California Career Technical Education Model Curriculum Standards

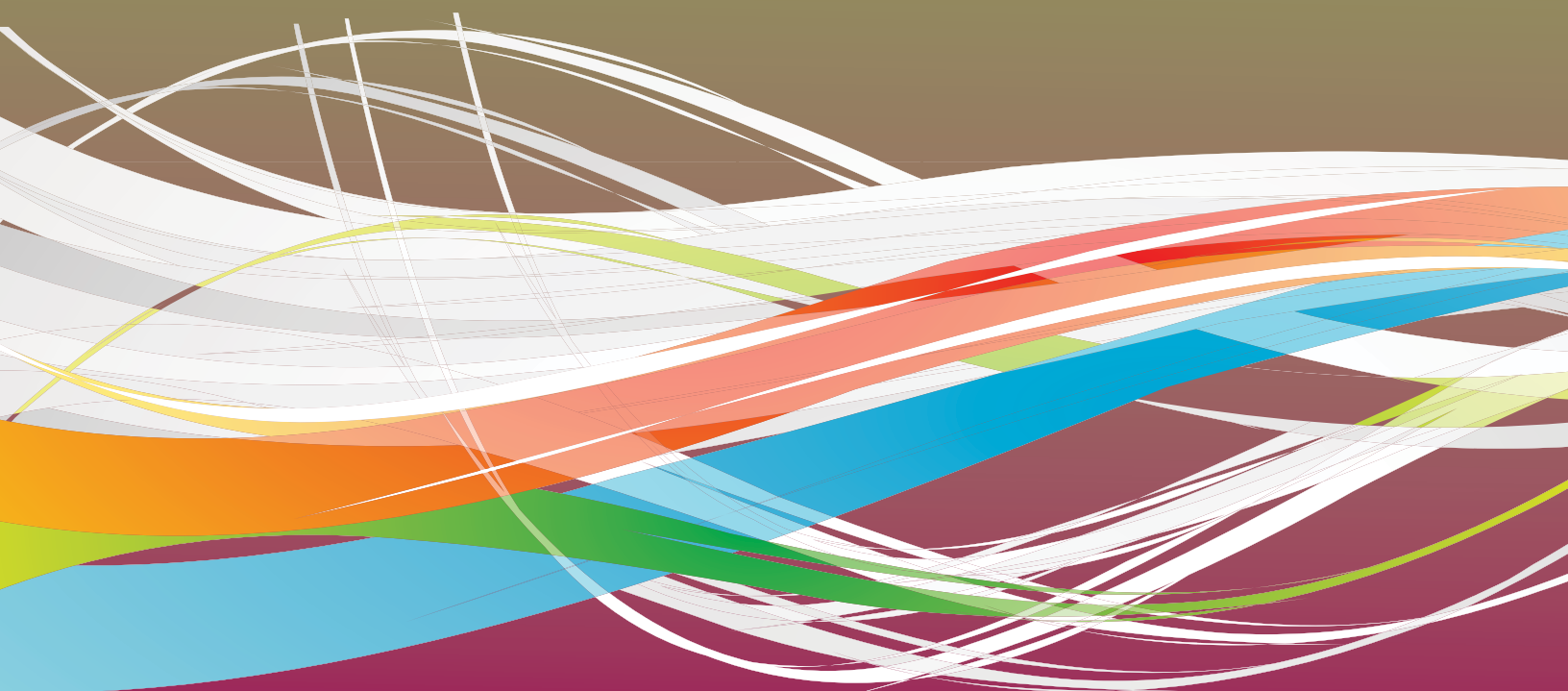Education, Child Development, and Family Services

CHILD

Child Development Pathway

Family and Human Services Pathway

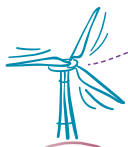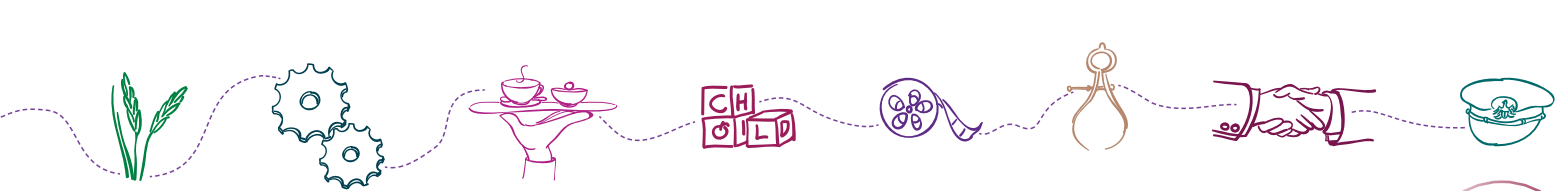Consumer Services Pathway

Education Pathway

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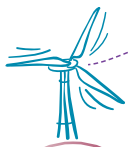
The industry-sector anchor standards have been customized with selected additions to better reflect the needs and special conditions of each industry sector.

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.
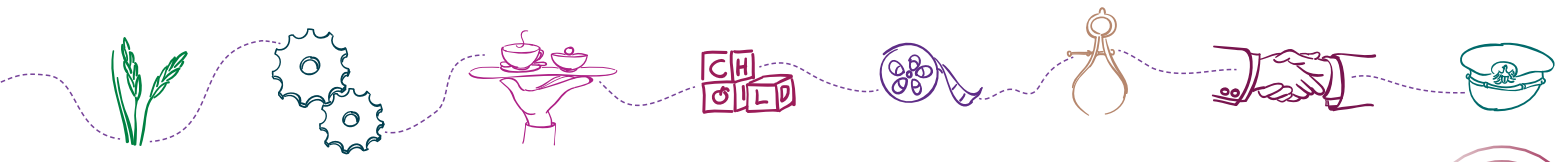
Implementation

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.
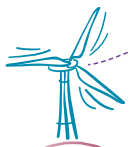
California Standards for Career Ready Practice

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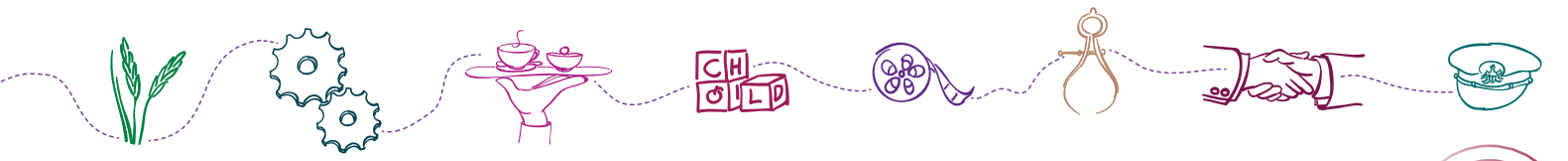
5. Utilize critical thinking to make sense of problems and persevere in solving them.

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.
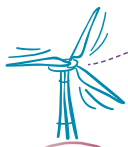
11. Employ valid and reliable research strategies.

