



littleBits Fundamentals Self-Guided Course Syllabus

Learn littleBits fundamentals and integration all on your own time. In this self-guided online course, you will learn how to bring the littleBits Invention Cycle into the classroom.

By the end of the course, you will have:

- An understanding of how littleBits infuses STEAM across the curriculum
 - Explored different instructional strategies for using littleBits
 - An appreciation for how the Invention Cycle develops creative confidence
 - Gained insights about implementing littleBits in your classroom
 - Designed and put into practice a STEAM-based lesson
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Module 1: Welcome to littleBits

In Module 1, you will learn about the littleBits mission and how they can benefit standards-based STEAM learning across all subject areas and grade levels.

- Why littleBits to Teach STEAM, Nurture Creativity, and Foster Science and Engineering
- Action Plan: Why littleBits
- Why littleBits: Quiz

Module 2: Pedagogical Frameworks

In Module 2, you will learn about the different frameworks that can be used to guide the engineering and invention process.

- Engineering and Invention Frameworks
- The Invention Cycle
- Pedagogical Value of the Invention Cycle
- Engineering Design Process
- Computational Thinking

Module 3: Building Circuits

Module 3 will introduce you to the basics of littlebits. You will create your first circuits and then take them through the littleBits invention cycle to see what you remix.

- Bit Basics
- Circuits
- Build Your First Circuit



- Circuit 2
- Circuit 3

Module 4: Coding Circuits

In Module 4, you will explore the littleBits Fuse app and how to program littleBits with the codeBit. You will program your first circuits and adapt the code in your inventions.

- CodeBit and Fuse
- Code Categories
- Code Your First Circuit
- CodeBit Example 2
- CodeBit Example 3
- Fuse Quiz

Module 5: Putting it All Together

Module 5 is designed to give you first-hand experience taking a project through the entire littleBits Invention Cycle.

- Game Development

Module 6: Logistics of the littleBits Classroom

Module 6 provides a wealth of resources for organizing and managing littleBits in your school.

- littleBits Classroom Essentials
- Classroom Management
- Care and Maintenance
- Classroom Management and the Invention Cycle
- Implementation Models
- Take Action
- Lesson Plan Template & Resources
- Share your Lesson

Access your Continuing Education Certificate

Once you complete the five modules, you will unlock the Continuing Education Certificate that you can print out to keep for your records.