
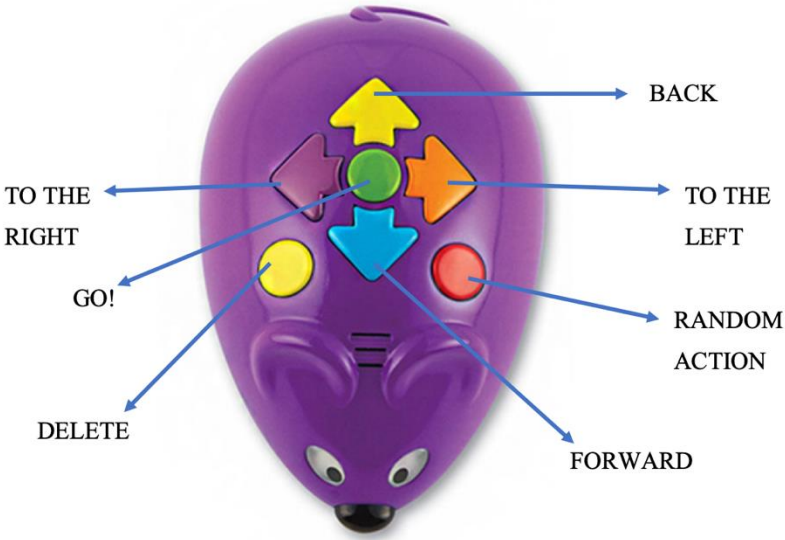


Programmable Robot	
<p>Problem wording</p>	<p>We work with a ‘mouse code and go’ programmable robot and a gameboard divided into squares where it moves.</p>  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"> <p>When the mouse touches the cheese with its nose, its eyes light up and it buzzes.</p> </div>  <p>The problem is worded as follows: ‘We have to help our mouse get a piece of cheese. That means you have to decide what instructions you should give the mouse and then check to see if your instructions worked.’</p> <p>The independent variable is the number of times the blue arrow is pressed and the dependent variable the square number where the mouse lands.</p> <p>We work with the direct and inverse functions: $f(n) = n$; $f(n) = n+2$; and $f(n) = n-1$.</p>
<p>Purpose</p>	<p>To explore:</p> <ul style="list-style-type: none"> • five-year-olds’ ability to identify and express inter-variable relationships. • how these students generalise. • the representations they use to express the relationships.

Suggestions for classroom delivery	Teachers should begin by working with ‘small’ numbers that can be counted on fingers and using manipulatives to then go on to ‘large’ numbers and questions that induce students to generalise.
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