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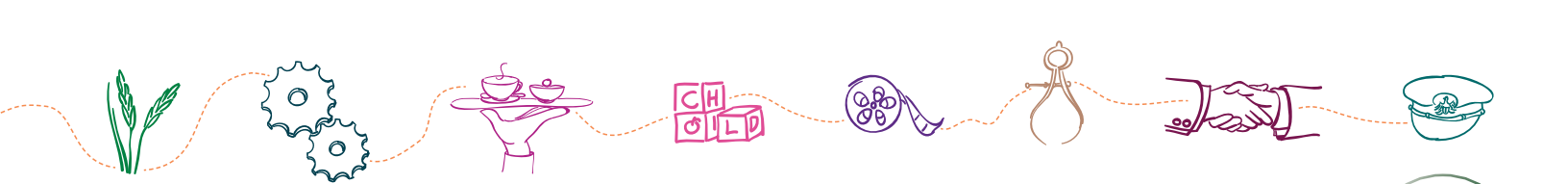
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Overview

The Career Technical Education (CTE) Model Curriculum Standards publication is organized for use as a complete document or for access to individual industry sectors and pathways. The document includes Standards for Career Ready Practice—which describe the knowledge and skills that students need prior to entering a career technical education program—as part of the career technical education sequence or as integrated elements of other course work in preparation for careers and college.

Each of the 15 industry sector sections includes a description, anchor standards, pathway standards, and an academic alignment matrix. The standards can be adjusted to be part of the curriculum (grades seven through twelve), provided through adult education, or included in community college programs. The document also lists the representatives who participated in each sector's content development and the references that were consulted to revise the CTE standards.

Standards for Career Ready Practice

California's Standards for Career Ready Practice, which follow this overview, are based on the Career Ready Practices of the Common Career Technical Core (CCTC), a state-led initiative sponsored by the National Association of State Directors of Career Technical Education Consortium (NASDCTEc):

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. (NASDCTEc 2012, 2)

California's 12 Standards for Career Ready Practice align with the state's CTE anchor standards and reflect the expectations from business and industry, labor and community organizations, and secondary and postsecondary education representatives from 42 participating states.

Anchor Standards

The 11 anchor standards build on the Standards for Career Ready Practice and are common across the 15 industry sectors. Content for these standards was drawn from several documents: "Preparing Students for the 21st Century Economy" (American Association of Colleges for Teacher Education and the Partnership for 21st Century Skills 2010); *How Should Colleges Prepare Students to Succeed in Today's Global Economy?* (Association of American Colleges and Universities and Peter D. Hart Research Associates, Inc. 2006); "Importance of Skills and Knowledge for College and Career Readiness," from *The MetLife Survey of the American Teacher: Preparing Students for College and Careers* (MetLife, Inc. 2011); and *Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce* (The Conference Board et al. 2006).

Each anchor standard is followed by performance indicators using action verbs from the Beyond Knowledge Construct, presented in a hierarchical progression of simple tasks to more complex tasks. Performance indicators provide guidance for curriculum design and standards measurement.



The industry-sector anchor standards have been customized with selected additions to better reflect the needs and special conditions of each industry sector.

Anchor Standard 1 (Academics) guides users to sector-specific core academic standards related to each industry sector, which are listed in the alignment matrix at the end of each sector section. Anchor standards 2–10 are deliberately aligned with one of the Common Core English language arts standards, using similar language demonstrating the natural connections between the two subjects. Anchor Standard 11 (Demonstration and Application) highlights classroom, laboratory, and workplace learning specific to the individual sector and pathways.

Pathway Standards

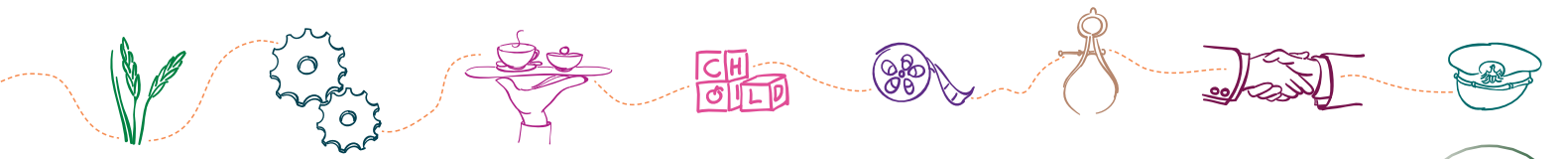
All 15 industry sectors contain multiple pathways. In order to be identified and listed for an industry sector, each pathway had to meet the following criteria:

- unique to an industry sector
- has an occupational focus
- consistent in size and scope
- composed of similar functions
- inclusive of all aspects of the industry
- includes 8–12 pathway-specific standards
- demonstrates sequence potential
- reasonable and appropriate for high school
- leads to high-skill, high-wage, or high-demand jobs
- sustainable and viable over the next 10 years

Academic Alignment Matrix

Each sector includes an academic alignment matrix that displays where a natural, obvious alignment occurs. Compiled by five teams of academic content experts in collaboration with industry-sector consultants, teachers, and other advisers, the alignment was selected if it was determined that the pathway standard would enhance, reinforce, or provide an application for a specific academic subject standard.

The alignment matrices include the subjects of Common Core English language arts and mathematics standards, history/social studies standards, and Next Generation Science Core Ideas. To assist with further review and implementation, each academic alignment is notated with specific pathway standards codes.



Implementation

The Standards for Career Ready Practice can be integrated with a course or incorporated into several courses over multiple school years (grades seven through twelve). The practices are expectations for all students, whether they are enrolled in a CTE program or following a more generalized course sequence. It is expected that all students who exit high school will be proficient in these practices.

The anchor standards are the basis for each of the pathways within each sector. These standards are designed to assist with the development of course curricula and instructional lesson plans; they describe what is to be taught and measured. In most cases, the teacher determines the sequence and strategies to be used to meet the needs of the student population he or she is serving.

The performance indicators that follow each standard offer guidance for both course design and student assessment. They are intended to guide course work as it is developed. The pathways organize the standards with a career focus, but they are not designed to be offered as single courses. Rather, the standards from each pathway are collected and organized into a sequence of learning. To meet local demands of business and industry and particular student populations, standards can be collected from more than one sector to create a course.

Using the academic alignment matrices as a resource, academic and CTE teachers can see where enhancements and support for both sets of standards can be initiated. CTE teachers can quickly identify academic standards that have a substantial relationship to their instruction. Likewise, academic teachers can specify individual academic standards and quickly identify related CTE standards, which will assist them in incorporating application and technology in their curricula and lessons.

The CTE Model Curriculum Standards are intended to serve the entire education community—from middle schools and high schools to postsecondary colleges and career training programs. A major aim of these standards is to prepare students for postsecondary education and training and to help them make a smooth transition into the workforce. In order for both the people and the economy of California to prosper, it is essential for all students to emerge from schools ready to pursue their career and college goals. Equipping all high school students with the knowledge and skills necessary to plan and manage their education and careers throughout their lives will help to guarantee these important outcomes. Strong CTE programs will continue to provide important educational opportunities to assist students as they pursue their dreams and strive for economic prosperity. The CTE Model Curriculum Standards are a resource for educators and the business world for ensuring high-quality CTE learning experiences and improved student outcomes in the twenty-first-century economy.



