LEGACY LEARNING CENTER

K-8 COMPUTER SCIENCE

CURRICULUM, SYLLABUS & LESSON PLANS | 2025-2026

Standards: Indiana K-8 Computer Science Academic Standards (IDOE 2023) | Based on CSTA K-12 CS Standards (2017) + K-12 CS Framework
6 Domains: Data & Information (DI) | Computing Devices & Systems (CD) | Programs & Algorithms (PA) | Networking & Internet (NI) | Impact & Culture (IC) | Digital Literacy (DL)
CS Standards assessed on ILEARN Science Grades 4 & 6 | SEA 172 (2018): CS mandatory K-12 | HS graduation requirement beginning 2029
HQCM-Approved: CodeHS Indiana K-8 Pathway (Grades 6-8) | Free: Code.org CSF K-5 | Scratch | CS Unplugged | Google CS First | Tynker
Grade Bands: K-2 (Dou'a, Hana, Hafsa) | 3-5 (Al Habib, Soraya, Dounia) | 6-8 (Hafsa, Abdelmalek)
Legacy Learning Center | 2025-2026 | IDOE CS Compliant | Source: in.gov/doe/students/computer-science/

Grade	Teacher	Band	ILEARN CS?	Primary Free Resource
K	Dou'a	K-2	No — builds foundation for Gr. 4 ILEARN	Code.org Course A + Scratch Jr. + CS Unplugged
Gr. 1	Hana	K-2	No	Code.org Course B + Scratch Jr. + Blockly
Gr. 2	Hafsa	K-2	No — bridges to 3-5 band	Code.org Course C + Scratch Jr. + CS Unplugged
Gr. 3	Al Habib	3-5	No — prepares for Gr. 4 ILEARN	Code.org Course D + Scratch 3.0 + Google CS First
Gr. 4	Soraya	3-5	YES - ILEARN Science Gr. 4 (~16% CS)	Code.org Course E + CodeHS IN4 + Scratch + ILEARN prep
Gr. 5	Dounia	3-5	No — prepares for Gr. 6 ILEARN	Code.org Course F + Scratch + CodeHS IN5
Gr. 6	Hafsa	6-8	YES - ILEARN Science Gr. 6 (~17% CS)	CodeHS Indiana 6 (HQCM) + Code.org CS Discoveries
Gr. 7	Abdelmalek	6-8	No — builds HS CS pipeline	CodeHS Indiana 7 (HQCM) + Python + replit.com
Gr. 8	Abdelmalek	6-8	No — HS CS prep (req. 2029)	CodeHS Indiana 8 (HQCM) + Python + Web Dev + AI

Indiana CS NON-NEGOTIABLES — All LLC Teachers

1. SEA 172 (2018) REQUIRES CS instruction for ALL students K-12 every school year — this is Indiana state law. Non-compliance is not an option.
2. K-8 CS standards adopted by SBOE June 2023 — mandatory beginning 2023-2024 school year.
3. CS standards for Grades 4 and 6 are ASSESSED on ILEARN Science (~16-17% of total score). Soraya (Gr. 4) and Hafsa (Gr. 6) must teach ALL CS standards before Spring ILEARN window.
4. CS is taught IN ADDITION TO grade-level science, math, and ELA. Minimum: 30-45 min/week K-5 | 45-50 min/week 6-8.
5. HS graduation requirement begins 2029 — LLC Grade 8 students are the Class of 2029. They MUST be prepared for the HS CS requirement.
6. All six CS domains must be addressed every year: DI | CD | PA | NI | IC | DL.
7. CodeHS Indiana K-8 Pathway (Grades 6-8) is on Indiana's HQCM Advisory List. Code.org CS Fundamentals (K-5) is free and IDOE-recommended.

Section 1: Indiana K-8 Computer Science Standards

Source: Indiana Academic Standards for K-8 Computer Science (IDOE 2023) — media.doe.in.gov/news/k-8-computer-science-indiana-academic-standards.pdf | Based on CSTA K-12 CS Standards (2017) and K-12 CS Framework. Adopted SBOE June 2023. Assessed on ILEARN Science Grades 4 and 6. Mandatory K-12 per SEA 172 (2018). HS graduation requirement beginning 2029 per IC 20-32-4-18.

Six CS Domains — The Framework

Domain	What Students Learn Across K-8
DI — Data & Information	Decompose problems; organize and analyze data; represent data in multiple ways; understand data types (binary, images, sounds); evaluate algorithms; protect data privacy; visualize data to find patterns.
CD — Computing Devices & Systems	Understand hardware + software working together; select appropriate tools; troubleshoot hardware/software issues; understand local/remote data storage; design user interfaces.
PA — Programs & Algorithms	Create step-by-step algorithms; write programs using sequences, events, loops, conditionals, variables, and functions; debug and test programs; use modular design; transition from block-based (K-5) to text-based (6-8) programming.
NI — Networking & Internet	Understand how the internet connects computers; explain how data packets travel; describe roles of protocols, browsers, and servers; cybersecurity and encryption; how to protect devices on networks.
IC — Impact & Culture	Positive and negative impacts of computing on individuals and society; digital citizenship; equity and inclusion; AI and algorithmic bias; careers in CS; ethical use of technology; intellectual property.
DL — Digital Literacy	Responsible and safe use of technology; internet safety and password hygiene; evaluating online information; digital communication and collaboration; copyright and citation; privacy settings; phishing awareness.

ILEARN CS Connection — Grades 4 and 6 (= Assessed)

Grade 4 ILEARN Science: CS segment = ~16% of total score (8 stand-alone items). Essential CS standards tested: 3-5.DI.1(E) Decompose problems | 3-5.DI.5(E) Data representation/binary | 3-5.CD.2(E) Debug programs | 3-5.PA.2(E) Programs with loops/conditionals | 3-5.IC.1(E) Technology impacts.

Grade 6 ILEARN Science: CS segment = ~17% of total score (8 stand-alone items). Essential CS standards tested: 6-8.DI.1(E) Decomposition | 6-8.DI.4(E) Privacy and security | 6-8.CD.3(E) Programs with loops/conditionals/variables | 6-8.NI.1(E) Data packet transmission | 6-8.PA.4(E) Modular design | 6-8.IC.2(E) Social impacts of computing.

Soraya (Grade 4) and Hafsa (Grade 6): all CS standards must be taught before Spring ILEARN window. Use ILEARN CS practice items weekly from October. Source: in.gov/doe/files/ILEARN-Science-Grade-4-Blueprint.pdf and in.gov/doe/files/ILEARN-Science-Grade-6-Blueprint.pdf

Grade Band K-2 Standards (Kindergarten, Grade 1, Grade 2 — Dou'a, Hana, Hafsa)

Standard	Indiana K-8 CS Standard — Full Text (Source: IDOE 2023 IAS)	Domain	ILEARN
K-2.DI.1	In order to solve a problem, sort information into a useful order.	DI	
K-2.DI.2	Identify and collect data using digital tools and technology.	DI	
K-2.DI.3	Recognize that software is created to control computer operations.	DI	
K-2.DI.4	Use technology tools to share information about yourself with your family, school, or community.	DI	
K-2.CD.1	Use appropriate digital tools and technology resources to accomplish a	CD	

	variety of tasks and solve problems.		
K-2.CD.2	Identify, using accurate terminology, simple hardware and software problems that may occur during use.	CD	
K-2.CD.3	Describe basic ways in which computers and the internet can be used to support everyday tasks.	CD	
K-2.PA.1	Construct a sequence of instructions (algorithm) to complete a task or solve a problem.	PA	
K-2.PA.2	Create, test, and modify a program in a visual programming environment using sequences and loops.	PA	
K-2.PA.3	Using a visual programming environment, create a program that includes sequences, events, and basic conditionals to accomplish a task.	PA	
K-2.PA.4	Decompose the steps to complete a familiar task and sequence them correctly.	PA	
K-2.NI.1	Demonstrate how a device on a network sends and receives information.	NI	
K-2.NI.2	Describe how technology resources can be used to communicate with others.	NI	
K-2.IC.1	Describe ways the community uses and relies on computing devices in everyday life.	IC	
K-2.IC.2	Explain who is responsible for keeping personal information safe.	IC	
K-2.IC.3	Explain what bugs are and how to find and fix them.	IC	
K-2.DL.1	Practice safe and responsible use of technology systems and software and make connections to how it relates to responsible use in the community.	DL	
K-2.DL.2	Use digital tools to communicate and collaborate.	DL	
K-2.DL.3	Evaluate online information for accuracy and point of view.	DL	

Grade Band 3-5 Standards (Grades 3, 4, 5 — Al Habib, Soraya, Dounia)

Green rows = ILEARN Science Grade 4 Essential CS Standards. All 3-5 standards must be taught across Grades 3-5.

