

American Careers Manufacturing – One Project
Aligned with Tennessee Standards
July 2007

<p>Project 5.5 – Follow the Trail (RFID Technology)</p>	
<p>Principles of Manufacturing</p> <p>1.0 Analyze the components of manufacturing systems.</p> <p style="padding-left: 20px;">1.1 Analyze the systems common to manufacturing organizations.</p> <p>2.0 Adapt processes to meet customer needs using quality principles.</p> <p style="padding-left: 20px;">2.1 Assess the effects of quality assurance on manufacturing processes.</p> <p style="padding-left: 20px;">2.2 Analyze the relationship between process management and quality assurance.</p> <p>3.0 Access, test, record, organize and evaluate information typical of a manufacturing workplace.</p> <p style="padding-left: 20px;">3.1 Access and process data commonly used in manufacturing.</p> <p style="padding-left: 20px;">3.2 Record data relevant to manufacturing processes.</p> <p style="padding-left: 20px;">3.5 Evaluate data relevant to manufacturing processes.</p> <p>4.0 Analyze the fundamental organizational components of manufacturing organizations.</p> <p style="padding-left: 20px;">4.2 Analyze organizational systems and processes.</p> <p style="padding-left: 20px;">4.3 Assess the role of personal accountability within an organization.</p> <p>6.0 Implement quality and statistical process control procedures to ensure and improve quality in manufacturing processes.</p> <p style="padding-left: 20px;">6.2 Use statistical process control concepts to evaluate and modify manufacturing processes.</p>	<p>English I</p> <p>Writing:</p> <p>Develop the structural and creative skills necessary to produce written language that can be read and interpreted by various audiences.</p> <ul style="list-style-type: none"> • Write to acquire knowledge, clarify thinking, synthesize information, improve study skills, gain confidence and enhance lifelong communication. • Approach writing tasks systematically and use elements of the writing process as appropriate. • Use a variety of appropriate organizational strategies to develop writing on various topics. <p>Reading:</p> <p>Develop the reading skills necessary for word recognition, comprehension, interpretation, analysis, evaluation and appreciation of the written text.</p> <ul style="list-style-type: none"> • Discern reading strategies appropriate to text. • Extend reading vocabulary. • Improve comprehension by interpreting, analyzing, synthesizing and evaluating written text. • Use cognitive strategies to evaluate text critically. • Develop skills in making inferences and recognizing unstated assumptions. • Interpret ideas, recognize logical relationships and make judgments based on sufficient evidence.

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<p>Integrated Mathematics I</p> <p>1.0 Number and Operations</p> <p style="padding-left: 20px;">1.7 Perform operations on algebraic expressions and informally justify the procedures chosen.</p> <p style="padding-left: 20px;">1.10 Select and apply an appropriate method for computing with real numbers and use estimation to evaluate the reasonableness of the result.</p> <p>2.0 Algebra</p> <p style="padding-left: 20px;">2.2 Identify dependent and independent variables in real-world situations.</p> <p style="padding-left: 20px;">2.7 Represent functions with equations, graphs, tables and words.</p> <p style="padding-left: 20px;">2.11 Recognize and extend numerical, geometric and spatial patterns.</p> <p style="padding-left: 20px;">2.14 Generalize numerical, geometric patterns verbally and symbolically.</p> <p>4.0 Measurement</p> <p style="padding-left: 20px;">4.3 Apply measurement concepts, relationships and formulas in algebraic and geometric problem-solving situations.</p> <p style="padding-left: 20px;">4.5 Demonstrate an understanding of rates and other derived and indirect measurements.</p>	<p>Algebra I</p> <p>1.0 Number and Operations</p> <p style="padding-left: 20px;">1.7 Use real numbers to represent real-world applications.</p> <p style="padding-left: 20px;">1.9 Select and apply an appropriate method for computing with real numbers and evaluate the reasonableness of results.</p> <p style="padding-left: 20px;">1.10 Perform operations on algebraic expressions and informally justify the procedures chosen.</p> <p>2.0 Algebra</p> <p style="padding-left: 20px;">2.1 Recognize, analyze, extend and create a variety of patterns.</p> <p style="padding-left: 20px;">2.3 Solve linear systems using a variety of techniques.</p> <p style="padding-left: 20px;">2.8 Interpret results of algebraic procedures.</p> <p>4.0 Measurement</p> <p style="padding-left: 20px;">4.2 Apply and communicate measurement concepts and relationships in algebraic and geometric problem-solving situations.</p> <p style="padding-left: 20px;">4.3 Demonstrate an understanding of rates and other derived measurements.</p> <p style="padding-left: 20px;">4.5 Analyze precision, accuracy, tolerance and approximate error in measurement situations.</p> <p>Physics</p> <p>2.0 Thermodynamics</p> <p style="padding-left: 20px;">2.1 Develop an understanding of heat and internal energy.</p> <p>Modern History</p> <p>3.0 Geography</p> <p style="padding-left: 20px;">3.2 Understand the importance of population growth and distribution for the world's development in the 20th Century.</p>