



Suggested- Scope And Sequence Plan

K - 8

<u>Grade Level</u>	<u>Name of Course</u>	<u>Lesson Plans/ Time Per Lesson</u>	<u>Concepts Covered</u>	<u>CSTA Standards</u>	<u>ISTE Standards</u>
K	Codemonkey Junior - Sequencing & Loops	★ 30 Challenges ★ 10 Lesson Plans ★ 35 Minutes Each	★ Logic ★ Algorithm ★ Sequencing ★ Loops ★ Counting And Orientation	★ 1A-CS-01 ★ 1A-AP-08 ★ 1A-AP-09 ★ 1A-AP-11 ★ 1A-AP-14 ★ 1A-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
K	CodeMonkey Junior - Advanced Sequencing & Loops	★ 30 Challenges ★ 7 Lesson Plans ★ 35 Minutes Each	★ Logic ★ Algorithm ★ Sequencing ★ Loops ★ Counting And Orientation	★ 1A-CS-01 ★ 1A-AP-08 ★ 1A-AP-09 ★ 1A-AP-11 ★ 1A-AP-14 ★ 1A-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
1	Codemonkey Junior - Conditional Loops	★ 30 Challenges ★ 6 Lesson Plans ★ 35 Minutes Each	★ Logic ★ Algorithm ★ Sequencing ★ Conditional Loops ★ Counting And Orientation	★ 1A-CS-01 ★ 1A-AP-08 ★ 1A-AP-09 ★ 1A-AP-11 ★ 1A-AP-14 ★ 1A-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
1	CodeMonkey Junior - Procedures	★ 30 Challenges ★ 6 Lesson Plans ★ 35 Minutes Each	★ Logic ★ Algorithm ★ Procedures ★ Counting And Orientation	★ 1A-CS-01 ★ 1A-AP-08 ★ 1A-AP-09 ★ 1A-AP-11 ★ 1A-AP-14 ★ 1A-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
2	Beaver Achiever: Sequencing & Simple Loops	★ 40 Challenges ★ 9 Lesson Plans ★ 45-minute Each	★ Sequencing ★ Repeat Loops ★ Nested Loops ★ Loops with Counter	★ 1A-CS-01 ★ 1A-AP-08 ★ 1A-AP-09 ★ 1A-AP-11 ★ 1A-AP-14 ★ 1A-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
2	Beaver Achiever: Conditional Loops	★ 35 Challenges ★ 7 Lesson Plans ★ 45-minute Each	★ Sequencing ★ Repeat Loops ★ Nested Loops ★ Conditional Loops ★ While Loops	★ 1A-CS-01 ★ 1A-AP-08 ★ 1A-AP-09 ★ 1A-AP-11 ★ 1A-AP-14	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D