Standard	Indiana K-8 CS Standard — Full Text (Source: IDOE 2023 IAS)	Domain	ILEARN
3-5.DI.1	**Decompose problems and sub-problems into parts as a means to solving complex problems.**	DI	**Gr.4&6**
3-5.DI.2	Organize and present data in a variety of visual formats (charts, tables) to make it useful.	DI	
3-5.DI.3	Collect data, using digital tools where appropriate, and represent data in various ways.	DI	
3-5.DI.4	Use outcome data to solve a problem or answer a question.	DI	
3-5.DI.5	**Discuss that there are different techniques for encoding data (numbers, images, sounds, text) and understand that all data can be represented using bits.**	DI	**Gr.4&6**
3-5.CD.1	Describe how hardware and software work together as a system to accomplish tasks.	CD	
3-5.CD.2	**Use a digital problem-solving tool to write and debug a simple program.**	CD	**Gr.4&6**
3-5.CD.3	Select appropriate digital tools and technology to accomplish a given task.	CD	
3-5.CD.4	Apply troubleshooting strategies for solving simple hardware and software problems.	CD	
3-5.PA.1	Develop and test an algorithm and show how it can be implemented as a computer program.	PA	

3-5.PA.2	**Develop, test, and refine programs that include sequences, events, loops, and conditionals using a block-based visual programming environment.**	PA	**Gr.4&6**
3-5.PA.3	Modify an existing program to add new functionality using a block-based visual programming environment.	PA	
3-5.PA.4	Decompose a complex problem into manageable sub-problems that could be solved by programming.	PA	
3-5.PA.5	Design and iteratively develop programs that combine control structures with user input.	PA	
3-5.NI.1	Describe how the internet connects computers around the world.	NI	
3-5.NI.2	Describe how websites and web pages are created and viewed using a browser.	NI	
3-5.NI.3	Identify how to recognize and avoid phishing and other cybersecurity threats.	NI	
3-5.IC.1	**Describe positive and negative social and ethical impacts of using technology.**	IC	**Gr.4&6**
3-5.IC.2	Identify computing technologies that have changed the world and express how those technologies influence and are influenced by cultural practices.	IC	
3-5.IC.3	Explore the various jobs and careers that involve computer science.	IC	
3-5.IC.4	Evaluate and discuss responsible behaviors and safety considerations for online communities and activities.	IC	
3-5.DL.1	Practice safe and responsible use of technology systems and software; make connections to how responsible use relates to responsible citizenship.	DL	
3-5.DL.2	Collect and use digital information safely and ethically.	DL	
3-5.DL.3	Use digital tools effectively and efficiently to communicate and collaborate.	DL	

Grade Band 6-8 Standards (Grades 6, 7, 8 — Hafsa, Abdelmalek)

Green rows = ILEARN Science Grade 6 Essential CS Standards. All 6-8 standards must be taught across Grades 6-8.

Standard	Indiana K-8 CS Standard — Full Text (Source: IDOE 2023 IAS)	Domain	ILEARN
6-8.DI.1	**Decompose (break down) problems into smaller, more manageable subsets by applying algorithmic problem-solving steps to make the possible solutions easier to follow, test, and debug.**	DI	**Gr.4&6**
6-8.DI.2	Represent data in multiple ways and translate from one representation to another.	DI	
6-8.DI.3	Evaluate the impact of algorithms by considering the criteria and constraints of the problem being solved.	DI	
6-8.DI.4	**Discuss issues of privacy and security in the context of data collection and evaluate potential risks and benefits.**	DI	**Gr.4&6**
6-8.DI.5	Analyze and describe how data is encrypted to protect private information.	DI	
6-8.DI.6	Create data visualizations to highlight relationships in data.	DI	
6-8.CD.1	Describe the relationship between hardware and software and how they work together to complete a task on a computing device.	CD	
6-8.CD.2	Understand how digital information is stored locally and remotely and how devices access information over networks.	CD	
6-8.CD.3	**Implement programs that include sequences, events, loops, conditionals, and variables using a block-based or text-based programming language.**	CD	**Gr.4&6**

6-8.CD.4	Systematically find and fix problems with computing artifacts.	CD	
6-8.CD.5	Design user-friendly interfaces to facilitate user interaction with computing devices.	CD	
6-8.PA.1	Decompose problems and sub-problems in a way that helps to plan, manage, and implement solutions.	PA	
6-8.PA.2	Design and develop programs that use variables, loops, nested loops, conditionals, and user-defined functions.	PA	
6-8.PA.3	Create programs using procedures and functions to organize code into logical and reusable sections.	PA	
6-8.PA.4	**Use modular design to create programs with multiple interdependent parts.**	PA	**Gr.4&6**
6-8.PA.5	Apply strategies for identifying, fixing, and documenting bugs in programs.	PA	
6-8.NI.1	**Explain how data packets are transmitted and received across the internet.**	NI	**Gr.4&6**
6-8.NI.2	Describe the role of protocols in transmitting data across networks and the internet.	NI	
6-8.NI.3	Evaluate and apply cybersecurity strategies to protect computer systems and networks.	NI	
6-8.NI.4	Describe how encryption and decryption work to keep data safe online.	NI	
6-8.IC.1	Describe ways that computing has impacted collaboration and communication in positive and negative ways.	IC	
6-8.IC.2	**Analyze the beneficial and harmful effects of computing innovations on individuals and society.**	IC	**Gr.4&6**
6-8.IC.3	Evaluate the credibility and accuracy of digital information and identify strategies for responsible sharing.	IC	
6-8.IC.4	Describe the impact of bias in algorithms, including in artificial intelligence and machine learning.	IC	
6-8.IC.5	Explore ethical issues in computing, including intellectual property and the effects of sharing software.	IC	
6-8.DL.1	Evaluate the appropriateness of digital tools and resources for a specific task.	DL	
6-8.DL.2	Demonstrate best practices for personal security online, including creating strong passwords and identifying phishing.	DL	
6-8.DL.3	Identify appropriate citation styles and apply them when attributing digital content.	DL	

Green = ILEARN Essential CS standards. All standards must be taught; essential standards receive highest emphasis. Source: IDOE 2023 CS Standards.

Section 2: CS Curriculum Resources, Tools & Best School Practices

HQCM-Approved Program — CodeHS Indiana K-8 Pathway (Grades 6-8)

CodeHS Indiana K-8 Pathway — On Indiana HQCM Advisory List

CodeHS Indiana 6, 7, and 8 courses are on Indiana's High Quality Curriculum Materials Advisory List — specifically designed for Indiana CS standards.

Grade 6 (codehs.com/course/IN_6) | Grade 7 (codehs.com/course/IN_7) | Grade 8 (codehs.com/course/IN_8) — all browser-based, no downloads, free teacher account.

Each course includes: video lessons, coding exercises, quizzes, projects, and teacher dashboard with progress tracking and gradebook.

Indiana PD partnership: 'CodeHS has partnered with IDOE to consistently deliver high-quality and engaging professional learning experiences. In 2022, over 170 Indiana teachers solidified best practices in CS instruction through CodeHS.' (IDOE CS PD page)

Indiana is ranked 7th in the nation for HS CS course offerings — CodeHS is a major contributor to this ranking.

Free CS Resources — All Grades K-8

Resource	Cost	Grades	Description + URL
Code.org CS Fundamentals (Courses A-F)	FREE	K-5	Complete K-5 CS curriculum — Course A(K), B(1), C(2), D(3), E(4), F(5) — block-based coding, algorithms, data, digital citizenship. Indiana-aligned. Used by 2M+ classrooms. code.org/educate/curriculum/elementary-school
Code.org CS Discoveries	FREE	6-8	Free year-long CS course Gr. 6-8 — problem-solving, web dev, programming, data, computing impacts. Used by thousands of Indiana schools. code.org/educate/csd
Code.org Hour of Code	FREE	K-8	Free 1-hour intro CS activities — great for CS Education Week (December). Minecraft, Star Wars, Frozen themes. hourofcode.com
Scratch 3.0 (MIT Media Lab)	FREE	2-8	Free block-based programming — students create stories, games, animations. Teacher resources at scratch.mit.edu/educators. 60+ languages. scratch.mit.edu
Scratch Jr.	FREE	K-2	Free tablet app for K-2 — visual block programming, no reading required. scratchjr.org
CS Unplugged	FREE	K-8	FREE offline CS activities — teach computing concepts WITHOUT computers. Binary, sorting, algorithms, networks, encryption. csunplugged.org
Tynker	Free tier	K-8	Visual programming + game design — free basic tier. Popular in Indiana elementary schools. tynker.com
Google CS First	FREE	4-8	FREE CS curriculum by Google — themed modules (music, storytelling, games, art) using Scratch. csfirst.withgoogle.com
Khan Academy Computing	FREE	5-8	FREE computing: HTML/CSS, JavaScript, SQL, programming basics — video + interactive exercises. khanacademy.org/computing
Microsoft MakeCode	FREE	4-8	FREE block-based + JavaScript — micro:bit physical computing — game development. makecode.com
Blockly Games	FREE	K-5	FREE game-based intro to programming — no account needed. blockly.games
Common Sense Media	FREE	K-8	FREE digital citizenship curriculum — internet safety, privacy,

Digital Citizenship			cyberbullying, media literacy. commonsense.org/education
replit.com	FREE	6-8	FREE online Python/JS/HTML IDE — no installation — students code in any browser. Used widely in Indiana MS CS. replit.com
Python.org (trinket.io)	FREE	7-8	FREE online Python environment — trinket.io | python.org | runs in browser — no downloads
Indiana IN Learning Lab — CS Frameworks	FREE	K-8	Official Indiana CS frameworks and resources from IDOE. inlearninglab.com/collections/2023-computer-science-frameworks
Machine Learning for Kids	FREE	6-8	FREE machine learning activities using Scratch — train AI models — used for AI/ML ethics units. machinelearningforkids.co.uk
AI for Oceans (Code.org)	FREE	5-8	FREE interactive AI curriculum — train a machine learning model — understand AI bias. code.org/oceans
W3Schools	FREE	7-8	FREE HTML/CSS/JavaScript reference and tutorials — students use as reference during web dev projects. w3schools.com

