

# STRANDS AND STANDARDS

## ELEMENTARY KEYBOARDING



### Course Description

Mastering keyboarding techniques is essential for developing accuracy and speed in technology use. The primary goal for students is to achieve proper keyboarding skills through keyboarding by touch. These standards are designed to help students demonstrate efficient digital input by the end of Grade 5\*. Grade 6 standards are designed to support continued learning in K-6 elementary schools. Standards include basic competency in keyboarding, appropriate and responsible use of technology, and basic computer science principles. This course is aligned to the [Utah K-5 Computer Science Standards](#).

<b>Intended Grade Level</b>	K-6
Core Code	32.02.00.00.210
<b>License Area of Concentration</b>	Elementary Associate Level License
	Elementary Professional Level License
	Secondary Associate Level License
	Secondary Professional Level License
<b>Required Endorsement(s)</b>	
Endorsement 1	Elementary Keyboarding

\* According to [Utah State Board Rule R277-700-5\(6\)](#), all Local Education Agencies (LEAs) are required to assess students' keyboarding proficiency by the end of Grade 5 and report school level results to the Utah State Board of Education.

# KINDERGARTEN

By the end of Kindergarten, students will be able to demonstrate:

## STRAND 1

**Students will demonstrate correct keyboarding techniques while using a digital device.** *Focus on technique knowledge. It is understood students in these grade levels may not physically be capable of full dexterity or classroom setup may not be permit adequate accommodations for proper technique.*

### Standard 1

Students will be introduced to proper keyboarding techniques.

- Body centered with the “G” and “H” keys.

## STRAND 2

**Students will be able to select and operate computing devices that perform a variety of tasks.**

### Standard 1

Students will be able to explore the functions of common hardware and software components of computing systems. **(1.CS.2)**

- Identify the use of a mouse, touch-pad, monitor/touch-screen, and keyboard.

### Standard 2

Students will be able to operate computing devices. **(1.CS.1)**

- Navigate using mouse, touch-pad, and/or touch-screen.

## STRAND 3

**Students will be able to explain what a password or pass phrase is and why it is used. (2.NI.1)**

### Standard 1

Students will be able to log on and off devices appropriately.

# GRADE 1

By the end of Grade 1, students will be able to demonstrate:

## STRAND 1

**Students will demonstrate correct keyboarding techniques while using a digital device.** *Focus on technique knowledge. It is understood students in these grade levels may not physically be capable of full dexterity or classroom setup may not be permit adequate accommodations for proper technique.*

### Standard 1

Students will be introduced to proper keyboarding techniques.

- Body centered with the “G” and “H” keys.
- Sit up straight.
- Elbows naturally at sides.

**Standard 2**

Students will be introduced to home row keys and placement.

- Students will be able to identify the home row keys (A, S, D, F, J, K, L, ;)

**STRAND 2**

**Students will be able to select and operate computing devices that perform a variety of tasks.**

**Standard 1**

Students will be able to explore the functions of common hardware and software components of computing systems. **(1.CS.2)**

- Identify the use of a mouse, touch-pad, monitor/touch-screen, and keyboard.
- Identify common software used in a classroom (i.e. Google Docs, Google Slides, Word, PowerPoint, Canvas, Google Classroom, Lexia, etc.)
  - Define **software** as programs that run on a computing system, computer, or other computing device.
  - Define **program** as a set of instructions that the computer executes to achieve a particular objective.

**Standard 2**

Students will be able to operate computing devices. **(1.CS.1)**

- Navigate using mouse, touch-pad, and/or touch-screen.

**Standard 3**

Students will be able to perform basic troubleshooting tasks. **(2.CS.1)**

- Check the device for battery charge and/or power connection.

**STRAND 3**

**Students will be able to explain what a password or pass phrase is and why it is used. (2.NI.1)**

**Standard 1**

Students will be able to log on and off devices appropriately.

