**TEXAS CTE LESSON PLAN**

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| **Lesson Identification and TEKS Addressed** | |
| **Cluster** | Hospitality and Tourism |
| **Course** | Practicum in Culinary Arts |
| **Lesson/Unit Title** | Business Finances in Hospitality and Tourism |
| **TEKS Student Expectations** | **130.257. (c) Knowledge and Skills**  (5) The student applies academics and job-readiness skills.  (A) The student is expected to apply mathematical skills to business transactions  (C) The student is expected to interpret data from documents such as tables, charts, and graphs to estimate and find solutions to problems  (D) The student is expected to organize and compose workplace documents |
| **Basic Direct Teach Lesson** | |
| **Instructional Objectives** | **Students will:**   * Recognize workplace documents * Identify business transactions used in the industry * Calculate business math problems * Interpret bar graphs, charts, and tables |
| **Rationale** | Do you like Math? Can you add, subtract, multiply and divide? If you answered yes, then you possess basic, much needed skills for a career in hospitality and tourism. In this lesson, you will see that mathematics is used in almost every operation of the hospitality and tourism industry. With the aid of technology and computer software programs such as point-of-sale and property management systems, business math skills will be easy to attain. Let’s find out how math can help make our jobs easier. |
| **Duration of Lesson** | Three 45-minute class periods |
| **Word Wall** | **Business transactions:** An economic event that initiates the accounting process of recording it in a company’s accounting system  **Data:** Facts and statistics collected together for reference or analysis  **Finances:** The way in which money is used and handled; especially: the way in which large amounts of money are used and handled by governments and companies  **Forecasting:** The use of historical data to predict future trends  **Management:** The organization and coordination of the activities of a business to achieve defined objectives  **Point-of-sale (POS) system:** A computerized system that can be used to take orders, generate bills, track revenue, create reports, manage inventory, facilitate communication between staff member and other functions  **Property management system (PMS):** Computer software and hardware used to run lodging properties |
| **Materials/**  **Specialized Equipment Needed** | **Equipment:**   * Computer with projector for PowerPoint presentation * Computers with Internet access (be sure to follow school district guidelines) * Headphones * Light projector (Elmo)   **Materials:**   * Employee schedules * Guest checks * Purchase orders * Time sheets   **Supplies:**   * Calculators * Cash register (if available) * Systems software (if available)   + Point-of-sale (PMS)   + Property management (PMS) * Copies of handouts   **PowerPoint:**   * Business Finances in Hospitality and Tourism   **Technology:**   * Free iPad App: * Mobi Pos Lite (free) (ios only) The ideal point of sale application for restaurants, coffee shops, bakeries, and kiosks.<https://itunes.apple.com/us/app/mobi-pos-point-of-sale-lite/id597234266?mt=8> * Infographic:   + Do the Math The Restaurant’s Industry Equation for Career Success   Multiple Career Pathways + Competitive Salaries + Consistent Pay Raises = Clear Road for Advancement<http://www.restaurant.org/Restaurant/media/Restaurant/SiteImages/News%20and%20Research/NRAEF-INFOGRAPHIC-4-FINAL.jpg>  **Handouts:**   * Anticipation Guide: Business Finances in Hospitality and Tourism * Anticipation Guide: Business Finances in Hospitality and Tourism (Key) * Business Math * Business Math (Key) * Business Math Quiz * Business Math Quiz (Key) * Employee Shift Schedule * Inventory List * Profit and Lost Statement * Purchase Order * Small Business Cash Flow Projection * Time Sheet |
| **Anticipatory Set** | Before class begins:  Optional: Become familiar with the Small Business Administration’s Learning Center that provides a 30-minute online course in accounting. This course will provide students with a certificate they will be able to add to their portfolio.   * Introduction to Accounting This course is designed to provide an overview of accounting.<https://www.sba.gov/tools/sba-learning-center/training/introduction-accounting>   Note to teacher: Before the start of this lesson, secure a list of food items and prices from a local vendor or the school cafeteria supervisor to be able to complete a purchase order in the Guided Practice section.  If possible, secure other workplace documents for students to view and become familiar with.  Display as many items from the Materials or Specialized Equipment Needed tab as you have available on a table in front of the room so that students may view as they enter.  Distribute the handout Anticipation Guide: Business Finances in Hospitality and Tourism and instruct students to read the statements carefully and place a check mark on the left column if they think it is true.  After the lesson, this handout will be revisited in the Lesson Closure section to check for knowledge of the lesson. |