			★ Until Loops	★ 1A-AP-15	
2	Beaver Achiever: If/Else Conditions	★ 40 Challenges ★ 7 Lesson Plans ★ 45-minute Each	★ Sequencing ★ If And If-else Conditions ★ Nested If And If-else Conditions	★ 1B-AP-09 ★ 1B-AP-10 ★ 1B-AP-11 ★ 1B-AP-12 ★ 1B-AP-13 ★ 1B-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
3	Coding Adventure Part I: Fundamentals	★ 75 Challenges ★ 16 Lesson Plans ★ 45-minute Each	★ Fundamentals Of Objects ★ Sequencing ★ Loops ★ Variables ★ Array Indexing ★ For Loops	★ 1B-AP-09 ★ 1B-AP-10 ★ 1B-AP-11 ★ 1B-AP-12 ★ 1B-AP-13 ★ 1B-AP-15	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D
3	Space Monkey (HOC)	★ 17 Challenges ★ 3 Lesson Plans ★ 45-minute Each	★ Sequencing ★ Time Loops ★ Objects ★ Indexing ★ While loops	★ 1B-AP-12 ★ 1B-AP-15 ★ 2-AP-14 ★ 2-AP-16 ★ 2-AP-17	★ ISTE-S.5.a ★ ISTE-S.5.b ★ ISTE-S.5.c ★ ISTE-S.5.d
3	Blocks Jumper (HOC)	★ 10 Challenges ★ 2 Lesson Plans ★ 45-minute Each	★ Loops ★ Event ★ Functions	★ 1B-AP-10 ★ 1B-AP-16 ★ 1B-AP-09	★ ISTE-S.1.a ★ ISTE-S.5.a ★ ISTE-S.5.c ★ ISTE-S.5.d
3	Digital Literacy - Digital Use	★ 16 Lesson Plans ★ 45-minute Each	★ Hardware, Software ★ Internet, Browsers, Search Engines, Emails ★ Word Processing, Spreadsheets, Presentations	★ 1B-IC-18 ★ 1B-CS-03 ★ 1B-CS-02 ★ 1B-NI-04 ★ 1B-DA-06 ★ 1B-DA-07	★ ISTE-S.1.d ★ ISTE-S.3.a ★ ISTE-S.3.b ★ ISTE-S.3.c ★ ISTE-S.4.b ★ ISTE-S.6.a ★ ISTE-S.5.b ★ ISTE-S.6.b ★ ISTE-S.6.d
4	Coding Adventure Part 2	★ 70 Challenges ★ 16 Lesson Plans ★ 45-minute Each	★ Function Definitions ★ Until Loops ★ Boolean Conditions ★ If and If-Else Conditions ★ Boolean Operators	★ 1B-AP-09 ★ 1B-AP-10 ★ 1B-AP-11 ★ 1B-AP-12 ★ 1B-AP-13 ★ 1B-AP-15 ★ 1B-AP-16	★ ISTE-S.5.a ★ ISTE-S.5.b ★ ISTE-S.5.c ★ ISTE-S.5.d
4	Digital Literacy - Digital Citizenship	★ 16 Lesson Plans ★ 45-minute Each	★ Digital Citizen ★ Digital Wellness ★ Digital Safety ★ Fake News, Critical Thinking	★ 1B-NI-05 ★ 1B-IC-19 ★ 1B-IC-21	★ ISTE-S.2.b ★ ISTE-S.6.b ★ ISTE-S.2.a ★ ISTE-S.2.c ★ ISTE-S.2.d ★ ISTE-S.3.a



					<ul style="list-style-type: none">★ ISTE-S.3.c★ ISTE-S.6.d★ ISTE-S.3.b
4	AI is a Hoot (HOC)	<ul style="list-style-type: none">★ 2 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Train an AI model★ Ai Predictions★ Events★ Loops	<ul style="list-style-type: none">★ 1B-AP-09★ 1B-AP-10	<ul style="list-style-type: none">★ ISTE-S.6.c
5	Coding Adventure Part 3	<ul style="list-style-type: none">★ 65 Challenges★ 16 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Operator NOT★ Comparisons★ Function Return Values★ Triggering Events using the mouse and keyboard	<ul style="list-style-type: none">★ 1B-AP-11★ 1B-AP-12★ 1B-AP-13★ 1B-AP-15★ 1B-AP-16	<ul style="list-style-type: none">★ ISTE-5.5.a★ ISTE-5.5.b★ ISTE-5.5.c★ ISTE-5.5.d
5	Data Science	<ul style="list-style-type: none">★ 16 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Collecting data★ Surveys★ Encoding data★ Storing data★ Data Visualization★ Data correlations★ Statistics and predictions	<ul style="list-style-type: none">★ 1B-AP-13★ 1B-AP-16★ 1B-DA-06★ 1B-DA-07★ 1B-IC-20	<ul style="list-style-type: none">★ ISTE-S.1.c★ ISTE-S.3.d★ ISTE-S.4.a★ ISTE-S.4.b★ ISTE-S.5.a★ ISTE-S.5.b★ ISTE-S.5.c★ ISTE-S.6.b★ ISTE-S.6.c★ ISTE-S.6.d
6	Game Builder Courses: <ul style="list-style-type: none">★ Sprite Animations★ Frogger★ Platformer Game Builder Platform	<ul style="list-style-type: none">★ 91 Exercises★ 19 Lesson Plans★ 45-minute Each Creating your own games not included in number of lessons	GB Platformer- <ul style="list-style-type: none">★ Create and write event handlers★ @onkey, @detroy, @collide★ Creating parameters★ If statements★ Adding sounds and loops GB Draw your Sprite- <ul style="list-style-type: none">★ Create an animation using a sprite sheet★ “addAnimation”, “startAnimation” GB Frogger- <ul style="list-style-type: none">★ Create unique versions of the classic game ‘Frogger’★ Learn to control touch interface with the @onswipe event handler★ Coding Components “onKey”, “step”, “if”, “setRotation”, “loop★ Determine- position, speed, and direction	<ul style="list-style-type: none">★ 2-AP-11★ 2-AP-12★ 2-AP-14★ 2-AP-16★ 2-AP-17★ 2-AP-18	<ul style="list-style-type: none">★ ISTE-S.5.a★ ISTE-S.5.c★ ISTE-S.5.d
6	Artificial Intelligence	<ul style="list-style-type: none">★ 16 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Ethics and critical thinking★ Using AI (language model, image model)★ Prompt engineering	<ul style="list-style-type: none">★ 2-AP-11★ 2-AP-18★ 2-DA-09★ 2-IC-20	<ul style="list-style-type: none">★ ISTE-S.1.d★ ISTE-S.2.a★ ISTE-S.2.b★ ISTE-S.2.d