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).
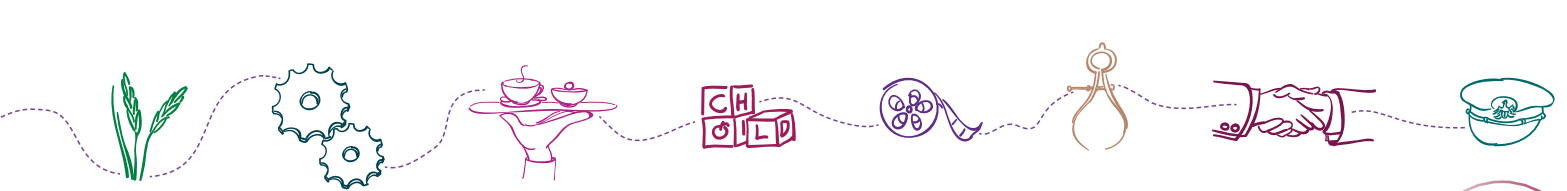
Education, Child Development, and Family Services

Sector Description

The Education, Child Development, and Family Services sector provides students with the academic and technical preparation to pursue high-skill, high-demand careers in these related and growing industries. The sector encompasses four distinct, yet interrelated, career pathways: Child Development, Consumer Services, Education, and Family and Human Services. The Child Development pathway provides students with the skills and knowledge they need to pursue careers in child care and related fields, and the Education pathway emphasizes the preparation of students to become teachers. The Consumer Services pathway gives students the employment and management skills needed in careers that involve helping consumers. The Family and Human Services pathway provides students with skills needed for careers related to family and social services. The standards are designed to integrate academic and career technical concepts. The anchor standards include Consumer and Family Studies comprehensive technical knowledge and skills that prepare students for learning in the pathways. The knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on projects, work-based instruction, and leadership development—for example, through Family, Career and Community Leaders of America (FCCLA). Standards in the Education, Child Development, and Family Services sector are designed to prepare students for technical training, postsecondary education, and entry to a career.
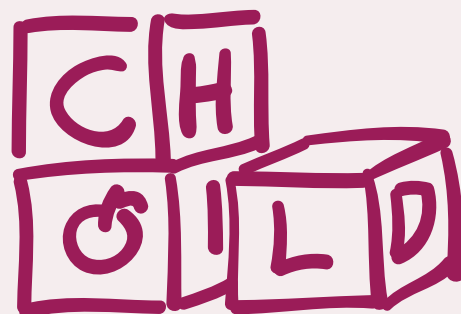
1.0 Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Education, Child Development, and Family Services academic alignment matrix for identification of standards.

2.0 Communications

Acquire and accurately use Education, Child Development, and Family Services 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 of small business in the California and global 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 Education, Child Development, and Family Services 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 Education, Child Development, and Family Services 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 Education, Child Development, and Family Services 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 Education, Child Development, and Family Services 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 Education, Child Development, and Family Services 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 Education, Child Development, and Family Services industry sector.

8.3   Demonstrate ethical and legal practices consistent with Education, Child Development, and Family Services 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 Education, Child Development, and Family Services 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 career technical student organization (FCCLA). (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 (such as FCCLA) 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 Education, Child Development, and Family Services sector issues and problems.

10.0 Technical Knowledge and Skills

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

This section is specific to the foundational knowledge and skills required for Consumer and Family Studies.

10.1 Interpret and explain terminology and practices specific to the Education, Child Development, and Family Services sector.

10.2 Comply with the rules, regulations, and expectations of all aspects of the Education, Child Development, and Family Services sector.

10.3 Construct projects and products specific to the Education, Child Development, and Family Services sector requirements and expectations.

10.4 Collaborate with industry experts for specific technical knowledge and skills.

10.5 Summarize the decisions and responsibilities involved in parenting in various cultures.

10.6 Describe and identify the stages of pregnancy, from conception through birth, and the implications of environment and heredity on the health and well-being of a child.

10.7 Explain the importance of studying child growth and development from infancy through adolescence.

10.8 Explain positive guidance and discipline techniques that promote feelings of self-worth as they apply to the developmental stages of children.

10.9 Demonstrate an understanding of the value and methods of providing infants, children, and adolescents with play and developmentally appropriate learning activities.

10.10 Describe the process of making consumer decisions, including the comparison of goods and services.

10.11 Practice how to manage financial resources to achieve personal and family goals.

10.12 Compare consumer resources, rights, and responsibilities and their relationship to the various levels of the economy.

10.13 Recognize the function of the family as a basic unit of society and the contributions of the family unit to the development of individuals.

10.14 Analyze the factors that affect the development of individuals and how to build positive relationships.

10.15 Describe the adjustments needed to adapt to major life changes throughout the human life cycle.

10.16 Apply strategies and resources for managing conflicts and crises.

10.17 Summarize the importance of wellness and safety to individual and family health and well-being.

10.18 Demonstrate an understanding of how to prevent and control infection and disease to produce the optimum health of individuals and families.

10.19 Explain the strategies that enable persons to manage and balance personal, family, and work responsibilities to enhance productivity and attain a quality of life.

10.20 Assess the individual, family, and workplace factors that influence decisions at each stage of the human life cycle.

10.21 Demonstrate an understanding of how knowledge, skills, attitudes, and behaviors learned in consumer and family studies can be transferred to advanced training and education or to careers related to the Education, Child Development, and Family Services sector.

11.0 Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the Education, Child Development, and Family Services anchor standards, pathway standards, and performance indicators in classroom, laboratory and workplace settings, and through the career technical student organization (FCCLA).

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 Education, Child Development, and Family Services 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 Education, Child Development, and Family Services 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. Child Development Pathway

The Child Development pathway is designed to prepare students to pursue a career in the field of child care and development for infants, toddlers, and young children. Students study child growth and development, safety and emergency procedures, nutrition and health practices, positive interaction and guidance techniques, learning theories, and developmentally appropriate practices and curriculum activities. Students apply this knowledge in a variety of early childhood programs, such as child development laboratories, public and private preschools, family day care settings, and recreational facilities. Students completing the program may apply for the Child Development Assistant Permit from the California Commission on Teacher Credentialing.

Sample occupations associated with this pathway:

- Child Care Worker
- Child Development Specialist
- Child Psychologist
- Family Service Advocate

A1.0 Recognize the essential aspects of the early childhood education, child care, and development industry and the industry's role in state and local economies.

  A1.1 Describe the organizational structures in early childhood education, child care, and development facilities.

  A1.2 Explain the effect of the child care and development industry on state and local economies.

  A1.3 Understand the interdependence of various career roles and how those roles contribute to the success of the child care and development program or work site.

  A1.4 Research the functions and roles of the various careers in the child care and development industry.

  A1.5 Identify the components of professionalism and how to practice professional behaviors.

  A1.6 Analyze the legislative, economic, educational, and social trends that affect the child care and development industry.

A2.0 Identify and apply operational procedures and organizational policies at various early childhood education, child care, and development facilities.