| **Direct Instruction with Special Education Modifications/**  **Accommodations** | Introduce lesson objectives, terms, and definitions.  Select and distribute a handout or graphic organizer from the Instructional Strategies drop down menu in Classroom Essentials or instruct students to take notes in their journal books or on their own paper.  Introduce the PowerPoint, Business Finances in Hospitality, and Tourism. Students will be expected to take notes while viewing the slide presentation. Allow time for classroom discussion.  View the YouTube video:   * Using the POS (Point of Sale) System A brief tutorial of the basic functions of the POS system used in the food service department at Umpqua Community College. Topics include: clocking in/out, inputting a customer’s order, closing a ticket & printing a checkout (sales summary) report.<https://youtu.be/rISyrnykrEw>   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * check for understanding * provide a printed copy of the slide presentation |
| **Guided Practice with Special Education Modifications/**  **Accommodations** | Divide the class into subgroups of three or four students.  Distribute the list of the food items and prices you have secured from a vendor or the school cafeteria supervisor.  Distribute the handouts Employee Shift Schedule, Inventory List, Profit and Loss Statement, Purchase Order, Small Business Cash Flow Projection, and Time Sheet to each group and explain that there are many workplace documents and these are a few to become familiar with.  Place the documents on a light projector one at a time and explain to the students how they would be used in a foodservice setting.  If a price list from a vendor or school cafeteria was secured, then allow students to complete the Purchase Order for items needed.  Note: These handout templates were downloaded from Microsoft® Excel and Word.  Optional activity:  Direct students to the computers and instruct them to log on to the Small Business Association’s website and the Learning Center for the online training. They will need headphones to complete the self-paced course that will provide them with a certificate of completion at the end. Students will be able to add this certificate to their portfolio.   * Introduction to Accounting This course is designed to provide an overview of accounting.<https://www.sba.gov/tools/sba-learning-center/training/introduction-accounting>   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * providing a text based accessible version of online course * check for understanding |
| **Independent Practice/**  **Laboratory Experience with Special Education Modifications/**  **Accommodations** | Calculators may be used for this activity.  Distribute the handout Business Math Skills and ask a volunteer to work one problem on board explaining each step to the rest of the class.  Continue doing the same with remaining problems or allow students to work independently.66  Instruct students to write three math problems using a bar, chart, or graph to complete the assignment.  Other math assessments available for these courses include:   * Practicum in Culinary Arts Multiple Choice Math Assessment Problems * Practicum in Hospitality Services Multiple Choice Math Assessment Problems   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * encourage participation * provide extra time if needed |
| **Lesson Closure** | Review lesson objectives, terms, and definitions.  Re-distribute the handout Anticipation Guide: Business Finances in Hospitality and Tourism from the Anticipatory Set.  Allow students to re-read each statement and answer the column on the right. |
| **Summative/End of Lesson Assessment with Special Education Modifications/**  **Accommodations** | Distribute the handout Business Math Quiz to assess students’ knowledge of interpreting bars, charts, and graphs.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * assistance with calculators * peer tutoring |
| **References/**  **Resources** | **Textbook:**   * *Culinary essentials.* (2010). Woodland Hills, CA: Glencoe/McGraw-Hill. * Draz, J., & Koetke, C. (2014). *The culinary professional.* Tinley Park, IL: Goodheart-Willcox Company. * *Foundations of restaurant management & culinary arts.* (2011). Boston, MA: Prentice Hall. * Reynolds, J. S. & Chase, D. M. (2014). *Hospitality services.* Tinley Park, IL: Goodheart-Willcox Company.   **Websites:**   * Small Business Administration Learning Center Online Training Introduction to Accounting This course is designed to provide an overview of accounting.<https://www.sba.gov/tools/sba-learning-center/training/introduction-accounting>   **YouTube:**   * Using the POS (Point of Sale) System A brief tutorial of the basic functions of the POS system used in the food service department at Umpqua Community College. Topics include: clocking in/out, inputting a customer’s order, closing a ticket & printing a checkout (sales summary) report.<https://youtu.be/rISyrnykrEw> |
| **Additional Required Components** | |
| **English Language Proficiency Standards (ELPS) Strategies** | * Word wall * Draw visual representations of terms on word wall * Add terms and definitions to personal dictionary |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** | |
