

Unit Plan by Prioritized Standards

Content Area	7th Grade Math
Grade/Course	7th Math
Unit of Study	Unit 6 - Probability
Duration of Unit	9 days

Insert priority standards below (include code). **CIRCLE or Highlight** the **SKILLS** that students need to be able to do and **UNDERLINE** the **CONCEPTS** that students need to know. (address “supporting” standards in daily lesson plans)

MGSE7.SP.7 **Develop** a probability model and **use it to find** probabilities of events. **Compare experimental and theoretical probabilities of events.** If the probabilities are not close, **explain possible sources of the discrepancy.**

MGSE7.SP.7a **Develop** a uniform probability model by assigning equal probability to all outcomes, and **use the model** to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.

MGSE7.SP.7b **Develop** a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

MGSE7.SP.8 **Find probabilities** of compound events using organized lists, tables, tree diagrams, and simulation.

MGSE7.SP.8c **Explain ways** to set up a simulation and use the simulation to generate frequencies for compound events. For example, if 40% of donors have type A blood, create a simulation to predict the probability that it will take at least 4 donors to find one with type A blood.

Skills (what must be able to do)	Concepts (what students need to know)	DOK Level / Bloom’s
Develop	A uniform probability model by assigning equal probability to all outcomes A non-uniform probability model by observing frequencies in data generated from a chance process	3
Find probabilities	Compound events using organized lists, tables, tree diagram, and simulation	3
Explain	Ways to set up a simulation and use the simulation to generate frequencies for compound events.	3

<p>Step 5: Determine BIG Ideas (enduring understandings students will remember long after the unit of study)</p>	<p>Step 6: Write Essential Questions (these guide instruction and assessment for all tasks. The big ideas are answers to the essential questions)</p>
<p>Understand that random sampling tends to produce representative samples and support valid inferences.</p> <p>Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.</p> <p>Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions</p>	<p>How can you represent the probability of compound events by constructing models?</p> <p>How can I use probability to determine if a game is worth playing or to figure my chances of winning the lottery?</p> <p>What is the process to design and use a simulation to generate frequencies for compound events?</p>
<p>Essential Unit Vocabulary</p>	
<ul style="list-style-type: none"> ● Event ● Probability ● Probability Model ● Simulation 	
<p>Next step, create assessments and engaging learning experiences</p>	