
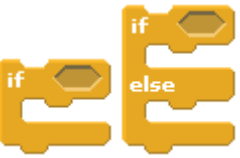
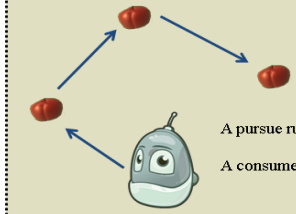






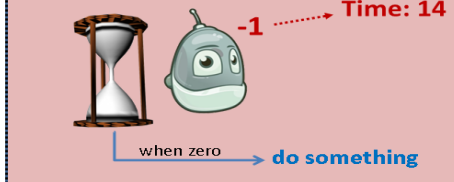



# Morley and Tacolneston - Knowledge Organiser

Computing Focus: Computer Science	Programming with Kodu Comparisons with Scratch	
Key Knowledge		
<b>Prior learning</b>	In Key Stage 2, children build on skills and extend their mastery of computers, as both user and creator. The computing curriculum aims to make children computationally aware, teaching them concepts (how to predict and analyse results, how to break a problem down into parts, how to spot and use similarities and how to evaluate) and approaches to help them problem-solve.	
<b>Sequence</b>	In Kodu any series of instructions that can be run/executed.	
<b>Selection/Condition In Scratch</b> <b>Events</b>   <b>Selection: If... then</b> 	<b>Examples in Kodu</b>  <div style="display: flex; justify-content: space-around;"> <div style="border: 1px dashed gray; padding: 5px; width: 45%;"> <p style="text-align: center;">Pursue and Consume</p> <p style="text-align: center;">Make the Kodu go to objects and eat them.</p>  <p style="text-align: center;">A pursue rule involves <i>motion</i>.</p> <p style="text-align: center;">A consume rule <i>uses up</i> the object.</p> </div> <div style="border: 1px dashed gray; padding: 5px; width: 45%;"> <p style="text-align: center;">Pursue and Consume</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>1</b> WHEN see apple + DO move toward</p> <p><b>2</b> WHEN bumped apple + DO eat it</p> </div> <div style="width: 45%;"> <p>Pursue rule</p> <p>Consume rule</p> </div> </div> <p>General Form:            WHEN see <i>thing</i> DO move toward            WHEN bumped <i>thing</i> DO consume it            "Consume" can be "eat", "grab", "vanish", or something else.</p> <p>Filter by color:            WHEN see <i>color thing</i> DO move toward            WHEN bumped <i>color thing</i> DO consume it</p> </div> </div>	
<b>Repetition /loops</b> 	When using Kodu you will notice the lack of repetition commands. This is due to the nature of the Kodu programming environment. In Kodu when the program is run, all the commands are triggered to run all the time as though each command is running as a forever loop waiting for its condition to occur.	
<b>Variable</b> A <b>Variable</b> is used to hold values and strings (that can change) and these can be in Scratch and Kodu displayed. <b>In Scratch</b>         	<b>Examples in Kodu</b>  <div style="display: flex; justify-content: space-around;"> <div style="border: 1px dashed gray; padding: 5px; width: 45%;"> <p style="text-align: center;">Countdown Timer</p> <p style="text-align: center;">Count down to zero on the screen.</p>  <p style="text-align: center;">when zero → do something</p> </div> <div style="border: 1px dashed gray; padding: 5px; width: 45%;"> <p style="text-align: center;">Countdown Timer</p> <p style="text-align: center;">Count down from 15 seconds. When the time reaches zero, explode.</p>  <p>Notes: (1) The 0.25 second delay in rule 3 is needed because the red score will be zero until rule 1 runs. (2) To advance the time silently and label the score as "Time", use the Options tool to set the red score to "Quiet Labeled", with Label: "Time".</p> </div> </div>	
Key Vocabulary	Possible experiences	
tinkering sequence algorithm debugging repetition / loops	decomposition logical reasoning selection variable executing/running a program	Tinkering with Kodu Using the Kodu tutorials Reading a game in Kodu programming language Planning and creating a game in Kodu Creating a game with at least one variable in Kodu