Probability

Probability 1.) AE-2 List the enduring understandings for a content-area unit to be implemented over a three- to five- week time period. Explain how the enduring understandings serve to contextualize (add context or way of thinking to) the content-area standards. Unit: Data and Probability Time: 3 weeks max Enduring Understanding: " Student Will Be Able To: - Know what probability is (chance, fairness, a way to observe our random world, the different representations) - Know what the difference between experimental and theoretical probability is - Be able to find the probability of a single event - Be able to calculate the probability of sequential events, with and without replacement - Understand what a fair game is and be able to determine if a game is fair - Be able to make a game fair - Be able to use different approaches (such as tree diagrams, area models, organized lists) to solve probability problems in life. - Be able to predict the characteristics of an entire population from a representative sample - Be able to analyze a representative sample for flaws in its selection - Be able to create and interpret different statistical representations of data (bar graphs, line graphs, circle graphs, stem-and-leaf) - Be able to choose an appropriate way to display various sets of data - Know why the Fundamental Counting Principle works and be able to use it to solve counting problems. " http://www. arps. org/Curriculum/Maps/MS/Mathematics/Grade7. pdf 2.) AE-3 List the language abilities that ELLs must develop to access the content you are teaching in your unit; then list the language abilities that they need to demonstrate content mastery. Academic Language Abilities: * Know the difference between possibility and probability. * Expressing probability and improbability * Words that have representations of mathematical meaning. AE- 4 Determine the content-area learning outcomes that all students will

master as a result of their participation in your unit of instruction. Learning Objectives " The student will be able to: * Define experiment, outcome, event, probability and equally likely. * Restate the formula for finding the probability of an event. * Determine the outcomes and probabilities for experiments. * Interact with die rolls and spinners to help predict the outcome of experiments. * Distinguish between an event and an outcome for an experiment. * Recognize the difference between outcomes that are equally likely and not equally likely to occur. Apply probability concepts to complete exercises. " — Unknown (online) Learning Outcomes " 1. describe discrete data graphically and compute measures of centrality and dispersion a 2. compute probabilities by modeling sample spaces and applying rules of permutations and combinations, additive and multiplicative laws and conditional probability a, b 3. construct the probability distribution of a random variable, based on a real-world situation, and use it to compute expectation and variance a, b 4. compute probabilities based on practical situations using the binomial and normal distributions; a, b 5. use the normal distribution to test statistical hypotheses and to compute confidence intervals. a, b" http://math. sci. ccny. cuny. edu/document/show/269