

Handwriting & Keyboarding:

Standards for the Production & Presentation of Writing

Introduction

Standards for the Production & Presentation of Writing: Handwriting & Keyboarding in Today's Classroom

To succeed in school today, students need to master a range of foundation skills for producing and presenting their written work. Both handwriting and keyboarding are foundation skills that enable students to succeed in every setting, with every type of written assignment or testing. These two skills work together in the classroom to create an engaged, balanced, and successful learning environment.

The research is clear: handwriting is the primary way children produce written work in elementary school. A 2013 study of K–5 classrooms showed that students spend the greatest part of their classroom instruction time (24 to 58 percent) on handwriting based activities.¹

Handwriting is taught in the beginning of elementary school and is mastered toward the end of the elementary years. Keyboards are introduced in the elementary environment, increasingly in K–2 classrooms, but generally by third or fourth grade, with fluency expected in middle school.

In today's elementary classroom, children spend 15 to 22 percent for their instruction time on technology-based activities, including keyboarding. Most are expected to produce work on a keyboard by the end of fourth grade. Many must also meet requirements for computer-based testing. This document addresses the specific skills that are appropriate by grade level. The techniques and timing for teaching them is critical in order to adhere to developmentally appropriate instruction in the classroom.

There are numerous research studies and articles that establish the relation between writing and keyboarding (Berninger 2009, Goldberg 2003, Cook

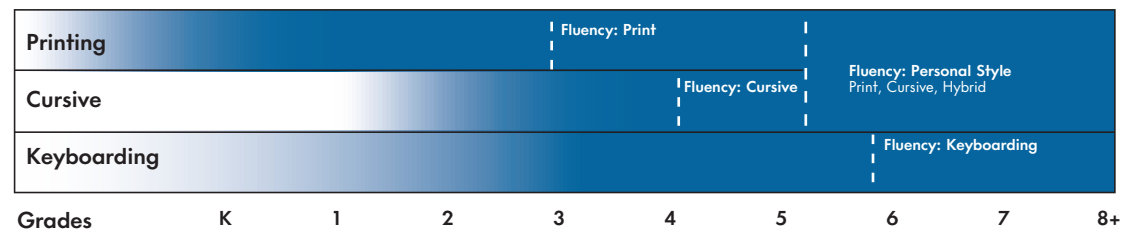
2007). As a rule, research states that learning how to write by hand before keyboarding is a necessary motor exercise as it helps develop eye-hand coordination motor skills (Saperstein 2012, James 2006 and 2012, Berninger 2012). Handwriting is a foundation skill that needs to be developed first and will influence students' reading, writing, language use, and critical thinking.

The milestones for handwriting start in kindergarten. Pre-K students are still working on letter recognition and developing the fine motor skills for effective printing. Through fine motor development, multisensory activities, and handwriting practice, most children achieve printing fluency by the end of second grade, and cursive fluency by the end of fourth grade. In fifth grade, children develop their personal style that continues into middle and high school.

The milestones for keyboarding begin in kindergarten as well. In Pre-K, computer work should be limited to developing mouse skills, and awareness of the keyboard. In kindergarten, the emphasis is on pre-keyboarding as children develop important finger and hand motor skills. The emphasis on pre-keyboarding skills continue through second grade to help children build the foundation for keyboarding fluency toward the end of the elementary grades.

The emphasis switches to keyboarding skills in third grade as children can be expected to use those skills in fourth and fifth grade. Since fluency for printing has often developed by third grade and cursive fluency is emerging, more focus on keyboarding around this time is developmentally appropriate. Furthermore, by third grade children have both increased attention to tasks as well as improved motor control. This makes learning to touch type easier.

Where Handwriting & Keyboarding Intersect



¹ Based on a survey conducted by Handwriting Without Tears®. The survey interviewed 459 kindergarten through fifth grade teachers from June to August 2013.

Introduction

The Standards


These standards can help guide your instruction to make sure that children are learning handwriting and keyboarding in a developmental order that promotes success.

The standards in this document were developed by a team of occupational therapists, teachers, and field experts. They are based on current research about handwriting, keyboarding, and technology use in early education classrooms. The best way to view this developmental progression is to look at the standards handwriting and keyboarding side by side by grade level.

In this document, you will find handwriting and keyboarding standards for each grade level from kindergarten through fifth grade and higher.

