

## SEVENTH GRADE CURRICULUM OBJECTIVES

### State Standard 10C

Students who meet the standard can determine, describe and apply the probabilities of events.

*(Probability, including counting techniques)*

#### The Learner Will...

MAINTAIN (F)	TARGET (G)	INTRODUCE (H)
<ul style="list-style-type: none"> <li>• Record probabilities as fractions, decimals, or percents.</li> <li>• Demonstrate that the sum of all probabilities equals one.</li> <li>• Determine empirical probabilities from a set of data provided.</li> <li>• Set up a simulation to model the probability of a single event.</li> <li>• Discuss the effect of sample size on the empirical probability compared to the theoretical probability.</li> <li>• List outcomes by a variety of methods (e.g., tree diagram).</li> <li>• Determine theoretical probabilities of simple events.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Discuss odds versus probability.</b></li> <li>• <b>Make and test conjectures about the results of experiments and simulations using proportionality and basic understanding of probability.</b></li> <li>• <b>Compute probabilities for simple compound events using methods such as organized lists and tree diagrams.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Describe and explain complementary and mutually exclusive events using appropriate terminology.</li> <li>• Design and conduct experiments or simulations for probability, including the possible use of technology to simulate events.</li> <li>• Discuss the difference in empirical and theoretical probability.</li> <li>• Compute probabilities for simple compound events using a variety of methods, including area models.</li> <li>• Identify situations where dependent and independent events occur.</li> <li>• Determine probabilities using simple counting techniques.</li> <li>• Discuss situations where permutations and combinations should be used in counting outcomes.</li> </ul>