

USING A SWITCH

My student hits the switch using.....

Please include:

- type of switch

- location

- how it is mounted/held in 1 spot

My student uses the switch for (specific examples please)

1. Voice Output (BIGmack etc.)

2. School Activities

3. Fun/Social Times

Ideas from other participants that might work for my student.....

MODES OF CONTROL FOR THE ABLENET POWERLINK

Modes determine the amount of time an electrical appliance (e.g. blender) that is hooked up to an Ablenet Powerlink stays activated once the switch has been hit.

- **Direct** - The student must keep pressure on the switch to keep the appliance going. This encourages reaching out and pushing/holding with the hand.

- **Timed (Seconds or Minutes)** - The student reaches out to hit the switch and the appliance continues to run for a set period of time. Repeated hitting of the switch will make the appliance run for whatever time period you choose to set. You may use different settings for different appliances and activities.

- **Latch** - The student turns the equipment on and it stays on until the switch is hit again to turn it off.

A battery operated device (e.g. All Turn It spinner, small fan, massager) runs on direct mode unless you have a Switch Latch (function is similar to a Powerlink).

Simple voice output devices such as a BIGmack or a Step-By-Step Communicator turn on when a switch is hit (or they are hit directly) and turn off automatically when the message is done.

Direct is the most concrete for learning but is often physically the most difficult. Your school occupational therapist or physiotherapist should help team members decide which mode to start with.

PROMPTING FOR SWITCH USE - SAMPLE ROUTINE

It will be easier for John to learn to use the switch if he gets consistent prompting/cueing from all the people that are working with him. Use the following sequence of prompts.

1. Let John know the switch activity is ready to start. Use some physical cueing, (e.g. taking his left hand to the switch 2 or 3 times to feel/see/hear what happens) for the first while, in addition to telling him.
2. Allow John 10 seconds to hit the switch on his own.
3. Cue John verbally to hit the switch. You can also tap beside the switch for extra sensory input. Keep your language clear, consistent and simple. "More music please, John. Hit the switch." Wait 10 seconds.
4. Physical prompt - Place your hand under John's left elbow and/or forearm. Move his hand slowly towards the switch so he has a chance to help you.

REMEMBER: Count out the 10 seconds silently. This will give John time to process your request and respond to it without stopping to listen to another verbal cue.

ACTIVITIES & ROUTINES WITH SWITCHES

Primary and Intermediate Grades

1. Switch Use in Functional Routines

It is important to start developing a repertoire of switch activities that are reinforcing for your student. These activities should include as many of the senses as possible as well as social contact and/or praise from adults or peers. Motivation is the key!

When switch access is new, opportunities for practice may need to occur both in a resource room/one to one situation as well as in the classroom. For switch use to have the most ongoing meaning, it needs to happen in a functional context as part of a routine that the student does on a regular basis.

2. How Can "Switch Use" Be Integrated Into Daily Activities?

Switch use has various functions. It can help to teach the student cause and effect and allow him/her to access voice output devices, take part in individual or group leisure activities and be a helper with a job to do at home, or in the classroom, school or community. Allow peers to try the switch. **It reinforces the use of the switch and places value on technology as the way the student interacts with his/her environment.**

A switch can be attached to almost any electrical device using an AbleNet Powerlink. **Use of these electrical devices in the classroom is intended to enhance a student's learning on their particular goals.** Some electrical appliances that could be used in the classroom include:

blender	juicer	sewing machine
can opener	lamp	scissors
card shuffler	magnifier lamp	spinner - All Turn It
conveyor belt	make-up mirror	stapler
coffee pot	malt machine	stereo
desk lamp	mixer	tape recorder
fan/spinner	organ	toaster
food processor	Paint 'N Swirl	vibrating pad
foot bath	paper shredder	vibrating pillow
hair dryer	pencil sharpener	vibrating slippers
hand held	massager	popcorn popper
ice cream machine	power tools	

3. Battery Operated Devices

Battery adapters are available for AA, C, D, and A batteries. When ordering adapters, make sure to specify the size needed. A battery eliminator for 9-volt batteries can be obtained from any electronics store.