What Indiana's Best Schools Do for K-8 CS

School	Grade Band	CS Practices & Key Tools
Carmel Clay Schools	K-8	Designated CS teacher 1x/week | Code.org CSF K-5 | Code.org CS Discoveries 6-8 | Scratch (3-5) | Hour of Code every December | Ozobots (K-2 physical coding) | Makey Makey (3-5) | CodeHS (6-8) | ILEARN CS prep items from October for Gr. 4 & 6
Hamilton Southeastern (HSE)	K-8	CS integrated with science and math | Code.org CSF K-5 | Scratch Jr. (K-2) | micro:bit physical computing (5-6) | CodeHS HQCM (7-8) | Strong digital citizenship with Common Sense Media | CS career exploration in 6-8 units
Zionsville Community Schools	K-8	CS instruction every grade every week | CS Unplugged (offline) before digital | Scratch 3-5 | Python intro Grade 8 | ILEARN CS practice items weekly for Gr. 4 & 6 | Teacher-created CS challenges connecting to other subjects
Elkhart Community Schools	K-6	Full Indiana CS standard alignment published online — model for other Indiana districts | Google Slides with linked activities for every CS standard | Code.org + CodeHS combination | CS integrated with ELA and math | Teacher PD through Indiana CSTA
MSD Warren Township (Indianapolis)	K-8	Equity focus — all students get CS regardless of background | Code.org free curriculum | CS Unplugged for limited-device access | Google CS First (4-6) | Common Sense Digital Citizenship at every grade | Scratch for 3-8 projects
Eman Schools (Independent)	K-8	Weekly CS class every grade | Code.org K-5 + CodeHS HQCM 6-8 | Offline computational thinking before online | Cross-curricular CS integration | Student coding projects at school exhibitions
Washington Township (MSD)	6-8	CodeHS Indiana HQCM pathway | JavaScript intro Grade 8 | Real-world projects: build a website, create a game | ILEARN CS prep items weekly from September | Focus on 6-8.PA and 6-8.DI (ILEARN-assessed standards)
IPS School 55 (Glenns Valley Elem.)	K-5	Code.org CSF as primary curriculum | All 5 SOR-aligned integration points for CS in ELA | Hour of Code whole-school event | ILEARN Grade 4 CS preparation embedded in science lessons | Scratch Jr. K-2

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SECTION 3 — KINDERGARTEN

Teacher: Dou'a

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Kindergarten CS: 30 min/week minimum. Four quarterly units: Q1 Algorithms + Sequences | Q2 Loops + Events | Q3 Data + Devices | Q4 Internet Safety + Digital Citizenship. Primary tool: Code.org Course A + Scratch Jr. + CS Unplugged offline activities. ILEARN: not assessed at K.

LESSON K.1 | Legacy Learning Center | K-8 CS | 2025-2026

What Is an Algorithm? — Sequencing Steps (K-2.PA.1)

Standard	Indiana CS Standard — Full Text
Standard	K-2.PA.1 — Construct a sequence of instructions (algorithm) to complete a task or solve a problem.
Objective	Students understand that an algorithm is an ordered sequence of steps. Students create a correct step-by-step algorithm for a familiar task and recognize that order matters.
Key Vocabulary	*Algorithm, Sequence, Step, Order, Instruction, First/Next/Then/Last, Correct/Incorrect Order*
Materials / Tools	Code.org Course A — Sequencing lessons (code.org/curriculum/coursea) | Large picture cards of scrambled steps | CS Unplugged algorithm activity cards | Sticky notes

Lesson Activities

Phase	Activity
Engage (10 min)	Scramble steps for making a peanut butter sandwich on the board. Teacher acts out the wrong order literally — students observe the error. 'Steps must be in the right order — just like a computer needs!' Students discuss what went wrong.
Explore (15 min)	Students receive picture cards (brush teeth / tie shoes / make cereal) and arrange in the correct order. Then: Code.org Course A 'Happy Maps' — students move the character step by step to reach the sunflower using arrow blocks.
Explain (10 min)	Introduce the word ALGORITHM. 'An algorithm is a list of steps in the correct order to solve a problem. Computers follow algorithms EXACTLY — no guessing.' Students share: 'What algorithm do you follow every morning?'
Elaborate (10 min)	CS Unplugged: Dou'a acts out getting dressed in the wrong order. Students 'debug' — find the error and fix the sequence. Students draw or write their own 4-step algorithm for a simple task.
Evaluate (5 min)	Exit ticket: students draw their 4-step algorithm in sequence on a paper strip. Teacher checks logical order.

Assessment	Differentiation	Resource / Tool
Algorithm card arrangement accuracy. Code.org Happy Maps completion. Exit ticket 4-step drawing.	ELL: picture-only cards | Below level: 3 steps only | Above level: write algorithm for teaching a robot to draw a square.	*Code.org Course A: code.org | CS Unplugged: csunplugged.org | Scratch Jr.: scratchjr.org*

LESSON K.2 | Legacy Learning Center | K-8 CS | 2025-2026

Loops — Do It Again! (K-2.PA.2)

Standard	Indiana CS Standard — Full Text

Standard	K-2.PA.2 — Create, test, and modify a program in a visual programming environment using sequences and loops.
Objective	Students understand that a loop repeats the same steps multiple times. Students create a simple Code.org program using a loop instead of repeated steps.
Key Vocabulary	*Loop, Repeat, Pattern, Sequence, Program, Bug, Debug*
Materials / Tools	Code.org Course A — Loops lessons | Paper robot movement offline game | Whiteboard | Scratch Jr. (optional)

Lesson Activities

Phase	Activity
Engage (10 min)	Teacher says 'Jump-Jump-Jump-Jump-Jump' then shows 'Repeat JUMP 5 times.' Compare: 5 individual steps vs. 1 loop. Which is more efficient? Students physically act out the loop.
Explore (15 min)	Code.org Course A Loops puzzles on devices. Students use REPEAT blocks instead of repeating single steps. Focus: identify what is repeating and put it inside the loop.
Explain (10 min)	Show: program WITHOUT loops (10 steps) vs. WITH loop (3 steps + repeat). 'Loops make programs shorter and easier to fix.' Connect to math: AABB patterns = loop patterns.
Elaborate (10 min)	Grid game on floor: teacher tapes squares. Students follow program card 'Repeat 3: Step Forward, Turn Right.' Walk the loop, then draw it on paper with arrows.
Evaluate (5 min)	Exit ticket: show a maze + program. 'Does this program have a loop? Circle it. How many times does it repeat?'

Assessment	Differentiation	Resource / Tool
Code.org loop puzzle completion. Exit ticket: identify loop and count repetitions.	ELL: clap pattern physically to demonstrate loop | Below level: observe loop running first | Above level: write a loop with 2 different actions inside.	*Code.org Course A: code.org | CS Unplugged: csunplugged.org | Scratch Jr. loop button: scratchjr.org*

LESSON K.3 | Legacy Learning Center | K-8 CS | 2025-2026

Staying Safe Online — Internet Safety (K-2.DL.1 + K-2.IC.2)

Standard	Indiana CS Standard — Full Text
Standard	K-2.DL.1 — Practice safe and responsible use of technology. K-2.IC.2 — Explain who is responsible for keeping personal information safe.
Objective	Students identify personal information that should NOT be shared online. Students identify trusted adults who can help when something feels wrong online.
Key Vocabulary	*Personal Information, Private, Safe/Unsafe, Online, Password, Trusted Adult, Digital Citizen*
Materials / Tools	Common Sense Media K-2 lesson: 'Is It Private?' (commonsense.org/education) | T-chart poster: OK to share / NOT OK to share | Sort cards

Lesson Activities

Phase	Activity
Engage (8 min)	Hold up a 'Personal Info Card' with full name, address, school, age, favorite color, password. 'Which do you share with a stranger online?' Class sorts with thumbs up/down.
Explore (12 min)	Common Sense Media video (2 min). Pairs sort 6 information picture cards: 'OK to share' vs 'NEVER share with strangers.'
Explain (10 min)	Rule: full name + address together = too much. Password = only you and parents. Rule: 'When in doubt, ask a trusted adult.' Who are trusted adults? Chart created together.

Elaborate (10 min)	Role-play: 'An online person asks for your home address to send a gift. What do you do?' Students practice: tell a trusted adult, do NOT share, log off.
Evaluate (10 min)	Exit ticket checklist: (1) Name one piece of info never to share. (2) Name one OK to share. (3) Name one trusted adult you would tell.

Assessment	Differentiation	Resource / Tool
Sort card accuracy. Exit ticket checklist 3 items.	ELL: picture-based information cards | Below level: password safety only | Above level: create a 'Digital Safety Pledge' poster.	*Common Sense Media K-2: commonsense.org/education* | *Code.org Course A Digital Citizenship* | *inlearninglab.com*

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SECTION 4 — GRADE 1

Teacher: Hana

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 1 CS: 30 min/week. Q1 Events + Conditionals | Q2 Debugging | Q3 Data Patterns | Q4 Networks + Devices. Primary: Code.org Course B + Scratch Jr. + CS Unplugged.

LESSON 1.1 | Legacy Learning Center | K-8 CS | 2025-2026

Events — When You Click, Something Happens (K-2.PA.3)

Standard	Indiana CS Standard — Full Text
Standard	K-2.PA.3 — Create a program that includes sequences, events, and basic conditionals to accomplish a task.
Objective	Students understand that a computer program responds to events (triggers). Students create a Scratch Jr. program that starts when an event happens.
Key Vocabulary	*Event, Trigger, Condition, If-Then, When (event block), Click, Sequence, Sprite*
Materials / Tools	Scratch Jr. (iPads or tablets) | Code.org Course B Events lessons | Projected example Scratch Jr. program | 'Event Cards' — physical: IF you clap → everyone stands

Lesson Activities

Phase	Activity
Engage (10 min)	Physical game: 'Simon Says with Events.' IF teacher claps → jump. IF teacher snaps → sit. Students play 3 minutes. 'You just responded to EVENTS — just like computers do!'
Explore (15 min)	Scratch Jr.: teacher shows a cat that moves when you tap the green flag. 'The green flag is the EVENT.' Students explore: What happens when you press it? Can you make it do something different?
Explain (10 min)	'An EVENT is something that happens — like pressing a button. A conditional says: IF this event happens, THEN do this action.' Show in Scratch Jr. Students label EVENT and ACTION.
Elaborate (15 min)	Scratch Jr. project: when you tap green flag → character moves; when you tap character → character says something. Students add their own character and 2 different events.
Evaluate (10 min)	Students describe: 'My program has ___ events. When ___, the program ___.' Exit: draw a box around an event in your program and label it.