**GRADE 2**

By the end of Grade 2, students will be able to demonstrate:

**STRAND 1**

**Students will demonstrate correct keyboarding techniques while using a digital device.** *Focus on technique knowledge. It is understood students in these grade levels may not physically be capable of full dexterity or classroom setup may not be permit adequate accommodations for proper technique.*

**Standard 1**

Students will be introduced to proper keyboarding techniques.

- Fingers curved and orientated to home row.
  - Define home row as the keys the fingers rest on before typing. These keys are identified as A, S, D, F, J, K, L, and;
- Sit up straight.
- Feet flat on floor.

- Body centered with the “G” and “H” keys.
- Elbows naturally at sides.

## Standard 2

Students will be introduced to home row keys and placement.

- Students will be able to identify the home row keys (A, S, D, F, J, K, L, ;)
- Students will be able to identify which finger strikes the home row keys.
  - Strike A with left pinky.
  - Strike S with left ring finger.
  - Strike D with left middle finger.
  - Strike F with left pointer finger.
  - Strike J with right pointer finger.
  - Strike K with right middle finger.
  - Strike L with right ring finger.
  - Strike ; with right pinky finger.

## STRAND 2

Students will be able to select and operate computing devices that perform a variety of tasks.

### Standard 1

Students will be able to explore the functions of common hardware and software components of computing systems. **(1.CS.2)**

- Identify the use of a mouse, touch-pad, monitor/touch-screen, and keyboard.
- Identify common software used in a classroom (i.e. Google Docs, Google Slides, Word, PowerPoint, Canvas, Google Classroom, Lexia, etc.)
  - Define **software** as programs that run on a computing system, computer, or other computing device.
  - Define **program** as a set of instructions that the computer executes to achieve a particular objective.

### Standard 2

Students will be able to operate computing devices. **(1.CS.1)**

- Navigate using mouse, touch-pad, and/or touch-screen.

### Standard 3

Students will be able to perform basic troubleshooting tasks. **(2.CS.1)**

- Check the device for battery charge and/or power connection.
- Check cord connections.
- Power down and restart.

## STRAND 3

Students will be able to explain what a password or pass phrase is and why it is used. **(2.NI.1)**

### Standard 1

Students will be able to explain why people use passwords and pass phrases. **(2.NI.1)**

### Standard 2

Students will be able to log on and off devices appropriately.

# GRADE 3

By the end of Grade 3, students will be able to demonstrate:

## STRAND 1

Students will demonstrate proficiency of proper keyboarding techniques.

### Standard 1

Students will demonstrate proper keyboarding techniques.

- Sit up straight.
- Feet flat on floor.
- Body centered with the “G” and “H” keys.
- Fingers curved and oriented to **home row**.
  - Define **home row** as the keys the fingers rest on before typing. These keys are identified as A, S, D, F, J, K, L, and ;
- Eyes on copy or screen, not on keys.
- Wrists straight and elbows naturally at sides.
- Correct fingers used for keystrokes.
- Key with smooth rhythm and quiet hands.

### Standard 2

Students will know and understand the purpose of correct keyboarding techniques.

- Understand the advantages of proper technique.
  - Increases speed.
  - Decreases errors.

## STRAND 2

Students will demonstrate key by touch proficiency.

### Standard 1

Students will demonstrate key by touch using correct fingering.

- Define **key by touch** as typing at the computer without looking at the keyboard and/or hands.
- Students will be able to key by touch all alphabet letters.
- Students will be able to key by touch the following keys:
  - Strike **Spacebar** with thumb.
  - Strike **Enter/Return** key with the right pinky.
  - Hold **Left Shift** key when capitalizing right hand letters.
  - Hold **Right Shift** key when capitalizing left hand letters.
  - Strike **Backspace/Delete** key with right pinky.
  - Strike **Tab** key with left pinky.
- Students will be able to key by touch the following punctuation keys:
  - Strike **Period** with right ring finger.
  - Strike **Comma** with right middle finger.
  - Key a **Question mark** by holding Left Shift with the left pinky and strike the question mark key with the right pinky. Release both keys.
  - Key **Exclamation Point** by holding Right Shift with right pinky and strike the exclamation point with the left pinky. Release both keys.