  A2.1 Identify the operational procedures at various types of facilities and their importance to the success of the organization.

  A2.2 Understand the operational policies and procedures related to early education, child care, and development program components (e.g., adult–child and adult–guardian interaction, physical environment, health, safety, nutrition, curriculum, and assessment).

A2.3 Explain the importance of, and procedures for, keeping child and classroom records and documentation.

A2.4 Summarize appropriate business systems that help with billing, ordering, budgeting, collecting fees, and reporting requirements.

A2.5 Illustrate the workforce management strategies that are effective for planning, making decisions, sharing responsibility, and negotiating.

A3.0 Summarize child care and development standards, licensing, regulations, and codes, including *California Code of Regulations* Title 5 and Title 22.

A3.1 Recognize the standards and licensing regulations for child care facilities.

A3.2 Identify the educational and industry-related requirements for child care facilities staff.

A3.3 Understand how local, state, and federal laws and regulations for child care facilities are enforced by regulatory agencies.

A3.4 Adhere to the health, safety, regulatory, and procedural requirements for the work site.

A3.5 Summarize the employer and employee responsibilities for complying with laws and regulations affecting the needs, interests, and rights of young children.

A3.6 Detect the indicators of child abuse or neglect and the responsibilities of staff as mandated reporters.

A4.0 Apply critical safety, emergency, and disaster procedures at the work site.

A4.1 Understand the state and federal environmental and safety regulations and the use of Material Safety Data Sheets (MSDS) as they relate to the child care and development industry.

A4.2 Implement the staff procedures, duties, and responsibilities related to safety, emergency, and disaster preparedness plans.

A4.3 Demonstrate how and when to use certified first aid, cardiopulmonary resuscitation (CPR), and other emergency procedures.

A4.4 Predict the typical hazards at the work site and know procedures and practices that contribute to a safe and healthy environment.

A5.0 Explain important elements of a child's physical, intellectual, emotional, and social growth and development.

A5.1 List the biological and environmental factors that influence the development of infants, toddlers, and children.

A5.2 Describe the developmental stages of infants, toddlers, and children.

A5.3 Summarize the ways in which diversity, family, and culture influence the development of children.

A5.4 Understand the importance of including infants, toddlers, and children with special needs.

A5.5 Analyze the importance of observational assessment and how to link assessment findings to individualized child planning.

A5.6 Evaluate the importance of learning environments, experiences, and interactions and their connections to each stage of physical, intellectual, social, and emotional development.

A5.7 Defend the benefits of parental involvement to the development of a child's physical, intellectual, emotional, and social growth and development.

A6.0 Employ the principles of positive interactions, guidance, and discipline in the workplace.

A6.1 Describe how to help children develop a positive self-image and self-esteem and develop self-discipline and respect for oneself and others.

A6.2 Use the importance of building positive relationships between the caregiver, children, and families to provide effective guidance and discipline.

A6.3 Diagram the elements of positive guidance and discipline techniques that are based on the stages of children's development.

A6.4 Identify practical strategies for finding positive solutions to common behavioral problems.

A6.5 Plan and demonstrate how the staff can adjust the environment to promote a child's independence and personal and social competence.

A7.0 Compare and apply the essential components of an effective learning environment for the early childhood classroom.

A7.1 Describe the components of an effective learning environment that reflects children's interests and developmental needs.

A7.2 Identify the early childhood education classroom learning areas and the contribution of each to the development of children.

A7.3 Classify multiple ways of promoting children's learning at different developmental stages and ages by using the continuum of teaching behaviors from directive to nondirective.

A7.4 Demonstrate appropriate teaching techniques and interaction styles for working with children of varying ages, learning styles, and cultural backgrounds.

A7.5 Illustrate the ways in which classroom environments promote productive interaction among children and adults to create a positive atmosphere and sense of community.

A7.6 Research and present the major learning theories and curriculum models and evaluate their application in early childhood education programs.

A8.0 Select and apply developmentally appropriate practices for curriculum development.

A8.1 Develop components of a developmentally appropriate curriculum in each area of the balanced daily routine: indoor/outdoor, quiet/active, individual and small group/large group, large muscle/small muscle, and child-initiated and staff-initiated activities.

A8.2 Observe children and document the observations in a factual and anecdotal format tying observations to developmental milestones.

A8.3 Integrate language acquisition strategies and support for English-language learners.

A8.4 Plan and conduct activities that reinforce foundation skills, reflect an integrated and emergent curriculum, and support school readiness.

A9.0 Practice the principles and practices of good nutrition, health, and safety for infants and children.

A9.1 List the procedures used to clean a facility that follow a logical sequence and universal health precautions.

A9.2 Practice the procedures for preventing the spread of infections and illnesses, including those for food-borne pathogens.

A9.3 Use the appropriate sanitation and hygiene techniques for infants, toddlers, children, and staff.

A9.4 Communicate the proper procedures to follow when preparing and serving nutritional snacks and meals, including those that foster independent eating practices and promote good nutrition and hygiene habits.

A9.5 Recognize, describe, and report signs and symptoms of illness, injury, discomfort, or special needs in infants, toddlers, and children.

A10.0 Communicate and interact effectively with families and communities.

A10.1 Name the benefits of establishing strong relationships with families and communities.

A10.2 Interpret how positive family–staff relationships, family members, and the community contribute to the physical, intellectual, social, and emotional development of the child.

A10.3 Compare and contrast how language, culture, and educational backgrounds may affect family structures and communication within and among families and communities.

A10.4 Devise ways to use opportunities throughout the daily routine to build trusting relationships and effective communication with families and others.

A10.5 Advocate for high-quality programs and services for children and families.

A11.0 Identify teaching materials and resources that enhance classroom instruction and indoor and outdoor learning in early childhood education, child care, and development programs.

A11.1 Select and develop age-appropriate and developmentally appropriate teaching materials and resources.

A11.2 Use the appropriate and current instructional technology and equipment to develop program materials and support learning.

A11.3 Evaluate the various types and sources of quality, age-appropriate, and developmentally appropriate materials and equipment.

A12.0 Illustrate how to support the learning process in an assisting role.

A12.1 Define the strategies for supervising and maintaining a supportive learning environment for infants, toddlers, and children.

A12.2 Understand the established standards and the standard operating procedures in classrooms, libraries, halls, and bathrooms and on the school grounds.

A12.3 Classify the typical learning challenges that students encounter in curricular areas.

A12.4 Implement planned activities to facilitate multidisciplinary learning and reinforce concepts.

A12.5 Differentiate how to provide instructional assistance to small and large learning groups.

A12.6 Identify and compile samples used for assessing a child and developing a portfolio.

B. Consumer Services Pathway

The Consumer Services pathway focuses on a broad-based curriculum designed to prepare students for careers helping customers, including credit counselors, consumer reporters, writers, and consumer affairs directors. Students learn employment, entrepreneurial, and management skills that include business structure; consumer rights and responsibilities; testing and demonstration of products; consumer communications; and energy, environment, and resource management.

