

The sequence of AIMS activities used in a course

Topic	Lesson Name and Number	Activity Title
Data	1. Data and Variability	<ul style="list-style-type: none"> • Meet and Greet • Developing a Class Survey • Variables on Backs
Statistical Models and Modeling	1. Using Models to Simulate Data	<ul style="list-style-type: none"> • One-Son Modeling Activity • Let's Make a Deal Simulation
Data	2. Avoiding Bias	<ul style="list-style-type: none"> • How you Ask a Question • Critiquing the Student Survey
	3. Random Sampling	<ul style="list-style-type: none"> • Gettysburg Address • Student Survey Sampling
	4. Randomized Experiments	<ul style="list-style-type: none"> • Taste Test
Distribution	1. Distinguishing Distributions	<ul style="list-style-type: none"> • Distinguishing Distributions • Growing a Distribution
	2. Exploring and Sorting Distributions	<ul style="list-style-type: none"> • What is a Histogram? • Sorting Histograms • Matching Histograms to Variable Descriptions • Creating graphs for variables without data • Exploring Different Representations of the Same Data
Center	1. Reasoning about Measures of Center	<ul style="list-style-type: none"> • What does a Mean Mean? • What does a Median Mean? • Means and Medians
	2. Choosing Appropriate Measures	<ul style="list-style-type: none"> • What is Typical? • Choosing an Appropriate Measure of Center
Variability	1. Variation	<ul style="list-style-type: none"> • How Big is Your Head?
	2. Reasoning about the Standard Deviation	<ul style="list-style-type: none"> • Comparing Hand Spans • What Makes the Standard Deviation Larger or Smaller?
Comparing Groups	1. Understanding Boxplots	<ul style="list-style-type: none"> • How Many Raisins in a Box?
	2. Comparing Groups with Boxplots	<ul style="list-style-type: none"> • Gummy Bears • Comparing Boxplots
	3. Reasoning about Boxplots	<ul style="list-style-type: none"> • Interpreting Boxplots • Matching Histograms to Boxplots
	4. Comparing Groups with Histograms, Boxplots, and Statistics	<ul style="list-style-type: none"> • How do Students Spend Their Time?

Topic	Lesson Name and Number	Activity Title
Statistical Models and Modeling	2. Modeling Random Variables 3. The Normal Distribution as a Model	<ul style="list-style-type: none"> • Coins, Cards, and Dice • What is Normal? • Normal Distribution Applications
Samples and Sampling Distributions	1. Sampling from a Population 2. Generating Sampling Distributions 3. Describing the Predictable Pattern: The Central Limit Theorem	<ul style="list-style-type: none"> • Reece's Pieces • Body Temperature • Sampling words • Sampling Pennies • Central Limit Theorem
Statistical Inference	1. Testing Statistical Hypotheses 2. <i>P</i> -values and Estimation 3. Reasoning about Confidence Intervals 4. Using Inference in an Experiment	<ul style="list-style-type: none"> • Modeling Coin Tosses • Balancing Coins • <i>P</i>-values • Types of Errors • Introduction to Confidence Intervals • Estimating with Confidence • Estimating Word Lengths • What Does the 95% Mean? • Gummy Bears Revisited
Covariation	1. Reasoning about Scatterplots and Correlation 2. Fitting a Line to Data 3. Inferences involving Bivariate Data	<ul style="list-style-type: none"> • Credit Questions • Interpreting Scatterplots • Reasoning about the Correlation Coefficient • Guessing Correlations • Diamond Rings • da Vinci and Body Measurements • Testing Relationships: Admissions Variables • Testing Relationships: Baseball Variables
Statistical Inference	5. Solving Statistical Problems Involving Statistical Inference	<ul style="list-style-type: none"> • Research Questions Involving Statistical Methods