Course B

Overview
Course B was developed with first graders in mind. Tailored to a novice reading level, this course also assumes limited knowledge of shapes and numbers.

While the concepts in Course B parallel those in Course A, students will be exposed to more sophisticated unplugged lessons and a greater variety of puzzles. Students will learn the basics of programming, collaboration techniques, investigation and critical thinking skills, persistence in the face of difficulty, and internet safety. At the end of this course students will create their very own custom game in the Play Lab programming environment on Code.org.

Core concepts:
- Digital Citizenship
- Sequencing
- Loops
- Impacts of Computing
- Events

Attitudinal goals:
- Programming is fun.
- It's okay not to get it right the first time.
- I can solve problems if I keep trying.

Key teaching tips:
- Use pair programming and encourage students to help each other.
- Work through sample problems with students as a class.
- Connect unplugged lessons to the online lessons using "bridging activities".
- Celebrate persistence as well as successes.
- Remind students that they can go back and fix mistakes.
- Honor the humor in the lessons and add more wherever possible.

Course B: Lesson Outlines

Online lessons are in regular text and unplugged lessons are **bolded**.

Concept Chunk	#	Lesson Name	Description
Digital Citizenship	**1**	**Digital Trails**	Created by Common Sense Education, students will learn that the information they put online leaves a digital footprint or "trail."
Sequencing	**2**	**Move It, Move It**	This lesson mentally prepares students for the coding exercises that they will encounter over the length of this course.
	3	Sequencing with Angry Birds	This lesson begins with a brief discussion on computer lab manners, then will progress into using a computer to complete online puzzles.
	4	Programming with Angry Birds	In this set of online puzzles, students will build on the understanding of algorithms, debugging, and general computer literacy.
	5	Programming with Harvester	Students will apply the programming concepts that they have learned to the Harvester environment.
Loops	**6**	**Getting Loopy**	Students will dance their way to a better understanding of how to use repeat loops.
	7	Loops with Harvester	Building on the concept of repeating instructions, this lesson will have students using loops to more efficiently get to the veggies.
	8	Loops with Laurel	Students use loops to collect treasure more efficiently.
	9	Drawing Gardens with Loops	Here, students use loops to create patterns. At the end of this stage, students will be given the opportunity to create their own images using loops.
Impacts of Computing	**10**	**The Right App**	Students exercise empathy and creativity to sketch their own smartphone app that addresses the needs of an imaginary user.
Events	**11**	**The Big Event Jr.**	This lesson shows that events are a great way to add variety to a pre-written algorithm.
	12	A Royal Battle with Events	In this online activity, students will have the opportunity to learn how to use events in Play Lab and apply all of the coding skills that they've learned to create an animated game.