Following are some tips for purchasing battery-operated toys or appliances (e.g. All Turn It Spinner, fans) for use in a simple technology system:

- Purchase battery-operated toys with an on/off switch and those powered by AA, C or D size batteries.
- If the toy runs on a track the battery compartment and on/off switch must be located on the track rather than on a movable piece.
- Toys that travel and spin are likely to get caught up in the wires of the battery device adapter.
- Consider the age appropriateness of the toys you buy. Very young children typically enjoy many battery-operated toys. However, there is a selection of items that may also be appropriate for creative play for older students.

4. Activities for Using Switches in the Classroom

4.1. Math

- Activate a tape recorder with a pre-recorded tape with math problems.
- Switch activate a tape recorder with a pre-recorded tape with answers to the day's math activity. Students can come to check their work.
- A Litebrite can be illuminated by the student with a switch. Classmates could be responsible for making the pattern: sort the pegs into colour groups, design patterns, make geometric shapes.

4.2. Computer

- Make posters for class presentations or projects. Partner chooses menus and a switch is used to activate menu choice.
- Try interactive switch games. Play with a partner to work on turn taking.

4.3. Science or Social Studies

- Use Paint 'N Swirl to create backgrounds for socials and science projects and displays. The student chooses the colours.
- Recycling: Switch activate a can opener to remove lids from cans for recycle bin. Classmates can bring cans from home. Paper shredders can also be operated with a switch and control unit.
- Use switch operated mixer to create play dough or cookie dough to make models for themes (planets, shadow box). The student may make some colour choices.

- Run a switch operated slide projector to run slides related to the classroom theme. You will need the slide projector adapter from AbleNet.
- Switch activate a tape recorder with sounds (e.g. animal) for classmates to identify. Sounds can be varied according to the theme.
- Switch activate the tape recorder with a pre-recorded tape with interesting facts about the subject at hand.
- Audio stories with read-along books may also suit science themes.
- Have the student make popcorn with a popcorn popper before a movie.

4.4. P.E.

- Use a pre-recorded tape to control movement to music with a move and freeze game.
- Play background music for warm ups or dramatic dance.
- Instructions or directions for peers to follow for movement activities or games (e.g. move right, move slowly, move high, Crow/Cranes) can be pre-recorded on a switch operated tape recorder.
- Use a BIGmack with pre-recorded cheers to cheer for classmates during team sports.

4.5. Library

- Audiocassettes and illustrated books can be controlled with a switch activated tape recorder.

4.6. Language Arts

- For story writing, classmates can read their stories into the tape recorder. Use a switch to play it back to the class for sharing time
- Run a listening center with a switch to check auditory comprehension. Play a short story for three to four students at a time when then have to answer pre-recorded comprehension questions.
- Play pre-recorded comprehension questions. When students finish reading a selection, they go to the student to listen to the questions.
- Use the switch to play a piece of music; classmates then write a story about the music.
- Play pre-recorded news for sharing time. One of the classroom buddies could record news sent in by the student's family.
- Use a switch activated tape recorder with audio library books. Read-a-long books are also available with some audio books.

4.7. Music

- Switch activate a tape recorder with a pre-recorded instrument or piece of music for classmates to identify.
- Play a rhythm on a tape recorder for the group to follow.

4.8. Art

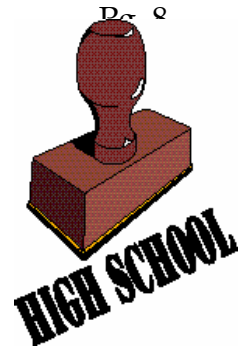
- Use a mixer and switch to mix cookie dough, paper mache or play dough for art projects. Play dough and cookie dough can be molded into thematic objects (dinosaurs, letters, spacecraft).
- Use a Paint 'N Swirl to make abstract designs for classmates. These designs are nice on their own, can be used as backgrounds for other projects or as stationary for: place mats, writing paper, gift or special occasion cards. Cardboard designs could be cut out and coated for brooches, earrings and refrigerator magnets.
- Play background music with a switch operated tape recorder for classmates to do impressionistic painting. Paper can be divided into six compartments. The student can play a short music segment while classmates paint what they visualize or how it makes them feel. Repeat with six different types of music.
- Use a popcorn popper to make popcorn art projects. The student can choose the colours of powder paint to add to the popcorn.
- The student could illuminate a mirror for a face painting session.

