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Online Learning Experience (OLE) Planning Grid - ITEC 7480

Standard:

M6D2. Students will use experimental and simple theoretical probability and understand the nature of sampling. They will also make predictions from investigations.
a. Predict the probability of a given event through trials/simulations (experimental probability), and represent the probability as a ratio.
b. Determine, and use a ratio to represent, the theoretical probability of a given event.
c. Discover that experimental probability approaches theoretical probability when the number of trials is large.

Related Standards:

M6N1. Students will understand the meaning of the four arithmetic operations as related to positive rational numbers and will use these concepts to solve problems.
f. Use fractions, decimals, and percents interchangeably.
g. Solve problems involving fractions, decimals, and percents.

M6A1. Students will understand the concept of ratio and use it to represent quantitative relationships.

Student Objectives/Outcomes:	Bloom's Level:	Activities:	Assessments:
1. *Determine the theoretical probability of a simple event* 2. *Represent probability using a ratio* 3. *Use fractions, decimals and percents interchangeably*	*Applying*	• *Watch "Basic Probability" on Brainpop* • *View the Q&A section at the end of the Brainpop video for more explainations* • *Probability Practice Worksheets (spinner, marbles)* • Rolling Dice Task from Framework • *Use Study Island for basic probabiliy practice using fractions, decimals and percents*	• *Results of Study Island practice* • *Feedback on practice worksheets* • *Feedback on Rolling Dice task*
4. *Predict the probabilty of a given event through trials and/or simulations* 5. *Distinguish between theoretical and experimental probability*	*Analyzing*	• *View narrated PPT on Theoretical vs. Experimental Probability* • *Theoretical vs Experimental tutorial: http://www.glencoe.com/sites/common_assets/mathematics/im1/concepts_in_motion/interactive_labs/M3_10/M3_10_dev_100.html* • *Activity: Find the theoretical probability of spinning a spinner. Then, find the Experimental probability of actually spinning the spinner. Record responses. http://nlvm.usu.edu/en/nav/frames_asid_186_g_4_t_5.html?open=activities* • *Dice Game Task from framework with assigned partner*	• *Feedback on Activity* • *Feedback on Dice Game task* • *Dice Game Task discussion*
6. *Recognize that as the number of trials gets larger, the experimental probability of an event approaches the theoretical probability of that event.*	*Creating*	• *Illluminate Task on when experimental probability becomes theoretical using http://illuminations.nctm.org/ActivityDetail.aspx?ID=79 and write a reflection* • *Find real world situations where probability is involved (include the theoretical probability) and post on discussion board. View and post comments on 3 peer postings.*	• *Feedback on illuminate task and real world application* • *Discussions on real world probability* •

7.	*Remembering*	•	•
8.	*Remembering*	•	•