The standards provide:

- The developmental sequence for the foundation skills of written production
- Expectations for student handwriting and keyboarding performance
- A framework for evaluating classroom instruction approaches
- Tools for educating others about handwriting and keyboarding standards for elementary education

 **Second Grade: Printing Skills**

2.1 Physical Approaches & Skill Development
Students will demonstrate physical development needed for writing.
Each student will:

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

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

- Demonstrate correct formation of letters and numbers
 - Start capitals at the top
 - Start numbers at the top
 - Start lowercase letters (except d and e) at the top
 - Follow standard formation sequence for letters and numbers
- Orient letters and numbers correctly (without reversals)
- Place letters and numbers on a base line (within 1/16" above or below)
- Write letters, numbers, and symbols in a grade-appropriate size
- Follow the writing guidelines of various styles of paper (double and single line)

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

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


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

- Write sentences with two to eight words
- Write from left to right, returning to left margin of subsequent lines as needed
- Use sentence writing conventions:
 - Begin with a capital
 - Leave a clearly defined space between words
 - Use ending punctuation (period, question mark, or exclamation point)
- Use commas 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:

- Write paragraphs using proper conventions
 - Write three- to five-sentence paragraphs
 - Indent the first line of each paragraph
 - Write titles of written works, capitalizing the first, last, and important words
- Follow the standard format for friendly letters
 - Write date, beginning at left margin or center of line
 - Write greeting, beginning at left margin
 - Write body, using paragraph skills
 - Write closing, matching starting point of date
 - Write name, matching starting point of date and closing

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 **Second Grade: Keyboarding Skills**

2.6 Physical Approaches & Skill Development
Students will demonstrate the physical development needed for keyboarding.
Each student will:

- Use proper posture and hand and body positions

2.7 Computer Readiness & Operations
Students will demonstrate the understanding of parts of a computer.
Each student will:

- Respect the computer and demonstrate safe and cooperative use of the computer
- Name the keyboard, monitor, cursor, and mouse
- Recognize that the keyboard is used to put text on a monitor/tablet
- Identify and understand how to click a mouse
- Use a mouse to click, drag and drop objects
- Use index finger to key in a simple passcode/command
- Click on a basic print command

2.8 Pre-Keyboarding Skills
Students understand the use of simple keyboard commands.
Each student will:

- Use Letter and Number Keys on a keyboard
 - Identify Home, Top, and Bottom Row Letter Keys
 - Recognize that Letter Keys produce a letter
 - Recognize that Number Keys produce a number or symbol
 - Place correct fingers on Home Row, Top Row, and Bottom Row keys using proper finger placement
 - Type individual letters using finger and letter-key association method while maintaining righthand/left-hand keyboard orientation
 - Type letter combinations using finger and letter-key association method while maintaining righthand/left-hand keyboard orientation
 - Type simple words using finger and letter-key association method while maintaining righthand/left-hand keyboard orientation
 - Type single-digit numbers using finger and letter-key association method while maintaining righthand/left-hand keyboard orientation

2.8 Pre-Keyboarding Skills (cont'd.)

- Use Action Keys on a keyboard
 - Recognize the keys and the jobs they do: Enter/Return, Spacebar, Shift, Arrow, Tab, Backspace, Caps Lock
 - Use thumb on Spacebar to create spaces after words
 - Press the Shift key to make capitals
 - Employ Tab Keys to create spacing in lists of letters, words, or symbols
 - Use Enter/Return Keys to create spacing between lines of text

2.9 Keyboarding Skills
Students understand how to touch type in order to create text.
Each student will:

- Use touch typing to create text
 - Use both hands for letter, word, and sentence drills while occasionally looking at the keyboard
 - Type name, words, lists, and sentences while occasionally looking at the keyboard

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Introduction

Handwriting

Handwriting standards provide guidance for assessing students' handwriting skills at every level—from printing to cursive. State language arts standards often are generally limited to one basic standard—“produces legible handwriting.” They do not provide guidance for what a student should know by each grade level, or how to remediate knowledge gaps.

Handwriting requires matching a motor program to the formation of a letter and then executing the program. The child needs to visualize the letter, recall the formation, and then write the letter accurately. Handwriting also requires spatial organization skills which help children to visually place the letters on lines and spaces between letters and words accurately. These skills are not necessary in keyboarding.

In kindergarten, children build, then write letters to develop handwriting habits. In first through second grade, children develop fluency with printing and work on language arts skills as they develop their writing.