California Standards for Career Ready Practice

Standards for Career Ready Practice describe the fundamental knowledge and skills that a career-ready student needs in order to prepare for transition to postsecondary education, career training, or the workforce. These standards are not exclusive to a career pathway, a CTE program of study, a particular discipline, or level of education. Standards for Career Ready Practice are taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. Standards for Career Ready Practice are a valuable resource to CTE and academic teachers designing curricula and lessons in order to teach and reinforce the career-ready aims of the CTE Model Curriculum Standards and the Common Core State Standards.

1. Apply appropriate technical skills and academic knowledge.

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education. They make connections between abstract concepts with real-world applications and recognize the value of academic preparation for solving problems, communicating with others, calculating measures, and other work-related practices.

2. Communicate clearly, effectively, and with reason.

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, using written, verbal, electronic, and/or visual methods. They are skilled at interacting with others, are active listeners who speak clearly and with purpose, and are comfortable with the terminology common to the workplace environment. Career-ready individuals consider the audience for their communication and prepare accordingly to ensure the desired outcome.

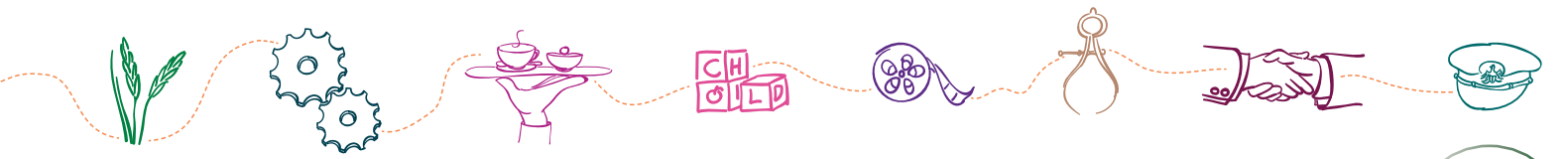
3. Develop an education and career plan aligned with personal goals.

Career-ready individuals take personal ownership of their own educational and career goals and manage their individual plan to attain these goals. They recognize the value of each step in the educational and experiential process and understand that nearly all career paths require ongoing education and experience to adapt to practices, procedures, and expectations of an ever-changing work environment. They seek counselors, mentors, and other experts to assist in the planning and execution of education and career plans.

4. Apply technology to enhance productivity.

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring and using new technology. They understand the inherent risks—personal and organizational—of technology applications, and they take actions to prevent or mitigate these risks.





5. Utilize critical thinking to make sense of problems and persevere in solving them.

Career-ready individuals recognize problems in the workplace, understand the nature of the problems, and devise effective plans to solve the problems. They thoughtfully investigate the root cause of a problem prior to introducing solutions. They carefully consider options to solve the problem and, once agreed upon, follow through to ensure the problem is resolved.

6. Practice personal health and understand financial literacy.

Career-ready individuals understand the relationship between personal health and workplace performance. They contribute to their personal well-being through a healthy diet, regular exercise, and mental health activities. Career-ready individuals also understand that financial literacy leads to a secure future that enables career success.

7. Act as a responsible citizen in the workplace and the community.

Career-ready individuals understand the obligations and responsibilities of being a member of a community and demonstrate this understanding every day through their interactions with others. They are aware of the impacts of their decisions on others and the environment around them and think about the short-term and long-term consequences of their actions. They are reliable and consistent in going beyond minimum expectations and in participating in activities that serve the greater good.

8. Model integrity, ethical leadership, and effective management.

Career-ready individuals consistently act in ways that align with personal and community-held ideals and principles. They employ ethical behaviors and actions that positively influence others. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the direction and actions of a team or organization, and they recognize the short-term and long-term effects that management's actions and attitudes can have on productivity, morale, and organizational culture.

9. Work productively in teams while integrating cultural and global competence.

Career-ready individuals positively contribute to every team as both team leaders and team members. They apply an awareness of cultural differences to avoid barriers to productive and positive interaction. They interact effectively and sensitively with all members of the team and find ways to increase the engagement and contribution of other members.

10. Demonstrate creativity and innovation.

Career-ready individuals recommend ideas that solve problems in new and different ways and contribute to the improvement of the organization. They consider unconventional ideas and suggestions by others as solutions to issues, tasks, or problems. They discern which ideas and suggestions may have the greatest value. They seek new methods, practices, and ideas from a variety of sources and apply those ideas to their own workplace practices.



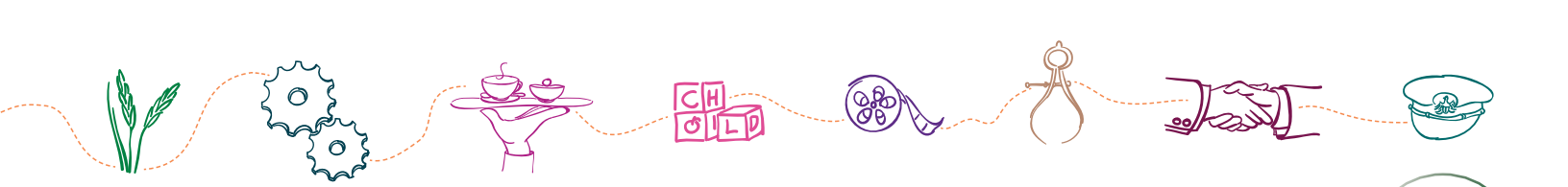
11. Employ valid and reliable research strategies.

Career-ready individuals employ research practices to plan and carry out investigations, create solutions, and keep abreast of the most current findings related to workplace environments and practices. They use a reliable research process to search for new information and confirm the validity of sources when considering the use and adoption of external information or practices.

12. Understand the environmental, social, and economic impacts of decisions.

Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact other people, organizations, the workplace, and the environment. They are aware of and utilize new technologies, understandings, procedures, and materials and adhere to regulations affecting the nature of their work. They are cognizant of impacts on the social condition, environment, workplace, and profitability of the organization.

Note: As stated previously, California's Standards for Career Ready Practice are based on the CCTC Career Ready Practices posted at <https://careertech.org/> (accessed June 8, 2016).



Business and Finance



Sector Description

Persons trained in fields such as business management, international trade, and various financial services specialties (e.g., accounting, banking, and investing) will find that their skills are highly marketable. Students master basic business principles and procedures before proceeding to the career path specializations. The specializations emphasize concepts of accounting and finance, including computer applications, taxes, investments, and asset management as well as pathways in international business and business management. Because almost every business and organization has a financial and management component, students will find that opportunities exist in many career paths in addition to those in business and finance.





Business and Finance Knowledge and Performance Anchor Standards

1.0 Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Business and Finance academic alignment matrix for identification of standards.

2.0 Communications

Acquire and accurately use Business and Finance sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats. (Direct alignment with LS 9-10, 11-12.6)

- 2.1 Recognize the elements of communication using a sender–receiver model.
- 2.2 Identify barriers to accurate and appropriate communication.
- 2.3 Interpret verbal and nonverbal communications and respond appropriately.
- 2.4 Demonstrate elements of written and electronic communication such as accurate spelling, grammar, and format.
- 2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- 2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.