			<ul style="list-style-type: none">★ Machine learning★ Supervised and unsupervised learning★ Reinforcement learning★ Neural networks★ Generative AI★ Training an AI model	<ul style="list-style-type: none">★ 2-IC-22★ 2-IC-23★ 2-NI-05	<ul style="list-style-type: none">★ ISTE-S.3.b★ ISTE-S.4.a★ ISTE-S..b★ ISTE-S.5.a★ ISTE-S.5.b★ ISTE-S.6.a★ ISTE-S.6.c
7	Banana Tales Part 1	<ul style="list-style-type: none">★ 87 Challenges★ 12 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Sequencing★ Lists★ For Loops★ Range, Variables★ If/Else★ While loops★ Boolean operators★ Functions	<ul style="list-style-type: none">★ 2-AP-11★ 2-AP-12★ 2-AP-13★ 2-AP-14★ 2-AP-16★ 2-AP-17★ 2-AP-19	<ul style="list-style-type: none">★ ISTE-S.3.d.★ ISTE-S.4.b★ ISTE-S.4.d★ ISTE-S.5.c★ ISTE-S.1.c
7	Banana Tales Part 2	<ul style="list-style-type: none">★ 63 Challenges★ 10 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Classes★ Input, Integers★ Strings★ Dictionary★ Set★ Tuple★ 2d lists★ Bubble sort	<ul style="list-style-type: none">★ 2-AP-11★ 2-AP-12★ 2-AP-13★ 2-AP-14★ 2-AP-16★ 2-AP-17★ 2-AP-19	<ul style="list-style-type: none">★ ISTE-S.3.d.★ ISTE-S.4.b★ ISTE-S.4.d★ ISTE-S.5.c★ ISTE-S.1. c
8	Coding Chatbots	<ul style="list-style-type: none">★ 74 Exercises★ 16 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Input/Output (Send/Read)★ Dictionary★ If★ ==★ If Else★ Variables★ Lists★ For Loops Assignment Operators★ While Loops★ And★ Or★ Ascii Codes★ Return★ Modules And Import★ True/ False★ Not★ Random	<ul style="list-style-type: none">★ 2-CS-02★ 2-CS-03★ 2-DA-09★ 2-AP-10★ 2-AP-11★ 2-AP-12★ 2-AP-13★ 2-AP-14★ 2-AP-15★ 2-AP-16★ 2-AP-17★ 2-AP-18★ 2-IC-22	<ul style="list-style-type: none">★ ISTE-S.3.d.★ ISTE-S.4.b★ ISTE-S.4.d★ ISTE-S.5.c★ ISTE-S.1.c.★ ISTE-S.1.d★ ISTE-S.3.d★ ISTE-S.4.a.★ ISTE-S.4.b★ ISTE-S.4.c★ ISTE-S.4.d.★ ISTE-S.5.d★ ISTE-S.6.a.★ ISTE-S.6.c★ ISTE-S.7.a★ ISTE-S.7.b★ ISTE-S.7.c★ ISTE-S.7.d.
8	Moon Lander (Mini Course)	<ul style="list-style-type: none">★ 17 Exercises★ 2 Lesson Plans★ 45-minute Each	<ul style="list-style-type: none">★ Event★ If, <, > ,★ If/Else★ Assignment operators	<ul style="list-style-type: none">★ 2-CS-02★ 2-CS-03★ 2-DA-09★ 2-AP-10★ 2-AP-11	<ul style="list-style-type: none">★ ISTE-S.5.a★ ISTE-S.5.c★ ISTE-S.5.d



