HISD | Academic Instructional Technology

EMPOWERING EDUCATION EVERY DAY

2021-22 Scope and Sequence
Technology Applications – First Grade

Cycle 1	27 Days Aug 23 - Oct 1	*The recommended number of days/lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*

Overview

Online Safety & Digital Citizenship: Online Safety curriculum teaches students how to be safe by educating them about online safety, the responsible use of technology and digital fair use rules.

Keyboarding: Teach students typing basics in early grades and progressively increase their accuracy and speed in later grades with the below keyboarding lessons and drills. Adaptive Keyboarding will assess student's typing strengths and prescribe custom typing activities to meet their individual needs.

Houston ISD's digital literacy textbook can be found in the HUB under Learning.com. Learning.com lessons are noted throughout the Scope and Sequence with the notation LCOM prior to the lesson name.

Topic(s)	Suggested Pacing and Lesson(s)	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Online Safety & Digital Citizenship Week 1- 5	**Week 1:** LCOM (D) Working Online (30 min) Practice Logging into Computer **Week 2:** LCOM (AE) Following Computer Rules (Whole Group) (20 min) LCOM (AE) Lab Rules Sign (Whole Group) (30 min) **Week 3:** LCOM (D) Open Communication Basics Discussion (30 min) Practice logging in to LCOM **Week 4:** Common Sense Education via LCOM (L) Pause & Think Online (25 min)	**Online Safety and Digital Citizenship:** K-2.5. Digital citizenship. The student practices safe, responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to: (A) adhere to acceptable use policies reflecting appropriate behavior in a digital environment; (B) comply with acceptable digital safety rules, fair use guidelines, and copyright laws; and (C) practice the responsible use of digital information regarding intellectual property, including software, text, images, audio, and video. **Keyboarding:** K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (A) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files; (B) use a variety of input, output, and storage devices; (C) use proper keyboarding techniques such as ergonomically correct hand and body positions appropriate for Kindergarten-Grade 2 learning; demonstrate keyboarding techniques for operating the alphabetic, numeric, punctuation, and symbol keys appropriate for Kindergarten-Grade 2 learning;

Keyboarding Week 6	*Stand-alone Student Video included for student direct access & viewing (2 min) **Week 5:** LCOM (D) Netiquette and Cyberbullying Discussion (30 min) LCOM (Video) Introduction to Digital Citizenship: Cyberbullying (5 min) LCOM (L) Introduction to Online Safety: Protecting Your Privacy (4 min) **Week 6:** LCOM (L) Locate and Type ABCDE (7 min) FGHIJ (7 min) KLMNO (6 min)	

Vocabulary

Week 1	Week 2	Week 3	Week 4	Week 5		Week 6
online offline	Pictures Computer Language Arts	complete/ incomplete balance device	pause online	complete/incomplete online safety kindness digital citizen cyberbully internet personal information app	private log off pretend lock screen tablet stranger online safety internet	key a, b, c, d, e keyboard phonics letters alphabet keyboarding

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Cycle 2	29 days Oct 5 – Nov 12	*The recommended number of days/lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*

Overview

Hardware/Software Fundamentals: Hardware and Software Fundamentals teaches students about computer systems, hardware and software, including the ethical use issues surrounding them.

Keyboarding: Teach students typing basics in early grades and progressively increase their accuracy and speed in later grades with the below keyboarding lessons and drills. Adaptive Keyboarding will assess student's typing strengths and prescribe custom typing activities to meet their individual needs.

Topic(s)	Suggested Pacing and Lesson(s)	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Hardware & Software Fundamentals Weeks 1-3	**Week 1:** LCOM (L) Mouse, Select, Drag and Double-click (8 min) LCOM (L) Symbols of Technology (12 min) LCOM (L) Processors, Input and Output Devices (9 min) **Week 2:** LCOM (L) Data Storage (7 min) LCOM (Activity) Data Storage Bingo Unplugged (30 min) **Week 3:** LCOM (L) Printers (9 min) LCOM (L) Scanners (6 min) LCOM (L) Windows and Controls (12 min)	**Hardware/Software Fundamentals:** K-2.1. Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to: (A) explore virtual environments, simulations, models, and programming languages to enhance learning; K-2.2. Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to: (A) use communication tools that allow for anytime, anywhere access to interact, collaborate, or publish with peers locally and globally; K-2.5. Digital citizenship. The student practices safe, responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to: (A) adhere to acceptable use policies reflecting appropriate behavior in a digital environment; (B) comply with acceptable digital safety rules, fair use guidelines, and copyright laws; and **Keyboarding:** K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files; (D) use a variety of input, output, and storage devices; (E) use proper keyboarding techniques such as ergonomically correct hand and body positions appropriate for Kindergarten-Grade 2 learning; (F) demonstrate keyboarding techniques for operating the alphabetic, numeric, punctuation, and symbol keys appropriate for Kindergarten-Grade 2 learning;
Keyboarding Weeks 4-6	**Week 4:** LCOM (L) ABCDE (7 min)	