3.0 Career Planning and Management

Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans. (Direct alignment with SLS 11-12.2)

- 3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.
- 3.2 Evaluate personal character traits such as trust, respect, and responsibility and understand the impact they can have on career success.
- 3.3 Explore how information and communication technologies are used in career planning and decision making.
- 3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.
- 3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.
- 3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.
- 3.7 Recognize the importance and impact small businesses have on our state, nation and world economies.
- 3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate candidates.
- 3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options.



4.0 Technology

Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Business and Finance sector workplace environment. (Direct alignment with WS 11-12.6)

- 4.1 Use electronic reference materials to gather information and produce products and services.
- 4.2 Employ Web-based communications responsibly and effectively to explore complex systems and issues.
- 4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.
- 4.4 Discern the quality and value of information collected using digital technologies, and recognize bias and intent of the associated sources.
- 4.5 Research past, present, and projected technological advances as they impact a particular pathway.
- 4.6 Assess the value of various information and communication technologies to interact with constituent populations as part of a search of the current literature or in relation to the information task.

5.0 Problem Solving and Critical Thinking

Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Business and Finance sector using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques. (Direct alignment with WS 11-12.7)

- 5.1 Identify and ask significant questions that clarify various points of view to solve problems.
- 5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.
- 5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.
- 5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety

Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Business and Finance sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)

- 6.1 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
- 6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
- 6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.



- 6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.
- 6.5 Demonstrate how to prevent and respond to work-related accidents or injuries; this includes demonstrating an understanding of ergonomics.
- 6.6 Maintain a safe and healthful working environment.
- 6.7 Be informed of laws/acts pertaining to the Occupational Safety and Health Administration (OSHA).

7.0 Responsibility and Flexibility

Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Business and Finance sector workplace environment and community settings. (Direct alignment with SLS 9-10, 11-12.1)

- 7.1 Recognize how financial management impacts the economy, workforce, and community.
- 7.2 Explain the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
- 7.3 Understand the need to adapt to changing and varied roles and responsibilities.
- 7.4 Practice time management and efficiency to fulfill responsibilities.
- 7.5 Apply high-quality techniques to product or presentation design and development.
- 7.6 Demonstrate knowledge and practice of responsible financial management.
- 7.7 Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.
- 7.8 Explore issues of global significance and document the impact on the Business and Finance sector.

8.0 Ethics and Legal Responsibilities

Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms. (Direct alignment with SLS 11-12.1d)

- 8.1 Access, analyze, and implement quality assurance standards of practice.
- 8.2 Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Business and Finance industry sector.
- 8.3 Demonstrate ethical and legal practices consistent with Business and Finance sector workplace standards.
- 8.4 Explain the importance of personal integrity, confidentiality, and ethical behavior in the workplace.
- 8.5 Analyze organizational culture and practices within the workplace environment.
- 8.6 Adhere to copyright and intellectual property laws and regulations, and use and appropriately cite proprietary information.
- 8.7 Conform to rules and regulations regarding sharing of confidential information, as determined by Business and Finance sector laws and practices.



9.0 Leadership and Teamwork

Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the Future Business Leaders of America (FBLA) career technical student organization. (Direct alignment with SLS 11-12.1b)

- 9.1 Define *leadership* and identify the responsibilities, competencies, and behaviors of successful leaders.
- 9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills as applied in groups, teams, and career technical student organization activities.
- 9.3 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace setting.
- 9.4 Explain how professional associations and organizations and associated leadership development and competitive career development activities enhance academic preparation, promote career choices, and contribute to employment opportunities.
- 9.5 Understand that the modern world is an international community and requires an expanded global view.
- 9.6 Respect individual and cultural differences and recognize the importance of diversity in the workplace.
- 9.7 Participate in interactive teamwork to solve real Business and Finance sector issues and problems.

10.0 Technical Knowledge and Skills

Apply essential technical knowledge and skills common to all pathways in the Business and Finance sector, following procedures when carrying out experiments or performing technical tasks. (Direct alignment with WS 11-12.6)

- 10.1 Interpret and explain terminology and practices specific to the Business and Finance sector.
- 10.2 Comply with the rules, regulations, and expectations of all aspects of the Business and Finance sector.
- 10.3 Construct projects and products specific to the Business and Finance sector requirements and expectations.
- 10.4 Collaborate with industry experts for specific technical knowledge and skills.
- 10.5 Interpret financial data, analyze results, and make sensible business decisions to promote a financially reliable business.
- 10.6 Evaluate the variety, nature, and diversity of investment vehicles and the elements that contribute to financial growth and success.
- 10.7 Adapt the distribution concepts and processes needed to move, store, locate, and transfer ownership of goods or services.
- 10.8 Integrate the techniques and strategies used to foster positive, ongoing relationships with customers, suppliers, investors, and community.



- 10.9 Evaluate the impact of local, state, federal, and/or international regulations on business and financial management decisions.
- 10.10 Apply the economic principles and concepts fundamental to business operations.
- 10.11 Recognize the importance of marketing in a global economy.
- 10.11 Develop a system for keeping and using financial records and a personal financial plan to manage cash flow and maintain creditworthiness.

11.0 Demonstration and Application






Demonstrate and apply the knowledge and skills contained in the Business and Finance anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and through the Future Business Leaders of America (FBLA) career technical student organization.

- 11.1 Utilize work-based/workplace learning experiences to demonstrate and expand upon knowledge and skills gained during classroom instruction and laboratory practices specific to the Business and Finance sector program of study.
- 11.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued learning at the postsecondary level.
- 11.3 Demonstrate entrepreneurship skills and knowledge of self-employment options and innovative ventures.
- 11.4 Employ entrepreneurial practices and behaviors appropriate to Business and Finance sector opportunities.
- 11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.

A. Business Management Pathway

Management consists of planning, leading, and controlling an organization or effort to accomplish a goal. In the Business Management pathway, students learn entrepreneurship and business fundamentals, goal-setting, resource allocation, organizational structure and management techniques, economics, financial data, risk management, information technology, and supply chain management.

Sample occupations associated with this pathway:

-  Human Resources Specialist
-  Education Administrator
-  Purchasing Agent
-  Office Manager
-  Chief Financial Officer

- A1.0 Explain entrepreneurship and the fundamentals of developing a new business.
 - A1.1 Recognize personal traits and leadership styles of entrepreneurs and business leaders.
 - A1.2 Analyze management theories and their application within the business environment.
 - A1.3 Develop personal management skills to function effectively, efficiently, and collaboratively in a business environment.
 - A1.4 Determine the type of business organization most appropriate for various business profiles.
 - A1.5 Construct and defend a business plan (components may include an executive summary, organizational structure, market analysis, Strengths Weaknesses Opportunities and Threats (SWOT) analysis, marketing plan, operating procedures, financial data, and feasibility and supporting documentation).
- A2.0 Plan, organize, secure, and manage resources of a project to achieve specific goals.
 - A2.1 Determine Specific, Measurable, Achievable, Realistic and Time-bound (SMART) goals for a specific project.
 - A2.2 Develop a project schedule, including the constraints of cost, time, and scope, to illustrate project structure using Gantt, Program Evaluation Review Technique (PERT), or other project planning tools.
 - A2.3 Optimize allocation of resources necessary to achieve predefined objectives.
 - A2.4 Evaluate beneficial change, or added value, of a specific project.
- A3.0 Investigate the functions and techniques of management and organizational structure and distinguish between small and large companies.
 - A3.1 Explain the organizational structure of various business environments.
 - A3.2 Describe management's role in demonstrating leadership, motivating employees, resolving conflict, addressing stress, and recognizing formal and informal employee groups.