			★ Functions ★ Sequencing	★ 2-AP-12 ★ 2-AP-13 ★ 2-AP-14 ★ 2-AP-15 ★ 2-AP-16 ★ 2-AP-17 ★ 2-AP-18 ★ 2-IC-22	
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Math Courses

The Codemonkey math courses are designed to run in parallel with our coding courses. While this is the suggested sequence, the only prerequisite for these courses is that students have completed the first lessons of Coding Adventure Part 1.

<u>Grade Level</u>	<u>Codemonkey Course</u>	<u>Lesson Plans</u>	<u>Concepts Covered</u>	<u>CSTA Standards</u>	<u>ISTE Standards</u>	<u>Common Core Math Standards</u>
2	Dodo Does Math - Distances	★ 20 Challenges ★ 3 Lesson Plans ★ 45-minute Each	★ Addition ★ Subtraction ★ Measuring Distances	★ 1B-AP-12 ★ 1B-AP-15 ★ 2-AP-14 ★ 2-AP-16 ★ 2-AP-17	★ ISTE-S.5.A ★ ISTE-S.5.B ★ ISTE-S.5.C ★ ISTE-S.5.D	★ Ccss.Math.Content.2.Oa.B.2 ★ Ccss.Math.Content.2.Nbt.A.2/B.5 /B.7 ★ CCSS.MATH.CONTENT.2.Md.A. 1 ★ Ccss.Math.Content.3.Oa.B.5/C.7 ★ Ccss.Math.Content. 3.Nbt.A.2 ★ Ccss.Math.Content.4.Md./C.7
3	Dodo Does Math Multiplication	★ 20 Challenges ★ 3 Lesson Plans ★ 45-minute Each	★ Commutative & Distributive Properties ★ Skip Counting ★ Multiplication	★ 1B-AP-12 ★ 1B-AP-15 ★ 2-AP-14 ★ 2-AP-16 ★ 2-AP-17	★ ISTE-S.5.a ★ ISTE-S.5.b ★ ISTE-S.5.c ★ ISTE-S.5.d	★ Ccss.Math.Content.2.Oa.B.2 ★ Ccss.Math.Content.2.Nbt.A.2/B.5 /B.7 ★ CCSS.MATH.CONTENT.2.Md.A. 1 ★ Ccss.Math.Content.3.Oa.B.5/C.7 ★ Ccss.Math.Content. 3.Nbt.A.2 ★ Ccss.Math.Content.4.Md./C.7
4	Dodo Does Math Angles	★ 20 Challenges ★ 3 Lesson Plans ★ 45-minute Each	★ Commutative & Distributive Properties ★ Skip Counting and Multiplication	★ 1B-AP-12 ★ 1B-AP-15 ★ 2-AP-14 ★ 2-AP-16 ★ 2-AP-17	★ ISTE-S.5.a ★ ISTE-S.5.b ★ ISTE-S.5.c ★ ISTE-S.5.d	★ Ccss.Math.Content.2.Oa.B.2 ★ Ccss.Math.Content.2.Nbt.A.2/B.5 /B.7 ★ CCSS.MATH.CONTENT.2.Md.A. 1 ★ Ccss.Math.Content.3.Oa.B.5/C.7 ★ Ccss.Math.Content. 3.Nbt.A.2 ★ Ccss.Math.Content.4.Md./C.7

Standards For Mathematical Practice

in addition, all Codemonkey courses address the following Common Core standards for Mathematical Practice:

- MP1: Make Sense Of Problems And Persevere In Solving Them.
- MP3: Construct Viable Arguments And Critique The Reasoning Of Others.
- MP4: Model With Mathematics.
- MP5: Use Appropriate Tools Strategically