

# **Career & Technical Education (CTE) Standards Revision Project**

## **Cluster: Marketing**

**Pathways: Marketing Communications, Marketing Management, Marketing Research, Merchandising, Professional Sales/Sales Management**

### **Marketing Cluster Overview**

The Marketing Cluster prepares learners for careers in planning, management and performing marketing activities to reach organizational objectives.

Laurie Urich, Program Director, Business and Marketing Education

Linda Harrison, Project Coordinator  
Diane Szymanski, Project Assistant

**Participation in this review and update included secondary business and marketing teachers and secondary language arts and math teachers.**

Updated June 2010

## Standards: Market Research

<b>Career Cluster/Cluster Grouping:</b>	<b>Marketing</b>
<b>Pathway(s):</b>	<b>Market Research</b>
<b>Prepared Completer Competencies:</b> <b>MKMR.01 Information Management: Utilize tools, strategies, and systems to access, process, maintain, evaluate, and disseminate information to assist business decision-making.</b>	
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b> <ul style="list-style-type: none"> <li>MKMR.01.01 Utilize information technology tools to manage and perform marketing research responsibilities.</li> </ul>	
<b>Evidence Outcomes</b> <b>Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Assess the impact of technology on marketing research.</li> <li>b. Determine types of technology needed by company/agency. RWC01.01.f</li> </ul>	<b>Academic Content Knowledge Alignment:</b> RWC01.01.f - Oral Expression and Listening - Effective speaking in formal and informal settings requires appropriate use of methods and audience awareness - Select appropriate technical or specialized language
	<b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>
<b>Prepared Completer Competencies:</b> <ul style="list-style-type: none"> <li>MKMR.02 Operations: Employ the processes and systems implemented to monitor, plan, and control day-to-day marketing research activities in order to contribute to continued business/unit functioning.</li> </ul>	
<b>High School Expectations</b>	

<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MKMR.02.01 Implement security precautions to protect marketing research.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Explain security considerations in the marketing research. RWC01.07.b, RWC01.07.c</li> <li>b. Maintain data security. SST03.04.b</li> <li>c. Develop strategies to protect digital data. SST03.04.b</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  RWC01.07.b - Oral Expression and Listening - Oral presentations require effective preparation strategies - Use verbal and nonverbal techniques to communicate information</p> <p>RWC01.07.c - Oral Expression and Listening - Oral presentations require effective preparation strategies - Define a position and select evidence to support that position</p> <p>SST03.04.b-Social Studies, Economics, Design, analyze, and apply a financial plan based on short- and long-term financial goals (PFL) - Analyze financial information for accuracy, relevance, and steps for identity protection</p>
	<b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MKMR.02.02 Implement purchasing activities to obtain business supplies, equipment, and resources.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Purchase information services. PWR2.2.a</li> </ul>	<b>Academic Content Knowledge Alignment:</b>

	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<p><b>Prepared Completer Competencies:</b></p> <ul style="list-style-type: none"> <li>• MKMR.03 Professional Development: Utilize concepts, tools, and strategies to explore, obtain, and develop a marketing research career.</li> </ul>	
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.03.01 Acquire information about the marketing research industry to aid in making career choices.</li> </ul>	
<p><b>Evidence Outcomes</b> <b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<p>a. Identify career opportunities in marketing research. RWC04.03.c, PWR2.7.f  b. Explain the role and responsibilities of marketing researchers. RWC04.03.c</p>	<p><b>Academic Content Knowledge Alignment:</b>  RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.7.f-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Personal Responsibility - Demonstrate awareness of and evaluate career options</p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.03.02 Utilize career-advancement activities to enhance professional development in marketing research.</li> </ul>	