Assessment	Differentiation	Resource / Tool
Scratch Jr. project: 2 events present. Exit ticket labeling events.	ELL: demonstrate program without verbal explanation | Below level: starter project — add one event only | Above level: explore microphone or timer event blocks.	*Scratch Jr.: scratchjr.org | Code.org Course B: code.org | CS Unplugged: csunplugged.org*

LESSON 1.2 | Legacy Learning Center | K-8 CS | 2025-2026

Debugging — Finding and Fixing Mistakes (K-2.IC.3)

Standard	Indiana CS Standard — Full Text
Standard	K-2.IC.3 — Explain what bugs are and how to find and fix them.

Objective	Students define a bug as an error in a program. Students practice debugging (finding and fixing errors) in both physical and digital programs.
Key Vocabulary	*Bug, Debug, Error, Test, Fix, Code, Program, Correct, Incorrect*
Materials / Tools	Code.org Course B debugging puzzles | Buggy algorithm printed cards with deliberate mistakes | Red and green sticky dots | Scratch Jr.

Lesson Activities

Phase	Activity
Engage (8 min)	Story: Grace Hopper found the FIRST real bug in 1947 — a moth in a computer. Show the photo. 'From that day on, errors in programs have been called BUGS and fixing them is called DEBUGGING.'
Explore (15 min)	Physical debug: students receive buggy algorithm cards with a step in the wrong place. Find and fix with red sticky dot + corrected step. Digital: Code.org Course B debugging puzzles.
Explain (10 min)	Debugging strategy: (1) run the program; (2) identify what went wrong; (3) find WHERE the error is; (4) fix it; (5) test again. 'Professionals spend MORE time debugging than writing new code.'
Elaborate (10 min)	Scratch Jr. intentional bug: pre-built project where character walks backward. Students find and fix. Document: 'I found the bug when ___ happened. I fixed it by ___.'
Evaluate (7 min)	Exit ticket: 'A robot should walk 3 steps forward and stop — but it walks 3 steps backward. What is wrong? How do you fix it?'

Assessment	Differentiation	Resource / Tool
Buggy algorithm card fix. Code.org puzzle completion. Exit ticket debugging plan.	ELL: debug with pictures only — point to the mistake | Below level: 1 bug only | Above level: intentionally break and swap Scratch Jr. programs with a partner.	*Code.org Course B: code.org | CS Unplugged: csunplugged.org | Grace Hopper video: youtube.com*

Legacy Learning Center · K-8 COMPUTER SCIENCE · 2025-2026

SECTION 5 — GRADE 2

Teacher: Hafsa

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 2 CS: 30 min/week. Q1 Conditionals + Functions intro | Q2 Data Collection + Binary | Q3 Networks + Devices | Q4 Impact + Careers. Primary: Code.org Course C + Scratch Jr. + CS Unplugged + Tynker Jr.

LESSON 2.1 | Legacy Learning Center | K-8 CS | 2025-2026

How Do Computers Store Information? — Binary (K-2.DI.3)

Standard	Indiana CS Standard — Full Text
Standard	K-2.DI.3 — Recognize that software is created to control computer operations.
Objective	Students understand that computers store ALL data as on/off signals (binary 0s and 1s). Students encode and decode simple messages using binary.
Key Vocabulary	*Data, Binary, 0 and 1, On/Off, Bit, Byte, Encode, Decode, Store, Software, Hardware*
Materials / Tools	CS Unplugged Binary Numbers activity cards (csunplugged.org) | Black and white squares (0 and 1) | Binary alphabet chart | Code.org binary activity | Binary bracelet template (optional)

Lesson Activities

Phase	Activity
Engage (10 min)	Show a light switch: ON or OFF. 'Computers only understand ON and OFF — written as 1 and 0. Everything — photos, music, games — is stored as 1s and 0s.' Demonstrate: how many patterns can you make with 3 switches? (2^3 = 8)
Explore (15 min)	CS Unplugged Binary Numbers: students receive 5 cards with dots (16, 8, 4, 2, 1). Flip face-up to represent numbers. 'Represent the number 13.' Students discover 8+4+1=13. Encode their first initial using a simplified binary chart.
Explain (10 min)	'A bit is one 0 or 1. Eight bits = one byte. Photos are millions of bytes. Binary is why computers can represent ANYTHING using just two states.' Show the letter A in binary (01000001).
Elaborate (10 min)	Binary bracelet: students fill 8 circles based on their birth month in binary. OR decode a hidden 3-letter word Hafsa writes in binary.
Evaluate (5 min)	Exit ticket: 'What does binary mean? Name two things computers store using binary.'

Assessment	Differentiation	Resource / Tool
Binary encoding/decoding accuracy. CS Unplugged completion. Exit ticket definition + 2 examples.	ELL: binary chart with pictures | Below level: 3 cards only (0-7) | Above level: encode full first name in binary.	*CS Unplugged Binary: csunplugged.org/en/topics/binary-numbers/ | Code.org binary activity | Binary Bracelets: csunplugged.org*

LESSON 2.2 | Legacy Learning Center | K-8 CS | 2025-2026

Digital Citizenship — Using Technology Responsibly (K-2.DL.1 + K-2.DL.2)

Standard	Indiana CS Standard — Full Text
Standard	K-2.DL.1 — Practice safe and responsible use of technology. K-2.DL.2 — Use digital tools to communicate and collaborate.

Objective	Students identify what responsible digital citizenship looks like. Students practice respectful online communication. Students understand that actions online have real consequences.
Key Vocabulary	*Digital Citizen, Responsible, Respectful, Cyberbullying, Online Community, Screen Time, Report, Consequence*
Materials / Tools	Common Sense Media: 'Pause & Think Online' video (commonsense.org) | Scenario cards | Digital Pledge poster | Class discussion anchor chart

Lesson Activities

Phase	Activity
Engage (8 min)	'If someone says something mean to you in person — how do you feel? What if they said it online?' Students discuss. 'Being online doesn't make it OK to be unkind. The same rules apply — and sometimes online words hurt MORE.'
Explore (12 min)	Common Sense Media 'Pause & Think Online' video (2 min). Students then receive scenario cards: 'A classmate posts a mean comment on your photo. What do you do?' Sort responses: Respond meanly / Ignore / Report / Tell a trusted adult.
Explain (10 min)	Introduce PAUSE & THINK: before posting anything online, ask: Is it TRUE? Is it HELPFUL? Is it INSPIRING? Is it NECESSARY? Is it KIND? (T.H.I.N.K. acronym). Post on wall.
Elaborate (10 min)	Students use digital tool (Google Docs, Seesaw, or paper) to write a positive, helpful message to a classmate. Practice: respectful digital communication (K-2.DL.2).
Evaluate (10 min)	Exit ticket: name 1 rule for being a responsible digital citizen. Students draw or write.

Assessment	Differentiation	Resource / Tool
Scenario card sort accuracy. T.H.I.N.K. applied in elaboration. Exit ticket rule.	ELL: scenario cards with pictures | Below level: focus on one rule only | Above level: create a class Digital Citizenship Pledge poster.	*Common Sense Media: commonsense.org/education | Code.org Digital Citizenship | Seesaw: web.seesaw.me*

Legacy Learning Center · K-8 COMPUTER SCIENCE · 2025-2026

SECTION 6 — GRADE 3

Teacher: Al Habib

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 3 CS: 30-45 min/week. Q1 Decomposition | Q2 Scratch Programming | Q3 Data Analysis | Q4 ILEARN Preview. Primary: Code.org Course D + Scratch 3.0 + Google CS First. ILEARN: Grade 3 builds directly toward Gr. 4 ILEARN CS — begin ILEARN-style items in January.

LESSON 3.1 | Legacy Learning Center | K-8 CS | 2025-2026

Decomposition — Breaking Big Problems into Small Pieces (3-5.DI.1)

Standard	Indiana CS Standard — Full Text
Standard	3-5.DI.1 — Decompose problems and sub-problems into parts as a means to solving complex problems.
Objective	Students decompose a complex real-world problem into smaller, manageable sub-problems. Students understand decomposition is the #1 CS problem-solving strategy.
Key Vocabulary	*Decomposition, Sub-problem, Complex, Manageable, Break down, Strategy, Algorithm*
Materials / Tools	Code.org Course D Decomposition lesson | Chart paper: complex problem | Decomposition graphic organizer | Sticky notes | Scratch 3.0 for application

Lesson Activities

Phase	Activity
Engage (10 min)	Al Habib shows a complex task: 'Plan a school field trip.' 'If I told a computer JUST that, it would fail — too complex. How do we break this down?' Brainstorm: choose destination, get permission slips, arrange transport, pack lunches, etc. 'This is DECOMPOSITION — the number one problem-solving strategy in CS.'
Explore (15 min)	Groups receive a complex problem (birthday party, robot, video game). Write the big problem, identify 4-6 sub-problems, arrange in order, identify if sub-problems need further decomposition. Present to class.
Explain (10 min)	'When programmers build apps, they decompose into modules: login, search, payment. Each module is solved separately.' Show Scratch project with multiple sprites — each sprite = one sub-problem.
Elaborate (15 min)	Scratch 3.0: plan a story with 2 characters. Decompose: what does Character 1 do? Character 2? Write the algorithm for each separately BEFORE touching the computer. Begin implementing Character 1.
Evaluate (5 min)	Exit ticket: 'A programmer wants to make a game where a character avoids enemies and collects coins. Decompose this into 3 sub-problems.'

