



## Occupational Therapy Fine Motor Skill Resource Information

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## Seating/Positioning

- In order to maximize hand and arm function, especially for children with motor difficulties, it is important that they are properly seated for table activities (including access to a computer).
- Optimal seating requires that the feet are flat on the floor or another surface, the hips and knees are positioned at 90°, back is supported by the backrest of the chair, and the arms are supported at an appropriate height (i.e., approximately 2" above the bent elbow) on the table/desk surface.
- The chair depth should be long enough to support the upper leg, but allows at least 3 finger spaces between the chair seat and the back of the knee.




## Colouring Activities

- Children having difficulty with accuracy for colouring tasks may benefit from the use of larger diameter or shorter colouring utensils.
- A bold outline and simple pictures can help with encouraging colouring within the visual boundaries.
- Also, a tactile outline (i.e., dried school or glitter glue) can provide a tactile boundary, especially useful for children who may not maintain visual interest in the colouring activity and who tend to scribble all over the page rather than colouring in a picture.





## Cutting Activities

- Children who have difficulty with cutting accuracy may benefit from the use of thicker media (i.e., construction paper or two pages glued together) as it can increase control of cuts.
- Right-handed children should be encouraged to cut in a counter clockwise manner and left-handers, clockwise. This ensures that they can see the lines they are cutting.
- Their forearms should be in a neutral or "thumbs up" position when cutting and they need to use a helper hand (non-dominant hand) to assist with paper stabilization and rotation.
- If a child is having difficulty with cutting accuracy, they may benefit from the use of scissors with tension-control. Tension-control scissors allow a child to concentrate on the cutting task rather than having to concentrate on the co-ordination of the opening and closing of the scissors. "My First Fiskar"/"Fiskars SquEEzers" scissors are tension-control scissors for beginners and/or children that require a safe, enclosed blade. These scissors are available at many local retailers and at: [www.therapyschoppe.com](http://www.therapyschoppe.com)
- Thick, bold lines will also assist with cutting tasks for a child having difficulty cutting precisely.



## Wrist Position for Printing and Writing

- Ideally the wrist is positioned in a slightly extended position (i.e., bent back slightly) when writing.
- If this is difficult, a child may benefit from an inclined surface for writing to encourage proper wrist positioning (i.e., flat 2" binder, slant board).



## Efficient Pencil Grasp

- For optimal printing and writing performance it is recommended that a proper pencil grasp is used.
- An efficient and preferred pencil grasp requires that the index finger and thumb rest on the pencil and the pencil rests on the middle finger (tripod grasp). The web space between the thumb and index finger is an open, circular space and the pencil rests at the base of this web space. The pencil should be angled back to rest within the web space rather than straight up in the air.
- Early printers will move the entire hand using wrist or forearm movements and this is referred to as a static pencil grasp. As we progress to cursive writing a more "dynamic" pencil grasp using finger movements is the most beneficial.
- Other pencil grasps can be considered efficient as well, including the use of a "quadrupod" grasp with the thumb, index and middle fingers resting on the pencil and the pencil resting on the ring finger. It is important that the web space remain open and rounded for this to be considered an efficient pencil grasp.
- The non-dominant hand should be used as the "helper" hand by holding the page at an appropriate angle.






## Pencil Grips

- This section will provide information on various pencil grips and how they may be useful.
- Purchase information is also included; however, these items may also be purchased from other retail options.




## "The Pencil Grip"

- A flexible rubber pencil grip that allows use for both right handed writers (thumb placed in area identified by the letter "R") and left handers (identified by "L").
- This grip is comfortable and provides assistance with proper grasp by providing surfaces for the thumb, index finger, and middle finger.
- It is placed on the pencil with the letters closest to the eraser end or the wider area at the top.
- It can be purchased at: [www.scholarschoice.ca](http://www.scholarschoice.ca) for ~\$26.99 for 12.





## The "Crossover" Grip

- This pencil grip is similar in design and fabrication as "The Pencil Grip" as it was produced by the same company.
- The main difference with this grip is the added "wings" that prevent the thumb from crossing over the index finger.
- It is placed onto the pencil similarly to "The Pencil Grip" and also has indicators for the thumb placement for wither left or right users.
- It can be purchased at: [www.scholarschoice.ca](http://www.scholarschoice.ca) for ~\$2.99 each or \$26.99 for 12.