<b>Evidence Outcomes</b> <b>Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Determine professional certification requirements in marketing research.</li> <li>b. Assess the services of professional organizations in marketing research. RWC04.03.c</li> </ul>	<b>Academic Content Knowledge Alignment:</b> RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources  <b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>
<b>Prepared Completer Competencies:</b> <ul style="list-style-type: none"> <li>• MKMR.04 Strategic Management: Use tools, techniques, and systems that affect a business's ability to plan, control, and organize an organization/marketing research department.</li> </ul>	
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b> <ul style="list-style-type: none"> <li>• MKMR.04.01 Utilize planning tools to guide organization's/marketing research department's activities.</li> </ul>	
<b>Evidence Outcomes</b> <b>Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Provide input into strategic planning. RWC01.02.d, PWR2.1.a</li> </ul>	<b>Academic Content Knowledge Alignment:</b> RWC01.02.d - Oral Expression and Listening - Effective collaborative groups accomplish goals - Participate in the preparations of the group activity or product, defining and assuming individual roles and responsibilities  <b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.1.a-Postsecondary & Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Apply logical reasoning and analytical skills

<p><b>Prepared Completer Competencies:</b></p> <ul style="list-style-type: none"> <li>• <b>MKMR.05 Marketing Information: Utilize concepts, systems, and tools for gathering, accessing, synthesizing, evaluating, and disseminating information to facilitate business decisions.</b></li> </ul>	
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.05.01 Assess marketing information needs to develop a marketing information management system.</li> </ul>	
<p><b>Evidence Outcomes</b></p> <p><b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<p>a. Assess marketing information needs. MAT03.01.a</p> <p>b. Identify issues and trends in marketing research. MAT03.01.b MAT03.01.c, PWR2.2.a</p> <p>c. Develop marketing information management system. MAT03.02.c, RWC04.08.a, PWR2.2.a</p>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>MAT03.01.a - Data Analysis, Statistics, and Probability - Statistical methods take variability into account, supporting informed decision-making through quantitative studies designed to answer specific questions</p> <ul style="list-style-type: none"> <li>- Formulate appropriate research questions that can be answered with statistical analysis</li> </ul> <p>MAT03.01.b - Data Analysis, Statistics, and Probability - Statistical methods take variability into account, supporting informed decision-making through quantitative studies designed to answer specific questions</p> <ul style="list-style-type: none"> <li>- Determine appropriate data collection methods to answer a research question</li> </ul> <p>MAT03.01.c - Data Analysis, Statistics, and Probability - Statistical methods take variability into account, supporting informed decision-making through quantitative studies designed to answer specific questions</p> <ul style="list-style-type: none"> <li>- Explain how data might be analyzed to provide answers to a research question</li> </ul> <p>MAT03.02.c - Data Analysis, Statistics, and Probability - The design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions - Differentiate between the inferences that can be drawn in experiments versus observational studies</p> <p>RWC04.08.a - Research and Reasoning - Informational materials, including electronic sources, need to be collected, evaluated, and analyzed for accuracy, relevance, and effectiveness for answering research questions - Integrate information from different sources to research and</p>

	<p>complete a project</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.05.02 Design quantitative marketing research activities to ensure accuracy, appropriateness, and adequacy of data collection efforts.</li> </ul>	
<p><b>Evidence Outcomes</b> <b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<ul style="list-style-type: none"> <li>a. Explain the nature of actionable research. RWC04.04.a</li> <li>b. Compare business objectives with the expected use of the marketing research outcomes. RWC04.04.a</li> <li>c. Select appropriate research techniques. MAT03.01.b, MAT03.02.a, PWR2.1.b</li> <li>d. Identify the marketing research problem/issue.</li> <li>e. Determine research approaches (e.g., observation, survey, experiment) appropriate to the research problem. MAT03.01.b, MAT03.02.a, MAT03.02.c, RWC04.04.b, PWR2.1.b</li> <li>f. Select data collection methods (e.g., observations, mail, telephone, Internet, discussion groups, interviews, scanners). MAT03.03.a, PWR2.1.d</li> <li>g. Evaluate the relationship between the research purpose and the marketing research objectives. MAT03.02.c</li> <li>h. Estimate the value of research information. RWC04.03.c, PWR2.1.e</li> <li>i. Develop sampling plans (i.e., who, how many, how chosen). MAT03.03.b, PWR2.1.f</li> <li>j. Prepare research briefs and proposals. RWC04.04.b, RWC04.08.a</li> <li>k. Control sources of error and bias (e.g., response errors, interviewer errors, non-response errors, sample design). MAT03.04.c RWC04.03.c, PWR2.1.f</li> <li>l. Develop rating scales (including Likert scales, semantic differential scales, behavior intention scales, etc.). PWR2.1.b</li> <li>m. Prepare diaries (e.g., product, media-use, contact). PWR2.1.b</li> <li>n. Create simple questionnaires (e.g., types of questions, question wording,</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>MAT03.01.a - Data Analysis, Statistics, and Probability - Statistical methods take variability into account, supporting informed decision-making through quantitative studies designed to answer specific questions - Formulate appropriate research questions that can be answered with statistical analysis</p> <p>MAT03.01.b - Data Analysis, Statistics, and Probability - Statistical methods take variability into account, supporting informed decision-making through quantitative studies designed to answer specific questions - Determine appropriate data collection methods to answer a research question</p> <p>MAT03.02.a - Data Analysis, Statistics, and Probability - The design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions - Identify the characteristics of a well-designed and well-conducted survey</p> <p>MAT03.02.c - Data Analysis, Statistics, and Probability - The design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions - Differentiate between the inferences that can be drawn in experiments versus observational studies</p>