Students are introduced to cursive at the end of second grade, or the beginning of third grade. Cursive is similar to print so children are not learning a new motor skill. Cursive will help children develop speed and fluency in writing, activate important parts of their brains, and help children with functional writing as they are still developing early keyboard skills.

Handwriting Standards Address:

- Printing Skills
- Pre-Cursive Skills
- Cursive Skills

Keyboarding

Keyboarding standards provide guidance for monitoring growth from pre-keyboarding to keyboarding skills. Educational standards are often limited to one standard—being able to type a certain number of words in a certain amount of time. They do not provide detailed guidance for what a student should know by each grade level.

Keyboarding requires the memorization of letter locations, the position of the fingers on these locations, and then pressing each key with precision and timing. It also requires using Letter, Number, and Action Keys. Action Keys are the keys that perform an action on the screen in terms of formatting text (i.e., Shift, Tab, Enter, Backspace, Spacebar).

Keyboarding, like handwriting, is a complex skill that requires many hours of practice and instruction. According to research, keyboarding acquisition is a process that involves three phases (Preminger, Weiss, Weintraub 2004):

- 1. Cognitive phase:** The student relies on visual feedback. The learner looks at their fingers or at the screen immediately after hitting a key.
- 2. Associative phase:** The student relies on kinesthetic cues.
- 3. Autonomous phase:** The student relies primarily on kinesthetic feedback.

Keyboarding Standards Address:

- Pre-Keyboarding Skills
- Keyboarding Skills



Kindergarten: Printing Skills

K.1 Physical Approaches & Skill Development

Students will demonstrate physical development necessary for writing.

Each student will:

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

K.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 capitals 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 base line
(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.3 Word Skills

Students will write letters together to form words.

Each student will:

- A. Write his/her name
 1. Begin with a capital
 2. Form each letter in a name, moving left to right
- B. Write two-to five-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.4 Sentence Skills

Students write words to express thoughts, forming sentences.

Each student will:

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

K.5 Physical Approaches & Skill Development

Students will demonstrate the physical development needed for keyboarding.

Each student will:

- A. Use proper posture and hand and body positions

K.6 Computer Readiness & Operations

Students will demonstrate the understanding of parts of a computer.

Each student will:

- A. Respect the computer and demonstrate safe and cooperative use of the computer
- B. Name the keyboard, monitor, cursor, and mouse
- C. Recognize that the keyboard is used to put text on a monitor/tablet
- D. Identify and understand how to click a mouse
- E. Use a mouse to click, drag and drop objects
- F. Use index finger to key in a simple passcode/command
- G. Click on a basic print command

K.7 Pre-Keyboarding Skills

Students understand the use of simple keyboard commands.

Each student will:

- A. Use Letter and Number Keys on a keyboard
 1. Identify Home, Top and Bottom Row Letter Keys
 2. Recognize that Letter Keys produce a letter
 3. Recognize that Number Keys produce a number or symbol
 4. Place correct fingers on Home Row, Top Row, and Bottom Row keys using proper finger placement
 5. Type individual letters using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 6. Type letter combinations using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 7. Type simple words using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 8. Type single-digit numbers using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation

K.7 Pre-Keyboarding Skills (cont'd.)

B. Use Action Keys on a keyboard

1. Recognize the keys and the jobs they do: Enter/Return, Spacebar, Shift, Arrows, Tab, Backspace, Caps Lock
2. Use thumb on Spacebar to create spaces

K.8 Keyboarding Skills

Students understand how to touch type in order to create text.

Each student will:

- A. Use touch typing to create text
 1. Use both hands for letter, word, and sentence drills
 2. Type name, words, lists, and simple sentences



First Grade: Printing Skills

1.1 Physical Approaches & 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

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 capitals 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 base line (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 two-to seven-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 two-to five-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
 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

1.5 Physical Approaches & Skill Development

Students will demonstrate the physical development needed for keyboarding.

Each student will:

- A. Use proper posture and hand and body positions

1.6 Computer Readiness & Operations

Students will demonstrate the understanding of parts of a computer.

Each student will:

- A. Respect the computer and demonstrate safe and cooperative use of the computer
- B. Name the keyboard, monitor, cursor, and mouse
- C. Recognize that the keyboard is used to put text on a monitor/tablet
- D. Identify and understand how to click a mouse
- E. Use a mouse to click, drag and drop objects
- F. Use index finger to key in a simple passcode/command
- G. Click on a basic print command

1.7 Pre-Keyboarding Skills

Students understand the use of simple keyboard commands.