Assessment	Differentiation	Resource / Tool
Group decomposition chart. Scratch project plan with sub-problems. Exit ticket 3 logical sub-problems.	ELL: organizer pre-filled with top-level problem | Below level: decompose a 2-step task first | Above level: create a full decomposition tree (main → sub → sub-sub).	*Code.org Course D: code.org | Scratch 3.0: scratch.mit.edu | Google CS First: csfirst.withgoogle.com | CS Unplugged: csunplugged.org*

LESSON 3.2 | Legacy Learning Center | K-8 CS | 2025-2026

Scratch Programming — Sequences, Loops & Events (3-5.PA.2)

Standard	Indiana CS Standard — Full Text
Standard	3-5.PA.2 — Develop, test, and refine programs that include sequences, events, loops, and conditionals using a block-based visual programming environment.
Objective	Students create a Scratch 3.0 program using all of: event trigger, sequence of 5+ steps, and at least one loop. Students test and debug their programs.
Key Vocabulary	*Scratch, Sprite, Stage, Script, Block, Event, Loop (forever/repeat), Sequence, Costume, Sound, Motion, Debug*
Materials / Tools	Scratch 3.0 (scratch.mit.edu — no account needed) | Scratch reference card | Planning storyboard paper

Lesson Activities

Phase	Activity
Engage (10 min)	Show completed Scratch project with animated story: character talks, moves, changes costumes. 'This uses sequences, events, and loops. By the end of class, your program will include all three.' Students identify each element on projected screen.
Explore (20 min)	Step-by-step guided challenge: (1) Add GREEN FLAG event; (2) 5 motion blocks sequence; (3) REPEAT 3 loop around sequence; (4) Costume change inside loop; (5) Add sound. Students test after each addition and debug.
Explain (10 min)	'Sequence runs top to bottom. REPEAT block = loop. GREEN FLAG = event. These three concepts appear in EVERY programming language — Python, Java, JavaScript.' Connect: this is what Grade 4 ILEARN CS will test.
Elaborate (15 min)	Add a SECOND sprite with its own scripts. Use a different event (space key pressed). Challenge: make sprites interact — when you click Sprite 1, Sprite 2 responds.
Evaluate (5 min)	Self-assessment checklist: event | loop | 5+ step sequence | tested/debugged | can explain each part .

Assessment	Differentiation	Resource / Tool
Scratch checklist (event + loop + sequence present). Verbal explanation of program.	ELL: Scratch in student's language (60+ languages available) | Below level: starter project — add loop only | Above level: add an if-else conditional.	*Scratch 3.0: scratch.mit.edu | Code.org Course D: code.org | Google CS First: csfirst.withgoogle.com*

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SECTION 7 — GRADE 4

Teacher: Soraya

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 4 CS: 45 min/week. ILEARN YEAR. Essential CS standards assessed on ILEARN Science Spring. Begin ILEARN CS practice items WEEKLY from October. Q1 Conditionals (3-5.PA.2) | Q2 Binary + Data (3-5.DI.5) | Q3 Programs + Debugging (3-5.CD.2) | Q4 Tech Impact + ILEARN INTENSIVE (3-5.IC.1).

LESSON 4.1 | Legacy Learning Center | K-8 CS | 2025-2026

Conditionals — If This, Then That (3-5.PA.2 ESSENTIAL — ILEARN Gr. 4)

Standard	Indiana CS Standard — Full Text
Standard	3-5.PA.2 (ESSENTIAL — ILEARN Gr. 4): Develop, test, and refine programs that include sequences, events, loops, AND CONDITIONALS using block-based programming.
Objective	Students implement an if-else conditional in their Scratch program and explain how it changes behavior. This standard IS ASSESSED on ILEARN Science Grade 4.
Key Vocabulary	*Conditional, If-Then, If-Then-Else, Boolean, True/False, Condition, Branch, 'On Edge Bounce', Touching (condition), Score, Variable*
Materials / Tools	Scratch 3.0 | Code.org Course E conditionals module | ILEARN-style CS practice item | Conditional flowchart printable | CodeHS Grade 4 Indiana course

Lesson Activities

Phase	Activity
Engage (10 min)	'Every morning you make conditionals: IF it is raining, THEN bring an umbrella. ELSE leave it home.' Physical game: IF teacher holds red card → sit. ELSE → stand. 'You just executed a conditional! Computers do this billions of times per second.'
Explore (18 min)	Scratch: build a sprite that ALWAYS says 'Hello' when space is pressed. Then add conditional: 'If touching color blue — Say Hello — Else — Say Nothing.' Students try: sprite reacts differently based on what it touches.
Explain (12 min)	ILEARN-format question: 'A program makes a character move forward. Which code block makes it say I am at the edge ONLY when it reaches the edge?' Walk through how to read code blocks. 'This is EXACTLY what ILEARN Grade 4 CS will ask.'
Elaborate (15 min)	ILEARN prep project: character moves left/right (arrow keys). Star moves down from top. IF sprite touches star → score goes up by 1. Students must use: sequence + event + loop + conditional.
Evaluate (5 min)	ILEARN-style exit ticket: 'Look at this Scratch code block. If the sprite touches the wall what happens: (a) stops (b) says Ouch (c) continues (d) disappears.' Students circle and explain.

Assessment	Differentiation	Resource / Tool
ILEARN-style exit ticket. Scratch project: conditional implemented. Verbal: student explains what condition triggers what action.	ELL: conditional flowchart in student's language | Below level: use 'if touching edge' bounce block | Above level: nested conditionals (if touching red AND blue) | ILEARN items: inpt.cambiumtds.com/student	*Code.org Course E: code.org | Scratch 3.0: scratch.mit.edu | CodeHS Indiana 4: codehs.com/course/IN_4 | ILEARN items: indiana.portal.cambiumast.com*

LESSON 4.2 | Legacy Learning Center | K-8 CS | 2025-2026

Technology Has Impacts — Good and Bad (3-5.IC.1 ESSENTIAL — ILEARN Gr. 4)

Standard	Indiana CS Standard — Full Text
Standard	3-5.IC.1 (ESSENTIAL — ILEARN Gr. 4): Describe positive and negative social and ethical impacts of using technology.
Objective	Students identify both positive and negative impacts of a specific technology. Students evaluate whether a technology's benefits outweigh its risks. ASSESSED ON ILEARN GRADE 4.
Key Vocabulary	*Technology, Impact, Positive Impact, Negative Impact, Social Impact, Ethical, Benefit, Risk, Tradeoff, Screen Time, Privacy, Cyberbullying*
Materials / Tools	ILEARN-style passage about technology | T-chart: Positive/Negative | Short news article on social media and kids | Technology Evaluation graphic organizer | ILEARN Grade 4 CS released items (IDOE portal)

Lesson Activities

Phase	Activity
Engage (10 min)	Hold up a smartphone. 'Is this technology good or bad?' Students vote. 'TRICK QUESTION — it's both. ILEARN will ask you to identify BOTH positive and negative impacts.' Brainstorm 3 positive + 3 negative together.
Explore (15 min)	Read 1-paragraph technology scenario (ILEARN reading level): school gives all students tablets — positive + negative impacts. Students complete T-chart. Pair share: which impact is most significant?
Explain (12 min)	ILEARN strategy: (1) Read the scenario; (2) Ask — does this HELP or HARM people? (3) Is it good for SOCIETY or just one person? (4) Are there unintended consequences? Practice with sample ILEARN question.
Elaborate (10 min)	Groups: each receives one technology (social media, self-driving cars, smartphones in classrooms, AI helpers). Create brief report: 2 positive, 2 negative, team recommendation.
Evaluate (8 min)	ILEARN-style exit ticket (3 multiple choice): positive impact of social media | negative impact of smartphones at school | identify incomplete claim about technology.

Assessment	Differentiation	Resource / Tool
T-chart completion. ILEARN-style exit ticket (3 questions). Technology report.	ELL: T-chart in student's language | Below level: focus on one technology only | Above level: research digital divide — are technology's benefits equally distributed?	*IDOE ILEARN Gr. 4 CS items: indiana.portal.cambiumast.com | Common Sense Media: commonsense.org | Code.org Course E: code.org | CodeHS Indiana 4: codehs.com/course/IN_4*

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SECTION 8 — GRADE 5

Teacher: Dounia

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 5 CS: 40 min/week. Q1 Variables + Advanced Algorithms | Q2 Networks + Internet | Q3 Data Analysis | Q4 Grade 6 ILEARN Preview + Final Scratch Project. Primary: Code.org Course F + Scratch + CodeHS IN5 + Google CS First.