routing, sequencing, length, layout). MAT03.01.a, MAT03.01.b, PWR2.1.b

MAT03.03.a - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Identify and choose appropriate ways to summarize numerical or categorical data using tables, graphical displays, and numerical summary statistics (describing shape, center and spread) and accounting for outliers when appropriate

MAT03.03.b - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Define and explain how sampling distributions (developed through simulation) are used to describe the sample-to-sample variability of sample statistics

MAT03.04.c - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Determine the margin of error associated with an estimate of a population characteristic

RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources

RWC04.04.a - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Analyze the logic of complex situations by questioning the purpose, question at issue, information, points of view, implications and consequences inferences, assumptions and concepts

RWC04.04.b - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Evaluate strengths and weaknesses of their logic and logic of others by using criteria including relevance, clarity, accuracy, fairness, significance, depth, breadth, logic and precision

RWC04.08.a - Research and Reasoning - Informational materials, including electronic sources, need to be collected, evaluated, and analyzed for accuracy, relevance, and effectiveness for answering research questions - Integrate information from different sources to research and complete a project

	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.1.b-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Conduct research using acceptable research methods</p> <p>PWR2.1.d-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Collect and analyze quantitative and qualitative data and research</p> <p>PWR2.1.e-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Evaluate the credibility and relevance of information, ideas, and arguments</p> <p>PWR2.1.f-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Discern bias, pose questions, marshal evidence, and present solutions</p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.05.03 Design qualitative marketing research study to ensure appropriateness of data-collection efforts.</li> </ul>	
<p><b>Evidence Outcomes</b> <b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<ul style="list-style-type: none"> <li>a. Design qualitative research study. RWC04.03.c, RWC04.04.a, PWR2.1.b</li> <li>b. Develop discussion guide for a qualitative marketing research study. RWC03.11.d, RWC04.03.c, RWC04.04.a</li> <li>c. Develop screener for a qualitative marketing research study. RWC03.11.d, RWC04.04.a</li> <li>d. Determine sample for qualitative marketing research study. RWC04.03.c, RWC04.04.a</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>RWC03.11.d - Writing and Composition - Informational and persuasive texts develop a topic and establish a controlling idea or thesis with relevant support - Anticipate and address readers' biases and expectations</p> <p>RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p> <p>RWC04.04.a - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Analyze the logic of complex situations by questioning the purpose, question at issue, information, points of view, implications and consequences inferences, assumptions</p>

