CODE KIT VOCABULARY DEFINITIONS

CODE KIT CORE

Introduction: Hello World

Circuit
- Series circuit - there is a single path for electricity to flow from one power source
- Parallel circuit - multiple paths for the electricity to flow from one power source

Power

Needed in every circuit and is the start of all your littleBits creations.

Input

These Bits add control to the circuit, through information provided by you or the environment, and sends signals to the Bits that follow.

Output

The Bits that "Do Something". The Bits complete an action or task (for example light, buzz, or move).

Wire

Bits that expand the circuit's reach and change direction. Come can also add a level of complexity and programmability to the circuit.

Magnets

Bits are designed to snap together, end to end, to create a complete circuit. The magnets inside each of the Bits' connectors ensure that students always attach the Bits the right way.

Software

A set of instructions that tells a computer exactly what to do.

Hardware

Physical parts computer that causes processing of data.

Code

The instructions that people create for computers to follow. Just like people speak different languages, so do programs.

Program

A group of instructions given to a computer to be processed. These instructions are typically used to solve a problem or make long problems for humans shorter and easier.

Inputs and Outputs

Bit

A contraction of "Binary Digit". A bit is a single unit of information in a computer, typically represented as a 0 or 1.

Block

Any programming language that lets users create programs by manipulating "blocks" or graphical programming elements, rather than writing code using text.

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codeBit

A tiny computer that acts like a brain for your littleBits circuits and allows you to send code from your computer to your codeBit so you can program your own circuits.

Serial mode

Serial communication is a way to send complex information between computers and other devices. Serial communication is made up of a series of 'on' and 'off' signals.

Hertz, tone, frequency, pitch

Hz, or hertz, is used to measure the frequency of a tone. The higher the frequency (and Hz number), the higher the pitch.

Loops

While Loop

A loop that continues to repeat while a condition is true.

For Loop

A loop with a predetermined beginning, end, and increment (step interval).

Animation frame

Individual pictures in a sequence of images.

Variable

A placeholder for a piece of information that can change.

Coordinates, x and y axis

The LED matrix is a colorful display that you can control using the codeBit. Each point on the matrix represents a coordinate that corresponds to the x and y axis.

Logic

Logic

Logic lets you add rules to your code.

IF/DO/ELSE:

- An "if statement" runs a block of code based on whether or not a condition is true.

- "Else statements" are used to do something else when the condition in the "if statement" isn't true.

AND/OR

Two or more relations can be logically joined using the logical operators AND and OR.

Round

Rounding means replacing a number with an approximate value that has a shorter, simpler, or more explicit representation

Signal

The flow of information carried by voltage, current, or magnetic field.

Variables

Variable

A placeholder for a piece of information that can change.

Set variable to

Use a variable in a program.

Tone length

A variable in Fuse to store a number. You can change the name of the variable and the number to whatever you want.

Game sprite

In computer graphics, a sprite is a two-dimensional bitmap that is integrated into a larger scene, most often in a 2D video game.

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Functions

Functions

A block of code that can be referenced by name to run the code it contains.

Sequence

The order that commands are executed by a computer. Allows us to carry out tasks that have multiple steps.

Animation frames

Individual pictures in a sequence of images.

Wait time variable

In this activity, this variable defines how long each note will play between the animation frames that you can see tucked away inside the light pink function blocks.

Ultimate Shootout

Loops

Loops check a condition and then run a code block. The loop will continue to check and run until a specified condition is reached.

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Engineering design

The engineering design process is a series of steps that engineers follow to come up with a solution to a problem.

Remix

In the littleBits Invention Cycle, this is your opportunity to improve your invention. Keep experimenting! Add new Bits, swap parts with other inventions, or take all the pieces apart and put them together in a different way.

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Pixel

A px (pixel) is the smallest portion of an image or display that a computer is capable of printing or displaying.

Hot Potato… of Doom!

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Invention Cycle

The Invention Cycle is a roadmap for your invention journey. Each phase is full of activities and questions that help you explore your ideas and develop your invention.

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Rockstar Guitar

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Prototype

Create your prototype during the "Create" portion of the Invention Cycle. You can build it from the instructions or make something from your imagination.

Iteration

The "Remix" portion of the Invention Cycle is your opportunity to iterate and improve your invention. Add new Bits, swap parts with other inventions, or take all the pieces apart and put them together in a different way.

Tug of War

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Debug

Use the Debugging Checklist to debug your connection, circuit, and code.

Change the World Arcade

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Playtesting

The "Play" portion of the Invention Cycle. Playing with what you've created is fun, but also an important part of inventing. Playing is like a test run. It's a chance to see how well your invention works and look for ways you can make it better.

Iteration

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ELA FOR ELEMENTARY

Turning Points

Turning point

A pivotal moment at the peak of the story arc that pits the protagonist against an opposing force in order to resolve the main conflict once and for all.

Scene

Every story has scenes. You could have one scene if your story is very short, but most stories will have multiple scenes.

Tension

The rising action is the increasing intensity of the conflict, creating a build-up of tension.

Narrative Arc

Narrative arc is a term that describes a story's full progression.

Engineering Solutions to Aesop's Fables

Engineering

The branch of science and technology concerned with the design, building, and use of engines, machines, and structures.

Brainstorm, Solution

The "Create" portion of the invention cycle. Brainstorm, design, and build a solution to a problem.

Feedback

The "Play" and "Remix" portion of the invention cycle. Collect feedback from classmates on your project. Use feedback to enhance your project.

Moral

A moral is a message that is conveyed or a lesson to be learned from a story or event.

Let's Make a Techno Jungle Together

Creative

Open challenges get you to flex your creative muscles. These challenges start with an open-ended problem. Your mission is to explore ways you could use littleBits to create an invention that solves that problem.

Narrative Arc

Narrative arc is a term that describes a story's full progression.

Interactivity

The process of two people or things working together and influencing each other.

Character

A character is a person, animal, being, creature, or thing in a story. Writers use characters to perform the actions and speak dialogue, moving the story along a narrative arc.

Vocabitlary

Strategies

In this activity, you will try different methods of learning and practicing new words. Your solution to learn the new words will be your strategy.

Visual

Visual representations of new words help us store these words in our memory more easily.

ELA FOR MIDDLE SCHOOL

Ancient Mythology

Wield

If you wield a tool. you handle it effectively.

Symbol

A mark or character used as a conventional representation of an object, function, or process.

Scepter

A ceremonial staff. With its jewels and ornamentation, a scepter is a symbol of power.

Cornucopia

A symbol of plenty consisting of a goat's horn overflowing with flowers, fruit, and corn.

Trident

A three-pronged spear.

Tinker with Storytelling

Essential, quality

Essential qualities make people unique. Quality is an aspect of someone's character or personality.

Essence

The intrinsic nature or indispensable quality of something, especially something abstract, that determines its character.

Compassionate

Feeling or showing sympathy and concern for others.

Characteristic

A feature or quality belonging typically to a person, place, or thing and serving to identify it.
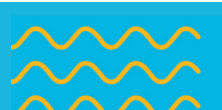
Trait

A distinguishing quality or characteristic, typically one belonging to a person.

Reinventing Careers

Career

An occupation undertaken for a period of a person's life and with opportunities for progress.

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