	FGHIJ (7 min) KLMNO (6 min) PQRST (6 min) **Week 5:** LCOM (L) KLMNO (6 min) PQRST (6 min) UVWXYZ (10 min) Locate and Type Numbers (10 min) **Week 6:** LCOM (AE) Typing Numbers (15 min) LCOM (L) Shift Key for Capital & Symbols (10 min) LCOM (L) Cursor, Spacebar, Backspace, Enter & Words (10 min)	

Vocabulary

Week 1	Week 2	Week 3		Week 4	Week 5	Week 6
mouse drag and drop double click cursor select pointer video technology audio symbol CD function input device keyboard computer monitor printer processor output device speakers mouse	drive DVD disk data storage device flash drive write optical drive USB CD read hard drive	network jam toner paper tray file preview ink copies printer cover preview peripheral device scanning beam Optical Character Recognition scanning surface scroll bar maximize dialog box minimize text box	radio button resize restore windows spinner dropdown menu checkbox optical character recognition scanning surface scroll bar maximize minimize text box	ABCDE FGHIJ KLMNO PQRST key keyboard phonics letters alphabet keyboarding	KLMNO PQRST UVWXYZ shape recognition 1-9 counting numbers	counting patterns key/keyboard/ing math capital letters shift key plus, minus symbol exclamation point equal sign phonics mathematical expressions question mark exclamatory sentences enter space/spacebar return letters backspace delete

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Cycle 3	30 Days Nov 15 - Jan 14	*The recommended number of days/lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*

Overview

Computer Science (Coding Basics): This unit contains introductory coding instruction with the initial lessons from Learning.com's EasyCode Foundations (powered by CodeMonkey).

Topic(s)	Suggested Pacing and Lesson(s)	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Computer Science Weeks 1-6	**Week 1:** LCOM (D) Intro to Coding (35 min) **Week 2:** LCOM (L) Let's Be Friends (35 min) **Week 3:** LCOM (L) Finding Treasure (35 min) **Week 4:** LCOM (L) Practice Makes Perfect (35 min) **Week 5:** LCOM (L) On Repeat (35 min) **Week 6:** LCOM (L) Loops (60 min)	**Computer Science (formerly Computational Thinking and Coding Basics):** K-2.1. Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to: (C) explore virtual environments, simulations, models, and programming languages to enhance learning; K-2.2. Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to: (A) use communication tools that allow for anytime, anywhere access to interact, collaborate, or publish with peers locally and globally; K-2.4. Critical thinking, problem solving, and decision making. The student applies critical-thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to: (A) identify what is known and unknown and what needs to be known regarding a problem and explain the steps to solve the problem; K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (A) use appropriate terminology regarding basic hardware, software applications, programs, networking, virtual environments, and emerging technologies; (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files;

Vocabulary

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
direction/orientation logic sequencing algorithms counting	coding sequencing programming	subproblems	advanced sequencing	loop conditional loop preset	loop until loop

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Cycle 4	27 days Jan 19 – Feb 25	*The recommended number of days/lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*

Overview

Multimedia: Multimedia curriculum teaches students the fundamentals of a variety of content forms. Students learn the basics of graphic design, desktop publishing and video editing.

Computer Science (formerly Computational Thinking and Coding Basics): This unit contains items that help students develop computational thinking skills in preparation for learning to write code and solve other problems.

Topic(s)	Suggested Pacing and Lesson(s)	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Multimedia Weeks 1-4	**Week 1:** LCOM (Discussion) Basic Design (30 min) LCOM (AE) Basic Design Reflection (5 min) **Week 2:** LCOM (L) Drawing Lines and Shapes to Tell a Story (9 min) LCOM (L) Drawing and Filling Shapes Using Graphic Tools (12 min) Introduce students to your Drawing environment (10 min) **Week 3:** LCOM (AE) Portrait of Myself (30 min) **Week 4:** LCOM (AE) Personal Flag (40 min)	**Multimedia**: K-2.1. Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to: (A) apply prior knowledge to develop new ideas, products, and processes; (C) explore virtual environments, simulations, models, and programming languages to enhance learning; K-2.2. Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to: (A) use communication tools that allow for anytime, anywhere access to interact, collaborate, or publish with peers locally and globally; K-2.4. Critical thinking, problem solving, and decision making. The student applies critical- thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to: (A) identify what is known and unknown and what needs to be known regarding a problem and explain the steps to solve the problem; (D) collect, analyze, and represent data using tools such as word processing, spreadsheets, graphic organizers, charts, multimedia, simulations, models, and programming languages. K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (B) use appropriate digital tools and resources for storage, access, file management, collaboration, and designing solutions to problems; (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files; use a variety of input, output, and storage devices **Computer Science (formerly Computational Thinking and Coding Basics):** K-2.1. Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to: (C) explore virtual environments, simulations, models, and programming languages to enhance learning; K-2.4. Critical thinking, problem solving, and decision making. The student applies critical- thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The