**Standard 2**

Students will demonstrate proper spacing using common punctuation marks.

- Students will use one space after keying a period, comma, question mark, and exclamation point.

**STRAND 3**

**Students will demonstrate key by touch from a variety of sources.**

**Standard 1**

Student will key from dictation.

- Students will key by touch alphabet letters, short words, and phrases from dictation.

**Standard 2**

Students will key from printed materials and digital copies.

**Standard 3**

Students will compose at the computer.

**STRAND 4**

**Students will demonstrate correct keyboarding techniques using a variety of timed writings.**

**Standard 1**

Students will improve accuracy.

**Standard 2**

Students will improve speed on 30-second timed writings.

**Standard 3**

Students will set goals and evaluate personal improvement.

- Organize and present collected data to support progress. (4.DA.1)
- Use data to set new goals, predict outcomes, and record results. (4.DA.2)

**Standard 4**

Students will evaluate proficiency goals.

- **Advanced (4)** – The student knows the keys and keys by touch and demonstrates perfect technique.
- **Meets Expectations (3)** – The student knows the keys and keys by touch.
- **Partial Mastery (2)** – The student looks at the keys most of the time.
- **Little or No Mastery (1)** – The student is dependent on looking at the keys.

**STRAND 5**

**Students will be able to describe how computing devices connect to other components. (3.CS.1)**

**Standard 1**

Students will be able to explain the difference between hardware and software and how they work together as a system to accomplish tasks. (4.CS.1)

- Define **hardware** as the physical components that make up a computing system, computer, or computing device.
- Define **software** as programs that run on a computing system, computer, or other computing device.

**Standard 2**

Students will be able to identify how to connect common hardware on a computing device.

- Power
- Headphones/speakers
- USB

**Standard 3**

Students will be able to perform basic troubleshooting tasks. **(5.CS.1)**

- Check the device for battery charge and/or power connection.

**STRAND 6**

**Students will be able to describe physical and digital security measures for protecting personal information. (3.NI.1 and 3.NI.2)**

**Standard 1**

Students will be able to identify components of strong passwords and/or pass phrases. **(3.NI.1)**

- Define **password/pass phrase** as a secret word or phrase that allows access to a computer system or service.
- A password or pass phrase should include the following:
  - Minimum of 12 characters
  - Capital letters
  - Lowercase letters
  - Numbers
  - Symbols
  - Phrases
- A password or pass phrase should be easily memorized.
  - First letter of each word in a phrase
  - Lyric of favorite song
  - Replacing letters with symbols or numbers

**Standard 2**

Students will develop personal patterns of behavior to protect information from unauthorized access. **(3.NI.2)**

- Student will be able to log on and off programs and apps appropriately.

**GRADE 4**

By the end of Grade 4, students will be able to demonstrate:

**STRAND 1**

**Students will develop proficiency of proper keyboarding techniques.**

**Standard 1**

Students will develop proper keyboarding techniques.

- Sit up straight.
- Feet flat on floor.
- Body centered with the “G” and “H” keys.
- Fingers curved and oriented to **home row**.
  - Define **home row** as the keys the fingers rest on before typing. These keys are identified as A, S, D,

F, J, K, L, and ;

- Eyes on copy or screen, not on keys.
- Wrists straight and elbows naturally at sides.
- Correct fingers used for keystrokes.
- Key with smooth rhythm and quiet hands.

## Standard 2

Students will know and understand the purpose of correct keyboarding techniques.

- Understand the advantages of proper technique.
  - Increases speed.
  - Decreases errors.
- Understand the disadvantages of poor technique.
  - Less productive.
  - Computer related health problems.
    - Musculoskeletal problems
    - Vision problems
    - Repetitive stress injuries
    - Headaches
    - Stress disorders

## STRAND 2

Students will develop key by touch proficiency.