LESSON 5.1 | Legacy Learning Center | K-8 CS | 2025-2026

How Does the Internet Work? (3-5.NI.1 + 3-5.NI.2)

Standard	Indiana CS Standard — Full Text
Standard	3-5.NI.1 — Describe how the internet connects computers around the world. 3-5.NI.2 — Describe how websites and web pages are created and viewed using a browser.
Objective	Students trace the path of data from one computer to another across the internet. Students explain the roles of URLs, IP addresses, servers, routers, and browsers.
Key Vocabulary	*Internet, Network, IP Address, URL, Server, Client, Browser, HTTP/HTTPS, Router, Packet, Web Page, Website, Download*
Materials / Tools	Code.org 'The Internet' video (youtube.com/watch?v=Dxcc6ycZ73M) | CS Unplugged network simulation | IP address worksheet | Google CS First Communication unit

Lesson Activities

Phase	Activity
Engage (10 min)	Physical simulation: each student gets a number (IP address). Teacher sends a 'packet' (index card with message) across the room through 3 intermediary students (routers). 'This is EXACTLY how the internet works!'
Explore (15 min)	Code.org 'How the Internet Works' video series (first 2 videos: Packets + IP addresses). Students note: what is a packet? an IP address? what does HTTP mean? CS Unplugged: map a path from computer A to computer B through routers.
Explain (12 min)	'When you type youtube.com: (1) DNS server translates youtube.com to an IP address; (2) Data travels in PACKETS through routers; (3) YouTube's server sends back the page in packets; (4) Your browser assembles and shows it.' Draw path on board. HTTPS vs HTTP: S = Secure/Encrypted.
Elaborate (10 min)	Students draw a 'data journey map': laptop → router → ISP → YouTube server → back to laptop. Label: client, server, routers, IP addresses, packets, URL. Look up URL structure of 5 websites: https:// | domain | .com | /page.
Evaluate (8 min)	Exit ticket: 'When Dounia types youtube.com, list 4 things that happen before the video appears.' Students list in order.

Assessment	Differentiation	Resource / Tool
Network path diagram accuracy. Exit ticket 4-step internet sequence. CS Unplugged router activity.	ELL: visual internet journey with labeled steps | Below level: client-server-browser only | Above level: research IPv4 vs. IPv6.	*Code.org How the Internet Works: code.org | CS Unplugged: csunplugged.org/en/topics/the-internet/ | Khan Academy internet: khanacademy.org*

LESSON 5.2 | Legacy Learning Center | K-8 CS | 2025-2026

Advanced Scratch + Grade 6 ILEARN CS Preview (3-5.PA.5 + 6-8 band intro)

Standard	Indiana CS Standard — Full Text
Standard	3-5.PA.5 — Design and iteratively develop programs that combine control structures with user input.
Objective	Students design a Scratch program with user input, multiple control structures, and iteration. Students preview Grade 6 ILEARN CS concepts.
Key Vocabulary	*User Input, Control Structure, Iteration, Variable, Ask block, Answer block, Input/Output, Iteration, Prototype, Test, Refine*
Materials / Tools	Scratch 3.0 | ILEARN Grade 6 CS sample items (IDOE portal) | Code.org Course F final projects

Lesson Activities

Phase	Activity
Engage (8 min)	'Grade 6 ILEARN CS tests you on programs that have variables, loops, conditionals, AND user input. Let's preview what that looks like.' Show a simple text-based program: Ask a question → get input → respond based on input.
Explore (20 min)	Scratch: students build a quiz program. (1) Ask for user's name (Ask block); (2) Say 'Hello, [answer]!'; (3) Ask a trivia question; (4) If answer = correct answer — add 1 to score variable; (5) Loop through 3 questions; (6) At end, say final score.
Explain (12 min)	'This program has: user input (Ask block), variable (score), loop (repeat 3), conditional (if answer = ...). These 4 elements are tested on ILEARN Grade 6 CS. In Grade 6 you'll see them in TEXT-BASED code, not blocks — but the concepts are identical.'
Elaborate (10 min)	Students improve and customize their quiz: (a) add a timer; (b) add sound effects for correct/wrong; (c) display a different ending based on final score. Iterate: test, find bugs, fix, test again.
Evaluate (10 min)	Exit: 'Write in words what your program does — describe the sequence, the loop, the conditional, and the user input.' Students write 4 sentences describing each element.

Assessment	Differentiation	Resource / Tool
Scratch quiz program: input + variable + loop + conditional all present. Exit: 4 sentences describing each element.	ELL: Scratch in student's language | Below level: pre-built quiz — student adds one additional question | Above level: research Python input() function — write same quiz in Python pseudocode.	*Scratch 3.0: scratch.mit.edu | Code.org Course F: code.org | ILEARN Gr. 6 CS items: indiana.portal.cambiumast.com*

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SECTION 9 — GRADE 6

Teacher: Hafsa

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 6 CS: 45-50 min/week. ILEARN YEAR. Essential CS standards assessed on ILEARN Science Spring. Weekly ILEARN CS practice items from October. Q1 Decomposition + Data (6-8.DI.1) | Q2 Text Programming + Conditionals (6-8.CD.3) | Q3 Networks + Encryption (6-8.NI.1 6-8.DI.4) | Q4 Impacts + ILEARN INTENSIVE (6-8.IC.2 + full prep).

LESSON 6.1 | Legacy Learning Center | K-8 CS | 2025-2026

Text-Based Programming — Reading and Writing Code (6-8.CD.3 ESSENTIAL — ILEARN Gr. 6)

Standard	Indiana CS Standard — Full Text
Standard	6-8.CD.3 (ESSENTIAL — ILEARN Gr. 6): Implement programs with sequences, events, loops, conditionals, AND VARIABLES using block-based OR TEXT-BASED programming language.
Objective	Students transition to text-based programming. Students read and write Python/JavaScript code with variable, loop, conditional, and output. This standard IS ASSESSED on ILEARN Grade 6.
Key Vocabulary	*Syntax, Variable, Assignment, Condition, If-else, While/For loop, Function, Print/Output, Input, Python, JavaScript, Bug, Runtime Error*
Materials / Tools	CodeHS Indiana 6 (codehs.com/course/IN_6) | Code.org App Lab (JS) | ILEARN Grade 6 CS released items | Python/JS syntax cheat sheet

Lesson Activities

Phase	Activity
Engage (10 min)	Show same program in Scratch (blocks) and JavaScript: 'for (let i=0; i<5; i++) { console.log("Hello!"); }' vs. Scratch REPEAT 5 (Say Hello) block. 'Same program — different language. Text-based = what professional programmers use. ILEARN Grade 6 tests your ability to READ this code.'
Explore (20 min)	CodeHS Indiana 6: (a) print 'Hello World' — understand output; (b) create variable score = 0; (c) write for loop counting 1 to 10; (d) add if-else: 'if score > 5: print("You win!") else: print("Try again.")' Test, debug, modify each.
Explain (12 min)	ILEARN Grade 6 CS question style: 'x = 10; if x > 5: print("Big") else: print("Small"). What does this output?' Students READ code and trace through it. 'CODE READING = understanding what code DOES without running it. ILEARN tests this.' Practice 3 code snippets.
Elaborate (13 min)	Mini-project: build a quiz program. (1) store score variable; (2) ask 3 questions (loop); (3) if correct add 1 to score (conditional); (4) print final score. Must use: variable + loop + conditional + output. Trace before running.
Evaluate (5 min)	ILEARN-style: 'score = 0; for i in range(3): score = score + 2; print(score)' Options: (a) 0 (b) 2 (c) 6 (d) 3. Explain why.

Assessment	Differentiation	Resource / Tool
CodeHS exercises complete. Code-tracing exit ticket. Mini-quiz: variable + loop + conditional present. Verbal trace before running.	ELL: syntax cheat sheet with terms in student's language | Below level: block-based version first, then view equivalent text | Above level: compare JS vs. Python syntax for same program.	*CodeHS Indiana 6 HQCM: codehs.com/course/IN_6 | Code.org App Lab: code.org/educate/applab | ILEARN Gr. 6 items: indiana.portal.cambiumast.com*

LESSON 6.2 | Legacy Learning Center | K-8 CS | 2025-2026

Encryption and Cybersecurity — Keeping Data Safe (6-8.DI.4 + 6-8.NI.1 — ILEARN Gr. 6)

Standard	Indiana CS Standard — Full Text
Standard	6-8.DI.4 (ESSENTIAL): Discuss privacy and security in the context of data collection. 6-8.NI.1 (ESSENTIAL): Explain how data packets are transmitted and received across the internet.
Objective	Students explain how data is encrypted to protect privacy during internet transmission. Students identify cybersecurity threats and protection strategies. Both standards are ASSESSED on ILEARN Grade 6.
Key Vocabulary	*Encryption, Decryption, Cipher, Key, Public Key, HTTPS, SSL/TLS, Packet, Cybersecurity, Phishing, Malware, Firewall, Two-Factor Authentication, Data Breach*
Materials / Tools	CS Unplugged Public Key Encryption activity | Caesar Cipher wheel (printable) | Code.org Internet Safety modules | ILEARN Gr. 6 cybersecurity items

Lesson Activities

Phase	Activity
Engage (10 min)	Pass a 'secret message' (paper) across the room without sealing it. 'Everyone can read this. How do we send a credit card number safely across the internet?' Introduce Caesar Cipher: shift each letter by 3. Students decode a short message.
Explore (15 min)	CS Unplugged Public Key Encryption: students role-play as Alice and Bob. Bob creates a 'padlock' (public key) anyone can use — only Bob can open it. Simulate: Alice encrypts message with Bob's public key — only Bob decrypts it. 'This is how HTTPS works.'
Explain (12 min)	'HTTPS = data encrypted with TLS. Packets travel encrypted. Even if intercepted, unreadable without private key.' ILEARN question: 'Which best protects a password when logging into a school account: (a) HTTP (b) HTTPS (c) Long password without HTTPS (d) Disabling firewall?' Students justify.
Elaborate (10 min)	Cybersecurity scenarios: students read 3 (phishing email, malware download, weak password). For each: identify the threat type and recommend a protection strategy (2FA, HTTPS, strong password, antivirus).
Evaluate (8 min)	Dual-standard ILEARN exit ticket: (1) 6-8.NI.1: Why are data packets sent in small pieces rather than one large file? (2) 6-8.DI.4: What feature on a website would best protect your account data? Use domain vocabulary.