Each student will:

- A. Use Letter and Number Keys on a keyboard
 1. Identify Home, Top, and Bottom Row Letter Keys
 2. Recognize that Letter Keys produce a letter
 3. Recognize that Number Keys produce a number or symbol
 4. Place correct fingers on Home Row, Top Row, and Bottom Row keys using proper finger placement
 5. Type individual letters using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 6. Type letter combinations using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 7. Type simple words using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 8. Type single-digit numbers using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation

1.7 Pre-Keyboarding Skills (cont'd.)

B. Use Action Keys on a keyboard

1. Recognize the keys and the jobs they do: Enter/Return, Spacebar, Shift, Arrows, Tab, Backspace, Caps Lock
2. Use thumb on Spacebar to create spaces
3. Press the Shift Key to make capitals

1.8 Keyboarding Skills

Students understand how to touch type in order to create text.

Each student will:

- A. Use touch typing to create text
 1. Use both hands for letter, word, and sentence drills
 2. Type name, words, lists, and sentences



Second Grade: Printing Skills

2.1 Physical Approaches & 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

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 capitals 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 base line (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 two- to ten-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
 2. Leave a clearly defined space between words
 3. Use ending punctuation (period, question mark, or exclamation point)
- D. Use commas 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 three- to five-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 the 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. Write name, matching starting point of date and closing



Second Grade: Keyboarding Skills

2.6 Physical Approaches & Skill Development

Students will demonstrate the physical development needed for keyboarding.

Each student will:

- A. Use proper posture and hand and body positions

2.7 Computer Readiness & Operations

Students will demonstrate the understanding of parts of a computer.

Each student will:

- A. Respect the computer and demonstrate safe and cooperative use of the computer
- B. Name the keyboard, monitor, cursor, and mouse
- C. Recognize that the keyboard is used to put text on a monitor/tablet
- D. Identify and understand how to click a mouse
- E. Use a mouse to click, drag and drop objects
- F. Use index finger to key in a simple passcode/command
- G. Click on a basic print command

2.8 Pre-Keyboarding Skills

Students understand the use of simple keyboard commands.

Each student will:

- A. Use Letter and Number Keys on a keyboard
 1. Identify Home, Top, and Bottom Row Letter Keys
 2. Recognize that Letter Keys produce a letter
 3. Recognize that Number Keys produce a number or symbol
 4. Place correct fingers on Home Row, Top Row, and Bottom Row keys using proper finger placement
 5. Type individual letters using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 6. Type letter combinations using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 7. Type simple words using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation
 8. Type single-digit numbers using finger and letter-key association method while maintaining right-hand/left-hand keyboard orientation

2.8 Pre-Keyboarding Skills (cont'd.)

B. Use Action Keys on a keyboard

1. Recognize the keys and the jobs they do: Enter/Return, Spacebar, Shift, Arrows, Tab, Backspace, Caps Lock
2. Use thumb on Spacebar to create spaces after words
3. Press the Shift Key to make capitals
4. Employ Tab Keys to create spacing in lists of letters, words, or symbols
5. Use Enter/Return Keys to create spacing between lines of text

2.9 Keyboarding Skills

Students understand how to touch type in order to create text.

Each student will:

A. Use touch typing to create text

1. Use both hands for letter, word, and sentence drills while occasionally looking at the keyboard
2. Type name, words, lists, and sentences while occasionally looking at the keyboard



Pre-Cursive Skills

3.1 Preparation Skills

Students will demonstrate strokes needed for cursive handwriting: strokes that change direction, retrace lines, and 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

3.2 Letter Skills

Students will demonstrate cursive writing skills efficiently from memory.