Sample occupations associated with this pathway:

- Media Product Demonstrator
- Customer Service Representative
- Personal Financial Advisor
- Accountant
- Credit Counselor

B1.0   Describe important aspects of the consumer services industry and the role of the industry in local, state, national, and global economies.

- B1.1   Identify the ways in which national and international policies and procedures affect the daily operations of a consumer services organization.
- B1.2   Summarize the legislative, economic, educational, and social trends that affect careers in the consumer services industry.
- B1.3   Explain the effect of this industry on businesses and the state's economy.
- B1.4   Identify the ways in which industries, companies, and agencies provide consumer information and services.
- B1.5   Communicate the role of consumer affairs personnel in an organization.

B2.0   Understand the principles of effective workforce and organizational management, including the roles and responsibilities of management and employees.

- B2.1   Explain the outcomes of effective leadership and management, such as profitability, solvency, productivity, consumer and client satisfaction, and business growth.
- B2.2   Demonstrate the main workforce management strategies, such as shared responsibilities and negotiation, collaboration/consensus building, and communication.
- B2.3   Summarize the interrelationship and interdependence and diversity of management and employees as they relate to workforce productivity.
- B2.4   Use organizational procedures and tools, such as business plans, budgets/financials, spreadsheets for payroll and inventories, recordkeeping, and communication with consumers.

B3.0   Demonstrate the operational procedures and safety practices that are commonly used in the consumer services industry.

  B3.1   Define the correct technical terms to describe products, procedures, and equipment specific to the consumer services industry.

  B3.2   Demonstrate the procedures for preparing, expediting, and tracking forms needed for requisitioning supplies and materials.

  B3.3   Analyze the purpose of, and information in, Material Safety Data Sheets (MSDS).

B4.0   Understand essential consumer protection laws and regulations.

  B4.1   Recall and chart the evolution of consumer protection legislation.

  B4.2   Describe the role of local, state, and national public and private agencies in consumer and business protection.

  B4.3   Identify the effects of environmental laws and safety regulations on consumers.

  B4.4   Explain the legal implications of a contract and interpret the consequences of consumer actions related to various types of contracts.

  B4.5   Illustrate essential consumer protection laws and regulations commonly used in the consumer services industry.

B5.0   Summarize consumer rights and responsibilities in the consumer services industry.

  B5.1   Identify effective strategies and laws that consumers can use when exercising their rights and useful methods for resolving complaints.

  B5.2   Demonstrate how individuals can have an effect on the legislative process as it relates to consumer regulations.

  B5.3   Illustrate the various advertising techniques with respect to consumer rights, marketing, technology, and point of sale methods.

  B5.4   Analyze the effect of consumer protection laws on the cost and quality of goods and services.

  B5.5   Diagram the effects of identity theft on diverse individuals, businesses, and local economies.

B6.0   Communicate the significance of national and international influences, current events, and diversity within the consumer services industry.

  B6.1   Identify the national and international issues that affect consumers.

  B6.2   Analyze the influence of different global industries, economies, regulations, and political and economic systems on the consumer services industry.

  B6.3   Predict how aspects of diversity, such as culture, age, socioeconomic, gender, language, and abilities, affect consumer services.

B7.0 Compare and contrast customer relationships and their impact on businesses and employees in the consumer services industry.

    B7.1 Identify the factors that contribute to quality customer relationships.

    B7.2 Demonstrate the methods used to establish trust between a client and a customer service employee.

    B7.3 Explain how the customer's point of view and suggestions affect management policies and decisions.

    B7.4 Assess customer needs or desires and recommend products and services.

    B7.5 Discern logical, legal, ethical, and expedient solutions to consumer concerns by empowering employees to resolve consumer issues at the lowest level.

    B7.6 Illustrate how the Internet and new technology, including social media, improve communication and facilitate business operations, as well as can harm or improve a business reputation.

B8.0 Use the skills and techniques needed to prepare advertising, public relations, and informational materials for consumers.

    B8.1 Identify the local, state, national, and international agencies, organizations, and media resources that provide current consumer information, including Internet and social media.

    B8.2 List the tools and techniques used for communicating with consumers, including those used for advertising.

    B8.3 Demonstrate how to prepare and deliver materials and presentations that consumers will understand, such as videos, visual presentations, media kits, public service announcements, and fact sheets.

    B8.4 Develop communications, timelines, agendas, schedules, meeting arrangements, and advertising media for public relations activities.

    B8.5 Analyze public relations plans in terms of their effect on customer relations and the operations of an organization.

B9.0 Summarize important consumer programs and services provided by energy, environmental, and resource management businesses.

    B9.1 Identify the various sources of energy available to consumers and the strategies that improve energy efficiency.

    B9.2 Explain the environmental impact of residential and commercial waste disposal and recycling issues.

    B9.3 Compare the costs and benefits of consumer programs for consumers, communities, and businesses.

B10.0 Research the basic procedures required to research, test, label, and demonstrate products to provide information needed by employees, consumers, and clients.

   B10.1 Identify the trends that affect customer demand for products and services, including green products, to promote environmental friendliness and sustainability.

   B10.2 Describe the purpose and significance of market research before a new product or service is developed and introduced.

   B10.3 Describe the standard testing procedures and strategies used to analyze data and integrate findings to revise products.

   B10.4 Explain the industry standards and government regulations that require specific information to be included on labels and care instructions.

   B10.5 Compare features, benefits, prices, product information, styles, and performance of goods.

   B10.6 Plan, produce, and evaluate demonstrations that educate consumers and promote a variety of products.

B11.0 Practice personal financial management, its effects on the economy, and career, personal, and family goals.

   B11.1 Describe the effects of short-term and long-term financial plans on consumer decisions.

   B11.2 Define and identify credit terminology, credit ratings and sources, costs of credit, and risks and benefits of credit.

   B11.3 Identify ways to resolve credit issues and explain the effect of credit issues on the consumer and the economy.

   B11.4 Illustrate the costs of bankruptcy to the individual, the consumer, the institution, and the economy.

   B11.5 Analyze budgets for a variety of individuals and families in accord with estimated income, needs, desires, goals, and lifestyles.

   B11.6 Analyze, describe, and contrast various types of investments and risk assessment programs.

B12.0 Explore the effect of the U.S. economic system on personal income, financial management, individual and family security, and consumer decisions.

   B12.1 Describe the interrelationship between the economy and consumer spending and saving.

   B12.2 Explain inflation and recession and how they affect the financial status of individuals and families.

   B12.3 Compare the services provided by various financial institutions and departments of government.

   B12.4 Review Truth in Lending legislation and California's Rosenthal Act related to consumers and their rights.

C. Education Pathway

The Education pathway is designed to prepare students for professional or learning support positions in education, prekindergarten through grade twelve. Students study human development; standards, regulations, and codes; positive guidance and counseling techniques; age-appropriate and grade-appropriate learning strategies; learning theories; and standards-based curriculum and instructional design. Students can apply and practice their knowledge and skills at a variety of elementary and secondary education sites.