- A3.3 Recognize a business' responsibility to employees, shareholders, society, and the environment.
- A3.4 Summarize techniques for managing human resources to maximize operational efficiencies and effectiveness.
- A3.5 Describe the role of organized labor and its influence on government and businesses.
- A3.6 Apply operations management principles and procedures to the design of an operations plan.

- A4.0 Apply economic concepts as they relate to business.
 - A4.1 Identify factors of production needed to create wealth.
 - A4.2 Explain the role of business in a free-enterprise system.
 - A4.3 Recognize the determinants of supply and demand and their impact on pricing.
 - A4.4 Calculate productivity with various levels of input.
 - A4.5 Illustrate the business cycle elaborating on leading, coinciding, and lagging economic indicators.
 - A4.6 Show the relationship between economic conditions and financial markets, including exchange rates.

- A5.0 Analyze financial data in order to make short-term and long-term decisions.
 - A5.1 Describe factors that affect the value of an asset, inflation, interest rates, risk, and return.
 - A5.2 Determine investment and finance options available at different stages of a business or product life cycle.
 - A5.3 Compare and interpret financial reports for internal and external use to analyze risk and return to make business decisions.
 - A5.4 Analyze how credit reports quantify credit worthiness.
 - A5.5 Assess how types of financial markets influence interest rates, inflation, balance of trade, and unemployment and the impact on business decisions.
 - A5.6 Create and use budgets to guide financial decision making.

- A6.0 Explain the importance of risk management and regulatory compliance in business.
 - A6.1 Identify, assess, and prioritize risks.
 - A6.2 Describe the concept and process of risk management, including the use of risk management tools such as insurance.
 - A6.3 Compare and contrast the various types of taxes in terms of the business structure.

- A7.0 Utilize information and technology tools to conduct business effectively and efficiently.
 - A7.1 Describe appropriate computer hardware used in business.
 - A7.2 Apply appropriate software used in business.



- A7.3 Examine technological trends and analyze the impact of technological innovations on the marketing and distribution of goods and services.
- A7.4 Integrate appropriate use of the Internet in business.
- A7.5 Investigate data security systems for business.
- A8.0 Construct a Marketing Plan.
 - A8.1 Describe effective marketing techniques.
 - A8.2 Explore how products and services are conceived, developed, maintained, and improved in response to market opportunities.
 - A8.3 Conduct market analysis and assess the business organization's position within their industry.
 - A8.4 Interpret how market research is used to develop strategies for marketing.
 - A8.5 Differentiate the components of a promotional plan (e.g., advertising, public relations, and sales promotion) and describe how the plan is used to achieve a stated outcome.
 - A8.6 Practice selling techniques used to aid customers and clients in making buying decisions.
- A9.0 Apply principles of supply chain management and SCM 2.0 to a business model.
 - A9.1 Describe Logistics Management systems.
 - A9.2 Illustrate the management of the complete flow of materials and activities in the supply chain from suppliers to customers.
 - A9.3 Summarize materials management, including effective inventory management practices, Procurement, and continuous control practices.
 - A9.4 Create a master plan for resources that addresses market demand, sales, and operations planning.
 - A9.5 Change variables in a master plan for resources, analyze its effect, and recommend corrective actions.








Business and Finance Pathway Standards

B. Financial Services Pathway

Financial services are an essential aspect of every business institution and organization. Students in this pathway investigate the field of financial management, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students formulate and interpret financial information for use in financial management decision making, such as compliance and risk management. This pathway may include programs of study for accounting, banking, securities and investments, and other financial specializations.

Sample occupations associated with this pathway:

-  Accounts Payable Clerk
-  Investment Consultant
-  Tax Preparer
-  Auditor
-  Accountant

B1.0 Create and use budgets to guide financial decision making.

- B1.1 Identify various forms of income and analyze factors that affect income as part of the career decision making process.
- B1.2 Evaluate the opportunity costs of savings and investment options to meet short and long term goals.
- B1.3 Apply a decision making model to maximize consumer satisfaction when buying consumer goods and service.
- B1.4 Analyze factors that affect the choice, cost, and legal aspects of using credit.
- B1.5 Develop and defend a spending/savings plan.
- B1.6 Develop tax planning strategies for financial planning.
- B1.7 Devise a plan to protect against identity theft.

B2.0 Explain how the application of Generally Accepted Accounting Principles (GAAP) impacts the recording of transactions and the preparation of financial statements.

- B2.1 Describe the two methods of accounting (cash and accrual) and the different accounting concepts (financial, tax, cost, nonprofit and auditing) used to report a business' financial position as it pertains to sole proprietorships, corporations, and partnerships.
- B2.2 Complete the steps in the accounting cycle in order to prepare financial statements and communicate how accounting procedures affect financial statements.
- B2.3 Use planning and control principles to evaluate the performance of an organization.
- B2.4 Discuss state and federal regulation of the accounting industry.



- B2.5 Discuss International Financial Reporting Standards (IFRS) and the convergence between IFRS and GAAP.
- B2.6 Develop a working knowledge of individual income tax procedures and compliance with tax laws and regulations.
- B3.0 Interpret financial formulas commonly found in financial institutions to aid in the growth and stability of financial services.
 - B3.1 Identify key ratios and banking calculations such as interest and annual percentage rate.
 - B3.2 Identify strategies and systems in real-world situations to maintain, monitor, control, and plan the use of financial resources.
 - B3.3 Use equations, graphical representations, and other accounting tools to classify, record, and summarize financial data.
 - B3.4 Identify strategies financial institutions utilize to make decisions about profitability, such as savings and lending ratios.
- B4.0 Interpret financial data, analyze results, and make sound business decisions to promote a financially healthy business.
 - B4.1 Apply differential analysis and present value concepts to make decisions.
 - B4.2 Interpret financial ratios and other metrics, such as cash flow and breakeven analysis, concentration risk, return on investment, leveraged debt, market share, and opportunity costs.
 - B4.3 Analyze an annual report and financial statement to predict profitability.
 - B4.4 Develop a working knowledge of individual income tax procedures and requirements to comply with tax laws and regulations.
- B5.0 Evaluate the impact of federal, state, and local regulations on financial management decisions.
 - B5.1 Explain the role of the Federal Reserve System, Internal Revenue Service (IRS), and Consumer Protection Laws.
 - B5.2 Describe provisions of bankruptcy law.
 - B5.3 Compare state and federal regulatory compliance of financial institutions and related services.
 - B5.4 Calculate the impact of various taxes on financial decisions.
- B6.0 Apply economic concepts as they relate to financial services.
 - B6.1 Define *capital* and explain how it is used to create wealth.
 - B6.2 Identify causes of stock price fluctuations and the relationship between bond prices and yields.
 - B6.3 Illustrate the business cycle elaborating on leading, coinciding, and lagging economic indicators.



