

Patterns and Logic

Coding basics in the Kindergarten classroom.

Curriculum Connections

- A7.** Patterns and Relationships
(A7.1, A7.2, A7.3)
- B11.** Coding Skills
(B11.1, B11.2, B11.3)

Key Takeaways

- Developing foundational coding knowledge enables students to problem solve and think analytically.
- The transferable skills associated with coding will serve students throughout their futures regardless of field of study or career.
- Early exposure to coding is often screen-free, using hands-on or kinesthetic learning experiences to introduce and embody programmatic ways of thinking.
- Understanding patterning and spatial sense are needed to support coding proficiency.
- Students can write more efficient code when they can recognize repeated instructions.

Strategies & Tips

- **Explore patterns through art.**
Deepen understanding of patterns with activities like bracelet beading—can your students predict what comes next?
- **Model positional and directional vocabulary.**
Help students deepen their spatial reasoning skills by combining explicit instruction with intentional classroom opportunities for students to encounter positional and directional vocabulary.
- **Decode text with coding.**
Have students use grids to retell a story, with a blank grid to code a tale from start to finish or a labelled grid to highlight a path with key features to encounter or avoid.
- **Activate directional understanding with arrows.**
Provide students with large arrows and have them create a “treasure map” they can follow either indoors or out. Support students with transferring their code to paper using arrows, words or symbols and aim for eventual independence.
- **Make mistakes your co-teacher.**
When sharing examples of code, make intentional errors, like writing the wrong direction or number of steps. These errors provide students with an opportunity to develop their problem-solving skills by debugging the code.

