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AP STATISTICS

Course Skills

The AP Statistics course skills describe what a student should be able to do while exploring course concepts. The table that follows presents these skills, which students should develop during the AP Statistics course. These skills form the basis of the tasks on the AP Exam.

The unit guides later in this publication embed and spiral these skills throughout the course, providing teachers with one way to integrate them in the course content with sufficient repetition to prepare students to transfer those skills when taking the AP Exam. Because the course skills are aligned to specific learning objectives, AP Exam questions will also reflect this pairing.

More detailed information about teaching the course skills can be found in the Instructional Approaches section of this publication.

AP STATISTICS

Course Skills

Skill Category 1	Skill Category 2	Skill Category 3	Skill Category 4
Selecting Statistical Methods 1 Select methods for collecting and/or analyzing data for statistical inference.	***Data Analysis*** 2 Describe patterns, trends, associations, and relationships in data.	***Using Probability and Simulation*** 3 Explore random phenomena.	***Statistical Argumentation*** 4 Develop an explanation or justify a conclusion using evidence from data, definitions, or statistical inference.

SKILLS

1.A Identify the question to be answered or problem to be solved *(not assessed)*.	**2.A** Describe data presented numerically or graphically.	**3.A** Determine relative frequencies, proportions, or probabilities using simulation or calculations.	**4.A** Make an appropriate claim or draw an appropriate conclusion.
1.B Identify key and relevant information to answer a question or solve a problem.	**2.B** Construct numerical or graphical representations of distributions.	**3.B** Determine parameters for probability distributions.	**4.B** Interpret statistical calculations and findings to assign meaning or assess a claim.
1.C Describe an appropriate method for gathering and representing data.	**2.C** Calculate summary statistics, relative positions of points within a distribution, correlation, and predicted response.	**3.C** Describe probability distributions.	
	2.D Compare distributions or relative positions of points within a distribution.		

INFERENCE

1.D Identify an appropriate inference method for confidence intervals.		**3.D** Construct a confidence interval, provided conditions for inference are met.	**4.C** Verify that inference procedures apply in a given situation.
1.E Identify an appropriate inference method for significance tests.		**3.E** Calculate a test statistic and find a p-value, provided conditions for inference are met.	**4.D** Justify a claim based on a confidence interval.
1.F Identify null and alternative hypotheses.			**4.E** Justify a claim using a decision based on significance tests.