

# Chapter 6: Differential Equations & Modeling

## Unit Details

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### Timeline

Approximately 8 teaching days

### Resources

Text book Chapter 6

Moodle support – Lessons, worksheets, answer keys.

### Objectives

See individual notes for details

### Key Ideas/Terms/Theorems/Processes

- Differential Equations
- Slope Fields
- Indefinite Integrals
- Substitution in definite and indefinite integrals
- Separable Differential Equations
- Law of Exponential Change
- Newton's Law of Cooling

### Practice & Support

- Pg 327 Quick Review #'s 3-7: Exercises #'s 1-23 odds.
- WS: Slope Fields
- WS: Calculaugh 60
- Pg 337 #'s 1-6, 17-24.
- Pg 338 #'s 25-43 odds, 49, 55, 61, 65.
- Pg 357 #'s 1-9 odds
- WS: Calculaugh 52
- Pg 357 #'s 22-38 evens, 36 a,b.
- WS: Substitution
- WS: Calculaugh 55
- Pg 373 #'s 3, 6, 8, 12, 15, 17, 18, 26, 27, 35, 37, 49, 52, 63.

### Assessments

One summative assessment – Part 1: No Calculator  
Part 2: Calculator

### Lessons

Sections 6-1, 6-2, 6-4. See notes for details.  
6-3 will be done later (time permitting)