

**Course:** AP Calculus AB

**Unit:** [U00] Prerequisites to Calculus

**Lesson:** [L91] Allometric Scaling

**Type:** Group activities & direct instruction

**Time:** Standard

### Objectives

- 1 Apply knowledge of rational exponents to allometric scaling
- 2 Formulate and solve logarithmic equations

### Lesson Structure

Step	Time	Task Analysis	Teaching Strategy	Active Participation
AS	0:10	Anticipatory Set: Define <i>allometry</i> and discuss an example with your partner. Together, choose one example to present to the class.	Individual research Team discussion	<i>Each student</i> looks up the definition <i>Each student</i> provides an example <i>Each team</i> discusses, compares and chooses an example to present
1	0:15	Present the fundamental allometric equation $Y=Y_0M^b$ and show one example in use.	Direct instruction Individual practice	<i>Each student</i> takes notes <i>Each student</i> tries one on her own
2	0:10	Review logarithmic equations and solve an allometric example.	Direct instruction Individual practice	<i>Each student</i> takes notes <i>Each student</i> tries one on her own
3	0:10	Apply all concepts to solve an allometric case study.	Team seatwork Team presentations	<i>Each team</i> solves the case study and is prepared to present.
CL	0:05	Closure: Describe one way that a logarithmic equation differs from a quadratic.	Discussion	<i>Each student</i> is prepared to discuss

**Resources:** APC-U00-L91.PPT

**Homework:** Each student devises and solves 2 allometric problems, and is prepared to present them to the class.

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