	<p>and concepts</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.1.b-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Conduct research using acceptable research methods</p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.05.04 Collect secondary marketing data to ensure accuracy and adequacy of information for decision-making.</li> </ul>	
<p><b>Evidence Outcomes</b> <b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<ul style="list-style-type: none"> <li>a. Obtain information from customer databases. PWR2.2.a</li> <li>b. Obtain marketing information from online sources (e.g., search engines, online databases, blogs, list serves, etc.) PWR2.2.a.</li> <li>c. Data mine web log for marketing information. MAT03.03.a</li> <li>d. Track environmental changes that impact marketing (e.g., technological changes, consumer trends, economic changes, regulatory changes, etc.). PWR2.2.a</li> <li>e. Monitor sales data (by volume, product, territory, channel, time period, etc.). RWC04.10.c</li> <li>f. Identify transactional data through electronic means (e.g., bar coding, optical scanners, automatic replenishment systems, electronic data interchange [EDI], and reader-sorters). PWR2.2.a</li> <li>g. Measure market size and composition.</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  MAT03.03.a - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Identify and choose appropriate ways to summarize numerical or categorical data using tables, graphical displays, and numerical summary statistics (describing shape, center and spread) and accounting for outliers when appropriate</p> <p>RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>
<p><b>High School Expectations</b></p>	

<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MKMR.05.05 Implement primary marketing research strategy to test hypothesis and/or to resolve issues.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Administer questionnaires. PWR2.8.a</li> <li>b. Conduct telephone interviews. PWR2.8.a</li> <li>c. Employ techniques to assess ongoing behavior (e.g., business records; manual record sheets; electronic recording devices for telephone, personal, and computer interviewing; smart cards; audio-visual equipment). PWR2.2.a</li> <li>d. Conduct in-depth interviews. PWR2.8.a</li> <li>e. Conduct focus groups. PWR2.8.a</li> <li>f. Conduct continuous panel research. PWR2.8.a</li> <li>g. Conduct test markets.</li> <li>h. Conduct experiments (e.g., lab and field experiments).</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p> <p>PWR2.8.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Communication - Read, write, listen and speak effectively</p>
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MKMR.05.06 Process data to translate marketing information into useful insights/knowledge.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Edit research data. MAT03.03.a</li> <li>b. Group and score research data.</li> <li>c. Conduct error detection/edit routines. RWC04.04.b</li> <li>d. Tabulate data.</li> <li>e. Create data matrix. MAT03.03.a, PWR1.2.c</li> <li>f. Select and use appropriate data support systems. MAT03.03.a</li> <li>g. Analyze narrative text (e.g., sorting, classifying/ categorizing, identifying patterns, interpreting, selecting mechanical analysis approaches). PWR1.1.c</li> <li>h. Interpret research data into information for decision-making. MAT03.04.a, RWC04.03.c, RWC04.04.b, PWR1.2.d</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>MAT03.03.a - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Identify and choose appropriate ways to summarize numerical or categorical data using tables, graphical displays, and numerical summary statistics (describing shape, center and spread) and accounting for outliers when appropriate</p> <p>MAT03.04.a - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Define and explain the meaning of significance (both practical and statistical)</p>

	<p>RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p> <p>RWC04.04.b - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Evaluate strengths and weaknesses of their logic and logic of others by using criteria including relevance, clarity, accuracy, fairness, significance, depth, breadth, logic and precision</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.1.c-Postsecondary &amp; Workforce Readiness, Content Knowledge , Literacy - Use logic and rhetoric to analyze and critique ideas</p> <p>PWR1.2.c-Postsecondary &amp; Workforce Readiness, Content Knowledge , Mathematical Sciences - Use concepts and techniques of probability and statistics</p> <p>PWR1.2.d-Postsecondary &amp; Workforce Readiness, Content Knowledge , Mathematical Sciences - Apply knowledge of mathematics to problem solve, analyze issues, and make critical decisions that arise in everyday life</p>
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>• MKMR.05.07 Apply statistical methods and software systems to aid in data interpretation.</li> </ul>	
<b>Evidence Outcomes</b> <b>Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<ul style="list-style-type: none"> <li>a. Test for significant differences. MAT03.04.a, PWR1.2.c</li> <li>b. Test for relationships. MAT03.03.c, PWR1.2.c</li> <li>c. Test for associations. MAT03.03.c, PWR1.2.c</li> <li>d. Use statistical inferences to make estimates or to test hypotheses. PWR1.2.c</li> <li>e. Identify types of modeling techniques. MAT03.05.a</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b>  MAT03.03.c - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Describe the relationship between two categorical variables using percents</p>