## The "Stetro" Grip

- The "stetro" pencil grip is made out of a firmer rubber than "The Pencil Grip" and the "Crossover" grip and is quite a bit smaller than the others.
- It too allows for specific finger placement (right handed, the thumb rests on the space with the star) to encourage a more tripod pencil grasp.
- It can be purchased at Scholar's Choice and costs ~\$11.99 for 36 grips.
- [www.scholarschoice.ca](http://www.scholarschoice.ca)





## The "Solo" Pencil Grip

- The "Solo" pencil grip is similar to the "Stetro" pencil grip as it is made out of a firmer rubber than "The Pencil Grip" and the "Crossover" grip.
- It is larger than the "Stetro" pencil grip, but smaller than most of the other pencil grips.
- It too allows for specific finger placement (right handed, the thumb rests on the "R" and vice versa) to encourage a more tripod pencil grasp.
- It can be purchased at Scholar's Choice and costs ~\$24.99 for 25 grips. [www.scholarschoice.ca](http://www.scholarschoice.ca)

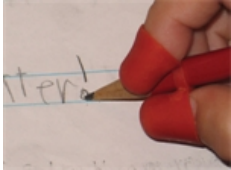

## The "Tri-Go" Pencil Grip

- This is a cylindrical shaped grip made of a moulded plastic material.
- It has areas built-in to encourage proper finger placement for a more 'tripod' grasp.
- This grip may be used for a child who would require some assistance with finger placement and a larger diameter writing utensil.
- These grips are available at: Scholar's Choice for a cost of ~\$2.99 for 10. [www.scholarschoice.ca](http://www.scholarschoice.ca)



### "The Writing Claw" Grip

- This pencil grip encourages the child to place the thumb, index, and middle finger in a tripod position. The child places each finger in one of the cups placed around the pencil.
- Some children may find this grip too restrictive, but it may assist with adjusting an inefficient pencil grasp.
- Available in two sizes: small and medium.
- Available at : Scholar's Choice and cost ~\$1.50-\$1.99.





### Foam/Gel Pencil Grip

- Many varieties of foam or gel pencil grips are available commercially at a variety of price points.
- These grips provide a slightly larger diameter for the pencil and can also be more comfortable than other pencil grips.
- Some children prefer this type of grip for its comfort and because it is not as different as some of the other grip choices.
- [www.smilemakerscanada.com](http://www.smilemakerscanada.com) and [www.scholarschoice.ca](http://www.scholarschoice.ca) carry a wide variety of fun pencil grips including gel, 'squishy' pencil grips.

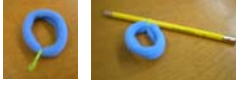


### Triangle Pencil Grip

- This style of pencil grip encourages the placement of the thumb, index and middle fingers on the pencil in a tripod grasp.
- It is also available commercially in a variety of different styles and for variable prices.
- Again, some children may prefer this type of pencil grip due to its simplicity.
- Scholar's Choice \$1.69/for 5 grips.
- [www.scholarschoice.ca](http://www.scholarschoice.ca).
- Triangle style pencils/crayons/markers are also available commercially and can provide similar facilitation of a tripod pencil grasp.






### Wrist Elastic/ Web Space Positioning

- Some children will hold a pencil with it resting straight up rather than back in the web space.
- This difficulty can be addressed by placing a small elastic around the pencil with a large 'ponytail' elastic attached to go on the wrist. The elastic placed on the wrist needs to be comfortable and not too tight as to reduce blood flow.
- A small charm could be attached to the large elastic and placed at the base of the ring and little fingers to encourage that these fingers are tucked into the palm by holding onto the charm.





### Pencil Pressure

- If a child presses too hard when printing or writing they may be adding this pressure to aid in stabilizing the pencil for writing.
- Finger strengthening activities will encourage increased finger movements and control.
- Also, mechanical pencils can be used to encourage decreased pencil pressure and clarify writing. Most regular diameter mechanical pencils can also accommodate pencil grips.
- Mechanical pencils come in a variety of thicknesses (0.5 mm, 0.7 mm, 0.9mm, 2.0 mm). If the child presses too hard and is frustrated by the mechanical pencil breaking, a larger diameter lead could be tried.
- To encourage even more reduction of pencil pressure, you could have the child try writing on tissue paper with the mechanical pencil; the tissue will tear if they press too hard.



### Pencil Control

- Some children will benefit from using a shorter writing utensil as there is less of the pencil to control.
- Larger diameter pencils (i.e., primary pencils or primary triangular pencils) may be easier for a child to grasp and control as well. A larger diameter pencil could also be cut in half to shorten and facilitate pencil control.




## Paper

- There are many different styles of paper that can be used to encourage and facilitate writing tasks for children having difficulty with letter sizing, spacing and baseline orientation.




