
Whether we use one or two switches the general concept of scanning is the same. A scan box is moved through a series of choices. With one switch, this is done by the computer, with two, pressing the move switch achieves this.

The object is chosen by pressing the switch (the **choose** switch for two switch users).

Scan boxes are a very abstract concept. Before using them on the computer, try introducing them in the 'real' world. Cut a square box from red card and use this to highlight choices at meal times etc. This will help the student associate the red box with choosing.



Errorless Scanning



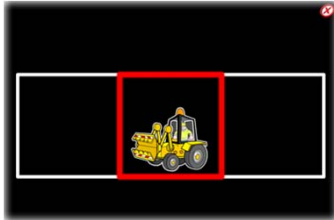
We usually introduce scanning at an 'errorless' level. This means simple that whatever the student chooses, they will always receive a reward. **They cant get it wrong.**

In this example the student is choosing events in a story telling activity. Whatever the student chooses determines how the story unfolds.

As the student becomes more proficient at this level, you may want to introduce some questioning. "Can you find the dog?" This will lead us into more focussed activities where the student will have to select specific objects.



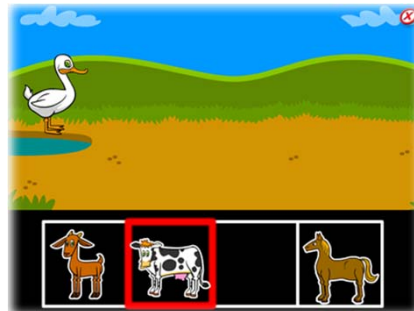
Choosing Specific Objects



Students at this level are required to select specific objects from a grid. It's best to use three cells rather than two. Only one cell will have an object. The student is asked to find the object then scans through the cells to select it. Auditory prompting helps... "nothing here... a digger... nothing here..."

In this example the student is required to complete a simple farmyard scene. The activity starts with four filled cells (errorless) then becomes progressively more difficult as objects are chosen and more empty cells need to be scanned.

You can make personalised activities like this in Chooselt! Maker 2.



Independent Choosing

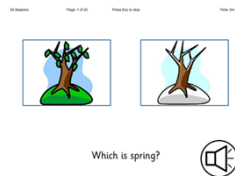
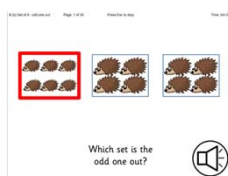


This is the end of our student's journey. They now have the skills they need to use switches to make independent choices.

Our challenge now is to ensure that we provide them with opportunities to use these skills to access communication, learning and leisure.

Open framework tools that support switch scanning enable us to create teaching activities.

Not everyone that we teach will reach this far but all of our students can and will make progress. They are on a journey, you have the road maps. Where will you take them?



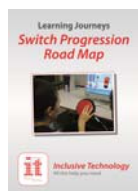
Useful Software

1-2-3 Paint	Easy Games	Switch Skills for Two Set One
Alphabet Paint	Happenings	Switch Skills for Two Set Two
Big Bang	Happy Duck	Switch Skills Scanning
Big Bang Patterns	Hey Presto	Switch Skills 2
Big Bang Pictures	Learn More Through Games	SwitchIt! Bob the Builder
Card Maker	Let's go to the Seaside	SwitchIt! Christmas Extra
Choose and Cook	Let's go to Town	SwitchIt! Dinosaurs Extra
Choose and Tell Fairy Tales	Megamix	SwitchIt! Farm Extra
Choose and Tell Legends	MyZone	SwitchIt! Hygiene Extra
Choose and Tell More Nursery Rhymes	Ooops!	SwitchIt! Jigsaw Maker 2
Choose and Tell Nursery Rhymes	Press It Now!	SwitchIt! Maker 2
ChooseIt! Maker 2	Press to Play	SwitchIt! Maker 2 Older Learners Ed
ChooseIt! Ready-mades Literacy	ReadIt! Younger Reader's Library	SwitchIt! People Extra
ChooseIt! Ready-mades Numeracy	Slideshow Maker	SwitchIt! Transport Extra
ChooseIt! Ready-mades Science	Spot On Games	SwitchIt! Weather Extra
Coping with Chaos	Step by Step	SwitchIt! Wildlife Extra
Counting Songs	SwitchIt! Facemaker	Teddy Games
Disco	Switch Skills 1	Toy Shop
Drumkit	Switch Skills 3	Two by Two
	Switch Skills Champions	

Software titles in red are the most useful open framework programs.

These allow you to make your own personalised switch activities at every skill level.

Any Questions?



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