CODING CURRICULUM MAP: YEAR 1–6

Year 1 ➜ Everyday Input & Sequences

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├── Software: Osmo Tangrams (iPad), Bee-Bots, Sphero Indi

├── Learning Style: Highly visual and tactile

└── Sample Activity: Use Bee-Bots to follow a path based on directional input

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Year 2 ➜ Inputs in Algorithms; Event-Driven Sequences

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├── Software: ScratchJr, Bee-Bots, Osmo Coding Awbie, CodeSpark Academy

├── Learning Style: Visual; build sequences triggered by events

└── Sample Project: Platform game with enemy sprite that detects player and reduces a life (introduces variables)

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Year 3 ➜ Repetition, Inputs, Multiple Event-Driven Sequences

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├── Software: CodeSpark Academy, Scratch, Sphero Play, CoSpaces

├── Learning Style: Visual; build adventure games with multiple interactive sequences

└── Sample Project: Maze game with repeating enemy movement and player interactions

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Year 4 ➜ Repetition with Exit, Selection (If/Else), Input → Process → Output

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├── Software: Scratch, Code.org, micro:bit, CuteBot, CoSpaces

├── Learning Style: Block-based; introduces terms like if, else, input, output

└── Sample Logic: "If shaken, then..."; "If sees black line, follow it; else stop"

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Year 5 ➜ Nested Loops, Conditions Within Loops, Event Handlers

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├── Software: micro:bit Inventor’s Kit, Code.org, Sphero Edu with BOLT

├── Learning Style: Block-based; builds on terms like variable, function, event

└── Sample Project: Create a sensor-based challenge (e.g., temperature-triggered response)

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Year 6 ➜ Inputs/Outputs, Variable Storage, Text-Based Intro

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├── Software: Kitronik Arcade, MakeCode Arcade, Python with micro:bit, EV3 Robotics

├── Learning Style: Block-based + Intro to Text; full vocabulary including logic and functions

└── Sample Project: Build arcade game or robot system using sensors and stored variables

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ENHANCEMENT SUGGESTIONS

Cross-Curricular Links:

├── Math ➜ Use loops/variables to simulate problems (e.g., multiplication)

├── Science ➜ Use sensors to collect/analyze data (e.g., light, temperature)

└── Art ➜ Create animations or interactive stories (e.g., Scratch, MakeCode)

Transition to Text-Based Coding:

├── Introduce Python via micro:bit or MakeCode Arcade (Year 6)

└── Use Blockly-to-Python converters to show code equivalence

| **Year** | **Key Concepts** | **Software / Tools** | **Programming Logic Focus** | **Robotics / Physical Computing** | **Digital Citizenship Focus** | **Cross-Curricular Links** |
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| **Y1** | Everyday Input & Sequences | Osmo Tangrams, Bee-Bots, Sphero Indi, Awbie, ScratchJr (intro), Code Monkey Jr, Chrome Music Lab, Keynote | Directional commands, linear sequences | Sphero Indi, Bee-Bots, MataBot, Lego WeDo | Caring for devices, basic online safety | Book Creator, Stop Motion (storytelling), Music Lab |
| **Y2** | Inputs in Algorithms; Event-Driven Sequences | ScratchJr, CodeSpark, Code.org, Osmo Awbie, Rodo Codo, 3D Slash | Event triggers, variables (score), collisions | Lego WeDo, Dash, MataBot, Indi STEAM | Online interactions | Pop Art (photography), STEAM via robotics, Keynote (IPC Jobs) |
| **Y3** | Repetition; Multiple Inputs; Game Logic | CodeSpark, Scratch, CoSpaces, SpriteLab, Code.org | Repeating loops, branching logic, interactive sequences | Lego WeDo, Sphero Play (Simple Block) | Browser safety, joining classes, intro to computational thinking | E-book creation (Keynote), CoSpaces collaboration, Stop Motion |
| **Y4** | Repetition with Exit; Selection (If/Else); Input → Output | Scratch, Code.org, CoSpaces, CuteBot, micro:bit, SpriteLab | Conditional branches, input-mapped responses, sensor logic | CuteBot (line following), Micro:bit (sensor inputs) | Generative AI, photo manipulation ethics | Game creation with sound (GarageBand), IPC Canva App Design, video editing |
| **Y5** | Nested Loops; Functions; Event Handlers | MakeCode Arcade, Code.org, CoSpaces, GarageBand, iMovie | Nested logic, custom functions, sensor-triggered events | EV3 Robotics, Sphero BOLT, Kitronik | Machine Learning + AI ethics | Mission to Mars IPC, podcast ads, multimedia projects |
| **Y6** | Variables; Inputs/Outputs; Text-Based Logic | MakeCode Arcade, AppLab, CoSpaces, Python (micro:bit), Thunkable | Persistent variables, text/block comparison, structured logic | EV3 Robotics, Micro:bit Inventor’s Kit, Kitronik | AI ethics, IP, data privacy, escape room simulation | Enterprise project: app dev, podcasting, 3D modelling, VR, media campaigns |