

Junior Coder

Lesson plan - 2

Coder Cove

Sequencing and logical
thinking

Lesson # 2 - Sequencing

Time:	60-75 mins	
Objective:	Analyze a problem and create instruction in correct order	
Learning	<p>What is Sequence ?</p> <p>Computers are very good at following instructions, but instructions should be detailed and in the right order. Sequence is step by step instruction in the right order.</p>	
Computer Vocabulary:	<p>Command - An instruction for the computer. When many commands are given one after another it makes up the algorithm.</p> <p>Event - An action that makes something happen. Touch is an event, clicking a button is an event. When an event occurs, the computer executes a set of instruction.</p>	
Materials required:	<p>iPad with Junior Coder downloaded.</p> <p>Color pencil and activity sheet for unplugged activity.</p>	
Common Core compliance:	CCSS.MATH.PRACTICE.MP1	<i>Make sense of problems and persevere in solving them.</i>
	CCSS.MATH.PRACTICE.MP6	<i>Attend to precision.</i>
Activity:	<p>Solve the levels 1 to 5 in Coder Cove. (Students can work in pairs.)</p> <p>Step 1 - Understand the problem.</p> <p>Step 2 - Break up the problem into smaller steps.</p> <p>Step 3 - Make a plan.</p> <p>Step 4 - Solve each step.</p> <p>Step 5 - Check your work.</p>	
Creativity:	<p>Click on "Create your own" button. Students can create treasure maps and challenge each other to a programming treasure hunt game.</p> <p>Drag the pirate to any grid.</p> <p>Place the treasure box in another grid away from the pirate.</p> <p>Use the red pencil to mark the treasure path starting from the pirate and ending at the treasure box.</p> <p>Drag the scenery items to complete the map. No items can be on the red line.</p> <p>Save your map and challenge your friend to program it.</p>	
Discussion:	<p>As a group discuss the following questions:</p> <ol style="list-style-type: none"> 1. What is an event? 2. How does the computer know when to execute a program? 	

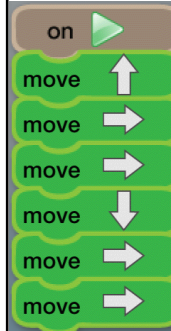
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Solutions:

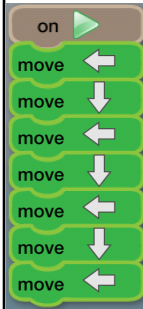
Level 1



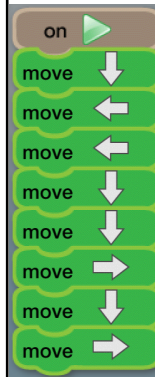
Level 2



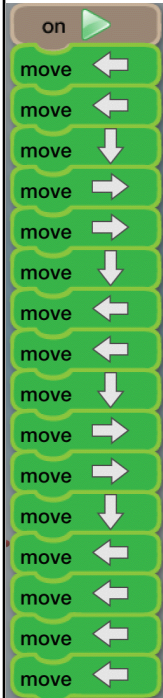
Level 3



Level 4



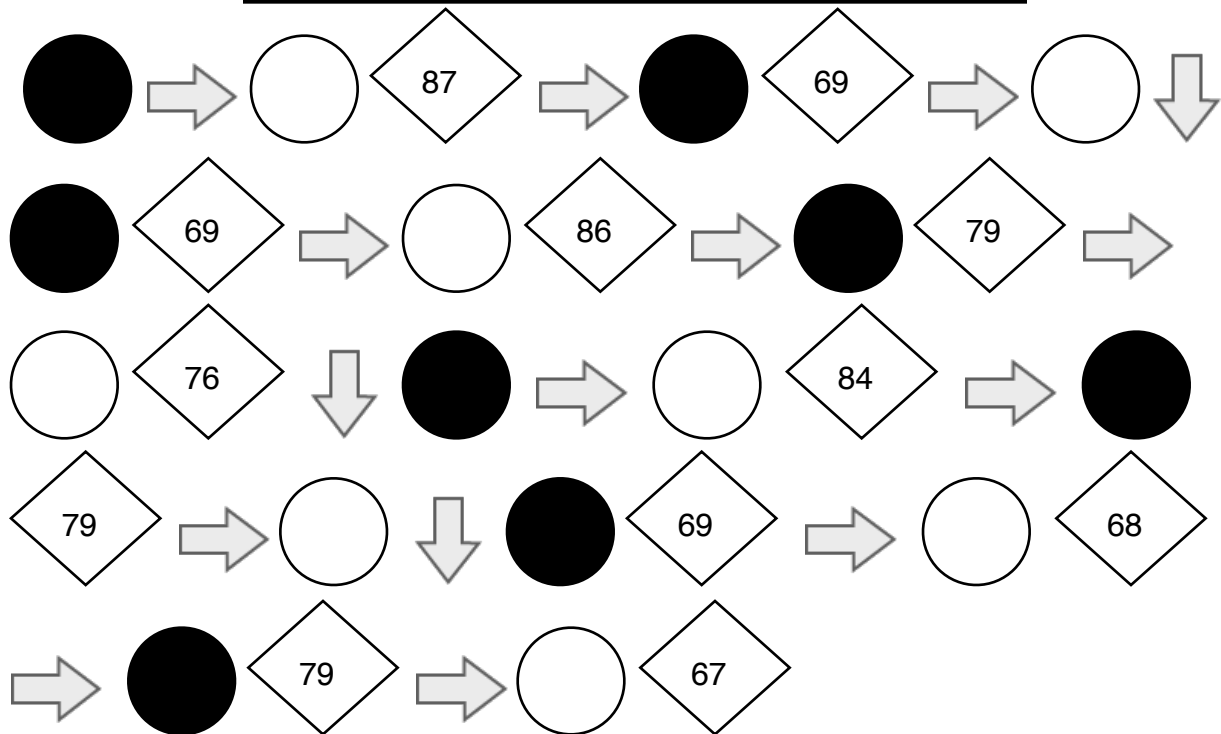
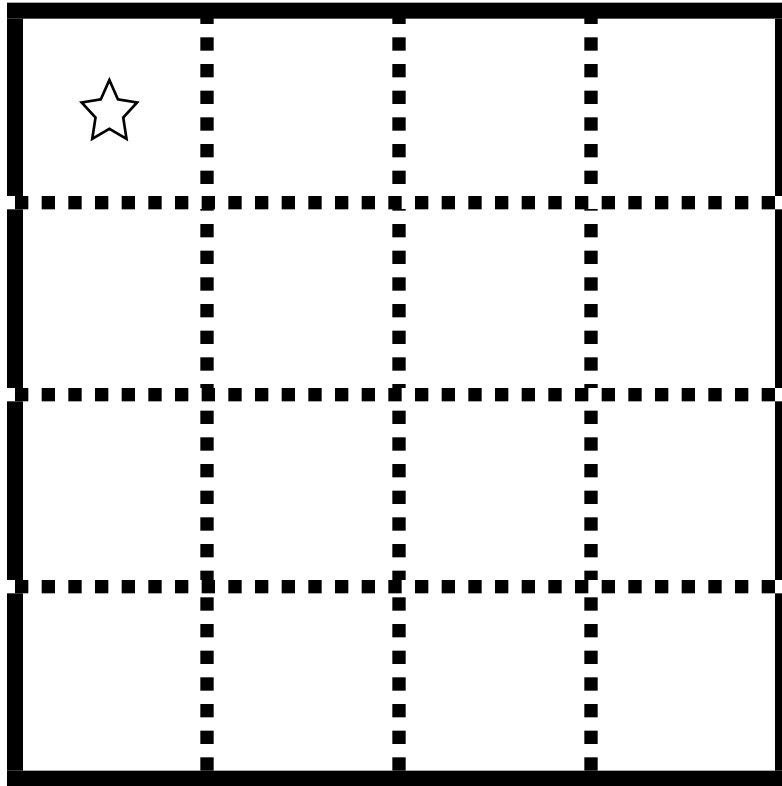
Level 5



Lesson # 2 - Sequencing

Unplugged Activity	Hand out the activity sheet for Lesson #2. Let students follow the instruction in sequence to color and design the quilt.
Unplugged activity discussion	What strategy did they follow? Did they read all the instruction at once and then make the quilt or did they follow each instruction one at a time.








Make a quilt using the code instructions below. Use the two tables in the next page to figure out what each symbol means. Start at the block with the star.



Secret message chart

A	65		F	70		K	75		P	80		U	85		Z	90
B	66		G	71		L	76		Q	81		V	86			
C	67		H	72		M	77		R	82		W	87			
D	68		I	73		N	78		S	83		X	88			
E	69		J	74		O	79		T	84		Y	89			

Action Chart

Code	Action
	Color the grid red
	Color the grid yellow
	Move right one grid
	Move left one grid
	Move up one grid
	Move down one grid
	Write a letter in the grid. The number inside the diamond indicates what letter you need to write. Use the secret message table above to find the letter from the number.