Sample occupations associated with this pathway:

- Before/Afterschool Program Aide
- Primary/Secondary School Teacher
- School Counselor
- Educational Administrator
- Speech Therapist

C1.0 Describe the structure of the education industry and its role in local, state, and global economies.

  C1.1 Identify the effect of the education industry on state and local economies.

  C1.2 Describe the basic structure of public education in California (e.g., prekindergarten through grade twelve, community college, the California State University, the University of California), as well as private institutions.

  C1.3 Understand the legislative, economic, and social trends that affect the education industry.

  C1.4 Explain the differences in organizational structures at educational facilities, including relationships and interactions among personnel.

C2.0 Name operational procedures and organizational policies at various levels in education.

  C2.1 Identify the business procedures related to the acquisition of supplies and collection of fees.

  C2.2 Recognize the main workforce management strategies in education (e.g., shared responsibility and negotiation).

  C2.3 Implement appropriate procedures at the classroom level (e.g., attendance; observations; evaluations; illness, incident, accident, and injury reports).

C3.0 State specific applications of government regulations in the education industry.

  C3.1 Describe the critical health and safety procedures that are used at a school site.

  C3.2 Identify the indicators of child abuse and neglect and the role of the mandated reporter.

C3.3   Locate and understand the credentialing requirements for teachers of students in prekindergarten through community college.

C4.0   Practice critical emergency and disaster procedures at a school site.

     C4.1   Identify state and federal environmental and safety regulations and the use of Material Safety Data Sheets (MSDS) as they relate to the education industry.

     C4.2   Recognize the typical hazards at the work site and know the procedures and practices that contribute to a safe and healthy environment.

     C4.3   Describe the staff procedures, duties, and responsibilities related to safety, emergency, and disaster preparedness plans.

     C4.4   Demonstrate how to use certified first aid, cardiopulmonary resuscitation (CPR), and other emergency procedures.

C5.0   Summarize important elements of the physical, intellectual, emotional, and social development of children and adolescents.

     C5.1   Identify how typical and common atypical developmental patterns affect the educational progress of children and adolescents.

     C5.2   Explain the role of family involvement in the physical, intellectual, emotional, and social development of children and adolescents.

     C5.3   Diagram factors in heredity, family, culture, diversity, economic, abilities, and environment that may influence the development of children and adolescents.

     C5.4   Assess and evaluate evidence-based educational practices for the inclusion of children and adolescents with special needs.

C6.0   Use positive interaction, guidance, and discipline in the educational environment.

     C6.1   List common behavior problems, possible causes, and develop potential positive solutions.

     C6.2   Define the types of positive guidance techniques that are used in various ages and stages of a child's development.

     C6.3   Demonstrate how to support the development of a positive self-image and self-esteem as well as independence and respect for oneself and others.

     C6.4   Practice strategies for building relationships and effective classroom management, including appropriate guidance and discipline.

     C6.5   Develop strategies for building relationships with all stakeholders.

C7.0   Explain the role and purpose of standards-based instruction and assessment.

     C7.1   Identify relevant curriculum standards and demonstrate their use in instruction.

     C7.2   Understand the processes, implementations, and educator responsibilities of individualized education programs (IEPs) and Section 504 plans of the Rehabilitation Act and the Americans with Disabilities Act.

C7.3   Understand the types, important elements, and purposes of student assessments.

C7.4   Explain the process of assessment for early identification of remedial needs or other interventions.

C7.5   Use the basic components of effective standards-based lesson plans appropriate for varying ages, learning styles, and diverse cultural backgrounds and abilities to write lesson plans.

C7.6   Practice using teaching strategies that promote student learning, critical thinking, and problem solving.

C7.7   Identify relevant curriculum standards, their significance to student success, and demonstrate their use in instruction.

C8.0   Compare basic principles and practices of good nutrition and health and wellness for children.

C8.1   Describe crucial safety and sanitary procedures to follow in the classroom related to good nutrition and health.

C8.2   Identify services available to at-risk students and how to link students to resources.

C8.3   Apply appropriate sanitation, health, and hygiene procedures for preventing the spread of infections and illnesses and for responding to allergic reactions.

C8.4   Research the nutritional needs of children and the allergies commonly associated with food.

C8.5   Detect common indicators of nutrition-related disorders and diseases.

C9.0   Assess how to communicate and interact effectively with families and community groups.

C9.1   Recognize the factors that influence effective communication between the school and home and how to foster familial involvement.

C9.2   Summarize the ways in which age, abilities, language, culture, economics, and educational backgrounds may affect communication within and among families and the school.

C9.3   Explain issues of diversity and how to exhibit sensitivity to cultural differences.

C10.0 Integrate the process of developing quality teaching materials and resources for classroom instruction.

C10.1 Evaluate various types and sources of quality, developmentally appropriate materials and equipment.

C10.2 Demonstrate the appropriate use of current and emerging technology to develop instructional materials and support learning.

C10.3 Assess available materials and resources for quality, accuracy, relevance, and grade appropriateness.

C10.4 Design grade-appropriate instructional materials and resources, including those that augment educational materials adopted by the State Board of Education.

C11.0 Evaluate the role of instructional staff in supporting the learning process.

C11.1 Name behavior standards expected of students in classrooms, libraries, and bathrooms on the school grounds and during educational and recreational trips.

C11.2 Demonstrate techniques for providing positive feedback on student work, attendance, and classroom performance.

C11.3 Explain how to help the teacher with student instruction, assessment, and confidentiality.

C11.4 Analyze a variety of individual and group teaching strategies and learning theories that promote effective learning.

C11.5 Research the common typical and atypical learning challenges for students in a variety of curricular areas.

C12.0 Formulate the components of effective after-school and recreational programs for individuals and groups.

C12.1 List the purposes of after-school and recreational activities.

C12.2 Summarize the important components and typical age-appropriate or ability-appropriate activities of various after-school and recreational programs.

C12.3 Assess the recreational interests and needs of individuals and groups and develop appropriate activities.

D. Family and Human Services Pathway

Employment growth in the Family and Human Services pathway will likely be driven by an increasing demand for family assistance. Students learn employment and management skills, such as positive guidance, professional behavior and standards, and laws and regulations related to the field. Students also learn about nutrition, health, aging, and safety.

Sample occupations associated with this pathway:

- Personal Care Assistant
- Human Services Program Specialist
- Social Outreach Director
- Community Organizational Director

D1.0   Recognize important aspects of the family and human services industry and the role of the industry in local, state, national, and global economies.

- D1.1   Describe the ways in which agencies and organizations provide family and human services.

- D1.2   Communicate the role and effect of this industry on individuals, families, and the state's economy.

- D1.3   Explore the legislative, economic, and social trends that have an effect on careers in the family and human services industry.

- D1.4   Diagram the organizational structure and hierarchy that shows the relationships and interactions among departments in both public and private sectors of this industry.

D2.0   Describe the principles of effective workforce and organizational management, including the roles and responsibilities of management and employees.