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Computer Science: Weeks 5-6	**Week 5:** LCOM (L) Computational Thinking: Directions (15 min) LCOM (AE) A New Student in Class (40 min) **Week 6:** LCOM (L) Computational Thinking: Patterns (15 min) LCOM (AE) Spirit Day T-Shirts (30 min)	student is expected to: (A) identify what is known and unknown and what needs to be known regarding a problem and explain the steps to solve the problem; K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (A) use appropriate terminology regarding basic hardware, software applications, programs, networking, virtual environments, and emerging technologies; (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files;

Vocabulary

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
audience design font graphics white space design elements	graphics drag and drop drawing software color palette mouse graphics software drawing area tool box fill color shape tool	language arts pictures graphics software	language arts pictures graphics software	directions problem solving problem solution computational thinking	pattern series rule predict directions order

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Cycle 5	33 Days Feb 28 - April 22	*The recommended number of days/lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*

Overview

Keyboarding: Teach students typing basics in early grades and progressively increase their accuracy and speed in later grades with the below keyboarding lessons and drills. Adaptive Keyboarding will assess student's typing strengths and prescribe custom typing activities to meet their individual needs.

Online Safety and Digital Citizenship (formerly Internet Usage & Online Communication): The Internet Usage and Online Communication unit teaches students vital skills for successfully navigating and searching the World Wide Web such as browsing basics, keyword searches, research strategies, information sourcing and ethics, and examination of information validity. Students also learn the basics of online communication such as email, instant messaging, blogs, community sites, podcasting, and digital collaboration.

Multimedia (formerly Visual Mapping): This unit includes the EasyTech Visual Mapping curriculum items that align to the First Grade pacing guide and is designed to teach students essential grade-appropriate digital literacy skills to help meet the first grade portion of national K-2 technology standards. Students learn to create visual maps, idea webs, diagrams, and groups of information based on classification.

Topic(s)	Suggested Pacing and Lesson(s)	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Multimedia Weeks 1-2	**Week 1:** LCOM (L) Groups and Labels (12 min) LCOM (AE) Sorting Sets (1 min) **Week 2:** LCOM (L) Attributes and Linking (12 min) LCOM (AE) I Belong to Many Groups (20 min)	**Multimedia (formerly Visual Mapping):** K-2.6.2 Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to: (A) use communication tools that allow for anytime, anywhere access to interact, collaborate, or publish with peers locally and globally. (C) format digital information, including font attributes, color, white space, graphics, and animation for a defined audience and communication medium. K-2.6.4 Critical thinking, problem solving, and decision making. The student applies critical thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to: (A) identify what is known and unknown and what needs to be known regarding a problem and explain the steps to solve the problem. (B) evaluate the appropriateness of a digital tool to achieve the desired product. K-2.6.6 Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (D) use a variety of input, output and storage devices.
Internet Usage & Online Communication Weeks 3-4	**Week 3:** LCOM (L) Online Information Basics (15 min) Student Independent Practice	**Online Safety and Digital Citizenship (formerly Internet Usage & Online Communication):** K-2.1. Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to: (A) apply prior knowledge to develop new ideas, products, and processes; (C) explore virtual environments, simulations, models, and programming languages to enhance learning; K-2.2. Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to: (A) use communication tools that allow for anytime,

