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# Introduction

Handwriting is an essential skill for both children and adults (Feder & Majnemer, 2007). Even in the age of technology, handwriting remains the primary tool of communication and knowledge assessment for students in the classroom. The demands for handwriting are great, whether in the classroom or beyond. A 1992 study (McHale & Cermak) found that 85 percent of all fine motor time in second-, fourth- and sixth-grade classrooms was spent on paper and pencil activities. A more recent study (Marr, Cermak, Cohn & Henderson, 2003) noted that kindergarten children are now spending 42 percent of their fine motor time on paper and pencil activities. The addition of handwritten components to many state standardized assessments and of a handwritten essay to the College Board SAT in 2005 further emphasize the importance of handwriting. Furthermore, good handwriting is important long after graduation. In *Script and Scribble* (2009), Florey writes in reference to handwritten job applications, “Like it or not, even in our machine-driven world, people still judge you by your handwriting.”

Research literature extensively documents the consequences of poor handwriting on early literacy and academic performance. Children who experience difficulty mastering this skill [handwriting] may avoid writing and decide that they cannot write, leading to arrested writing development (Graham, Harris and Fink, 2000). Handwriting is critical to the production of creative and well-written text (Graham & Harris, 2005) affecting both fluency and the quality of the composition. Illegible handwriting also has secondary effects on school achievement and self-esteem (Engel-Yeger, Nagakur - Yanuv & Rosenblum, 2009; Malloy-Miller, Polatajko & Anstett, 1995).

Handwriting instruction must adhere to developmental principles to ensure success for all children. According to the National Association for the Education of Young Children (NAEYC), newborn to eight-year-old children learn best from methods that are consistent with developmentally appropriate practice (1996). However, due to a general lack in professional development in the area of handwriting, educators are not always aware of the specific objectives to be addressed at various grade levels.

Handwriting instruction must adhere to developmental principles to ensure success for all children. Yet educational guidelines often are limited to one standard, “produces legible handwriting” in the English/Language Arts standards. When students fail to meet this standard, teachers have no means for examining which skills are lacking. Meanwhile these students are experiencing all the negative effects of poor handwriting. Seeing the need for a more specific analysis of skills, a team of occupational therapists and educators has developed this set of Handwriting Standards. We hope it will serve as an example to educators and curriculum decision-makers and bring increased attention to this crucial, yet often overlooked, area of education.

# Kindergarten

## Handwriting Standards

### Readiness Skills

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#### *K.1 Concept Development*

Students will demonstrate emergent literacy skills needed for writing. Each student will:

- A. Identify basic shapes (e.g., +, □, ○, △)
- B. Recognize simple size differences (e.g., big and little)
- C. Understand position words (e.g., top/bottom, front/back, up/down, in/out)
- D. Demonstrate print awareness
  - 1. Position a book or page correctly for coloring, writing, or reading
  - 2. Track pictures, symbols, or letters from top to bottom and left to right
  - 3. Understand that printed words represent spoken words
- E. Identify printed symbols used for communication
  - 1. Identify capital letters
  - 2. Identify lowercase letters
  - 3. Identify numbers
- F. Use drawings and symbols to convey meaning and share ideas
  - 1. Draw simple shapes (e.g., +, □, ○, △)
  - 2. Draw a person
  - 3. Use letters to approximate words

#### *K.2 Physical Development*

Students will demonstrate physical development needed for writing. Each student will:

- A. Use a correct and efficient pencil grip for writing
- B. Stabilize paper with non-writing hand while drawing/writing
- C. Position writing paper appropriately
- D. Maintain sitting posture for writing/coloring/drawing

### Printing Skills

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#### *K.3 Letter Skills*

Students will demonstrate skills in printing letters and numbers from memory. Each student will:

- A. Demonstrate correct formation of letters and numbers
  - 1. Start capital letters at the top
  - 2. Start numbers at the top
  - 3. Start lowercase letters (except **d** and **e**) at the top
  - 4. Follow standard formation sequence for letters and numbers
- B. Orient letters and numbers correctly (with few reversals)
- C. Place letters and numbers on a baseline (within 1/8" above or below)
- D. Write letters and numbers in a grade-appropriate size
- E. Follow the writing guidelines of various styles of paper (triple, double, and single lines)

#### *K.4 Word Skills*

Students will write letters together to form words. Each student will:

- A. Write his/her name
  - 1. Begin with a capital letter
  - 2. Form each letter in a name, moving left to right
- B. Write 2- to 5-letter words
  - 1. Form each letter in the word, moving left to right
  - 2. Use appropriate spacing (i.e., letters close together, NOT touching or overlapping)

#### *K.5 Sentence Skills*

Students write words to express thoughts, forming sentences. Each student will:

- A. Write simple 2- to 3-word sentences
- B. Write horizontally, from left to right
- C. Use sentence writing conventions:
  - 1. Start sentences with a capital letter
  - 2. Leave a clearly defined space between words
  - 3. Use ending punctuation
    - a. Use period to end statements
    - b. Use a question mark to end questions
    - c. Use an exclamation point to end exclamations

