



Center for Curriculum Redesign

Professional Development in Exponential Modeling

Module Content

Unit 1: Exploring Exponential Relationships

- 1.1 - Growth Intuition
- 1.2 - Rates of Change
- 1.3 - Compound Interest
- 1.4 - Exponential Functions
- 1.5 - A Formula for Growth & Decay

Unit 2: Visualizing Exponentials

- 2.1 - Visualizing Growth & Decay
- 2.2 - Comparing Function Behavior
- 2.3 - The Time Factor
- 2.4 - Translating Exponential Functions
- 2.5 - Changing Bases
- 2.6 - Putting It All Together

Unit 3: Analyzing Exponentials

- 3.1 - Is It Exponential?
- 3.2 - When Exponential Growth Ends
- 3.3 - Modeling an Endowment Fund

Module Time: 20 hours*

Module Project: Exponentials & Climate Change

Core Concepts in this Module

- Proportional Reasoning
- Modeling
- Patterns & Structure
- Equality & Relationships

Competencies in this Module

- Critical Thinking
- Metacognition
- Curiosity

*Total module time of 20 hours includes both independent learning/asynchronous (~85%) and synchronous (~15%)