Each student will:

- A. Form lowercase letters correctly
- B. Form capitals correctly
- C. Place letters on a base line (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 base line connections, maintaining letter integrity
 1. Connect base line ending to a base line start (e.g., **t** to **e**)
 2. Connect base line ending to a mid line start (e.g., **c** to **a**)
- B. Demonstrate correct high connections, maintaining letter integrity
 1. Connect a high ending to a mid line start (e.g., **o** to **u**)
 2. Connect a high ending to a base line start (e.g., **w** to **h**, **b** to **r**)

3.3 Connection Skills (cont'd.)

- C. Use appropriate spacing between connected letters (i.e., close together, NOT overlapping, with only connections touching)
- D. Cross and dot appropriate letters after completing connected letters
- E. Demonstrate correct connections from capitals
 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
 2. Leave a clearly defined space between words
 3. Use ending punctuation (period, question mark, or exclamation point)
- C. Use commas 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 five- to six-sentence paragraphs
 2. Indent the beginning of each paragraph
- B. Write titles of written works, capitalizing the first, last, and important words
- C. Follow the 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

3.6 Physical Approaches & Skill Development

Students will demonstrate the physical development needed for keyboarding.

Each student will:

- A. Use proper posture and hand and body positions

3.7 Computer Operations

Students will apply knowledge of parts of a computer and basic text formatting tools.

Each student will:

- A. Respect the computer and demonstrate safe and cooperative use of the computer
- B. Name the keyboard, monitor, cursor, and mouse
- C. Recognize that the keyboard is used to put text on a monitor/tablet
- D. Identify and understand how to click with a mouse
- E. Manipulate objects using click, drag and drop with a mouse
- F. Use index finger to key in a passcode/command
- G. Modify text using basic text formatting tools (i.e., bold, italic, underline)
- H. Click on a basic print command

3.8 Pre-Keyboarding Skills

Students will use unilateral hand skills.

Each student will:

- A. Relate specific fingers with specific keys
 1. Identify Home, Top, and Bottom Row Letter Keys
 2. Recognize that Letter Keys produce a letter
 3. Recognize that Number Keys produce a number or symbol
 4. Place correct fingers on Home Row, Top Row, and Bottom Row keys using proper finger placement
 5. Review and demonstrate the proper keyboarding technique for each letter of the alphabet

3.9 Keyboarding Skills

Students understand how to touch type in order to create text.

Each student will:

- A. Use touch typing to create text
 1. Use both hands for letter, word, and sentence drills without looking at the keyboard
 2. Type name, words, lists, sentences, and paragraphs using both hands without looking at the keyboard
 3. Use written language skills (i.e., capitalization, punctuation,

3.9 Keyboarding Skills (cont'd.)

spelling, etc.) as grade appropriate

4. Use Number Keys to type specific circumstances (i.e., dates, money, math sentences)
5. Build accuracy and fluency

B. Use Action Keys on a keyboard

1. Recognize the keys and the jobs they do: Enter/Return, Spacebar, Shift, Arrows, Tab, Backspace, Caps Lock
2. Use thumb on Spacebar to create spaces after words and punctuation
3. Press the Shift Key to make capitals
4. Press the Shift Key to use symbols at the top of number and punctuation Keys
5. Employ Tab Keys to create spacing in lists of letters, words, or symbols
6. Use Enter/Return Keys to create spacing between lines of text or paragraphs



Fourth Grade: Cursive Skills

4.1 Letter Skills

Students demonstrate cursive writing skills efficiently from memory.

Each student will:

- A. Form lowercase letters correctly
- B. Form capitals correctly
- C. Place letters on a base line
(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)

4.2 Connection Skills

Students join letters using standard, efficient connections to form words.

Each student will:

- A. Demonstrate correct base line connections, maintaining letter integrity
 1. Connect base line ending to base line start
(e.g., **t** to **e**)
 2. Connect base line ending to mid line start
(e.g., **c** to **a**)
- B. Demonstrate correct high connections, maintaining letter integrity
 1. Connect a high ending to mid line start
(e.g., **o** to **u**)
 2. Connect a high ending letter to base line start
(e.g., **w** to **h**, **b** to **r**)
- C. Use appropriate spacing between connected letters
(i.e., close together, NOT overlapping with only connections touching)
- D. Cross and dot appropriate letters after completing connected letters
- E. Demonstrate correct connections from capitals
 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
 2. Leave a clearly defined space between words
 3. Use ending punctuation
(period, question mark, or exclamation point)
- C. Use commas 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 five- to six-sentence paragraphs
 2. Indent the beginning of each paragraph
- B. Write titles of written works, capitalizing the first, last, and important words
- C. Follow the 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

4.6 Physical Approaches & Skill Development

Students will demonstrate the physical development needed for keyboarding.

Each student will:

- A. Use proper posture and hand and body positions

4.7 Computer Operations

Students will apply knowledge of parts of a computer and basic text formatting tools.