- B6.4 Assess the ways in which financial markets influence interest rates, inflation, balance of trade, and unemployment and the impact on business decisions.
- B6.5 Explain the role of investment banking in the primary marketplace.
- B7.0 Explain the concepts, role, and importance of international finance and risk management.
 - B7.1 Compare the variety of ways in which funds are transferred in foreign trade.
 - B7.2 Analyze factors that affect currency and exchange rates.
 - B7.3 Formulate an insurance and risk management plan.
 - B7.4 Explain the importance of actuarial science in the insurance industry.
 - B7.5 Compare and contrast risk management methods of avoidance, reduction, assumption, and shifting.
 - B7.6 Analyze choices available to consumers for protection against risk and financial loss.
 - B7.7 Identify main operations and evaluate services provided by financial institutions.
- B8.0 Evaluate the variety, nature, and diversity of investment vehicles and the elements that contribute to financial growth and success.
 - B8.1 Explain the time value of money.
 - B8.2 Describe the functions, responsibilities, and ethical considerations of a financial institution.
 - B8.3 Recognize the categories and characteristics of major investment vehicles, such as stocks, bonds, real estate, mutual funds, venture capital, retirement investment plans, and education savings plans.
 - B8.4 Describe reasons why investors buy and sell and the methods they use.
 - B8.5 Describe factors that affect the value of an asset, including industry trends, price to earnings ratio, cash flow, growth rate, timing, inflation, interest rate, opportunity cost, risk, and required return.
 - B8.6 Consult federal resources and independent rating companies for reports and research on investment vehicles and providers.
 - B8.7 Select sources to finance venture creation/start-up.
 - B8.8 Describe the role of the Securities and Exchange Commission (SEC) and the Financial Industry Regulation Authority (FINRA) and explain regulation of the industry, including legal and ethical considerations in all aspects of financial services.
- B9.0 Evaluate financial services providers and explore the duties and activities of financial service careers.
 - B9.1 Identify electronic banking technologies.
 - B9.2 Identify licensure requirements for various professionals in the financial services industry.



- B9.3 Demonstrate characteristics of professionalism in working relationships with customers and employees.
- B9.4 Demonstrate techniques for managing human resources to maximize operational efficiencies and effectiveness.
- B9.5 Discuss legal and ethical considerations in providing financial advice, buying or selling securities, insurance or real estate, and borrowing or lending money.
- B9.6 Examine the environments in which securities and investments services are offered, including securities sales agents, securities and investment firms, and securities markets.
- B9.7 Determine client needs and wants and develop and present a written investment recommendation to the client using standard writing conventions.
- B9.8 Scrutinize lending and borrowing practices.



C. International Business Pathway

The relative ease of travel and the use of electronic communication have seemingly diminished the size of the globe, yet the interdependence of countries for goods and services causes this marketplace to grow, thrive, and become increasingly more competitive. Students focusing on the occupational area of international trade develop an understanding of the global business environment and the interconnectedness of cultural, political, legal, historical, economic, and ethical systems.

Sample occupations associated with this pathway:

-  International Shipping Specialist
-  Export Sales Representative
-  Customs Broker
-  Customs Inspector
-  International Market Researcher

C1.0 Describe the fundamental concepts of international business.

- C1.1 Identify forms of business ownership and entrepreneurial opportunities available in international business.
- C1.2 Conduct market research for a product or service traded internationally.
- C1.3 Illustrate the process of buying, selling, and promoting products in a modern global trade.
- C1.4 Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.
- C1.5 Construct and defend a business plan for a product or service traded internationally.

C2.0 Describe the interrelatedness of geographic, social, cultural, political, and legal factors and how they shape the global business environment.

- C2.1 Interpret the effect of culture, customs, and politics on trade.
- C2.2 Illustrate how geographic conditions affect trade.
- C2.3 Apply communications strategies necessary and appropriate for effective and profitable international businesses relations.
- C2.4 Analyze special challenges in human resources and strategic management in international business.

C3.0 Apply economic concepts as they relate to international business.

- C3.1 Describe the laws of absolute and comparative advantage.
- C3.2 Explain the importance of productivity and analyze how specialization, division of labor, investment in physical and human capital, and technological change affect productivity and global trade.



- C3.3 Examine the role of trade, trade agreements, protectionism, and monetary markets in the global economy.
- C3.4 Relate the balance of trade concepts to the import/export process.
- C3.5 Examine the ways in which a country's natural, financial, and human resources influence international business.
- C3.6 Analyze the role of government in economic systems.
- C4.0 Describe common financing sources and the payment methods used for international business transactions.
 - C4.1 Explain the concepts, role, and importance of international finance and risk management.
 - C4.2 Analyze factors that affect currency and exchange rates.
 - C4.3 Compare the variety of ways in which funds are transferred in foreign trade.
 - C4.4 Assess the ways in which financial markets influence interest rates, inflation, balance of trade, and unemployment and the impact on business decisions.
 - C4.5 Produce documentation for international trade, including letters of credit, import/export documents, permits, taxes, and duties.
- C5.0 Recognize the role of information and communications technology in modern global trade.
 - C5.1 Identify hardware and software commonly used in international business operations.
 - C5.2 Integrate appropriate use of the Internet in business.
 - C5.3 Analyze security measures used to protect businesses and consumers engaging in international e-commerce.
- C6.0 Analyze international markets and competition.
 - C6.1 Apply marketing concepts to international business situations.
 - C6.2 Differentiate between the types of market structures and their effect on the price and the quality of goods and services produced.
 - C6.3 Research measures used to evaluate the economic conditions of a country.
 - C6.4 Identify factors that determine balance of trade and research balance of trade for a developed nation, a developing nation, and an undeveloped nation.
 - C6.5 Develop strategies to adapt and respond to meeting the differences in culture, market, habits, experience, and laws.
- C7.0 Assess the risks associated with various methods of entering the global marketplace.
 - C7.1 Calculate the effects of exchange rate fluctuation.
 - C7.2 Determine pricing for products and services traded internationally.
 - C7.3 Set inventory levels based upon location of customers, durability of products, and logistics.



- C7.4 Analyze choices available to international businesses for protection against risk and financial loss.
- C7.5 Determine exposure of doing business internationally and develop a recommendation for entering the international market.
- C8.0 Reconstruct the logistics of importing and exporting products and services.
 - C8.1 Explain how private, nonprofit, and government agencies assist in global trade.
 - C8.2 Determine the effect of imports and exports on production and manufacturing.
 - C8.3 Distinguish between direct and indirect distribution channels.
 - C8.4 Compare how products are prepared for international versus domestic distribution.
 - C8.5 Contrast the four forms of international operations: working through a foreign intermediary, licensing agreement with the foreign business, forming a strategic alliance, or becoming a multinational corporation.
 - C8.6 Analyze special challenges in operations and strategic management in international business.