### Standard 1

Students will develop key by touch using correct fingering.

- Define **key by touch** as typing at the computer without looking at the keyboard and/or hands.
- Students will be able to key by touch all alphabet letters.
- Students will be able to key by touch the following keys:
  - Strike **Spacebar** with thumb.
  - Strike **Enter/Return** key with the right pinky.
  - Hold **Left Shift** key when capitalizing right hand letters.
  - Hold **Right Shift** key when capitalizing left hand letters.
  - Strike **Backspace/Delete** key with right pinky.
  - Strike **Tab** key with left pinky.
- Students will be able to key by touch the following punctuation keys:
  - Strike **Period** with right ring finger.
  - Strike **Comma** with right middle finger.
  - Key a **Question mark** by holding Left Shift with the left pinky and strike the question mark key with the right pinky. Release both keys.
  - Key **Exclamation Point** by holding Right Shift with right pinky and strike the exclamation point with the left pinky. Release both keys.

### Standard 2

Students will develop proper spacing using common punctuation marks.

- Students will use one space after keying a period, comma, question mark, and exclamation point.

## STRAND 3

Students will develop key by touch from a variety of sources.

### Standard 1

Student will key from dictation.

- Students will key by touch alphabet letters, short words, and phrases from dictation.

### Standard 2

Students will key from printed materials and digital copies.

### Standard 3

Students will compose at the computer.

## STRAND 4

Students will develop correct keyboarding techniques using a variety of timed writings.

### Standard 1

Students will improve accuracy.

### Standard 2

Students will improve speed on 30-second timed writings.

### Standard 3

Students will set goals and evaluate personal improvement.

- Organize and present collected data to support progress. (4.DA.1)
- Use data to set new goals, predict outcomes, and record results. (4.DA.2)

### Standard 4

Students will evaluate proficiency goals.

- **Advanced (4)** – The student knows the keys and keys by touch and demonstrates perfect technique.
- **Meets Expectations (3)** – The student knows the keys and keys by touch.
- **Partial Mastery (2)** – The student looks at the keys most of the time.
- **Little or No Mastery (1)** – The student is dependent on looking at the keys.

## STRAND 5

Students will be able to describe how computing devices connect to other components. (3.CS.1)

### Standard 1

Students will be able to explain the difference between hardware and software and how they work together as a system to accomplish tasks. (4.CS.1)

- Define **hardware** as the physical components that make up a computing system, computer, or computing device.
- Define **software** as programs that run on a computing system, computer, or other computing device.

### Standard 2

Students will be able to identify how to connect common hardware on a computing device.

- Power
- Headphones/speakers
- USB

- Wireless connectivity (i.e. WiFi, Bluetooth, etc.)

### Standard 3

Students will be able to perform basic troubleshooting tasks. (5.CS.1)

- Check the device for battery charge and/or power connection.
- Check cord connections.
- Power down.

## STRAND 6

Students will be able to describe physical and digital security measures for protecting personal information. (3.NI.1 and 3.NI.2)

### Standard 1

Students will be able to create components of strong passwords and/or pass phrases. (3.NI.1)

- Define **password/pass phrase** as a secret word or phrase that allows access to a computer system or service.
- A password or pass phrase should include the following:
  - Minimum of 12 characters
  - Capital letters
  - Lowercase letters
  - Numbers
  - Symbols
  - Phrases
- A password or pass phrase should be easily memorized.
  - First letter of each word in a phrase
  - Lyric of favorite song
  - Replacing letters with symbols or numbers

### Standard 2

Students will develop personal patterns of behavior to protect information from unauthorized access. (3.NI.2)

- Students will demonstrate logging on and off programs and apps appropriately.

## GRADE 5

By the end of Grade 5, students will be able to demonstrate:

### STRAND 1

Students will master proficiency of proper keyboarding techniques.