<p>f. Apply mathematical modeling techniques. MAT03.05.b, MAT03.05.c</p>	<p>MAT03.04.a - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Define and explain the meaning of significance (both practical and statistical)</p> <p>MAT03.05.a - Data Analysis, Statistics, and Probability - Probability models outcomes for situations in which there is inherent randomness, quantifying the degree of certainty in terms of relative frequency of occurrence - Develop, using all tools including graphing technology, simulations that demonstrate probability as a long-run relative frequency</p> <p>MAT03.05.b - Data Analysis, Statistics, and Probability - Probability models outcomes for situations in which there is inherent randomness, quantifying the degree of certainty in terms of relative frequency of occurrence - Apply and solve problems using the concepts of independence and conditional probability</p> <p>MAT03.05.c - Data Analysis, Statistics, and Probability - Probability models outcomes for situations in which there is inherent randomness, quantifying the degree of certainty in terms of relative frequency of occurrence - Apply and solve problems using the concept of mutually exclusive properties when combining probabilities</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.2.c-Postsecondary &amp; Workforce Readiness, Content Knowledge , Mathematical Sciences - Use concepts and techniques of probability and statistics</p>
<b>High School Expectations</b>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>MKMR.05.08 Report findings to communicate research information to others.</li> </ul>	
<p><b>Evidence Outcomes</b></p> <p><b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<p>a. Set confidence levels. RWC04.03.c, PWR1.2.c</p> <p>b. Test for significant differences. PWR1.2.c</p>	<p><b>Academic Content Knowledge Alignment:</b>  MAT03.03.c - Data Analysis, Statistics, and Probability - Visual displays</p>

<p>c. Test for relationships. PWR1.2.c  d. Test for associations. PWR1.2.c  e. Use statistical inferences to make estimates or to test hypotheses. MAT03.03.c, MAT03.04.a, PWR1.2.c  f. Identify types of modeling techniques. MAT03.03.c, MAT03.04.a  g. Apply mathematical modeling techniques. MAT03.03.c, MAT03.04.a  h. Use statistical software systems (e.g., SPSS, Excel, Access, etc.). PWR2.2.a</p>	<p>and summary statistics condense the information in data sets into usable knowledge - Describe the relationship between two categorical variables using percents</p> <p>MAT03.04.a - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Define and explain the meaning of significance (both practical and statistical)</p> <p>MAT03.04.c - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Determine the margin of error associated with an estimate of a population characteristic</p> <p>RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p>
<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.2.c-Postsecondary &amp; Workforce Readiness, Content Knowledge , Mathematical Sciences - Use concepts and techniques of probability and statistics</p> <p>PWR2.2.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Find and Use Information/Information Technology - Select, integrate, and apply appropriate technology to access and evaluate new information</p>	
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p>	
<ul style="list-style-type: none"> <li>• MKMR.05.09 Interpret research data into information for decision-making.</li> </ul>	
<p><b>Evidence Outcomes</b>  <b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>

<p>a. Interpret descriptive statistics for marketing decision-making. RWC04.08.a, RWC04.10.a, RWC04.10.c, PWR1.2.c</p> <p>b. Interpret correlation. RWC04.08.a, RWC04.10.a, RWC04.10.c, PWR1.2.c</p>	<p><b>Academic Content Knowledge Alignment:</b>  RWC04.08.a - Research and Reasoning - Informational materials, including electronic sources, need to be collected, evaluated, and analyzed for accuracy, relevance, and effectiveness for answering research questions - Integrate information from different sources to research and complete a project</p> <p>RWC04.10.a - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Analyze the purpose, question at issue, information, points of view, implications and consequences, inferences, assumptions and concepts inherent in thinking</p> <p>RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b>  PWR1.2.c-Postsecondary &amp; Workforce Readiness, Content Knowledge , Mathematical Sciences - Use concepts and techniques of probability and statistics</p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.05.10 Manage marketing information to facilitate pricing strategies that maximize return and meet customers’ perceptions of value.</li> </ul>	
<p><b>Evidence Outcomes</b> <b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<p>a. Determine price sensitivity. MAT03.03.c</p>	<p><b>Academic Content Knowledge Alignment:</b>  MAT03.03.c - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Describe the relationship between two categorical variables using percents</p>