5. Daily Living Activities

- Help prepare snack or lunch by operating the blender and/or microwave.
- Operate a food processor to slice vegetables for salad or dinner.
- The student can participate in leisure type activities by playing the radio or tapes.
- Use a communication device (BIGmack or Step-by-Step) with messages when collecting attendance sheets. This might start with only his/her classroom and the one across the hall. Others within the same wing of the building could be added later. The messages could be made by peers and should change frequently to maintain the novelty. The messages could be jokes, statements, social interaction comments (e.g. "Good morning. Did you watch the hockey game last night?").

These are some suggestions to get you started. Use your imagination and local resources to determine other opportunities. The purpose is to increase the student's opportunities for using the switch to work on his/her individual learning goals in a variety of ways throughout the day.

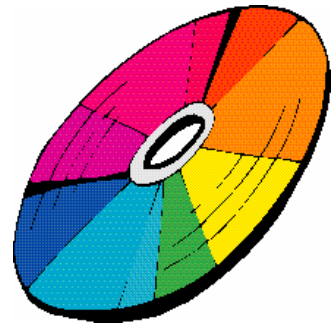
USING A SWITCH IN MIDDLE SCHOOL AND HIGHSCHOOL



For switch use to have the most ongoing meaning, it needs to happen in a functional context as part of a routine that the student does on a regular basis.

Art:

- Use a mixer and switch to mix cookie dough, paper maché or play dough for art projects. Peers can mold play dough and cookie dough into thematic objects (dinosaurs, letters, space-craft).
- Spin art/twirl-o-paint can be switch operated to make abstract designs for classmates. Choose the colors. These designs are nice on their own or can be used as backgrounds for other projects. AbleNet makes twirl-o-paint.
- Play background music with a switch operated tape recorder for classmates to do impressionistic painting. Paper can be divided into six compartments. The student can play a short music segment while classmates paint what they visualize or how it makes them feel. Repeat with six different types of music. Use the Timed function on the Powerlink.
- Use a popcorn popper to make popcorn art projects.
- Make gifts using spin art or twirl-o-paint. For example, place mats, writing paper, background designs for gifts or special occasion cards, book covers, cardboard designs to cut out and shellac for brooches, earrings and refrigerator magnets.
- Illuminate a mirror for a face painting session.



Band

- The student could tape a portion of the band class and at their request replay their performance for them to critique.
- The student could play pre-recorded applause upon completion of a recital.

Class/School Store:

- Play the price list with a switch and Step-by-Step Communicator.

Computer:

- Play interactive switch games with a partner to work on turn taking.



Cooking:

- Help prepare a snack by operating the blender or microwave.
- Operate a can opener, blender, mixer, coffee maker, food processor/chopper or a popcorn popper.

Jobs:

- Help prepare lunch by operating the blender.

- Use a communication device (BIGmack or Step-by-Step) with messages when collecting attendance sheets. The messages could be made by peers and could change frequently to maintain the novelty. The messages could be jokes, statements or questions. Conversation is enhanced if the message ends with a question.

Home:

- Play the radio or recorded music using an AbleNet control unit and switch.
- Turn on the TV and change channels using a TV/Video Control Unit from AbleNet. See the catalogue. Available through Insight Media in Surrey.
- Use a Step by Step to record conversations, jokes, compliments, questions or plans made with peers during break time so she can replay them at home for enjoyment and follow-up.

Language Arts:

- Classmates with written output difficulties can read short writing assignments into the tape recorder. The student can use the switch to play it back to the class for sharing time.
- Run a listening center with a switch to check comprehension. Pre-record on a tape player a short story for three to four students to listen to. Then play pre-recorded comprehension questions for them using the Step by Step
- When students finish reading a selection, they could go to the student to hear pre-recorded comprehension questions. These could be played with a switch and tape player and control unit. Use the Timed function so the tape stops after each question and is ready for the next question the next time the switch is pressed.
- Play a piece of music, then classmates then write or tell a story about the music.
- Play pre-recorded news for sharing time. A friend could record news sent in by the student's family.
- Use a switch activated tape recorder with Talking Books from the public library.
- Plug a Language Master into one Powerlink outlet, and a tape player into the other. The student chooses whether to listen to a book on tape, or to help a classmate practice spelling words, then presses the switch that corresponds to the chosen activity.



