

**Chapter 12 Planning Chart: Probability**

**Cross-Curricular Competency: Solves problems.** Lesson 3 provides students with another method by which they can solve certain kinds of problems. Students can apply this method to solve problems in other areas in addition to mathematics.

**Broad Area of Learning: Media Literacy.** Students are exposed to statements about probability in all forms of media. Lesson 1 and Lesson 4 provide contexts (sports and biology) through which a discussion of the use of probability in the media can be undertaken.

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
<b>Getting Started:</b> Lucky 7, pp. 410–411			Assessment Opportunity
<b>Lesson 1:</b> Exploring Probability, pp. 412–413	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment                             <ul style="list-style-type: none"> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> </ul> </li> <li>• Event                             <ul style="list-style-type: none"> <li>• Simple, complementary, compatible, incompatible, dependent and independent events</li> </ul> </li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Calculating the probability of an event</li> </ul>	
<b>Lesson 2:</b> Calculating Probability, pp. 414–417	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment                             <ul style="list-style-type: none"> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> </ul> </li> <li>• Event                             <ul style="list-style-type: none"> <li>• Simple, complementary, compatible, incompatible, dependent and independent events</li> </ul> </li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Calculating the probability of an event</li> </ul>	
<b>Mid-Chapter Review:</b> pp. 418–419			Assessment Opportunity
<b>Curious Math:</b> Simpson’s Paradox, p. 420	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment                             <ul style="list-style-type: none"> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> </ul> </li> <li>• Event                             <ul style="list-style-type: none"> <li>• Simple, complementary, compatible, incompatible, dependent and independent events</li> </ul> </li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Calculating the probability of an event</li> </ul>	Optional
<b>Math Game:</b> Unlucky Ones, p. 421			Optional
<b>Lesson 3:</b> Solving Problems Using Organized Lists, pp. 422–425	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment                             <ul style="list-style-type: none"> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> </ul> </li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Enumerating possibilities using different types of representations: tree diagram, network, table, etc.</li> <li>• Calculating the probability of an event</li> </ul>	

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
<b>Lesson 4:</b> Using Tree Diagrams to Calculate Probability, pp. 426–429	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment</li> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Enumerating possibilities using different types of representations: tree diagram, network, table, etc.</li> <li>• Calculating the probability of an event</li> </ul>	<b>Teaching and Learning:</b> Introduce the term <i>network</i> as another name for the tree diagram in Examples 3 and 4.
<b>Lesson 5:</b> Applying Probabilities, pp. 430–433	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment</li> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Enumerating possibilities using different types of representations: tree diagram, network, table, etc.</li> <li>• Calculating the probability of an event</li> </ul>	
<b>Mental Math:</b> Expressing a Fraction as a Percent, p. 433	<p><i>Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense</i></p> <ul style="list-style-type: none"> <li>• Reading, writing, various representations, patterns, properties</li> <li>• Fractional, decimal and exponential (integral exponent) notation; percentage, square root</li> </ul>	<p><i>Arithmetic: Different Ways of Writing and Representing Numbers</i></p> <ul style="list-style-type: none"> <li>• Recognizing and using equivalent ways of writing numbers: <ul style="list-style-type: none"> <li>• Equivalent fractions</li> </ul> </li> <li>• Switching from one way of writing numbers to another or from one type of representation to another</li> </ul> <p><i>Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation</i></p> <ul style="list-style-type: none"> <li>• Looking for equivalent expressions</li> <li>• Mental computation: the four operations, especially with numbers written in decimal notation, using equivalent ways of writing numbers and the properties of operations</li> </ul>	
<b>Chapter Self-Test:</b> p. 434			Self-Assessment Opportunity
<b>Chapter Review:</b> pp. 435–436			Assessment Opportunity
<b>Chapter Task:</b> Rock, Paper, Scissors, p. 437	<p><i>Probability: Random Experiment</i></p> <ul style="list-style-type: none"> <li>• Random experiment</li> <li>• Random experiments involving one or more steps (with or without replacement, with or without order)</li> <li>• Outcome of a random experiment</li> <li>• Theoretical probability and experimental probability</li> </ul>	<p><i>Probability: Processing Data From Random Experiments</i></p> <ul style="list-style-type: none"> <li>• Calculating the probability of an event</li> </ul>	Assessment Opportunity
<b>Chapters 10–12 Cumulative Review:</b> pp. 438–439			Assessment Opportunity Choose from Questions 1, 5–9, 10a), c)–f).