Each student will:

- A. Respect the computer and demonstrate safe and cooperative use of the computer
- B. Name the keyboard, monitor, cursor, and mouse
- C. Recognize that the keyboard is used to put text on a monitor/tablet
- D. Understand how to click with a mouse
- E. Manipulate objects using click, drag and drop with a mouse
- F. Use a mouse to scroll through text on a monitor
- G. Use a mouse to make selections from drop-down menus
- H. Use index finger to key in a passcode/command
- I. Modify text using basic text formatting tools (Bold, Italic, Underline)
- J. Click on a basic print command

4.8 Pre-Keyboarding Skills

Students will use unilateral hand skills.

Each student will:

- A. Relate specific fingers with specific keys
 1. Identify and consistently use the Home Row Keys with proper finger position
 2. Extend touch typing skills to the row above and below the home row keys using the proper fingers
 3. Review and demonstrate the proper keyboarding technique for each letter of the alphabet

4.9 Keyboarding Skills

Students understand how to touch type in order to create text.

Each student will:

- A. Use touch typing to create text
 1. Use both hands for letter, word, and sentence drills without looking at the keyboard
 2. Type name, words, lists, and sentences using both hands without looking at the keyboard

4.9 Keyboarding Skills (cont'd.)

3. Type all text in a multi-paragraph document without looking at the keyboard
4. Use written language skills (e.g., capitalization, punctuation, spelling, etc.) as grade appropriate
5. Use Number Keys to type specific circumstances (e.g., dates, money, math sentences)
6. Build accuracy and fluency

B. Use Action Keys on a keyboard

1. Use keyboard features: Enter/Return, Spacebar, Shift, Arrows, Tab, Backspace, Caps Lock
2. Use thumb on Spacebar to create spaces after words and punctuation
3. Press the Shift Key to make capitals
4. Press the Shift Key to use symbols at the top of number and Punctuation Keys
5. Employ Tab Keys to create spacing in lists of letters, words, or symbols
6. Use Enter/Return Keys to create spacing between lines of text or paragraphs

5.1 Physical Approaches & Skill Development

Students will demonstrate the physical development needed for keyboarding.

Each student will:

- A. Use proper posture and hand and body positions

5.2 Computer Operations

Students will apply knowledge of parts of a computer and basic text formatting tools.

Each student will:

- A. Respect the computer and demonstrate safe and cooperative use of the computer
- B. Name the keyboard, monitor, cursor, and mouse
- C. Recognize that the keyboard is used to put text on a monitor/tablet
- D. Understand how to click with a mouse
- E. Manipulate objects using click, drag and drop with a mouse
- F. Use a mouse to scroll through text on a monitor
- G. Use a mouse to make selections from drop-down menus
- H. Use index finger to key in a passcode/command
- I. Modify text using basic text formatting tools (i.e., bold, italic, underline)
- J. Click on a basic print command

5.3 Pre-Keyboarding Skills

Students will use unilateral hand skills.

Each student will:

- A. Relate specific fingers with specific keys
 1. Identify and consistently use the Home Row Keys with proper finger position
 2. Extend touch typing skills to the row above and below the Home Row Keys using the proper fingers
 3. Review and demonstrate the proper keyboarding technique for each letter of the alphabet

5.4 Keyboarding Skills

Students utilize touch typing in order to create text.

Each student will:

- A. Use touch typing to create text
 1. Use both hands for letter, word, and sentence drills without looking at the keyboard
 2. Type name, words, lists, and sentences using both hands without looking at the keyboard

5.4 Keyboarding Skills (cont'd.)

3. Type all text in a multi-paragraph document without looking at the keyboard
4. Use written language skills (i.e., capitalization, punctuation, spelling, etc.) as grade appropriate
5. Use Number Keys to type specific circumstances (i.e., dates, money, math sentences)
6. Build accuracy and fluency

B. Use "Action" keys on a keyboard

1. Use keyboard features: Enter/Return, Spacebar, Shift, Arrows, Tab, Backspace, Caps Lock
2. Use thumb on Spacebar to create spaces after words and punctuation
3. Press the Shift Key to make capitals
4. Press the Shift Key to use symbols at the top of number and Punctuation Keys
5. Employ Tab Keys to create spacing in lists of letters, words, or symbols
6. Use Enter/Return Keys to create spacing between lines of text or paragraphs

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