## Physical Skills

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### *1.1 Physical Approaches and Skill Development*

Students will develop necessary physical skills for handwriting. Each student will:

- A. Use a correct and efficient pencil grip for writing
- B. Stabilize paper with non-writing hand while writing
- C. Position writing paper appropriately
- D. Maintain sitting posture for writing

## Printing Skills

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### *1.2 Letter Skills*

Students will demonstrate skills in printing letters and numbers from memory. Each student will:

- A. Demonstrate correct formation of letters and numbers
  1. Start capital letters at the top
  2. Start numbers at the top
  3. Start lowercase letters (except **d** and **e**) at the top
  4. Follow standard formation sequence for letters and numbers
- B. Orient letters and numbers correctly (without reversals)
- C. Place letters and numbers on a baseline (within 1/16" above or below)
- D. Write letters, numbers, and symbols in a grade-appropriate size
- E. Follow the writing guidelines of various styles of paper (triple, double, and single lines)

### *1.3 Word Skills*

Students write letters together to form words. Each student will:

- A. Write names
  1. Begin each name with a capital
  2. Form each letter in a name, moving left to right
  3. Write courtesy titles correctly (Mr., Mrs., Ms., Miss., Dr.)
  4. Leave clearly defined space between title, first name, and last name
- B. Write 2- to 7-letter words
  1. Form each letter in the word, moving left to right
  2. Use appropriate spacing (i.e., letters close together, NOT touching or overlapping)

### *1.4 Sentence Skills*

Students write words to express thoughts, forming sentences. Each student will:

- A. Write 2- to 5-word sentences
- B. Write from left to right, returning to left margin of subsequent lines as needed
- C. Use sentence writing conventions:
  1. Begin with a capital letter
  2. Leave a clearly defined space between words
  3. Use ending punctuation (period, question mark, or exclamation point)

### *1.5 Writing Conventions*

Students will combine sentences to express ideas or opinions, using formatting conventions that are extensions of handwriting skills. Each student will:

- A. Copy/write a short paragraph
  - 1. Use three to five sentences
  - 2. Indent the first line of a paragraph
- B. Write titles of written works, capitalizing the first, last, and important words

## Physical Skills

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### 2.1 Physical Approaches and Skill Development

Students will demonstrate physical development needed for writing. Each student will:

- A. Use a correct and efficient pencil grip for writing
- B. Stabilize paper with non-writing hand while writing
- C. Position writing paper appropriately
- D. Maintain sitting posture for writing

## Printing Skills

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### 2.2 Letter Skills

Students demonstrate skills in printing letter and number skills from memory. Each student will:

- A. Demonstrate correct formation of letters and numbers
  1. Start capital letters at the top
  2. Start numbers at the top
  3. Start lowercase letters (except **d** and **e**) at the top
  4. Follow standard formation sequence for letters and numbers
- B. Orient letters and numbers correctly (without reversals)
- C. Place letters and numbers on a baseline (within 1/16" above or below)
- D. Write letters, numbers, and symbols in a grade-appropriate size
- E. Follow the writing guidelines of various styles of paper (double and single lines)

### 2.3 Word Skills

Students write letters together to form words. Each student will:

- A. Write names
  1. Begin with a capital
  2. Form each letter in a name, moving left to right
  3. Write courtesy titles correctly (Mr., Mrs., Ms., Miss., Dr.)
  4. Leave clearly defined space between title, first name, and last name
- B. Write 2- to 10-letter words
  1. Form each letter in the word, moving left to right
  2. Use appropriate spacing (i.e., letters close together, NOT touching or overlapping)
  3. Capitalize proper nouns
  4. Place apostrophe correctly in possessives and contractions
  5. End abbreviations with a period

### 2.4 Sentence Skills

Students write words to express thoughts, forming sentences. Each student will:

- A. Write sentences with two to eight words
- B. Write from left to right, returning to left margin of subsequent lines as needed



- C. Use sentence writing conventions:
  - 1. Begin with a capital letter
  - 2. Leave a clearly defined space between words
  - 3. Use ending punctuation (period, question mark, or exclamation point)
- D. Use comma and quotation marks to indicate speech

### *2.5 Writing Conventions*

Students will combine sentences to express ideas or opinions, using formatting conventions that are extensions of handwriting skills. Each student will:

- A. Write paragraphs using proper conventions
  - 1. Write 3- to 5-sentence paragraphs
  - 2. Indent the first line of each paragraph
- B. Write titles of written works, capitalizing the first, last, and important words
- C. Follow standard format for friendly letters
  - 1. Write date, beginning at left margin or center of line
  - 2. Write greeting, beginning at left margin
  - 3. Write body, using paragraph skills
  - 4. Write closing, matching starting point of date
  - 5. Place name, matching starting point of date and closing

## Pre-Cursive Skills

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### 3.1 Preparation Skills

Students will demonstrate strokes needed for cursive handwriting: strokes that change direction, retrace lines, or form loops. Each student will:

- A. Connect an under to an over stroke, moving left to right
- B. Retrace a vertical stroke
- C. Retrace a curved stroke
- D. Produce neat loops (ascending and descending)