#### Standard 1

Students will master proper keyboarding techniques.

- Sit up straight.
- Feet flat on floor.
- Body centered with the “G” and “H” keys.
- Fingers curved and oriented to home row.
  - Define home row as the keys the fingers rest on before typing. These keys are identified as A, S, D, F, J, K, L, and ;
- Eyes on copy or screen, not on keys.

- Wrists straight and elbows naturally at sides.
- Correct fingers used for keystrokes.
- Key with smooth rhythm and quiet hands.

### Standard 2

Students will know and understand the purpose of correct keyboarding techniques.

- Understand the advantages of proper technique.
  - Increases speed.
  - Decreases errors.
- Understand the disadvantages of poor technique.
  - Less productive.
  - Computer related health problems.
    - Musculoskeletal problems
    - Vision problems
    - Repetitive stress injuries
    - Headaches
    - Stress disorders

## STRAND 2

Students will master key by touch proficiency.

### Standard 1

Students will master key by touch using correct fingering.

- Define **key by touch** as typing at the computer without looking at the keyboard and/or hands.
- Students will be able to key by touch all alphabet letters.
- Students will be able to key by touch the following keys:
  - Strike **Spacebar** with thumb.
  - Strike **Enter/Return** key with the right pinky.
  - Hold **Left Shift** key when capitalizing right hand letters.
  - Hold **Right Shift** key when capitalizing left hand letters.
  - Strike **Backspace/Delete** key with right pinky.
  - Strike **Tab** key with left pinky.
- Students will be able to key by touch the following punctuation keys:
  - Strike **Period** with right ring finger.
  - Strike **Comma** with right middle finger.
  - Key a **Question mark** by holding Left Shift with the left pinky and strike the question mark key with the right pinky. Release both keys.
  - Key **Exclamation Point** by holding Right Shift with right pinky and strike the exclamation point with the left pinky. Release both keys.
- Students will be introduced to correct fingering when using the numbers keys located on the top row (not the keypad located on the right of the keyboard).

### Standard 2

Students will master proper spacing using common punctuation marks.

- Students will use one space after keying a period, comma, question mark, and exclamation point.

## STRAND 3

Students will master key by touch from a variety of sources.

### Standard 1

Student will key from dictation.

- Students will key by touch alphabet letters, short words, and phrases from dictation.

### Standard 2

Students will key from printed materials and digital copies.

### Standard 3

Students will compose at the computer.

## STRAND 4

Students will master correct keyboarding techniques using a variety of timed writings.

### Standard 1

Students will improve accuracy.

### Standard 2

Students will improve speed on 1-minute timed writings.

### Standard 3

Students will set goals and evaluate personal improvement.

- Organize and present collected data to support progress. (4.DA.1)
- Use data to set new goals, predict outcomes, and record results. (4.DA.2)

### Standard 4

Students will evaluate proficiency goals.

- **Advanced (4)** – The student knows the keys and keys by touch and demonstrates perfect technique.
- **Meets Expectations (3)** – The student knows the keys and keys by touch.
- **Partial Mastery (2)** – The student looks at the keys most of the time.
- **Little or No Mastery (1)** – The student is dependent on looking at the keys.

## STRAND 5

Students will be able to describe how computing devices connect to other components. (3.CS.1)

### Standard 1

Students will be able to explain the difference between hardware and software and how they work together as a system to accomplish tasks. (4.CS.1)

- Define **hardware** as the physical components that make up a computing system, computer, or computing device.
- Define **software** as programs that run on a computing system, computer, or other computing device.

### Standard 2

Students will be able to identify how to connect common hardware on a computing device.

- Power
- Headphones/speakers
- USB

- Wireless connectivity (i.e. WiFi, Bluetooth, etc.)

