This workbook belongs to:

calgarylibrary.ca/coding

2016

Coding Workbook

BEGINNERS

Calgary Public Library

Activity One

# Today’s Module

<http://studio.code.org/s/course2/stage/3/puzzle/1>



* Learn what coding and algorithms are, and practice making your own.
* You are also learning about “decomposing” – breaking a hard problem down into simpler parts.

Vocabulary Words

* **Algorithm:** A list of steps to finish a task. A set of instructions that can be performed with or without a computer. For example, the collection of steps to make a peanut butter and jelly sandwich is an algorithm.\*
* **Decompose:** Break a problem down into smaller pieces.\*

# Today I Learned… (write or draw about something you learned today)

# I Really Liked… (write or draw about something you enjoyed today)

*\*Vocabulary word definitions were taken directly from the glossary at code.org:* [*https://code.org/curriculum/docs/k-5/glossary*](https://code.org/curriculum/docs/k-5/glossary)

Activity Two

# Today’s Module

<http://studio.code.org/s/course2/stage/6/puzzle/1>



* Learn about loops – how to make a computer repeat an instruction without having to use the same words (or code) over and over again.
* You are also working on the skill of “pattern matching” - finding things that are the same.

Vocabulary Word

* **Loop:** the action of doing something over and over again.\*
* **Pattern Matching:** Finding similarities between things.\*

# Today I Learned… (write or draw about something you learned today)

# I Really Liked… (write or draw about something you enjoyed today)

*\*Vocabulary word definitions were taken directly from the glossary at code.org:* [*https://code.org/curriculum/docs/k-5/glossary*](https://code.org/curriculum/docs/k-5/glossary)

Activity Three

# Today’s Module

<http://studio.code.org/s/course2/stage/10/puzzle/1>



* Learn how to spot mistakes in a program and fix your code.
* This also lets you practice problem solving and persistence (working on a problem until you get it right).

Vocabulary Words

* **Bug:** An error in a program that prevents the program from running as expected.\*
* **Debugging:** finding and fixing problems in your algorithm or program.\*

# Today I Learned… (write or draw about something you learned today)

# I Really Liked… (write or draw about something you enjoyed today)

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Activity Four

# Today’s Module

<http://studio.code.org/s/course2/stage/13/puzzle/1>



* Today you will learn about conditionals; if this happens, then something else happens.
* You will also keep practicing with loops and debugging.

Vocabulary Words

* **Conditionals:** Statements that only run under certain conditions or situations.\*

# Today I Learned… (write or draw about something you learned today)

# I Really Liked… (write or draw about something you enjoyed today)

*\*Vocabulary word definitions were taken directly from the glossary at code.org:* [*https://code.org/curriculum/docs/k-5/glossary*](https://code.org/curriculum/docs/k-5/glossary)

Activity Five

# Today’s Module

<http://studio.code.org/s/course2/stage/16/puzzle/1>



* Learn about events – in computer science terms, an action that causes something to happen (like clicking the mouse to move a character).
* You also get to make your own version of the Flappy game, that you can share with friends or family!

Vocabulary Words

* **Event:** an action that causes something to happen.\*

# Today I Learned… (write or draw about something you learned today)

# I Really Liked… (write or draw about something you enjoyed today)

*\*Vocabulary word definitions were taken directly from the glossary at code.org:* [*https://code.org/curriculum/docs/k-5/glossary*](https://code.org/curriculum/docs/k-5/glossary)

Activity Six

# Today’s Module

<http://studio.code.org/s/playlab/stage/1/puzzle/1>



* Practice everything you learned by creating your own original game!
* When you’re done, you can share the link with your family and friends so they can play the game you created.

The link for your game is: (write it out carefully)

# Today I Learned… (write or draw about something you learned today)

# I Really Liked… (write or draw about something you enjoyed today)

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Rules for Coding Buddies

* Treat big/little buddies, library staff, and library customers with respect
* No running in the library
* Use inside voices
* Don’t be disruptive to the other groups
* No cell phones
* No swearing