## Cursive Skills

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### 3.2 Letter Skills

Students will demonstrate cursive writing skills efficiently from memory. Each student will:

- A. Form lowercase letters correctly
- B. Form capital letters correctly
- C. Place letters on a baseline (within 1/16" above or below)
- D. Write letters in a grade-appropriate size
- E. Follow the writing guidelines of various styles of paper (double and single lines)

### 3.3 Connection Skills

Students will join letters to form words, using standard, efficient connections. Each student will:

- A. Demonstrate correct baseline connections, maintaining letter integrity
  1. Connect baseline ending to a baseline start (e.g., **t** to **e**)
  2. Connect baseline ending to a midline start (e.g., **c** to **a**)
- B. Demonstrate correct high connections, maintaining letter integrity
  1. Connect a high ending to a midline start (e.g., **o** to **u**)
  2. Connect a high ending to a baseline start (e.g., **w** to **h**, **b** to **r**)
- C. Use appropriate spacing between connected letters (close together, NOT overlapping, with only connections touching)
- D. Cross and dot appropriate letters after completing connected letters
- E. Demonstrate correct connections from capital letters
  1. Write signature in cursive using correct connections
  2. Use correct connections for proper nouns

### 3.4 Sentence Skills

Students will write words to express thoughts, forming sentences. Each student will:

- A. Write from left to right, returning to left margin of subsequent lines as needed
- B. Use sentence writing conventions:
  1. Begin with a capital letter
  2. Leave a clearly defined space between words
  3. Use ending punctuation (period, question mark, or exclamation point)
- C. Use comma and quotation marks correctly to indicate speech
- D. Use commas to separate items in series and to set off clauses and phrases

### *3.5 Writing Conventions*

Students will combine sentences to express ideas or opinions, using formatting conventions that are extensions of handwriting skills. Each student will:

- A. Write paragraphs using proper conventions
  - 1. Write 5- to 6-sentence paragraphs
  - 2. Indent the beginning of each paragraph
- B. Write titles of written works, capitalizing the first, last, and important words
- C. Follow standard format for friendly letters
  - 1. Write date, beginning at left margin or center of line
  - 2. Write greeting, beginning at left margin
  - 3. Write body using paragraph skills
  - 4. Write closing, matching starting point of date
  - 5. Place signature, matching starting point of date and closing

## Pre-Cursive Skills

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### 4.1 Preparation Skills

Students demonstrate strokes needed for cursive handwriting: strokes that change direction, retrace lines, or form loops. Each student will:

- A. Connect an under to an over stroke, moving left to right
- B. Retrace a vertical stroke
- C. Retrace a curved stroke
- D. Produce neat loops (ascending and descending)

## Cursive Skills

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### 4.2 Letter Skills

Students demonstrate cursive writing skills efficiently from memory. Each student will:

- A. Form lowercase letters correctly
- B. Form capital letters correctly
- C. Place letters on a baseline (within 1/16" above or below)
- D. Write letters in a grade-appropriate size
- E. Follow the writing guidelines of various styles of paper (single lines)

### 4.3 Connection Skills

Students join letters using standard, efficient connections to form words. Each student will:

- A. Demonstrate correct baseline connections, maintaining letter integrity
  1. Connect baseline ending to baseline start (e.g., **t** to **e**)
  2. Connect baseline ending to midline start (e.g., **c** to **a**)
- B. Demonstrate correct high connections, maintaining letter integrity
  1. Connect a high ending to midline start (e.g., **o** to **u**)
  2. Connect a high ending letter to baseline start (e.g., **w** to **h**, **b** to **r**)
- C. Use appropriate spacing between connected letters (close together, NOT overlapping with only connections touching)
- D. Cross and dot appropriate letters after completing connected letters
- E. Demonstrate correct connections from capital letters
  1. Write signature in cursive using correct connections
  2. Use correct connections for proper nouns

### 4.4 Sentence Skills

Students will write words to express thoughts, forming sentences. Each student will:

- A. Write from left to right, returning to left margin of subsequent lines as needed
- B. Use sentence writing conventions:
  1. Begin with a capital letter
  2. Leave a clearly defined space between words
  3. Use ending punctuation (period, question mark, or exclamation point)
- C. Use comma and quotation marks correctly to indicate speech
- D. Use commas to separate items in series and to set off clauses and phrases

#### *4.5 Writing Conventions*

Students will combine sentences to express ideas or opinions, using formatting conventions that are extensions of handwriting skills. Each student will:

- A. Write paragraphs using proper conventions
  - 1. Write 5- to 6-sentence paragraphs
  - 2. Indent the beginning of each paragraph
- B. Write titles of written works, capitalizing the first, last, and important words
- C. Follow standard format for business letters
  - 1. Write heading (return address and date) at left margin
  - 2. Write inside address at left margin
  - 3. Write salutation at left margin
  - 4. Write body using paragraph skills, leaving line space between paragraphs
  - 5. Write closing at left margin
  - 6. Place signature at left margin
  - 7. Leave line space after heading, inside address, salutation, body, closing

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