Academic Alignment Matrix

BUSINESS AND FINANCE		PATHWAYS		
		A. Business Management	B. Financial Services	C. International Business
ENGLISH LANGUAGE ARTS				
Language Standards – LS (Standard Area, Grade Level, Standard #)				
11.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	A1.0, A3.0, A4.0, A6.0, A8.0, A9.0	B1.0, B2.0, B11.0	C1.0, C3.0, C4.0	
11.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	A1.0, A3.0, A4.0, A6.0, A8.0, A9.0	B1.0	C1.0, C4.0	
11.3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	A3.0	B4.0, B5.0	C2.0, C6.0	
11.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grades 11–12 reading and content</i> , choosing flexibly from a range of strategies.	A2.0, A3.0	B4.0, B5.0	C2.0, C6.0	
11.5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	A1.0	B4.0, B10.0	C2.0, C6.0	
11.6. Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.	A1.0	B2.0, B10.0	C1.0, C6.0, C8.0	
Reading Standards for Informational Text – RSIT (Standard Area, Grade Level, Standard #)				
11.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.	A4.0	B5.0, B6.0, B8.0	C1.0, C8.0	
11.2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.	A3.0, A5.0	B5.0		
11.3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10, B11	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0	
11.4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10). (See grade 11/12 Language standards 4–6 on page 46 for additional expectations.)	A5.0, A6.0, A7.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10	C1.0, C8.0	





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	PATHWAYS		
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BUSINESS AND FINANCE			
Reading Standards for Informational Text – RSIT (Standard Area, Grade Level, Standard #) (continued)			
11.5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.	A4.0, A6.0, A7.0	B1.0, B2.0, B3.0, B6.0, B7.0, B8.0, B10.0	C5.0, C6.0, C7.0
11.6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.		B1.0	
11.7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0
Writing Standards – WS (Standard Area, Grade Level, Standard #)			
11.1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.	A8.0, A9.0	B1.0, B3.0, B6.0	C3.0
11.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0	B2.0, B4.0, B5.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C4.0, C5.0, C6.0, C7.0, C8.0
11.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0
11.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0
11.6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0
11.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0

Academic Alignment Matrix

BUSINESS AND FINANCE		PATHWAYS		
		A. Business Management	B. Financial Services	C. International Business
Writing Standards – WS (Standard Area, Grade Level, Standard #) (continued)				
11.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation including footnotes and endnotes.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0	
11.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0	
MATHEMATICS				
Algebra – A-SSE – Seeing Structure in Expressions				
<i>Interpret the structure of expressions</i>				
1. Interpret expressions that represent a quantity in terms of its context. a. Interpret parts of an expression, such as terms, factors, and coefficients. b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)$ as the product of P and a factor not depending on P.		B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0	
2. Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$. a. Use the distributive property to express a sum of terms with a common factor as a multiple of a sum of terms with no common factor. For example, express $xy^2 + x^2y$ as $xy(y + x)$. (Common Core Standard A-SSE-2a) b. Use the properties of operations to express a product of a sum of terms as a sum of products. For example, use the properties of operations to express $(x + 5)(3 - x + c)$ as $-x^2 + cx - 2x + 5c + 15$. (Common Core Standard A-SSE-2b)		B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0	





Academic Alignment Matrix

		PATHWAYS		
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BUSINESS AND FINANCE				
Algebra – A-CED – Creating Equations				
<i>Create equations that describe numbers or relationships</i>				
1. Create equations and inequalities in one variable including ones with absolute value and use them to solve problems in and out of context, including equations arising from linear functions.				
1.1 Judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step. (CA Standard Algebra II – 11.2)				
2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.				
3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.				
4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R .				
Algebra – A-REI – Reasoning with Equations and Inequalities				
<i>Understand solving equations as a process of reasoning and explain the reasoning</i>				
1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.				
2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.				
<i>Solve equations and inequalities in one variable</i>				
3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.				
3.1 Solve equations and inequalities involving absolute value. (CA Standard Algebra I – 3.0 and CA Standard Algebra II – 1.0)				

Academic Alignment Matrix

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		A. Business Management	B. Financial Services	C. International Business
Functions – F-IF – Interpreting Functions				
<i>Understand the concept of a function and use function notation</i>				
1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x . The graph of f is the graph of the equation $y = f(x)$.		A4.0, A5.0, A6.0, A7.0, A8.0		
2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.		A4.0, A5.0, A6.0, A7.0, A8.0		
3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = 1$, $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.		A4.0, A5.0, A6.0, A7.0, A8.0		
<i>Interpret functions that arise in applications in terms of the context</i>				
4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.		A4.0, A5.0, A6.0, A7.0, A8.0	B3.0, B4.0	
5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.		A4.0, A5.0, A6.0, A7.0, A8.0		
6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.		A4.0, A5.0, A6.0, A7.0, A8.0	B3.0, B4.0, B5.0, B6.0, B7.0, B8.0	C3.0, C6.0, C7.0, C8.0





Academic Alignment Matrix

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	A. Business Management	B. Financial Services	C. International Business
Functions – F-IF – Interpreting Functions <i>(continued)</i>			
<i>Analyze functions using different representations</i>			
7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. <ul style="list-style-type: none"> a. Graph linear and quadratic functions and show intercepts, maxima, and minima. b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior. e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. 	B3.0		
8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. <ul style="list-style-type: none"> a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. b. Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^t/10$, and classify them as representing exponential growth or decay. 	A4.0, A5.0, A6.0, A7.0, A8.0		
9. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.	A4.0, A5.0, A6.0, A7.0, A8.0		
10. Demonstrate an understanding of functions and equations defined parametrically and graph them. (CA Standard Math Analysis – 7.0)	A4.0, A5.0, A6.0, A7.0, A8.0		

Academic Alignment Matrix

BUSINESS AND FINANCE	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
<p>Functions – F-BF – Building Functions</p> <p><i>Build a function that models a relationship between two quantities</i></p> <p>1. Write a function that describes a relationship between two quantities.</p> <p>a. Determine an explicit expression, a recursive process, or steps for calculation from a context.</p> <p>b. Combine standard function types using arithmetic operations. <i>For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.</i></p> <p>c. (+) Compose functions. For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.</p> <p>2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.</p> <p><i>Build new functions from existing functions</i></p> <p>3. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.</p> <p>3.1 Solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions. (CA Standard Algebra II - 24.0)</p> <p>4. Find inverse functions.</p> <p>a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. For example, $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.</p> <p>b. (+) Verify by composition that one function is the inverse of another.</p> <p>c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.</p> <p>d. (+) Produce an invertible function from a non-invertible function by restricting the domain.</p> <p>5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.</p>	A9.0		
	A9.0		
	A9.0		





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Geometry – G-CO – Congruence			
<i>Make geometric constructions</i>			
12. Make formal geometric constructions with a variety of tools and methods (compass and straight-edge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.		B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
Geometry – G-MG – Modeling with Geometry			
<i>Apply geometric concepts in modeling situations</i>			
1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).		B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).		B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios)		B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
Number and Quantity – N-RN – The Real Number System			
<i>Extend the properties of exponents to rational exponents</i>			
1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3) \cdot 3}$ to hold, so $(5^{1/3})^3$ must equal 5.		B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.		B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
<i>Use properties of rational and irrational number</i>			
3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.		B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0

Academic Alignment Matrix

	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
BUSINESS AND FINANCE			
Number and Quantity – N-VM – Vector and Matrix Quantities			
<i>Perform operations on matrices and use matrices in applications</i>			
6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.		B1.0	
7. (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.		B1.0	
8. (+) Add, subtract, and multiply matrices of appropriate dimensions.		B1.0	
9. (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.		B1.0	
10. (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.		B1.0	
11. (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.		B1.0	
12. (+) Work with 2 x 2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.		B1.0	
Statistics and Probability – S-IC – Making Inferences and Justifying Conclusions			
<i>Understand and evaluate random processes underlying statistical experiments</i>			
1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	A4.0, A5.0, A6.0, A7.0, A8.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	A4.0, A5.0, A6.0, A7.0, A8.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
<i>Make inferences and justify conclusions from sample surveys, experiments, and observational studies</i>			
3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	A1.0, A2.0, A4.0, A5.0, A6.0, A7.0, A8.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0





