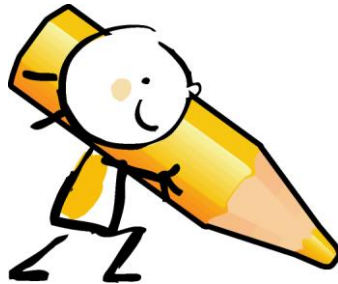


**Sunny Hill Health Centre for Children
Therapy Department**



Printing Like a Pro!

A Cognitive Approach to
Teaching Printing to
Primary School-Age Children

(For Parents and Caregivers)



Developed by Ivonne Montgomery, Occupational Therapist,
and Jill Zwicker, PhD, OT(C)

Worksheets and other supporting materials can be found at:
http://www.childdevelopment.ca/School-Age_Therapy_Practice_Resources.aspx

Printing Program Suggestions for School-Age Children

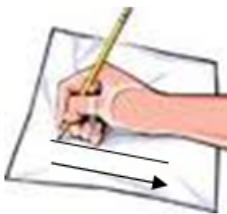
PRINTING LIKE A PRO! (For Parents and Caregivers)

Parents:

- Is your child struggling with learning to print?
- Are they frustrated while printing?
- Is your child having problems remembering the letters and how to form them?
- Does your child print letters starting from the bottom rather than from the top?
- Does your child frequently reverse letters?
- Is it hard to read your child's writing?

If you answered yes to one or more of these questions, then this might be a good program for you to do with your child at home to help them to learn how to print or to improve their printing skills.

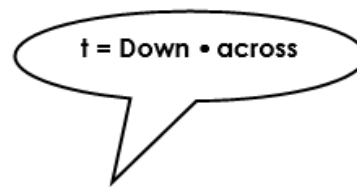
- **Why use this program?** This program's aim is to help your child learn and remember the correct way to form each letter. This helps to make printing easier. This can also help to make printing neater and quicker.
- **Who can use this program?** This printing program is for all types of learners in primary grades. It was, however, developed for students with motor learning problems.
- **How this program works?** This program uses specific strategies that include **modeling, imitation, self-talk, self-monitoring** and **self-evaluation** (these are cognitive-based strategies).
- **How often should practice be done?** 20 minutes, three to five times a week may help your child learn correct letter formation. This regular teaching will hopefully help to prevent or correct "bad habits".



Parent models



Child imitates



Child says out loud

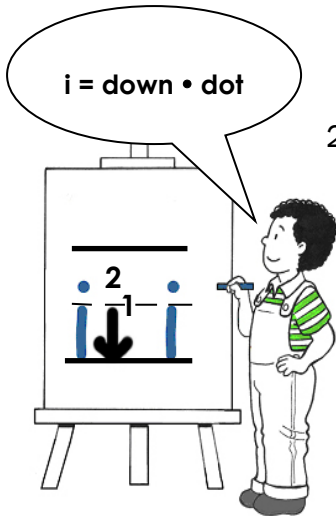


Child circles best letters

Teaching and Learning Strategies:

1. Modelling:

- Label and discuss **lines, dotted interlines and spaces** on paper, chalkboard or a whiteboard.
- **Show** your child a few times how to form each letter using self-talk (see next point). It is best to **sit beside** and not across from your child so that they can more easily imitate you.
- **Include numbered arrows** that show correct letter formation as this provides a **good visual cue**. Point out the numbered arrows to your child so they are aware of the correct letter formation of each letter. Use Printing Like a Pro! “cue cards” as an additional visual support.).



2. Self-Talk:

- Encourage your child to **say out loud** how to form each letter. This is called “**self-talk**” for the direction of movement. For example, “i = down • dot”.
- You can help by saying the directions out loud to your child and encouraging your child to repeat after you.
- Later, remind them if they forget to talk out loud.
- Try to use the same set of directions each time. Using the **same self-talk words** each time is important for best learning (for an example, please see sample self-talk directions attached.)

3. Self-Monitoring and Self-Evaluation:

- It is important for your child to look at their work to see how closely their letter formation matches the target letter.
- Encourage your child to check (self-monitor) if they are using “key strategies for neat printing”, such as printing slowly, forming letters from top to bottom and making sure letters are the correct size. Initially, do not worry about staying on the lines. As you notice improvements you can focus on this more. Please see example of "key strategies" cue sheet on Page 7 and others embedded in the worksheet sets.
- **Self-evaluation** can also be in the form of **circling their best-formed letters**. Assist your child as needed. Discuss with your child why they chose those letters. This helps them to focus on the important aspects of proper letter formation.

4. Practice:

Use the **Printing Like a Pro! worksheets and lined paper**.

All are available for download from:

http://www.childdevelopment.ca/School-Age_Therapy_Practice_Resources.aspx

Activities to Try:

How often?

- The **Printing Like a Pro!** worksheets should be done for about **20 minutes, three to five times a week.**

What to use and what to do?