Assessment	Differentiation	Resource / Tool
Caesar Cipher accuracy. Encryption role-play participation. Cybersecurity scenario analysis. ILEARN exit ticket (2 standards).	ELL: Caesar Cipher physical wheel | Below level: phishing identification only | Above level: research AES-256 encryption vs. Caesar Cipher.	*CS Unplugged Encryption: csunplugged.org/en/topics/encryption/ | Code.org Internet Safety: code.org | ILEARN Gr. 6 items: indiana.portal.cambiumast.com*

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SECTION 10 — GRADE 7

Teacher: Abdelmalek

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 7 CS: 45-50 min/week. Not assessed — builds toward HS CS graduation requirement (2029). Class of 2030 will need HS CS. Q1 Python Functions (6-8.PA.2 6-8.PA.3) | Q2 Web Design HTML/CSS (6-8.CD.5) | Q3 Data Analysis (6-8.DI.6) | Q4 AI Ethics (6-8.IC.4). Primary: CodeHS Indiana 7 (HQCM) + replit.com + Python Turtle.

LESSON 7.1 | Legacy Learning Center | K-8 CS | 2025-2026

Python Programming — Functions, Variables & Loops (6-8.PA.2 + 6-8.PA.3)

Standard	Indiana CS Standard — Full Text
Standard	6-8.PA.2 — Design and develop programs with variables, loops, conditionals, and user-defined functions. 6-8.PA.3 — Create programs using procedures and functions for reusable code sections.
Objective	Students write Python programs with user-defined functions, variables, and loops. Students understand why functions are essential for professional programming and code reusability.
Key Vocabulary	*Python, Function, def, return, Parameter, Argument, Local Variable, Indentation, For loop, While loop, Input(), Print(), Import, Module, Reusability, Abstraction*
Materials / Tools	CodeHS Indiana 7 Python modules (codehs.com/course/IN_7) | Python Turtle (trinket.io) | Python syntax cheat sheet | replit.com (free Python IDE)

Lesson Activities

Phase	Activity
Engage (10 min)	Show code WITHOUT functions: 10 lines drawing a square repeated. Then WITH a function: def drawSquare(): 4 lines — call it anytime. 'Instead of repeating code, write it ONCE and CALL it.' Professional connection: every Python library (NumPy, Pandas, TensorFlow) is made of functions.
Explore (20 min)	CodeHS Indiana 7: (1) Write def greet(name): print('Hello, '+name); (2) Call function 3 times with different names; (3) Add return value: def square(n): return n*n; (4) Use for loop to call function 5 times. Test and debug each step.
Explain (12 min)	'Functions = ABSTRACTION — you don't need to know HOW print() works, you just call it. This is why large programs are possible.' Introduce modules: import math; math.sqrt(16). 'Data scientists use pandas functions to analyze millions of rows.'
Elaborate (15 min)	Mini-project: greeting card generator. Must include: 2+ user-defined functions, a loop running 3 times, user input affecting output, at least one return value. Peer review: check for correct function use.
Evaluate (3 min)	Exit: 'Write a Python function called double(n) that returns n x 2. Call it with 7 and print the result. Expected output: 14.'

Assessment	Differentiation	Resource / Tool
CodeHS Python modules complete. Mini-project: 2+ functions + loop + input. Exit ticket: function with return value.	ELL: Python cheat sheet with key terms translated | Below level: pre-written function bodies — students only call them | Above level: build a Python module (library) with 5 related functions.	*CodeHS Indiana 7 HQCM: codehs.com/course/IN_7 | trinket.io | replit.com | Python.org docs*

LESSON 7.2 | Legacy Learning Center | K-8 CS | 2025-2026

Web Design — Building a Website with HTML & CSS (6-8.CD.5)

Standard	Indiana CS Standard — Full Text
Standard	6-8.CD.5 — Design user-friendly interfaces to facilitate user interaction with computing devices.
Objective	Students build a functioning multi-page website using HTML and CSS. Students apply UI design principles. Students understand how HTML structures content and CSS styles it.
Key Vocabulary	*HTML, CSS, Element, Tag, Attribute, div, h1, p, a, img, Selector, Property, Value, Class, ID, Responsive Design, User Interface (UI), User Experience (UX), Wireframe*
Materials / Tools	CodeHS Indiana 7 Web Development module | replit.com (free HTML/CSS/JS IDE) | Google Sites (scaffolded) | Wireframe paper template | W3Schools: w3schools.com

Lesson Activities

Phase	Activity
Engage (10 min)	Open Chrome DevTools (right-click → Inspect) on a simple website. Change background color and heading text live. 'EVERY website is made of HTML and CSS. Instagram, YouTube, Google — built on these two languages. Today you write your first real website code.'
Explore (20 min)	replit.com: create HTML/CSS project. Step-by-step: (1) Basic HTML structure <!DOCTYPE html>; (2) Add h1 heading; (3) Add paragraph; (4) Add link; (5) Open style.css: body{background-color:lightblue;} h1{color:navy;} Run and see result in real time.
Explain (12 min)	'HTML = skeleton (structure). CSS = clothes (styling). JavaScript (Grade 8) = behavior.' UI design principles: contrast, alignment, repetition, proximity (C.A.R.P.). Show two versions of same website — one good UI, one poor UI. Students identify which is more user-friendly and why (6-8.CD.5).
Elaborate (20 min)	Project: personal portfolio website. Requirements: (a) 2 pages linked together; (b) heading, paragraph, image, link on each; (c) CSS color scheme, font, background, padding; (d) wireframe drawn BEFORE coding; (e) 2 UI design principles applied.
Evaluate (8 min)	Peer review: visit partner's website — rate: navigation clear? contrast readable? all content visible? link works? Written feedback. Students revise based on feedback.

Assessment	Differentiation	Resource / Tool
Portfolio website meets all requirements. Peer review feedback quality. UI principles identification quiz.	ELL: HTML tag reference in student's language | Below level: Google Sites first, then view source HTML | Above level: add JavaScript button that changes color or validates a form.	*CodeHS Indiana 7 HQCM: codehs.com/course/IN_7 | replit.com | W3Schools: w3schools.com | Code.org Web Lab: code.org/educate/weblab*

Legacy Learning Center · K-8 COMPUTER SCIENCE · 2025-2026

SECTION 11 — GRADE 8

Teacher: Abdelmalek

MANDATORY CS PLAN | 2023 INDIANA CS STANDARDS | SEA 172 COMPLIANT

Grade 8 CS: 45-50 min/week. HS CS Pipeline Year — Class of 2029 must meet HS CS graduation requirement (IC 20-32-4-18). Q1 Advanced Python + Data Structures | Q2 Full Web Dev (HTML/CSS/JS) | Q3 Cybersecurity Deep Dive | Q4 AI, Machine Learning & Ethics + HS Readiness. Primary: CodeHS Indiana 8 (HQCM) + Python + replit.com.

LESSON 8.1 | Legacy Learning Center | K-8 CS | 2025-2026

Advanced Python — Data Structures & Debugging (6-8.PA.2 + 6-8.PA.5)

Standard	Indiana CS Standard — Full Text
Standard	6-8.PA.2 — Design programs with variables, loops, conditionals, and functions. 6-8.PA.5 — Apply strategies for identifying, fixing, and documenting bugs.
Objective	Students implement Python lists and dictionaries as data structures. Students apply systematic debugging strategies. Students document code with comments.
Key Vocabulary	*Python, List, Dictionary, Index, Key-Value Pair, Append, For loop (in list), Function, Bug, Syntax Error, Logic Error, Runtime Error, Comment, Documentation, Print debugging*
Materials / Tools	CodeHS Indiana 8 Python modules (codehs.com/course/IN_8) | replit.com | Python debugger | Printed debugging strategy card

Lesson Activities

Phase	Activity
Engage (10 min)	Show a program that crashes with an error message. 'This program has a bug. In 2024, software bugs cost the global economy over $2 trillion annually. Debugging is one of the most valuable skills in CS.' Walk through 3 types of errors: syntax (typo), logic (wrong answer), runtime (crashes during execution).
Explore (20 min)	CodeHS Indiana 8: (a) create a list scores = [85, 92, 78, 95, 88]; (b) loop through list and print each score; (c) calculate average with a function; (d) create a dictionary {'name':'Rahim','score':95}; (e) access values by key. Debug a provided buggy program using print debugging strategy.
Explain (12 min)	Debugging strategies: (1) READ the error message — it tells you line number + error type; (2) Print debugging — add print() statements to track values; (3) Comment out sections — narrow down where bug is; (4) Rubber duck debug — explain your code out loud; (5) Google the error message. 'Professional programmers use ALL of these.'
Elaborate (15 min)	Class contact book project: (a) Create dictionary with 5 entries (name: phone number); (b) Write function to look up a name; (c) Write function to add a new contact; (d) Write function to delete a contact; (e) Add comments to ALL code. Submit with: code + 1 bug intentionally introduced + debugging log showing how they found and fixed it.
Evaluate (3 min)	Exit: 'Name 3 types of programming errors. Give an example of each. Which is hardest to find and why?'