- D2.1   Define the outcomes of effective leadership and management, such as profitability, solvency, productivity, positive work environment, and client satisfaction.

- D2.2   Practice the main workforce management strategies, such as shared responsibilities, collaboration, consensus-building, and communication.

- D2.3   Compare the interrelationship, interdependence, and diversity of management and employees as they relate to workforce productivity.

- D2.4   Experiment with using organizational procedures and tools, such as business plans, budgets/financials, spreadsheets for payroll and inventories, recordkeeping, and communication with consumers.

- D2.5   Create a plan of how to identify and gain access to various sources of funding and services that serve individuals, families, and communities.

D3.0 Locate the facilities and operational procedures used in the family and human services industry.

D3.1 List the various types of care facilities that promote the independence of clients.

D3.2 Describe the operational procedures related to quality control, inventory control, maintenance, storage, security, mailing, receiving, billing, and payment.

D3.3 Become familiar with various types of liability, insurance policies, code compliance, service agreements, and contracts.

D3.4 Evaluate facilities for the safety, well-being, and needs of diverse clients.

D4.0 Adhere to the laws and regulations that affect providers of family and human services and their diverse clients.

D4.1 Recognize the local, state, and federal laws, regulations, and agencies established to protect children, adolescents, and adults, including older adults and other persons with special needs and abilities.

D4.2 Identify the ways in which local, state, and federal regulations and laws are enforced by regulatory agencies, including the California Occupational Safety and Health Administration, the Americans with Disabilities Act, and the Health Insurance Portability and Accountability Act.

D4.3 Understand the typical policies and procedures established by employers to comply with local, state, and federal regulations and laws.

D5.0 Interpret the stages of human development and the related needs of individuals and families.

D5.1 Identify the behaviors and resources that foster the health and well-being of individuals and families.

D5.2 Classify common needs, problems, and adjustments associated with life changes.

D5.3 Develop ways to enhance the social and emotional health of individuals and families.

D5.4 Diagram the characteristics and changing needs of the various stages of development throughout the life span.

D5.5 Assess the special needs of clients and identify resources and agencies that provide services.

D6.0 Apply the basic principles that promote health and well-being throughout the life span.

D6.1 Select strategies that promote good health practices for all ages.

D6.2 Recognize and describe signs and symptoms of health, illness, discomfort, and disease.

D6.3 Evaluate foods in terms of their economic and nutritional value.

D6.4 Plan and demonstrate exercise activities that are enjoyable, safe, and appropriate for the individual needs of clients.

D6.5 Plan and prepare snacks and meals that meet the dietary needs of persons, including those with special dietary needs, by using sanitary and safe food-handling procedures.

D7.0 Practice important safety, emergency, and disaster procedures to use for a variety of populations.

    D7.1 Recognize how to establish and promote good safety habits for all ages.

    D7.2 Discern the causes and preventions of common accidents and injuries.

    D7.3 Identify the specific health considerations of persons with disabilities.

    D7.4 Practice the correct procedures for dealing with emergencies and disasters.

    D7.5 Perform the procedures for basic first aid and cardiopulmonary resuscitation (CPR) for infants, children, and adults.

    D7.6 Comply with the procedures that prevent the spread of illnesses, infections, and diseases, including blood-borne pathogens.

D8.0 Develop interpersonal skills required to interact effectively with individuals and families of all ages and abilities.

    D8.1 Use the strategies that promote positive interaction between individuals, families, and agencies.

    D8.2 Apply effective ways to communicate and interact with culturally diverse individuals and families, such as using mediation, conflict resolution, and decision-making skills.

    D8.3 Create effective ways to teach individuals and families communication, mediation, conflict-resolution, and decision-making skills.

D9.0 Integrate positive guidance and its application in helping individuals and families.

    D9.1 Interpret the concept of positive guidance and its benefits across one's life span.

    D9.2 Implement positive guidance techniques that are appropriate for clients and that promote independence.

    D9.3 Predict possible causes of behavior problems and conflict and demonstrate positive solutions, including behavior modification.

D10.0 Facilitate daily living activities of individuals and families.

    D10.1 List the tasks of daily living and the types of assistance persons need with these activities, including assistance for persons with special needs.

    D10.2 Understand the importance of personal care and well-being to the physical and emotional health of clients.

    D10.3 Demonstrate the importance of privacy, independence, dignity, confidentiality, and respect for clients.

    D10.4 Develop procedures for shopping, banking, recordkeeping, and other services that will assist clients.

    D10.5 Research the various types of disabilities, potential barriers, and types of accommodations needed for clients.

D10.6 Experiment with important consumer information, such as comparison shopping, disclosure on labels, warranties and guarantees, consumer fraud and identity theft, consumer redress, and consumer rights and responsibilities.

D11.0 Distinguish common problems and crises affecting individuals and families of all ages.

D11.1 Summarize the signs of emotional and physical abuse, emotional crises, and mental health issues, such as depression, isolation, substance abuse, stress, elder abuse, financial abuse, and neglect.

D11.2 Explain behaviors that require intervention and outside assistance.

D11.3 Demonstrate how to provide the information that individuals and families need to make decisions about seeking professional help.

D12.0 Advocate for the importance of social involvement for individuals and families.

D12.1 Defend the value of social, recreational, and educational activities for all ages.

D12.2 Locate and evaluate the appropriateness of facilities and community resources for social support, recreational, and educational activities.

D12.3 Recommend appropriate community resources for social, recreational, and educational activities to meet client needs for all ages.

D12.4 Plan, conduct, and evaluate social, recreational, and educational activities appropriate to the physical, psychological, cultural, and socioeconomic needs of individuals and families.