Academic Alignment Matrix

BUSINESS AND FINANCE	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
Statistics and Probability – S-IC – Making Inferences and Justifying Conclusions (continued)			
5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	A3.0, A4.0, A5.0, A6.0, A7.0, A8.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
6. Evaluate reports based on data.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
Statistics and Probability – S-ID – Interpreting Categorical and Quantitative Data			
<i>Summarize, represent, and interpret data on a single count or measurement variable</i>			
1. Represent data with plots on the real number line (dot plots, histograms, and box plots).		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
<i>Summarize, represent, and interpret data on two categorical and quantitative variables</i>			
5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. <ol style="list-style-type: none"> Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models. Informally assess the fit of a function by plotting and analyzing residuals. Fit a linear function for a scatter plot that suggests a linear association. 		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0



Academic Alignment Matrix

	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
BUSINESS AND FINANCE			
Statistics and Probability – S-ID – Interpreting Categorical and Quantitative Data <i>(continued)</i>			
<i>Interpret linear models</i>			
7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	A5.0, A6.0, A7.0, A8.0	B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
8. Compute (using technology) and interpret the correlation coefficient of a linear fit.		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
9. Distinguish between correlation and causation.		B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
Statistics and Probability – S-CP – Conditional Probability and the Rules of Probability			
<i>Understand independence and conditional probability and use them to interpret data</i>			
1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").	A4.0, A5.0, A6.0, A7.0	B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
2. Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	A4.0, A5.0, A6.0, A7.0	B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
3. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.	A4.0, A5.0, A6.0, A7.0	B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.	A4.0, A5.0, A6.0, A7.0	B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C3.0, C4.0, C6.0, C7.0, C8.0
<i>Use the rules of probability to compute probabilities of compound events in a uniform probability model</i>			
6. Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model.	A4.0, A5.0, A6.0, A7.0		



Academic Alignment Matrix

		PATHWAYS		
		A. Business Management	B. Financial Services	C. International Business
BUSINESS AND FINANCE				
Statistics and Probability – S-CP – Conditional Probability and the Rules of Probability <i>(continued)</i>				
7.	Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.	A4.0, A5.0, A6.0, A7.0		
8. (+)	Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B A) = P(B)P(A B)$, and interpret the answer in terms of the model.	A4.0, A5.0, A6.0, A7.0		
9. (+)	Use permutations and combinations to compute probabilities of compound events and solve problems.	A4.0, A5.0, A6.0, A7.0		
Statistics and Probability – S-MD – Using Probability to Make Decisions				
<i>Calculate expected values and use them to solve problems</i>				
1. (+)	Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.	A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
2. (+)	Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.	A4.0, A5.0, A6.0, A7.0, A8.0, A9.0		C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
3. (+)	Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated, find the expected value. For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.	A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
4. (+)	Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?	A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0

Academic Alignment Matrix

	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
BUSINESS AND FINANCE			
Statistics and Probability – S-MD – Using Probability to Make Decisions (continued)			
<i>Use probability to evaluate outcomes of decisions</i>			
5. (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.			
a. Find the expected payoff for a game of chance. For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.	A2.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
b. Evaluate and compare strategies on the basis of expected values. For example, compare a high deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.			
6. (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	A2.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
7. (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).	A2.0, A8.0, A9.0	B1.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B10.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
Statistics and Probability – APPS – Advanced Placement Probability and Statistics			
7.0 Students demonstrate an understanding of the standard distributions (normal, binomial, and exponential) and can use the distributions to solve for events in problems in which the distribution belongs to those families.	A4.0, A5.0, A6.0, A7.0		C3.0, C4.0, C6.0, C7.0, C8.0
10.0 Students know the definitions of the mean, median and mode of distribution of data and can compute each of them in particular situations.	A4.0, A5.0, A6.0, A7.0		C3.0, C4.0, C6.0, C7.0, C8.0
15.0 Students are familiar with the notions of a statistic of a distribution of values, of the sampling distribution of a statistic. And of the variability of a statistic.	A4.0, A5.0, A6.0, A7.0		C3.0, C4.0, C6.0, C7.0, C8.0
16.0 Students know basic facts concerning the relation between the mean and the standard deviation of a sampling distribution and the mean and the standard deviation of the population distribution.	A4.0, A5.0, A6.0, A7.0		C3.0, C4.0, C6.0, C7.0, C8.0
Calculus – C			
11.0 Students use differentiation to solve optimization (maximum–minimum problems) in a variety of pure and applied contexts.	A4.0, A5.0, A6.0, A7.0		C3.0, C4.0, C6.0, C7.0, C8.0





Academic Alignment Matrix

		PATHWAYS		
		A. Business Management	B. Financial Services	C. International Business
BUSINESS AND FINANCE				
HISTORY/SOCIAL SCIENCE				
Principles of American Democracy and Economics – AD				
12.7	Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.			
12.7.2.	Identify the major responsibilities and sources of revenue for state and local governments.		B8.0	
12.7.5.	Explain how public policy is formed, including the setting of the public agenda and implementation of it through regulations and executive orders.		B8.0	
Principles of Economics – PE				
12.1	Students understand common economic terms and concepts and economic reasoning.	A1.0, A2.0	B1.0, B8.0	
12.1.1.	Examine the causal relationship between scarcity and the need for choices.	A1.0, A2.0, A4.0, A7.0, A8.0	B1.0, B6.0, B8.0	
12.1.2.	Explain opportunity cost and marginal benefit and marginal cost.	A1.0, A2.0, A4.0, A7.0	B1.0, B2.0, B4.0, B6.0, B8.0	C1.0, C3.0, C4.0, C6.0, C8.0
12.1.3.	Identify the difference between monetary and non-monetary incentives and how changes in incentives cause changes in behavior.		B1.0, B11.0	
12.1.4.	Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.	A3.0, A4.0, A6.0, A9.0	B1.0, B4.0	
12.1.5.	Analyze the role of a market economy in establishing and preserving political and personal liberty (e.g., through the works of Adam Smith).	A4.0		
12.2	Students analyze the elements of America's market economy in a global setting.	A1.0, A3.0, A4.0	B1.0, B3.0, B4.0, B8.0, B10.0, B11.0	C2.0, C6.0
12.2.1.	Understand the relationship of the concept of incentives to the law of supply and the relationship of the concept of incentives and substitutes to the law of demand.	A4.0, A8.0		C1.0, C2.0, C3.0, C6.0, C7.0, C8.0
12.2.2.	Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.	A4.0, A8.0	B1.0, B4.0	C1.0, C2.0, C3.0, C6.0, C7.0, C8.0
12.2.3.	Explain the roles of property rights, competition, and profit in a market economy.	A3.0, A4.0, A8.0, A9.0		C1.0, C2.0, C3.0, C6.0, C7.0, C8.0