Leisure Time with Peers:

- Play games using an All-Turn-It Spinner: This tool is available from **Insight Media Centre in Surrey (604) 581-2420**, for \$171.00. It includes a "shake the dice" overlay. Additional accessory packages can be purchased, e.g., re-usable vinyl stickers for customizing an overlay, "Bowling" and "Golf" games. At its simplest level it can be used to make random choices in games. The overlays can be used to roll "1 dice" or "2 dice".

- Students can be assigned different roles. One student could be the "spinner" for all the players. Another student could be the calculator and add the numbers when 2 dice are "rolled".
- Students can work in partners.
- Voice output could be added by plugging in a BIGmack or Step-by-Step. Use the sequences to say whose turn is next, to say encouraging phrases.
- Run a battery operated card shuffler using a battery bypass device from an electronics store and the AbleNet control unit. (This could be borrowed from PISP for trial.)
- Operate a game spinner to make random selections with other students playing a game, for example, Twister. The disc could have the four colours of the game on it. The student could select the colours for the next player.

Math:

- Play a pre-recorded tape with math problems.
- Play a pre-recorded tape with answers to the day's math activity. Students can come to check their work.
- Switch activate a tape recorder with a pre-recorded tape with story problems
- A Litebrite can be illuminated by the student with a switch. Classmates could be responsible for making the pattern, e.g., design patterns, geometric shapes.



Music/Band:

- Play a pre-recorded tape of an instrument for classmates to guess which instrument is playing.
- Play a recording of a bell chime along with other instruments being played.
- Use Step by Step to name which instrument should play next during a practice.



Office Jobs:

- Sharpen pencils for office staff with an electric sharpener.
- Shred paper for staff using switch and control unit and paper shredder.
- Operate electric stapler to help collate materials for other teachers.

PE:

- Play a pre-recorded tape to control movement to music in a dance class.
- Play background music for warm ups or dramatic dance.
- Play a pre-recorded tape to give instructions or directions for students to follow for movement activities or games.
- Play pre-recorded cheers to cheer on classmates during team sports.

- Announce the starting line-up or the start of a team game.
- Give instructions to the team/class on the BIGmack or the Step-by-Step.

School:

- Use a WaterPic (a water pressure system used to remove plaque from teeth which may be found in a garage sale or advertised in a want ad) to help water plants. Connect it to a control unit and switch. Peers could bring plants to the student. They could hold the wand while she presses the switch long enough to water the plant. The student may be able to hold the wand if the handle is enlarged.
- Operate electric stapler to help collate materials for other teachers.

Science/Socials:

- Use art ideas to create backgrounds for socials and science projects and displays for example make sponge prints or Spin Art backgrounds (See AbleNet catalogue) for a mural.
- Use a can opener to remove lids from cans for recycling.
- Operate a paper shredder to make nesting material for class pets. Supply this to elementary schools.
- Operate a mixer for play dough to make models for themes (planets, shadow box). The student chooses the colours as well.
- Run a slide projector to show slides related to the classroom theme. Use the slide projector control from AbleNet.
- Audio stories with read-along books may also suit science themes. The "Timed" function on the control unit may be helpful.
- Make popcorn with a popcorn popper before viewing a video.



“Play a pre-recorded tape with interesting facts about the subject at hand.”



Sewing Class:

- Use a switch to operate electric scissors. Scissors could be operated by a peer or assistant to prepare paper or fabric for projects.

Woodworking

Connect a drill press to the PowerLink. Use the switch to run the press so classmates work together to make a project.

WORKING TOWARDS THE 1001 SWITCH IDEAS

<p>Paint 'N Swirl</p> <ul style="list-style-type: none"> • art projects - cards, bookmarks, background for seasonal shapes (e.g. hearts, pumpkins, candy canes) • special reward for peer • to do with siblings at home • make postcards to send to family members or a secret pal at school • to decorate his/her room • help peers to make a joint project (e.g. hand quilt in the library) • creating the cover for a concert program • decorations/placemats then laminate • use fabric instead of paper - do for family, friends or school fund-raiser • border around bulletin board or artwork • decorating thank you cards • decorating posters • newsletter • wall decorations - home or school 	<p>Electric Stapler</p> <ul style="list-style-type: none"> • set up bulletin board • handouts • newsletters • help in an office (school or community) <p>Make Up Mirror</p> <ul style="list-style-type: none"> • personal hygiene (e.g. brushing teeth, washing face) • styling hair • face painting at school or community fund-raiser • help peers put on make up •
<p>Vibrator/Massager</p> <ul style="list-style-type: none"> • sell mini massages at a school fair • art - run vibrator beside the paper to make patterns • massage for hurts from the playground or after a game/track and field event • to give self enjoyable sensory experience 	<p>Water Pik</p> <ul style="list-style-type: none"> • water plants • rinse dishes • add water to paints when mixing • washing overheads (dry with hair dryer after) - school job • to keep clay wet • help detail the car • wash equipment (e.g. paintbrushes)