| **Reading Strategies** | Other articles pertaining to this lesson that students may read include:   * How to Interpret Graphs & Charts  Graphs and charts are visual representations of data in the form of points, lines, bars, and pie charts. Using graphs or charts, you can display values you measure in an experiment, sales data, or how your electrical use changes over time.<http://www.ehow.com/how_6930975_interpret-graphs-charts.html> * The Importance of Basic Math in Business  Whether you are aware of it or not, math is used in most aspects of your daily life, both at home and in the office. Knowledge of basic math can save you a lot of time when you’re at the clothing store or supermarket, but it is also important in a business environment.<http://www.ehow.com/facts_7472221_importance-basic-math-business.html> * Why Is Mathematics Important in Culinary Arts?  Comfort with mathematics is an essential component of the culinary arts. Chefs and cooks use math skills every day to measure ingredients precisely, to convert units based on the equipment they have and to modify recipe portions. Mathematics is also important for the business side of things, such as in the case of determining cost per meal, so the executive chef can establish a menu price that will yield a profit.<http://www.ehow.com/how-does_4899712_how-math-used-cooking.html>   **Reading Strategy** Encourage students to “visualize” as they read. Many students are visual learners and will benefit from making sketches or diagrams on scrap paper as they read. Providing students with graphic organizers to help them organize their thoughts is also helpful. |
| **Quotes** | It’s never been more important for borrowers to arm themselves with knowledge and build sound financial-management skills.  **-Robert Manning**  Plan to build up your food supply just as you would a savings account. Save a little for storage each paycheck. Can or bottle fruit and vegetables from your gardens and orchards. Learn how to preserve food through drying and possibly freezing. Make your storage a part of your budget.  **–Ezra Taft Benson**  If I’m teaching girls that do love to make cookies and do love fashion – that they can use math as a part of that – you think that’s me saying, come on girls you belong in the kitchen, you belong shopping? Or, do you think it’s me showing them how math is part of all their life, even the part they thought it had nothing to do with?  **-Danica McKellar** |
| **Writing Strategies** | **Journal Entries:**   * I would like to own my own business and … * The point-of-sale system at my work does … * Being a manager of a hospitality business is …   **Writing Strategy:**   * RAFT Writing Strategy:   + Role – manager   + Audience – employees   + Topic – time sheets   + Format – memo   Write a memo to the employees reminding them to turn in their time sheets before the end of the shift. |
| **Communication 90 Second Speech Topics** | * Three things to remember about using a point-of-sale system is … * List the steps needed to complete a weekly time sheet. |
| **Other Essential Lesson Components** | |
| **Enrichment activity** | Students can download a business plan from the Small Business Association website and create a business model for a foodservice establishment they would like to own.   * Small Business Association<https://www.sba.gov/>   **Infographic:**  Infographics are graphic visual representations of information, data or knowledge intended to present complex information quickly and clearly.  The infographic below is related to this lesson. Allow students to view the image on a projector and lead a discussion concerning the information provided.   * Do the Math The Restaurant’s Industry Equation for Career Success  Multiple Career Pathways + Competitive Salaries + Consistent Pay Raises = Clear Road for Advancement<http://www.restaurant.org/Restaurant/media/Restaurant/SiteImages/News%20and%20Research/NRAEF-INFOGRAPHIC-4-FINAL.jpg> |
| **Family/**  **Community Connection** | Invite a member of the Small Business Association to speak to the class about cybersecurity using credit cards and computer systems. |
| **CTSO connection** | **Family, Career, and Community Leaders of America**  <http://www.fcclainc.org>   * Applied Math for Culinary Management An individual or team event, recognizes participants who use Family and Consumer Sciences skills to demonstrate the application of mathematical concepts in the culinary arts industry. * Hospitality, Tourism, and Recreation An individual or team event, recognizes participants who demonstrate their knowledge of the hospitality, tourism, and recreation industries and ability to translate their knowledge into a hypothetical or real business. Project must relate to culinary, lodging, recreation, tourism, or event coordination.   **SkillsUSA**  <http://skillsusa.org/>   * Related Technical Math On a written test, contestants demonstrate skills required to solve mathematical problems commonly found in the skilled trades and professional and technical occupations. Skills demonstrated include addition, subtraction, multiplication and division of whole numbers, fractions, and decimals; applied word problems; percentages; ratio proportions; averages; area; volume; metric measures and traditional (Imperial) measures and trigonometry. |
| **Service Learning Projects** | Successful service learning project ideas originate from student concerns and needs. Allow students to brainstorm about service projects pertaining to this lesson. [www.ysa.org](http://www.ysa.org)  Possible ideas:  Math can be challenging for young students. Students may plan and design a presentation on how math is used in hospitality careers and relate it to job skills. They can present it to elementary school students. |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)