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
ENGLISH LANGUAGE ARTS				
Language Standards – LS (Standard Area, Grade Level, Standard #)				
11–12.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.3. 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.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.6. 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, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
Reading Standards for Informational Text – RSIT (Standard Area, Grade Level, Standard #)				
11–12.1. 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.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.2. 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.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
ENGLISH LANGUAGE ARTS				
Reading Standards for Informational Text – RSIT (Standard Area, Grade Level, Standard #) *(continued)*				
11–12.3. 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, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0,D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.4. 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.)	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
Reading Standards for Literacy in History/Social Studies – RHSS (Standard Area, Grade Level, Standard #)				
11–12.3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledgement where the text leaves matters uncertain.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A10.0, A12.0	B1.0, B4.0, B5.0, B6.0, B11.0, B12.0	C1.0, C5.0, C6.0, C9.0, C12.0	D1.0, D4.0, D5.0, D11.0, D12.0
Reading Standards for Literacy in Science and Technical Subjects – RLST (Standard Area, Grade Level, Standard #)				
11–12.2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.	A9.0, A11.0, A12.0	B1.0, B2.0, B3.0, B7.0, B9.0, B10.0, B12.0	C1.0, C2.0, C3.0, C4.0, C8.0, C10.0	D2.0, D3.0, D4.0, D6.0, D7.0,D10.0
11–12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.	A9.0, A11.0, A12.0	B1.0, B2.0, B3.0, B7.0, B9.0, B10.0, B12.0	C1.0, C2.0, C3.0, C4.0, C8.0, C10.0	D2.0, D3.0, D4.0, D6.0, D7.0,D10.0
11–12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.	A9.0, A11.0, A12.0	B1.0, B2.0, B3.0, B7.0, B9.0, B10.0, B12.0	C1.0, C2.0, C3.0, C4.0, C8.0, C10.0	D2.0, D3.0, D4.0, D6.0, D7.0,D10.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Reading Standards for Literacy in Science and Technical Subjects – RLST (Standard Area, Grade Level, Standard #) *(continued)*				
11–12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	A9.0, A11.0, A12.0	B1.0, B2.0, B3.0, B7.0, B9.0, B10.0, B12.0	C1.0, C2.0, C3.0, C4.0, C8.0, C10.0	D2.0, D3.0, D4.0, D6.0, D7.0, D10.0
Writing Standards – WS (Standard Area, Grade Level, Standard #)				
11–12.1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented. f. Use specific rhetorical devices to support assertions (e.g., appeal to logic through reasoning; appeal to emotion or ethical belief; relate a personal anecdote, case study, or analogy).	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
Writing Standards – WS (Standard Area, Grade Level, Standard #)	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Writing Standards – WS (Standard Area, Grade Level, Standard #) *(continued)*				
11–12.2. 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, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
a. Introduce a topic or thesis statement; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.				
b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.				
c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.				
d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.				
e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.				
f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).				
11–12.3. Write narratives to develop real or imaged experiences or events using effective technique, well–chosen details, and well–structured event sequences.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.4. Produce clear and coherent writing in which the development, orga–nization, 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, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
WS (Standard Area, Grade Level, Standard #)	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Writing Standards – WS (Standard Area, Grade Level, Standard #) *(continued)*				
11–12.5. 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, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.6. 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, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.7. 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, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.9. 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, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
11–12.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C6.0, C7.0, C8.0, C9.0, C10.0, C11.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D8.0, D9.0, D10.0, D11.0, D12.0
Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects – WHSST				
11–12.1. Write arguments focused on discipline-specific content.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C7.0, C8.0, C9.0, C10.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D10.0, D11.0, D12.0
11–12.2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.0	B1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C7.0, C8.0, C9.0, C10.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D10.0, D11.0, D12.0

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects – WHSST *(continued)*				
11–12.8. 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 specific 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.	A1.0, A2.0, A3.0, A4.0, A5.0, A6.0, A7.0, A8.0, A9.0, A10.0, A11.0, A12.	AB1.0, B2.0, B3.0, B4.0, B5.0, B6.0, B7.0, B8.0, B9.0, B10.0, B11.0, B12.0	C1.0, C2.0, C3.0, C4.0, C5.0, C7.0, C8.0, C9.0, C10.0, C12.0	D1.0, D2.0, D3.0, D4.0, D5.0, D6.0, D7.0, D10.0,D11.0, D12.0
MATHEMATICS				
Algebra – A-SSE – Seeing Structure in Expressions				
Write expressions in equivalent forms to solve problems				
3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. a. Factor a quadratic expression to reveal the zeros of the function it defines. b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines. c. Use the properties of exponents to transform expressions for exponential functions. For example the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} = 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%. d. Prove simple laws of logarithms. (CA Standard Algebra II – 11.0) e. Use the definition of logarithms to translate between logarithms in any base. (CA Standard Algebra II – 13.0) f. Understand and use the properties of logarithms to simplify logarithmic numeric expressions and to identify their approximate values. (CA Standard Algebra II – 14.0)	A3.0, A4.0	B5.0, B10.0, B11.0	C1.0, C2.0, C3.0	D2.0, D3.0
4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.	A2.0	B5.0, B11.0	C1.0, C2.0, C3.0	D2.0, D3.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Algebra – A-CED – Creating Equations				
Create equations that describe numbers or relationships				
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)	A5.0, A7.0	B7.0	C12.0	D5.0
2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	A5.0, A7.0, A9.0	B5.0	C8.0	D6.0
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.	A5.0, A7.0, A9.0	B5.0, B6.0	C8.0	D6.0
Algebra – A-REI – Reasoning with Equations and Inequalities				
Understand solving equations as a process of reasoning and explain the reasoning				
2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	A5.0	B5.0	C5.0	D5.0
Solve equations and inequalities in one variable				
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)	A1.0	B9.0, B11.0, B12.0	C5.0	
Solve systems of equations				
5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.		B2.0		
6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.		B2.0		

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Functions – F–IF – Interpreting Functions				
Interpret functions that arise in applications in terms of the context				
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.		B11.0, B12.0		
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.		B11.0, B12.0		
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.		B11.0, B12.0		
Functions – F–BF – Building Functions				
Build a function that models a relationship between two quantities				
1. Write a function that describes a relationship between two quantities. *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.* b. Combine standard function types using arithmetic operations.		B6.0, B7.0		
2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.		B6.0		
Functions – F–LE – Linear, Quadratic, and Exponential Models				
2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input–output pairs (include reading these from a table).			C6.0	
Geometry – G–C – Circles				
Understand and apply theorems about circles				
1. Prove that all circles are similar.	A5.0, A8.0		C10.0	

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Geometry – G–CO – Congruence				
Make geometric constructions				
12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, 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.	A4.0		C4.0	
Geometry – G–GMD – Geometric Measurement and Dimensions				
Explain volume formulas and use them to solve problems				
1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.	A8.0, A11.0		C5.0, C10.0	
2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.	A4.0, A8.0, A11.0			
Visualize relationships between two–dimensional and three–dimensional objects				
4. Identify the shapes of two–dimensional cross–sections of three–dimensional objects, and identify three dimensional objects generated by rotations of two-dimensional objects.	A8.0, A11.0		C5.0, C10.0	
5. Determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.	A8.0, A11.0		C5.0, C10.0	
Geometry – G–MG – Modeling with Geometry				
Apply geometric concepts in modeling situations				
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.	A1.0, A5.0, A6.0, A7.0, A8.0, A9.0, A12.0	B8.0	C2.0, C12.0	
2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).	A1.0, A5.0, A6.0, A7.0, A8.0, A9.0, A12.0	B3.0, B8.0	C2.0, C12.0	D2.0, D6.0
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)	A1.0, A5.0, A6.0, A7.0, A8.0, A9.0, A12.0	B3.0	C2.0, C12.0	D3.0

