

UNIT 00 – HUNTER 2022 LESSON	
L01 – IF/ELSE Conditional Reasoning	
PRIOR KNOWLEDGE	-“SEQUENCING” in a basic flow chart
OBJECTIVE	I can evaluate and apply conditional statements to control the flow of a program.
SWBAT	By the end of this lesson, students will be able to: -Define and give an example of “conditional statements” -Read a script and identify what the IF condition is asking for, what will happen IF TRUE, and what will happen ELSE -Use IF/ELSE logic to solve a programming puzzle
MATERIALS	
GROUPING	
LEARNING SUPPORTS	Graphical organizers, Flowcharts, SNAP!
ASSESSMENT	Apply conditional logic: students correctly describe & phrase a condition that will control the given code snippet Evaluate conditional: students correctly give arguments that will evaluate to true/false in their condition (and can identify which is which)
APCS Principles Framework	LO 4.1.1 Develop an algorithm for implementation in a program. EK 4.1.1A Sequencing, selection, and iteration are building blocks of algorithms. EK 4.1.1B Sequencing is the application of each step of an algorithm in the order in which the statements are given. EK 4.1.1C Selection uses a Boolean condition to determine which of two parts of an algorithm is used.
REFERENCES	

TIME	AGENDA	QUESTIONS/CFUs/MISUNDERSTANDINGS
10	<b>WARM UP</b>	
	-Board has flowchart symbols/shapes up and requests students to mark down what each symbol/shape is used for.	
	<b>MINI LESSON + CONDITIONAL SIMON SAYS</b>	
	-Teacher defines “conditional”  -Simon Says: IF you are wearing RED stand up.  -Simon Says: IF you are wearing BLUE stand up. Otherwise, raise your hand.  ***** <b>INCLUDE VISUAL OF IF/ELSE FLOWCHART SHAPE</b>	<i>Q: What types of real world “conditional” statements are you familiar with? (Student answers; things like “If you make honor roll we will go to Disney” or “If you are over 18 you can vote.”</i> <i>Q: What was the condition that needed to be met? How did students react when it was met? How did students react when it wasn’t met?</i>  <i>Q: How was this different from the first conditional we practiced? How did students react when the condition was true? When it wasn’t true?</i>
30	<b>YOU TRY</b>  -Students get sample/deconstructed script with basic conditional: ASK a math question; IF correct answer is given, THEN congratulate user; ELSE state answer is incorrect.	<i>Q: What is the intention of this program?</i> <i>Q: What is the condition that must be met?</i> <i>Q: How are you deciding which response is returned for a true condition, and which for otherwise?</i>  MIS: Students may not initially use correct answer as IF condition (i.e. they may input a wrong answer so that the program will state the answer is incorrect) – <i>Q: How many</i>

		<i>wrong answers are there for this math question? How many correct answers? Which one is more specific/easier to plan for?</i>
	<b>CHECK-IN</b> -Student demonstrates correct solution to You Try mini puzzle -Students self-check -Teacher checks in with students whose program did not match correct solution	<i>CFU/MIS: If a student is choosing an incorrect result, check that they are not mixing up the intention of the statement. Be sure that syntax (if any) is concise and clear.</i>
	<b>PRACTICE</b> -Students create a series of scripts to satisfy flowcharts using IF/ELSE statements -Students draw flowcharts for simple conditional scripts -Teacher circulates and assists	<i>Q: How does this script use the IF/ELSE logic similarly to our You Try? What is different about this?</i> <i>Q: What is the intention of this script? What is the condition that must be met?</i> <i>Q: What is the purpose of the “forever” block in these scripts?</i>
5	<b>EXIT SLIP &amp; LOG OUT</b> -Provided a script with the condition missing, complete a reasonable condition to control flow. -Select an input value that will achieve a specified outcome in the provided script.	<u>Exit Slip Rubric:</u> 1 pt: Add an appropriate condition 2 pt: Accurately select an input that will achieve the specified outcome based on the chosen condition.