	<p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b></p>
<p><b>High School Expectations</b></p>	
<p><b>Concepts and skills students know include:</b></p> <ul style="list-style-type: none"> <li>• MKMR.05.11 Manage marketing information to predict/analyze consumer behavior.</li> </ul>	
<p><b>Evidence Outcomes</b></p> <p><b>Students can:</b></p>	<p><b>21<sup>st</sup> Century Skills and Readiness Competencies</b></p>
<ul style="list-style-type: none"> <li>a. Predict demand patterns. MAT03.03.a, MAT03.03.c</li> <li>b. Conduct demand analysis. MAT03.03.a, MAT03.03.c , PWR1.2.a</li> <li>c. Evaluate product usage. PWR1.2.a</li> <li>d. Analyze purchasing behavior. RWC04.04.b, PWR1.2.a</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>MAT03.03.a - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Identify and choose appropriate ways to summarize numerical or categorical data using tables, graphical displays, and numerical summary statistics (describing shape, center and spread) and accounting for outliers when appropriate</p> <p>MAT03.03.c - Data Analysis, Statistics, and Probability - Visual displays and summary statistics condense the information in data sets into usable knowledge - Describe the relationship between two categorical variables using percents</p> <p>RWC04.04.b - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Evaluate strengths and weaknesses of their logic and logic of others by using criteria including relevance, clarity, accuracy, fairness, significance, depth, breadth, logic and precision</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b></p> <p>PWR1.2.a-Postsecondary &amp; Workforce Readiness, Content Knowledge, Mathematical Sciences - Think critically, analyze evidence, read graphs, understand logical arguments, detect logical fallacies, test conjectures, evaluate risks, and appreciate the role mathematics plays in the modern world, i.e., be quantitatively literate</p>

<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>• MKMR.05.12 Manage marketing information to facilitate product/service management decisions.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Conduct product analysis. RWC04.03.c, PWR2.1.a</li> <li>b. Conduct customer satisfaction studies. RWC04.03.c, PWR1.1.d</li> <li>c. Conduct service quality studies. RWC04.03.c, PWR1.1.d</li> <li>d. Identify new product opportunities. PWR2.3.b</li> <li>e. Test product concepts. RWC04.03.c, PWR2.1.a</li> <li>f. Design and conduct product tests. RWC04.03.c, PWR2.1.a</li> <li>g. Determine attitudes towards products and brands. RWC04.03.c, PWR1.1.d</li> <li>h. Provide information to launch new products. RWC04.03.c</li> <li>i. Estimate repeat purchase rate. MAT03.04.a, PWR2.1.a</li> <li>j. Estimate purchase cycle. MAT03.04.a, PWR2.1.a</li> <li>k. Predict brand share. MAT03.04.a</li> <li>l. Estimate market share. MAT03.04.a, PWR2.1.a</li> <li>m. Prepare trend analyses. MAT03.05.a, PWR2.1.a</li> <li>n. Monitor inventory data.</li> <li>o. Track cost data. PWR1.1.d</li> <li>p. Collect product quality data. PWR1.1.d</li> <li>q. Conduct segmentation studies to understand how to segment products. PWR2.1.d</li> <li>r. Track brand health. PWR1.1.d</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>MAT03.04.a - Data Analysis, Statistics, and Probability - Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic - Define and explain the meaning of significance (both practical and statistical)</p> <p>MAT03.05.a - Data Analysis, Statistics, and Probability - Probability models outcomes for situations in which there is inherent randomness, quantifying the degree of certainty in terms of relative frequency of occurrence - Develop, using all tools including graphing technology, simulations that demonstrate probability as a long-run relative frequency</p> <p>RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b></p> <p>PWR1.1.d-Postsecondary &amp; Workforce Readiness, Content Knowledge , Literacy - Access and use primary and secondary sources to explain questions being researched</p> <p>PWR2.1.a-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Apply logical reasoning and analytical skills</p> <p>PWR2.1.d-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Collect and analyze quantitative and qualitative data and research</p> <p>PWR2.3.b-Postsecondary &amp; Workforce Readiness, Learning and</p>