With the **Printing Like a Pro!** worksheets:

- Show your child a few times how to form each letter. Remember to sit beside and not across from your child so that they can more easily imitate you. You can trace over the letter and numbered arrows with a highlighter. **Remember to:**
 - **Model printing of each letter a few times.** Use Printing Like a Pro! “cue cards” as an additional visual support.
 - **Point to the “visual cues” (numbered arrows)**
 - **Encourage “self-talk”**
 - **Encourage “self-monitoring” and “self-evaluation”.**
 - **Remind your child to** check if “key strategies for neat printing” are being used, such as printing slowly, forming letters from top to bottom and making sure letters are the correct size.
 - Initially, do not worry about staying on the lines. As you notice improvements you can focus on this more.
 - Please see example of "key strategies" cue sheet on Page 7 and others embedded in the worksheet sets.
- Sit with your child as they work on each letter worksheet. It is important for your child to use “self-talk” and correct errors they have made (i.e., self-evaluation).
- Also make note of any letters your child is struggling with so that more attention can be paid to learning these letters.

Worksheets: The worksheets should be used progressing from lower-case Level I (typically grade 1) to Level II (typically towards the end of grade 1 and/or in grade 2). For children in kindergarten the enlarged lower-case Level I/kindergarten worksheet set should be used. For older children use the worksheets that best match their abilities.

At the end of each session, practice each letter learned on a regular sheet of paper using a pencil. This is done to help “carry over” what was learned (i.e., generalization of the skills learned).

Letter Groupings and Teaching Lower Case Letters

Please work **first on teaching lower case** as lower case letters are **used more in printing** (and in reading) than upper case.

- It is important to **teach the proper way to form each letter** as shown on the Printing Like a Pro! worksheets, i.e., top to bottom, etc.
- Work on each group listed below **using the Level I lower-case worksheet** until you feel the student(s) have learned the group i.e., can easily remember how to correctly print each letter in the group.
- After practicing all the individual letters, it is good review to practice all letters from the group in typical and then random order. **Level II Printing Like a Pro! Worksheets (Letter Group Review)** can be used for this purpose.
- Once printing of each letter in the group appears **easy and automatic**, move on to the next group.

The groups have been **broken down** from **easiest to most difficult letters** to form:

Following are the groups you can work on:

<u>Downers</u>	l i t f	easiest
(Group 1)		
<u>Rounders</u>	c o e a d	
(Group 2)		
<u>Curvers (special)</u>	s u	
(Group 3)		
<u>Curvers</u>	r n m h b	
(Group 4)		
<u>Diggers</u>	j g q p	
(Group 5)		
<u>Sliders</u>	w y x z k	most difficult
(Group 6)		

- A good teaching tip is to **begin each session with a warm up. To do this, review all the letters already learned on a scrap sheet of paper. This helps your child remember** all the basic motor patterns needed to print more challenging letters.
- It is important to **observe** if your child **correctly forms** the letters in each group. If they have forgotten, you will need to go back and re-teach using the above strategies.
- **Once** your child has learned correct letter formation and **can easily remember how to form letters, other parts of printing can then be addressed** such as staying on the line, spacing, and sizing.

Simple Words and Sentences

Once your child can easily and automatically print letters, the next step is to work on simple words. Focus on words that use the lower case letters in each group learned. Group One/Downers - “if, it, lit, fit”, etc. These can be done on a chalkboard or on lined paper. **Level II Printing Like a Pro! Worksheets (Word Practice)** can also be used for this purpose.

Encourage your child to check if they are using “key strategies for neat printing”, such as printing slowly, proper positioning on the lines, consistent sizing and proper spacing between letters and words, i.e., use finger spacing or a Popsicle stick between words. Please see example of “key strategies” cue sheet on Page 7 and others included in worksheet sets.

You can next progress to having your child print entire sentences. **Level II Printing Like a Pro! Worksheets (Sight Word Sentences)** can also be used for this purpose. Focus on:

- Proper letter formation and sizing
- Proper positioning on the line
- Proper spacing within and between the words
- Proper use of punctuation

Capital Letters

If needed, capital letters can be focused on lastly, using the progression below. Work from the easiest to the most difficult letters to form. **Remember to model each letter a few times, use “visual cues” (letters with numbered arrows), encourage “self-talk” and “self-evaluation” of “key strategies for neat printing”.**

Following are the groups you can work on:

<u>Downers</u> L T I H F E (Group 1)	easiest ↓ most difficult
<u>Rounders</u> C O Q G S (Group 2)	
<u>Curvers (special)</u> S U J (Group 4)	
<u>Curvers</u> P B R D (Group 4)	
<u>Sliders (long)</u> V W X A N M Z (Group 5)	
<u>Sliders (short)</u> Y K (Group 6)	

What to use and what to do?

- Follow the same steps as described before, regarding use of the **Printing Like a Pro!** worksheets. At the end of each session, practice each letter learned on a sheet of lined paper using a pencil. This is done to help “carry over” what was learned (i.e. generalization of the skills learned).
- The last step is to work on words that begin with capital letters, later practicing sentences.

Your child should now be ready to **Print Like a Pro!**

Printing Like a Pro!