Assessment	Differentiation	Resource / Tool
CodeHS Python modules complete. Contact book project with comments + debugging log. Exit ticket 3 error types.	ELL: debugging strategy card in student's language | Below level: lists only (no dictionaries); guided debugging with teacher | Above level: use Python's built-in debugger pdb; set breakpoints; step through code.	*CodeHS Indiana 8 HQCM: codehs.com/course/IN_8 | replit.com | Python docs: python.org | W3Schools Python: w3schools.com*

LESSON 8.2 | Legacy Learning Center | K-8 CS | 2025-2026

Artificial Intelligence, Machine Learning & Algorithmic Bias (6-8.IC.4)

Standard	Indiana CS Standard — Full Text
Standard	6-8.IC.4 — Describe the impact of bias in algorithms, including in artificial intelligence and machine learning.
Objective	Students define AI and ML. Students identify how bias enters AI systems and its real-world impact. Students evaluate ethical implications of AI use.
Key Vocabulary	*Artificial Intelligence (AI), Machine Learning (ML), Training Data, Bias, Fairness, Accuracy, Model, Prediction, Automation, Neural Network, Facial Recognition, Dataset, Algorithm*
Materials / Tools	Code.org AI for Oceans (code.org/oceans) | AI bias case study (facial recognition + race) | Machine Learning for Kids (machinelearningforkids.co.uk) | Reflection organizer

Lesson Activities

Phase	Activity
Engage (10 min)	Show real headline: AI facial recognition system had significantly higher error rates for darker-skinned individuals — used by law enforcement. 'This AI was trained mostly on lighter-skinned people — so it worked better for them. This is ALGORITHMIC BIAS.' Discussion: whose fault is it? The algorithm? Programmer? The data? Society?
Explore (15 min)	Code.org AI for Oceans: students train an AI model to recognize fish vs. not-fish. Observe: (a) limited training data → less accurate; (b) training data with errors → AI learns wrong patterns. 'Your AI just learned bias from its training data. Where could this cause real harm?'
Explain (12 min)	'Machine learning: computers learn from DATA — not explicit rules. If data is biased → model is biased.' Examples: Amazon hiring AI discriminated against women; healthcare AI gave lower care recommendations for Black patients; recidivism AI predicted higher criminal risk for Black defendants. 'AI reflects the humans who built it and the data they used.'
Elaborate (15 min)	Groups: each receives one AI application (hiring software, medical diagnosis, parole decisions, social media moderation, college admissions). Identify: (a) who benefits? (b) who might be harmed? (c) what bias could enter? (d) how should society regulate it? Present to class.
Evaluate (8 min)	Exit: 'A company uses AI to review job applications trained on 10 years of past hires — mostly men. (1) What bias might the AI have? (2) How might this affect women applicants? (3) What should the company do before using this AI?' 3-5 sentences.

Assessment	Differentiation	Resource / Tool
AI for Oceans + reflection. Group AI ethics analysis. Exit ticket: bias identification + impact + solution.	ELL: AI bias case study with visuals + simplified text | Below level: AI for Oceans only; exit ticket reduced to 2 questions | Above level: research FTC AI bias guidelines; propose a fairness checklist.	*Code.org AI for Oceans: code.org/oceans | Machine Learning for Kids: machinelearningforkids.co.uk | AI4K12: ai4k12.org | MIT Moral Machine: moralmachine.mit.edu*

Section 5: Year-Long Pacing, Tracking & Authorizations

Year-Long CS Pacing — All Grades

Grade	Teacher	Quarterly Topics	ILEARN CS Essential Standards	Primary Tool
K	Dou'a	Q1 Algorithms | Q2 Loops | Q3 Data + Devices | Q4 Internet Safety	K-2.PA.1 K-2.PA.2 K-2.DI.1 K-2.DL.1	Code.org Course A + Scratch Jr.
Gr. 1	Hana	Q1 Events + Conditionals | Q2 Debugging | Q3 Data Patterns | Q4 Networks	K-2.PA.3 K-2.IC.3 K-2.NI.1	Code.org Course B + Scratch Jr.
Gr. 2	Hafsa	Q1 Conditionals | Q2 Binary/Data | Q3 Networks | Q4 Digital Citizenship	K-2.DI.3 K-2.NI.2 K-2.DL.1 K-2.DL.2	Code.org Course C + Scratch Jr.
Gr. 3	Al Habib	Q1 Decomposition | Q2 Scratch | Q3 Data | Q4 ILEARN Preview	3-5.DI.1 3-5.PA.2 3-5.IC.1	Code.org Course D + Scratch 3.0
Gr. 4	Soraya	Q1 Conditionals | Q2 Binary | Q3 Debug | Q4 Tech Impact + ILEARN PREP	3-5.DI.1(E) 3-5.DI.5(E) 3-5.CD.2(E) 3-5.PA.2(E) 3-5.IC.1(E)	Code.org Course E + CodeHS IN4 + Scratch
Gr. 5	Dounia	Q1 Variables | Q2 Networks/Internet | Q3 Data Viz | Q4 Gr. 6 Preview	3-5.NI.1 3-5.NI.2 3-5.PA.5	Code.org Course F + Scratch + CodeHS IN5
Gr. 6	Hafsa	Q1 Decomposition | Q2 Text Programming | Q3 Encryption | Q4 Impacts + ILEARN	6-8.DI.1(E) 6-8.DI.4(E) 6-8.CD.3(E) 6-8.NI.1(E) 6-8.PA.4(E) 6-8.IC.2(E)	CodeHS Indiana 6 HQCM + Code.org CS Disc.
Gr. 7	Abdelmalek	Q1 Python Functions | Q2 Web Design HTML/CSS | Q3 Data Analysis | Q4 AI Overview	6-8.PA.2 6-8.PA.3 6-8.CD.5 6-8.DI.6	CodeHS Indiana 7 HQCM + replit.com
Gr. 8	Abdelmalek	Q1 Advanced Python | Q2 Full Web Dev | Q3 Cybersecurity | Q4 AI Ethics + HS Prep	6-8.PA.2 6-8.PA.5 6-8.CD.5 6-8.NI.3 6-8.IC.4	CodeHS Indiana 8 HQCM + Python + replit.com

Weekly CS Fidelity Checklist — All Teachers

CS Instructional Expectation	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8
CS lesson taught — 30+ min (K-5) or 45+ min (6-8) per SEA 172 requirement								
All six CS domains addressed this quarter (DI | CD | PA | NI | IC | DL)								
Gr. 4 & 6: ILEARN CS practice item reviewed this week (October onward)								
Unplugged (offline) CS activity used at least once this month								
Cross-curricular CS connection made (math, science, or ELA)								
Digital citizenship / internet safety addressed this month								
Students coded or programmed this week								
CS student work displayed or shared in classroom or school								

Week of (date): →	__/__	__/__	__/__	__/__	__/__	__/__	__/__	__/__

Teacher Sign-Off — All K-8 Teachers

Grade / Teacher	Teacher Signature	Date / Principal Initials
Kindergarten Dou'a	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 1 Hana	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 2 Hafsa	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 3 Al Habib	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 4 Soraya	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 5 Dounia	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 6 Hafsa	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 7 Abdelmalek	Teacher Signature: _____	Date: _____ Principal Initials: _____
Grade 8 Abdelmalek	Teacher Signature: _____	Date: _____ Principal Initials: _____

School-Wide CS Authorization

Principal / Head of School	CS Coordinator / STEM Lead
Signature: _____ Date: _____	Plan Effective: 2025-2026 Standards: Indiana K-8 CS IAS (2023)

All CS Resources — Verified Direct URLs (May 2026)

Indiana K-8 CS Standards (IDOE): in.gov/doe/students/computer-science/
Indiana CS Standards PDF: media.doe.in.gov/news/k-8-computer-science-indiana-academic-standards.pdf
CodeHS Indiana K-8 HQCM Pathway: codehs.com/states/IN
CodeHS Indiana 6: codehs.com/course/IN_6 | Grade 7: codehs.com/course/IN_7 | Grade 8: codehs.com/course/IN_8
Code.org CS Fundamentals (K-5): code.org/educate/curriculum/elementary-school
Code.org CS Discoveries (6-8): code.org/educate/csd
Code.org Hour of Code: hourofcode.com
Scratch 3.0: scratch.mit.edu | Scratch Educator Resources: scratch.mit.edu/educators
Scratch Jr.: scratchjr.org
CS Unplugged (FREE offline activities): csunplugged.org
Google CS First: csfirst.withgoogle.com
Khan Academy Computing: khanacademy.org/computing
Microsoft MakeCode: makecode.com

Tynker: tynker.com
Common Sense Media Digital Citizenship: commonsense.org/education
replit.com (free online Python/JS/HTML IDE): replit.com
trinket.io (free Python Turtle): trinket.io
W3Schools: w3schools.com
Code.org AI for Oceans: code.org/oceans
Machine Learning for Kids: machinelearningforkids.co.uk
AI4K12 Initiative: ai4k12.org
Blockly Games: blockly.games
CS Unplugged Binary: csunplugged.org/en/topics/binary-numbers/
CS Unplugged Encryption: csunplugged.org/en/topics/encryption/
Indiana ILEARN CS items (Released): inpt.cambiumtds.com/student
Indiana Assessment Portal (teacher login): indiana.portal.cambiumast.com
ILEARN Science Gr. 4 CS Blueprint: in.gov/doe/files/ILEARN-Science-Grade-4-Blueprint.pdf
ILEARN Science Gr. 6 CS Blueprint: in.gov/doe/files/ILEARN-Science-Grade-6-Blueprint.pdf
Indiana IN Learning Lab CS Frameworks: inlearninglab.com/collections/2023-computer-science-frameworks
IDOE Teaching and Learning: teachingandlearning@doe.in.gov | General: 1-317-232-6610