### Standard 3

Students will be able to perform basic troubleshooting tasks. (5.CS.1)

- Check the device for battery charge and/or power connection.
- Check cord connections.
- Open Task Manager.
  - Windows Operating System: Ctrl+Alt+Delete
  - Mac Operating System: Option+Cmd+Esc
  - Chromebook: Search+Esc
- Power down.

## STRAND 6

Students will be able to describe physical and digital security measures for protecting personal information. (3.NI.1 and 3.NI.2)

### Standard 1

Students will be able to create components of strong passwords and/or pass phrases. (3.NI.1)

- Define **password/pass phrase** as a secret word or phrase that allows access to a computer system or service.
- A password or pass phrase should include the following:
  - Minimum of 12 characters
  - Capital letters
  - Lowercase letters
  - Numbers
  - Symbols
  - Phrases
- A password or pass phrase should be easily memorized.
  - First letter of each word in a phrase
  - Lyric of favorite song
  - Replacing letters with symbols or numbers

### Standard 2

Students will develop personal patterns of behavior to protect information from unauthorized access. (3.NI.2)

- Student will be able to log on and off programs and apps appropriately.

## GRADE 6\*

*\*Grade 6 standards are designed to support continued learning in K-6 elementary schools and not required in Utah State Board Rule.*

By the end of Grade 6, students will be able to demonstrate:

## STRAND 1

Students will demonstrate mastery of proficiency of proper keyboarding techniques.

### Standard 1

Students will demonstrate mastery of proper keyboarding techniques.

- Sit up straight.
- Feet flat on floor.
- Body centered with the “G” and “H” keys.
- Fingers curved and oriented to home row (A, S, D, F, J, K, L and ;).
- Wrists straight and elbows naturally at sides
- Eyes on copy or screen, not on keys.
- Correct fingers used for keystrokes.
- Key with smooth rhythm and quiet hands.

### Standard 2

Students will demonstrate the benefits of proper touch typing and keyboarding techniques.

- Improve efficiency, accuracy, and productivity using the keyboard.

### Standard 3

Students will improve accuracy.

### Standard 4

Students will evaluate proficiency goals.

- **Advanced (4)** – The student knows the keys and keys by touch and demonstrates perfect technique.
- **Meets Expectations (3)** – The student knows the keys and keys by touch.
- **Partial Mastery (2)** – The student looks at the keys most of the time.
- **Little or No Mastery (1)** – The student is dependent on looking at the keys.

## STRAND 2

Students will demonstrate mastery of key by touch proficiency.

### Standard 1

Students will demonstrate mastery of key by touch using correct fingering.

- Define **key by touch** as typing at the computer without looking at the keyboard and/or hands.
- Students will demonstrate mastery of key by touch all alphabet letters.
- Students will demonstrate mastery of key by touch the following keys:
  - Strike **Spacebar** with thumb.
  - Strike **Enter/Return** key with the right pinky.
  - Hold **Left Shift** key when capitalizing right hand letters.
  - Hold **Right Shift** key when capitalizing left hand letters.
  - Strike **Backspace/Delete** key with right pinky.
  - Strike **Tab** key with left pinky.
- Students will demonstrate mastery of key by touch the following punctuation keys:
  - Strike **Period** with right ring finger.
  - Strike **Comma** with right middle finger.
  - Key a **Question mark** by holding Left Shift with the left pinky and strike the question mark key with the right pinky. Release both keys.
  - Key **Exclamation Point** by holding Right Shift with right pinky and strike the exclamation point with the left pinky. Release both keys.
- Students will demonstrate correct fingering when using the numbers keys located on the top row (not the keypad located on the right of the keyboard).

### Standard 2

Students will demonstrate mastery of proper spacing using common punctuation marks.

- Students will use one space after keying a period, comma, question mark, and exclamation point.

## **STRAND 3**

**Students will create a variety of documents using key by touch.**

### **Standard 1**

Students will compose a variety of documents on the computer.

- Arguments to support claims
- Informative/Explanatory texts
- Narrative texts