## Hint Print Paper

- This paper has visual cues for letter placement on the lines and in the spaces.
- The majority of letters will fit on the line in the green "grass" area, ascending letters use the blue "sky" area too and the descending letters fall into the brown "earth/dirt" area.
- This paper can be purchased at: [www.otideas.com](http://www.otideas.com) and costs ~\$4.00 US/pad (25 sheets).




## Tactile Paper

- Tactile paper contains lines that are somewhat raised and can assist with proper placement of letters by providing a tactile cue for the lines.
- Some samples of this paper are available at local retailers in a variety of styles.
- Another company that distributes this type of paper is: [www.therapysnoppe.com](http://www.therapysnoppe.com). The cost is ~\$24.99 for 125 sheets. The brand name of the paper is 'Right Line' in 'wide' and 'narrow styles'.



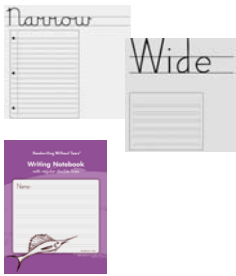
## Three-Line Paper

- Paper with two solid lines and a middle, dotted line can assist a child with placement of letters on a line and within the spaces as necessary. Spaces between each line should be available to limit the confusion of descending letter placement.
- This paper can be commonly found in schools.
- If a child has difficulty with ascending and descending letters, he/she may benefit from having the lines highlighted in different colours to provide reference points.
- The enclosed example called 'easy Writing Paper' was provided from: [www.easywritingpaper.com](http://www.easywritingpaper.com) and is also available at: [www.sammonspreston.ca](http://www.sammonspreston.ca).
- This style of paper can be presented in a variety of sizes according to a child's need.




## Double-Line Paper

- This style of paper is used with the 'Handwriting Without Tears' printing and cursive writing programs. It provides a student with two simple lines and spaces between each line to facilitate letter placement.
- The simplicity of this type of paper encourages that the majority of the letter fits between the lines, upper case letters and ascending letters go above the line and descending letters drop below.
- This paper can be purchased at: [www.hwtears.com](http://www.hwtears.com) and costs ~\$2.95 for 100 sheets. It is available in wide, regular and narrow rule and can also be purchased in notebook form.

## RediSpace Transitional Notebook Paper

- Transitional paper provides a clear "start" left margin and a "stop" right margin using visual cues (i.e., colours and street signs).
- The marker lines on each solid line can assist with letter and word spacing.
- Available in "Notebook" or "Storybook" styles at [www.scholarschoice.ca](http://www.scholarschoice.ca)

## Carbonless Notebook Paper

- For students having difficulty with copying notes from the board within the time allowed, carbonless paper could be used by a peer and then separated into two copies to ensure students have the notes.
- This would save teacher's and assistant's time and effort as they would no longer need to photocopy unfinished notes for students.
- Available at:  
[www.mayerproducts.com](http://www.mayerproducts.com) or  
[www.beacon-ridge.com](http://www.beacon-ridge.com).



## Finger Spacers

- For children who have difficulty with placing spaces between the words, a concrete cue can sometimes help.
- Finger spacers can be purchased with either one or two fingers to space as required.
- Purchase information can be found at:  
[www.therapyschoppe.com](http://www.therapyschoppe.com)  
 for ~\$12.00 for a set of 20.



## Printing and Cursive Writing Programs

- In order to encourage the development of printing and writing skills we often use different program booklets for practice.
- To facilitate letter learning, it is recommended that a program be arranged based on letter formations or letter groups rather than alphabetically to facilitate letter learning.
- The programs available will range in complexity and this should also be considered when providing them as a tool for students.
- The following programs are some that we recommend on a regular basis; however, there are many other appropriate programs on the market and available to school.



## "Handwriting Without Tears" Printing

- The Handwriting Without Tears (HWT) program was created by Jan Olson, Occupational Therapist. It incorporates several developmental concepts into the introduction of letter and number formation learning.
- This program uses visual cues to associate with letter formations and encourages proper sizing, spacing, and baseline orientation by using paper with only two lines separated by spaces.
- The author of this program encourages the learning of upper case letters first as they are all the same size, they all fit within the space of an elongated rectangle, they are commonly seen within the environment (i.e. STOP, EXIT), and they can all be formed from a combination of big line, little line, big curve, little curve.
- She insists that a child should not be tracing letters if the intent is to learn the letter formation and that a "perfect model" is required for each letter that you intend the child to form.
- Her printing booklets are available in French and English and are available in increasing complexity from an early introduction of letters ("Get Set for School") to more of an emphasis on lower case letters and reducing line spaces with ("My Printing Book").