	Behavior Skills, Creativity and Innovation - Generate, evaluate, and implement new ideas and novel approaches
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>• MKMR.05.13 Manage marketing information to facilitate promotional activities.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ol style="list-style-type: none"> <li>a. Pre-test promotional campaign (e.g., advertising, direct marketing, etc.). RWC04.09.a, PWR2.1.b</li> <li>b. Conduct advertising tracking studies. MAT03.01.c, RWC04.03.c, PWR2.1.b</li> <li>c. Measure media audience. MAT03.01.c, RWC04.03.c</li> <li>d. Measure response rates. MAT03.01.c, RWC04.03.c</li> </ol>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>MAT03.01.c - Data Analysis, Statistics, and Probability - Statistical methods take variability into account, supporting informed decision-making through quantitative studies designed to answer specific questions - Explain how data might be analyzed to provide answers to a research question</p> <p>RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p> <p>RWC04.09.a - Research and Reasoning - Information from primary and secondary sources is used to establish relevance, significance, and accuracy in answering research questions - Examine materials to determine appropriate primary and secondary sources to use for investigating a question, topic, or issue (e.g., library databases, print and electronic encyclopedia and other reference materials, pamphlets, book excerpts, online and print newspaper and magazine articles, letters to an editor, digital forums, oral records, research summaries, scientific and trade journals)</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b></p> <p>PWR2.1.b-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Conduct research using acceptable research methods</p>

<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MKMR.05.14 Assess quality of marketing research activities to determine needed improvements.</li> </ul>	
<b>Evidence Outcomes</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
<b>Students can:</b>	
<ul style="list-style-type: none"> <li>a. Evaluate quality of marketing research studies (e.g., timeliness, speed, sampling, validity/reliability, bias, etc.). RWC04.03.c, RWC04.04.b, PWR2.1.e</li> <li>b. Assess satisfaction with contracted research firms. RWC04.03.c, RWC04.04.b</li> <li>c. Measure the impact of marketing research. RWC04.03.c, RWC04.04.b</li> <li>d. Suggest improvements to marketing research activities. RWC04.03.c, RWC04.04.b, RWC04.10.c, PWR2.1.f</li> </ul>	<p><b>Academic Content Knowledge Alignment:</b></p> <p>RWC04.03.c - Research and Reasoning - Self-designed research provides insightful information, conclusions, and possible solutions - Evaluate quality, accuracy, and completeness of information and the bias, credibility and reliability of the sources</p> <p>RWC04.04.b - Research and Reasoning - Complex situations require critical thinking across multiple disciplines - Evaluate strengths and weaknesses of their logic and logic of others by using criteria including relevance, clarity, accuracy, fairness, significance, depth, breadth, logic and precision</p> <p>RWC04.10.c - Research and Reasoning - Effective problem-solving strategies require high-quality reasoning - Implement a purposeful and articulated process to solve a problem</p> <p><b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b></p> <p>PWR2.1.e-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Evaluate the credibility and relevance of information, ideas, and arguments</p> <p>PWR2.1.f-Postsecondary &amp; Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Discern bias, pose questions, marshal evidence, and present solutions</p>
<b>High School Expectations</b>	
<b>Concepts and skills students know include:</b>	
<ul style="list-style-type: none"> <li>MKMR.05.15 Compare marketing research proposals to select agency providing the most value.</li> </ul>	

<b>Evidence Outcomes</b> <b>Students can:</b>	<b>21<sup>st</sup> Century Skills and Readiness Competencies</b>
a. Evaluate proposed research methodology. PWR2.1.e	<b>Academic Content Knowledge Alignment:</b>  <b>Learning &amp; Behavioral Skills (Inquiry, Application in Society &amp; Technology &amp; Nature of...):</b> PWR2.1.e-Postsecondary & Workforce Readiness, Learning and Behavior Skills, Critical Thinking and Problem Solving - Evaluate the credibility and relevance of information, ideas, and arguments