Sample of “Self-Talk” Directions for Lower Case Letters

The following are examples of the self talk directions the child can say aloud while printing.

Downers - Group 1

- l Down
- i Down • dot
- t Down • across
- f Around • down • across

Rounders - Group 2

- c Around • leave open
- o Around • close
- e Forward • around
- a Around • close • down
- d Around • close • up • down

Curvers (Special) - Group 3

- s Curve back • curve forward
- u Down • curve • up • down

Curvers - Group 4

- r Down • up • curve • stop
- n Down • up • curve
- m Down • up • curve • curve
- h Down • up • curve
- b Down • up • curve • close

Diggers - Group 5

- j Down • dig • curve • dot
- g Around • close • dig • curve
- q Around • close • dig • slide up
- p Down • dig • up • curve • close

Sliders – Group 6

- v Slide down • up
- w Slide down • up • down • up
- y Slide down • slide back • dig
- x Slide down • slide back
- z Forward • slide back • forward
- k Down • slide back • slide forward

Key Strategies for Neat Printing



My strategies for neat printing:



- Slow down
- Print letters from top to bottom
- Print letters on the line (no floaters)
- Print tall letters tall (b, d, f, h, k, l, t)
- Print small letters small (a, c, e, i, m, n, o, r, s, u, v, w, x, z)
- Print "digger" letters digging down below lower line (g, j, p, q, y)
- Leave a finger space between words
- Use correct capitalization and punctuation
- Skip a line (double space work)

How did I do?



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- Print "digger" letters digging down below lower line (g, j, p, q, y)
- Leave a finger space between words
- Use correct capitalization and punctuation
- Skip a line (double space work)

How did I do?



References:

- BC Ministry of Education Performance Standards
http://www.bced.gov.bc.ca/perf_stands/writing.htm
- Berninger, V.W., Vaughan, K.B., Abbott, R.D., Abbott, S. P., Woodruff Rogan, L., Brooks, A., Reed, E., & Graham, S. (1997). Treatment of handwriting problems in beginning writers: transfer from handwriting to composition. *Journal of Educational Psychology*, 89, 652-666.
- Denton, P., Cope, S., & Moser, C. (2006). The effects of sensorimotor-based intervention versus therapeutic practice on improving handwriting performance in 6-11 year-old children. *American Journal of Occupational Therapy*, 60, 16-27.
- Fancher, L. A., Priestley-Hopkins, D. A., & Jeffries, L. M. (2018). Handwriting Acquisition and Intervention: A Systematic Review. *Journal of Occupational Therapy, Schools, & Early Intervention*, 1-20.
- Graham, S. (2009). Want to improve children's writing? Don't neglect their handwriting. *American Educator*, 20-27/40
- Graham, S. Harris, K. & Fink, B. (2000). Is handwriting causally related to learning to write? Treatment of handwriting problems in beginning writers. *Journal of Educational Psychology*, 92, 620 -633.
- Graham, S., & Weintraub, N. (1996). A review of handwriting research: Progress and prospects from 1980 to 1994. *Educational Psychology Review*, 8, 7-87.
- Hoy, M.P., Egan, M.Y., & Feder, K. (2011). A systematic review of interventions to improve handwriting. *Canadian Journal of Occupational Therapy*, 78, 13-25.
- Laverdure, P., & Wilmer, B. (2018). Using an outdoor voice. *Journal of Occupational Therapy Schools, & Early Intervention*, 11(5), 1-11.
- Montgomery, I., & Zwicker, J.G. (2011). Applying current research evidence into practice: Development of a handwriting intervention program. *Dyspraxia Foundation Professional Journal*, 10, 12-20.
- Montgomery, I., & Zwicker, J. G. (2019). Use of Printing like a Pro! in a School-Based Printing Club to Improve Handwriting Legibility in Primary Grade Students. *Journal of Occupational Therapy, Schools, & Early Intervention*, 1-15.
- Santangelo, T., & Graham, S. (2016). A comprehensive meta-analysis of handwriting instruction. *Educational Psychology Review*, 28, 225-265.
- Weintraub, N., Yinon M., Bar-Effrat Hirsch I., & Parush S. (2009). Effectiveness of sensorimotor and task-oriented handwriting intervention in elementary school-aged students with handwriting difficulties. *OTJR: Occupation, Participation, and Health*, 29, 125-134.
- Zwicker, J.G. (2011). Cognitive versus multisensory approaches for handwriting: Current state of the evidence. *Dyspraxia Foundation Professional Journal*, 10, 3-11.
- Zwicker, J.G., & Hadwin, A. (2009). Cognitive versus multisensory approaches to handwriting intervention: A randomized control trial. *OTJR: Occupation, Participation, and Health*, 29, 40-48.
- Zwicker, J.G., & Harris, S.R. (2009). A reflection of motor learning theory in pediatric occupational therapy practice. *Canadian Journal of Occupational Therapy*, 76, 29-37.
- Zwicker, J.G., & Montgomery, I. (2012). Application of Motor Learning Principles to Handwriting Instruction and Intervention, *Handwriting Today*, 11, 9-19.

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