

Jillian Scheschuk

“Exploring Families of Functions, Transformations, and Inverses”

Unit Objectives

Part 1) What are Functions?

[About 3-4 instructional days plus review/practice]

- Defining a function and determining if a relation is a function
- Finding Domain and Range
- Evaluating a function given its equation and/or graph
- Using correct function notation
- Identifying characteristics given a graph
- Quiz

Part 2) Parent Functions and Transformations

[About 7-8 instructional days plus review/practice]

- Exploring parent functions using graphing calculators and/or software
- Comparing and contrasting the families of functions
- Exploring transformations using Desmos (online graphing software)
- Summarize and draw conclusions about the effects of the different transformations through equations and graphing
- Applying transformations to real world contexts
- Graphing transformations given function equations
- Graphing transformations given function graphs
- Test

Part 3) Function Operations and Inverses

[About 8-9 instructional days plus review/practice]

- Evaluating function operations from given equations
- Evaluating function operations from given graphs
- Evaluating compositions of functions using equations and graphs
- Applying function compositions to real world contexts
- Discovering Inverse Functions through graphs
- Determining whether a function has an inverse function (one-to-one)
- Finding inverse functions from equations and graphs

- Verifying inverses from given equations

- Test