Academic Alignment Matrix

	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
BUSINESS AND FINANCE			
Principles of Economics – PE (continued)			
12.2.4. Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.	A4.0, A8.0		
12.2.5. Understand the process by which competition among buyers and sellers determines a market price.	A4.0	B1.0, B4.0, B6.0	
12.2.6. Describe the effect of price controls on buyers and sellers.	A3.0, A4.0		
12.2.7. Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.	A7.0, A4.0	B6.0	
12.2.8. Explain the role of profit as the incentive to entrepreneurs in a market economy.	A1.0, A3.0, A4.0, A9.0	B6.0, B8.0	
12.2.9. Describe the functions of the financial markets.	A5.0	B3.0, B4.0, B6.0, B8.0, B10.0, B11.0	
12.2.10. Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.	A1.0, A4.0		
12.3 Students analyze the influence of the federal government on the American economy.	A3.0, A4.0, A5.0, A6.0, A8.0, A9.0	B1.0, B2.0, B4.0, B5.0, B6.0, B10.0	
12.3.1. Understand how the role of government in a market economy often includes providing for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers' rights.	A3.0, A4.0, A9.0	B1.0, B2.0, B3.0, B5.0	C2.0, C3.0, C7.0, C8.0
12.3.2. Identify the factors that may cause the costs of government actions to outweigh the benefits.	A3.0, A4.0	B1.0, B4.0, B6.0	C2.0, C3.0, C7.0, C8.0
12.3.3. Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.	A5.0, A6.0, A8.0	B1.0, B3.0, B4.0, B5.0, B6.0	C2.0, C3.0, C7.0, C8.0
12.3.4. Understand the aims and tools of monetary policy and their influence on economic activity (e.g., the Federal Reserve).	A5.0, A8.0	B2.0, B3.0, B5.0, B6.0, B10.0	C2.0, C3.0, C7.0, C8.0
12.4 Students analyze the elements of the U.S. labor market in a global setting.	A3.0, A4.0, A5.0, A7.0		
12.4.1. Understand the operations of the labor market, including the circumstances surrounding the establishment of principal American labor unions, procedures that unions use to gain benefits for their members, the effects of unionization, the mini-mum wage, and unemployment insurance.	A4.0	B7.0, B8.0	C1.0, C2.0, C3.0, C6.0, C7.0, C8.0





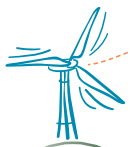
Academic Alignment Matrix

	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
Principles of Economics – PE (continued)			
12.4.2. Describe the current economy and labor market, including the types of goods and services produced, the types of skills workers need, the effects of rapid technological change, and the impact of international competition.	A3.0, A4.0, A5.0, A7.0	B7.0, B8.0	
12.4.3. Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.	A6.0, A7.0		
12.4.4. Explain the effects of international mobility of capital and labor on the U.S. economy.	A7.0		C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0
12.5 Students analyze the aggregate economic behavior of the U.S. economy.	A4.0, A5.0		
12.5.1. Distinguish between nominal and real data.	A4.0	B1.0, B5.0, B11.0	
12.5.2. Define, calculate, and explain the significance of an unemployment rate, the number of new jobs created monthly, inflation or deflation rate, and a rate of economic growth.	A4.0, A5.0	B5.0, B6.0	C6.0
12.5.3. Distinguish between short-term and long-term interest rates and explain their relative significance.	A5.0	B3.0, B4.0, B6.0, B8.0, B10.0	
12.6 Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States' borders.	A4.0, A5.0, A7.0	C1.0, C3.0, C4.0, C6.0, C7.0, C8.0	
12.6.1. Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.		B7.0	C1.0, C2.0, C3.0, C6.0, C7.0, C8.0
12.6.2. Compare the reasons for and the effects of trade restrictions during the Great Depression compared with present-day arguments among labor, business, and political leaders over the effects of free trade on the economic and social interests of various groups of Americans.		B7.0	C1.0, C2.0, C3.0, C6.0, C7.0, C8.0
12.6.3. Understand the changing role of international political borders and territorial sovereignty in a global economy.		B7.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0
12.6.4. Explain foreign exchange, the manner in which exchange rates are determined, and the effects of the dollar's gaining (or losing) value relative to other currencies.	A4.0, A5.0, A7.0	B7.0	C1.0, C2.0, C3.0, C4.0, C6.0, C7.0, C8.0

Academic Alignment Matrix

BUSINESS AND FINANCE	PATHWAYS		
	A. Business Management	B. Financial Services	C. International Business
U.S. History and Geography – US			
11.6 Students analyze the different explanations for the Great Depression and how the New Deal fundamentally changed the role of the federal government.		B1.0, B5.0	
11.6.5. Trace the advances and retreats of organized labor, from the creation of the American Federation of Labor and the Congress of Industrial Organizations to current issues of a postindustrial, multinational economy, including the United Farm Workers in California.	A3.0		
11.9 Students analyze U.S. foreign policy since World War II.		B5.0	
11.11 Students analyze the major social problems and domestic policy issues in contemporary American society.			C1.0, C2.0, C6.0
11.11.1. Discuss the reasons for the nation's changing immigration policy, with emphasis on how the Immigration Act of 1965 and successor acts have transformed American society.	A3.0		
World History, Culture, and Geography – WH			
10.3 Students analyze the effects of the Industrial Revolution in England, France, Germany, Japan, and the United States.			
10.3.1. Analyze why England was the first country to industrialize.	A1.0, A7.0		
10.3.5. Understand the connections among natural resources, entrepreneurship, labor, and capital in an industrial economy.	A1.0		
10.3.6. Analyze the emergence of capitalism as a dominant economic pattern and the responses to it, including Utopianism, Social Democracy, Socialism, and Communism.	A1.0		





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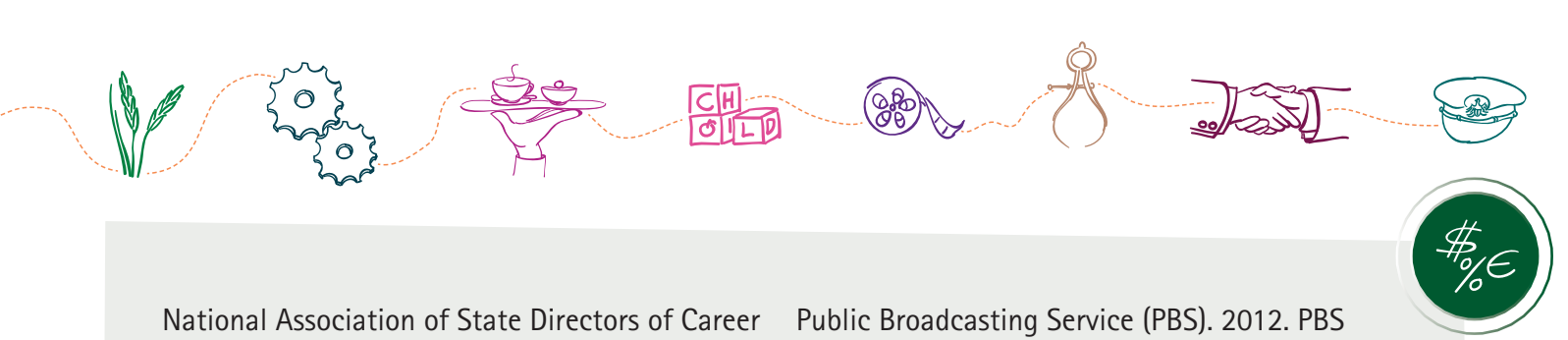


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