## "Handwriting Without Tears" Cursive Writing Program

- This is a simplified cursive writing program also created by occupational therapist, Jan Olson.
- It is a program featuring simplified cursive instruction. The letters in the program are not slanted and the program does not require "loopy loops" when they are not necessary (i.e., h, and k do not have loops).
- Due to its simplicity, this program is often recommended for those children with significant fine motor control and visual perception difficulties.
- Again the program uses visual cues, simple language and double lined paper similar to the printing programs.
- Preparatory activities to encourage increased dynamic finger movements are found at the beginning of this cursive writing booklet.
- There are two cursive writing booklets available in both French and English and can be purchased at [www.hwtears.com](http://www.hwtears.com).



## "Handwriting Without Tears"

- This program has several material supports available for purchase including: chalkboards, wooden pieces, music CDs, paper, crayons, pencils, playdough tray, and teachers' guides.
- Purchase information for "Handwriting Without Tears" materials:

[www.hwtears.com](http://www.hwtears.com)



## "Loops and Other Groups" Cursive Writing Program

- This cursive writing program was prepared by an occupational therapist and uses 4 distinct letter formation groups for the learning of cursive writing. The "clock climbers" (a, c, d, g, q), the "kite strings" (i, s, j, p, r, o, t, w, s), the "loop group" (e, f, h, k, l, b), and the "hills and valleys" (y, u, z, x, v, n, m) make up the four groups used in this program.
- This is a kinesthetic program using pages with three lines and a dotted centre line to facilitate letter spacing, sizing, and baseline orientation. The program also encourages students to try writing letters with their eyes closed at the bottom of each page to assist with motor memory of letter formations.
- The program emphasizes the practice of letters that are difficult to connect (i.e., bridge connectors).
- It also provides distal finger control exercises to encourage more dynamic finger movements when writing.
- "Loops and Other Groups" booklets can be purchased through:  
[www.otideas.com](http://www.otideas.com)



## Computer Adaptations

- Several simple adaptations can be made to every computer system that may assist some children having difficulty.
- Increase and/or simplify the font. For students with visual or visual perception difficulties enlarging the font can facilitate the writing process. Also the 'comic sans ms' font offers a simplified letter presentation.
- Slow the repeat rate or "filter keys". For students who often strike more than one key at a time or who have difficulty removing their fingers from the keys before the letters begin to repeat. Within the "Control Panel", select "accessibility options" and then filter keys. Set the settings for this function as desired.
- For those students who have difficulty using both hands to insert capital letters the "Sticky Keys" feature can also be selected within the computer's "accessibility options". This feature allows the student to select the keys individually to produce a capital, etc. (i.e., select shift key and then desired letter). This adaptation works for the control, alt and shift keys.



## Large Print Keyboard Stickers/ Zoomcaps

- Large keyboard stickers or "zoomcaps" can assist a child with vision or visual perception difficulties locate letters on the keyboard with greater ease.
- These keyboard stickers should be applied to a clean and dry keyboard (use of rubbing alcohol prior to applying will remove any oils from the keyboard and ensure better adhesion).
- They are available in a variety of configurations and background colours and are available in French and in English. Three colour zoomcaps can be used for students beginning to learn the keyboard to encourage the use of both hands. One side of the keyboard will have stickers with black letters and a yellow background and the other half of the keyboard would have black letters with a green background to distinguish letters that should be selected using the left or right hand. The other extraneous keys (i.e., F function keys, number keys, etc.) are black on a white background.
- These keyboard stickers can be purchased through: [www.beaujoie.com](http://www.beaujoie.com)



## Typing Programs

- There are many typing programs on the market to encourage increased keyboard knowledge and ten finger typing.
- Some are more interactive and "kid friendly" and some are available in French as well. The computer software market is continually changing and improving therefore specific programs are not recommended here.
- For a child experiencing difficulties with fine motor co-ordination skills, using all ten fingers to access the keyboard may be too frustrating. Instead the use of typing programs should be encouraged for the learning of letter placement on the keyboard and the use of both hands if possible with whatever finger combination is the most efficient for the student.
- A free, English, web-based interactive typing program can be found at:  
[www.bbc.co.uk.com](http://www.bbc.co.uk.com) (search keyword 'typing')  
"Dance Mat Typing"



## Occupational Therapy

- Occupational therapists assess, provide recommendations, and consult in schools through the School Health Support Services program (SHSS) with the Community Care Access Centre (CCAC).
- This specialized service is important for children who are experiencing fine motor and visual perception difficulties requiring remediation.
- Referrals can be made by parents and school staff and will be processed only with parent/guardian consent. For further information regarding occupational therapy services through the SHSS, please contact CCAC at 522-3460.