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Keyboarding Weeks 5-6	**Week 4:** LCOM (D) Safe Site Strategies Discussion (30 min) **Week 5:** LCOM (AE) Beginning Sounds (20 min) Independent Practice: Type spelling words **or** Typing Activity (teacher choice) using a Word Processor (30 min) **Week 6:** LCOM (L) Cursor, Arrows & Tab (9 min) LCOM (AE) Animal Story (20 min)	anywhere access to interact, collaborate, or publish with peers locally and globally; K-2.3. Research and information fluency. The student acquires and evaluates digital content. The student is expected to: (A) use search strategies to access information to guide inquiry; (B) use research skills to build a knowledge base regarding a topic, task, or assignment; and K-2.4. Critical thinking, problem solving, and decision making. The student applies critical- thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to: (A) identify what is known and unknown and what needs to be known regarding a problem and explain the steps to solve the problem; K-2.5. Digital citizenship. The student practices safe, responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to: (A) adhere to acceptable use policies reflecting appropriate behavior in a digital environment; (B) comply with acceptable digital safety rules, fair use guidelines, and copyright laws; and K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files; (D) use a variety of input, output, and storage devices; **Keyboarding:** K-2.1. Creativity and innovation. The student uses creative thinking and innovative processes to construct knowledge and develop digital products. The student is expected to: (C) explore virtual environments, simulations, models, and programming languages to enhance learning; K-2.6. Technology operations and concepts. The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files; (D) use a variety of input, output, and storage devices; (E) use proper keyboarding techniques such as ergonomically correct hand and body positions appropriate for Kindergarten-Grade 2 learning; (F) demonstrate keyboarding techniques for operating the alphabetic, numeric, punctuation, and symbol keys appropriate for Kindergarten-Grade 2 learning

Vocabulary

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
toolbar label linking mouse workspace file	focus font clipart text elements diagram text box	web page Internet World Wide Web website hyperlinks	website hyperlinks web page internet world wide web appropriate	Keyboard Sounds Letters Language Arts	space keyboarding left key enter right

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click and drag visual mapping diagram focus symbol text box clipart Science classification	toolbar attribute linking workspace visual mapping background effect Critical Thinking Mapping Pictures Social Studies		inappropriate		tab backspace curser up letters down phonics delete arrow keyboard Illustrating Computer Keyboard Reading

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Cycle 6	31 Days April 25 - June 7	*The recommended number of days/lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*

Overview

Business Applications (formerly Word Processing): This unit includes the EasyTech Word Processing curriculum items that align to the First Grade pacing guide and is designed to teach students essential grade-appropriate digital literacy skills to help meet the first grade portion of national K-2 technology standards.

Online Safety and Digital Citizenship: Online Safety curriculum teaches students how to be safe by educating them about online safety, the responsible use of technology and digital fair use rules.

Topic(s)	Suggested Pacing and Lesson(s)	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Business Applications Weeks 1-2	**Week 1:** LCOM (L) Basic Document Creation (12 min) Independent Practice in Word Processing Environment **Week 2:** LCOM (L) Formatting Text (15 min) Independent Practice in Word Processing Environment	**Business Applications (formerly Word Processing):** K-2.6.2 Communication and collaboration. The student collaborates and communicates both locally and globally using digital tools and resources to reinforce and promote learning. The student is expected to: (C) Format digital information, including font attributes, color, white space, graphics and animation, for a defined audience and communication medium. K-2.6.4 Critical thinking, problem solving, and decision making. The student applies critical thinking skills to solve problems, guide research, and evaluate projects using digital tools and resources. The student is expected to: (B) Evaluate the appropriateness of a digital tool to achieve the desired product. K-2.6.6 Technology operations and concepts: The student demonstrates knowledge and appropriate use of technology systems, concepts, and operations. The student is expected to: (A) use appropriate terminology regarding basic hardware, software applications, programs, networking, virtual environments, and emerging technologies. (C) perform basic software application functions, including opening an application and creating, modifying, printing, and saving files.
Online Safety and Digital Citizenship Weeks 3-4	**Week 3:** CSE (Lesson) How Technology Makes You Feel (30 min) *Stand-alone Student Video included for student direct access & viewing (1 min) **Week 4:** CSE (Lesson) Internet Traffic Light (35 min) *Stand-alone Student Video included for student direct access & viewing (1 min)	**Online Safety and Digital Citizenship:** K-2.5. Digital citizenship. The student practices safe, responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to: (A) adhere to acceptable use policies reflecting appropriate behavior in a digital environment; (B) comply with acceptable digital safety rules, fair use guidelines, and copyright laws;

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Capstone EOY Project Week 5-6	**Weeks 5-6:** LCOM (Pre-Test) Inquiry: Where in the World (10 min) LCOM (Project) Inquiry: Where in the World (60 min) Classroom Presentations of Projects LCOM (Reflection) Inquiry: Where in the World Reflection (15 min)	

Vocabulary

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
end punctuation text lowercase period open capitalization printing file word processing exit question mark spacing close save exclamation point cursor input erase	underline bold font size paste open italic font style rhyme clipboard copy reading spacing word processing select cut font	common sense education pause uncomfortable	focus font clipart text elements diagram text box toolbar attribute linking workspace visual mapping background effect	regions human geography mapping shelter social studies geography	geography human geography mapping regions shelter social studies