

## Understanding Functions

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My unit for the Delaware Teachers Institute will focus on understanding and interpreting the characteristics of functions and function notation. In our curriculum, the concept of functions and function notation is not given the time it requires to truly understand it. I have noticed that students seem to misinterpret the meaning of  $f(x)$  and always feel more comfortable writing a function as  $y=$  instead of  $f(x)=$ . They do not grasp what separates a function from a non-function, or relation, or why it is even necessary to define something as a function. In our curriculum, there is only a single investigation that teaches function notation, functions versus non-functions, and domain and range. This is simply too much content to put in an investigation that is supposed to take no more than two school days. It is supposed to serve as an introduction into a quadratic functions unit, but it does not connect to the concepts of quadratic functions. I have created a unit that will introduce the idea of functions, function notation, domain and range, and connect specifically to quadratic functions by demonstrating the relationship between linear and quadratic functions.