<p>Blender</p> <ul style="list-style-type: none"> • do a demo with the teacher • blend up paint colours • make smoothies as a reward for peers • mix a special drink etc. that fits with a socials theme • food items (pudding, whipping cream, making a snack for class that fits with a socials theme, baking) • whip cream for art - add colour • making paper or papiér maché • science - emulsion • helper to make items for peers to support curriculum • help make dinner (blend a soup) • milkshakes • crush ice <p>helping at a pancake breakfast</p> <ul style="list-style-type: none"> • mixing drinks at a party 	<p>Can Opener</p> <ul style="list-style-type: none"> • open coffee cans in the staff room • as part of a demo with teacher • open cans for recycling program • part of cooking class • help feed cat or dog <p><u>Pencil Sharpener</u></p> <ul style="list-style-type: none"> • sharpen pencils for peers, library, secretary or other classes • sharpen crayons • sharpen chopsticks for garden stakes • fund raiser - charge people for sharpening their pencils - 1 cent each
<p>Coin Sorter</p> <ul style="list-style-type: none"> • after a fund-raiser • for the school secretary • for the daily concession • for PAC • to work on concepts (Which row is bigger?) • weekly for family for "treat" or holiday bank 	<p>Electric Scissors</p> <ul style="list-style-type: none"> • cutting paper for art projects, cut and paste, math (shapes for patterns) • doing prep for crafts • helping peers to cut up sentence strips

<p>Fan</p> <ul style="list-style-type: none"> • station as part of a science experiment - peers come to him for a bonus question • blow bubbles <p>Digital Camera (& remote switch)</p> <ul style="list-style-type: none"> • show pictures on a theme for class • take pictures using remote switch 	<p>Hair Dryer</p> <ul style="list-style-type: none"> • dry dishes in the staff room or at home • dry paint or spread paint during art • blow out candles on birthday cake • on cool setting drying overheads (just washed with water pik) - school job • dry nail polish • dry temporary tattoos (at school or community fund-raiser) • sound effect in a play • dry hair at pool for self and others • shrink wrap • soften beeswax sheets for candle making • melting ice for science experiment • blowing a toy windmill • blowing bubbles
<p>Popcorn Popper</p> <ul style="list-style-type: none"> • popcorn for a movie/video in class or at home • sell popcorn at school or community fund-raiser • Christmas decorations • art projects 	<p>Paper Shredder</p> <ul style="list-style-type: none"> • rough copy of report cards • for secretary - school or community • art activity - stuffing for 3 dimensional objects (e.g., hanging fish) • making paper maché • packing for mailing • animal bedding

Spinner

- use as dice for a board game (e.g. Snakes and Ladders, Yahtzee)
- Bingo
- use for math drills - addition, subtraction, multiplication or division
- put colours on and play Twister at indoor recess or lunch hour
- P. Ed. - choosing activities, go/stop, directions, picking teams (e.g. next person in line goes to the _____ team.")
- change centres
- picking activities/partners
- science - animals/features organs/function, size, location planet/properties/location
- operate light sources to discuss properties
- LA - pick key topic for discussion (characters/action/motivation)
- History/SS - event (people involved/impact/dates)
- Wheel of Fortune - spinner says how many points an answer is worth
- raffle - each prize gets assigned a number then peer pulls name out of a jar for that prize
- fortune telling booth at school fundraiser

Tape Player/BIGmack (or other voice output)

- play music in halls at lunch or recess
- play background music or sound effects during a play or an art class
- instructions (e.g. recipe, at a science centre)
- announcements for the class or a part of activate a song during concert or assembly
- jokes
- conduct interviews for school or community projects, newsletters, newspapers
- tests
- answers to question of the day
- listen to story tape (commercial, or read by family member or peer)
- read a story to a kindergarten class or in library
- record singing or music class and play back
- record a drum roll or drum machine to introduce a piece of music played by peers