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES

	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Number and Quantities – N–Q – Quantities				
Reason quantitatively and use units to solve problems				
1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	A7.0, A8.0, A9.0	B8.0, B9.0	C5.0, C6.0, C11.0, C12.0	D2.0, D3.0, D4.0, D5.0
2. Define appropriate quantities for the purpose of descriptive modeling.	A2.0, A4.0, A6.0, A9.0, A10.0, A11.0	B5.0, B6.0	C6.0, C8.0, C9.0, C10.0	D7.0, D9.0, D10.0
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	A3.0	B2.0, B8.0, B9.0	C2.0, C5.0	D1.0, D2.0, D3.0
Statistics and Probability – S–IC – Making Inferences and Justifying Conclusions				
Understand and evaluate random processes underlying statistical experiments				
1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	A1.0, A5.0, A12.0	B7.0, B8.0, B10.0	C1.0	D1.0
Make inferences and justify conclusions from sample surveys, experiments, and observational studies				
3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.	A5.0	B7.0, B10.0, B11.0	C2.0, C5.0, C7.0, C9.0	D5.0, D12.0
6. Evaluate reports based on data.	A5.0, A8.0, A11.0	B7.0, B10.0, B11.0	C2.0, C5.0, C7.0, C9.0	D5.0, D12.0
Statistics and Probability – S–ID – Interpreting Categorical and Quantitative Data				
Summarize, represent, and interpret data on a single count or measurement variable				
1. Represent data with plots on the real number line (dot plots, histograms, and box plots).	A1.0, A5.0, A6.0	B2.0, B7.0, B12.0	C5.0, C6.0, C7.0, C9.0, C10.0, C12.0	D3.0, D5.0, D6.0, D7.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	**B.** Consumer Services	**C.** Education	**D.** Family and Human Services
Statistics and Probability – S–ID – Interpreting Categorical and Quantitative Data *(continued)*				
Summarize, represent, and interpret data on two categorical and quantitative variables				
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.				
a. 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.	A5.0, A6.0, A7.0, A8.0, A10.0	B2.0, B7.0, B12.0	C5.0, C6.0, C7.0, C9.0, C10.0, C12.0	D3.0, D5.0, D6.0, D7.0
b. Informally assess the fit of a function by plotting and analyzing residuals.				
Interpret linear models				
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, A10.0	B2.0, B7.0, B12.0	C5.0, C6.0, C7.0, C9.0, C10.0, C12.0	D3.0, D5.0, D6.0, D7.0
Statistics and Probability – S–CP – Conditional Probability and the Rules of Probability				
Understand independence and conditional probability and use them to interpret data				
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").	A1.0, A2.0, A4.0	B1.0, B2.0, B3.0, B4.0, B6.0, B9.0, B12.0	C1.0, C2.0, C3.0	D1.0, D2.0, D3.0
2. Understand that two events A and 8 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.		B3.0		
3. Understand the conditional probability of A given B as *P(A and 8)/P(8)*, and interpret independence of A and 8 as saying that the conditional probability of A given 8 is the same as the probability of A, and the conditional probability of 8 given A is the same as the probability of 8.		B3.0		

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES

	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Statistics and Probability – S–CP – Conditional Probability and the Rules of Probability *(continued)*				
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.		B3.0		
Use the rules of probability to compute probabilities of compound events in a uniform probability model				
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.	A8.0	B2.0	C5.0, C8.0	
7. Apply the Addition Rule, P(A or B) = P(A) + P(B) - P(A and B), and interpret the answer in terms of the model.		B2.0		
8. (+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in terms of the model.		B2.0		
9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems.		B2.0		
Statistics and Probability – S–MD – Using Probability to Make Decisions				
Calculate expected values and use them to solve problems				
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, A6.0, A8.0, A10.0, A12.0	B1.0, B10.0, B11.0	C6.0, C7.0, C8.0, C10.0	D5.0, D6.0, D8.0, D9.0, D10.0, D11.0
2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.		B1.0		
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.		B1.0		

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Statistics and Probability – S–MD – Using Probability to Make Decisions *(continued)*				
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?		B1.0		
Use probability to evaluate outcomes of decisions				
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.	A1.0, A11.0	B1.0, B11.0	C1.0, C10.0	D1.0, D2.0, D10.0, D12.0
SCIENCE				
Scientific and Engineering Practices – SEP				
1. Asking questions (for science) and defining problems (for engineering)	A2.0, A3.0	B9.0, B10.0	C4.0, C10.0	D3.0, D10.0
2. Developing and using models	A1.0, A8.0	B10.0, B11.0	C12.0	D9.0
3. Planning and carrying out investigations	A8.0, A11.0, A12.0	B6.0, 10.0	C9.0, C11.0, C12.0	D1.0, D2.0, D3.0, D9.0, D10.0, D11.0
4. Analyzing and interpreting data	A1.0, A3.0, A5.0, A6.0, A7.0, A10.0	B11.0	C1.0, C8.0	D6.0, D9.0, D11.0
5. Using mathematics and computational thinking	A2.0	B1.0, B2.0, B8.0, B9.0, B10.0, B11.0	C1.0, C7.0, C10.0	D2.0
7. Engaging in argument from evidence		B11.0		D3.0
8. Obtaining, evaluating, and communicating information	A1.0, A3.0, A5.0, A6.0, A7.0, A12.0	B1.0, B3.0, B8.0	C7.0, C9.0, C11.0	D1.0, D3.0, D4.0, D5.0, D6.0, D7.0, D11.0
Crosscutting Concept – CC				
1. Patterns	A8.0	B10.0	C7.0	D5.0
2. Cause and effect: Mechanism and explanation	A4.0, A5.0, A6.0, A7.0, A9.0	B11.0	C6.0, C7.0, C8.0	D1.0, D2.0, D3.0, D9.0, D10.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Crosscutting Concept – CC *(continued)*				
3. Scale, proportion, and quantity	A1.0, A12.0	B11.0, B12.0	C1.0, C2.0, C6.0	D1.0, D3.0
4. Systems and system models	A4.0, A5.0	B4.0, B9.0, B10.0	C4.0	
5. Energy and matter: Flows, cycles, and conservation	A5.0			
7. Stability and change	A7.0		C6.0, C9.0	
Physical Sciences – PS				
PS1: Matter and Its Interactions				
PS1.A: Structure and Properties of Matter	A4.0, A11.0	B3.0, B4.0	C4.0, C8.0	D6.0, D7.0
PS1.B: Chemical Reactions	A4.0, A3.0 A9.0	B4.0	C4.0, C8.0	D6.0, D7.0
PS2: Motion and Stability: Forces and Interactions				
PS2.A: Forces and Motion	A4.0		C4.0	D7.0
PS2.B: Types of interactions	A4.0	B9.0	C4.0	D7.0
PS2.C: Stability and Instability in Physical Systems	A4.0		C4.0	D7.0
PS3: Energy				
PS3.A: Definitions of Energy	A3.0, A4.0	B1.0, B4.0, B9.0	C4.0	D7.0
PS3.B: Conservation of Energy and Energy Transfer	A3.0, A4.0	B4.0	C4.0	D7.0
PS3.D: Energy in Chemical Processes and Everyday Life	A4.0	B9.0	C3.0	D6.0
PS4: Waves and Their Applications in Technologies for Information Transfer				
PS4.C: Information Technologies and Instrumentation	A11.0	B3.0	C10.0	D10.0
Life Sciences – LS				
LS1: From Molecules to Organisms: Structures and Processes				
LS1.A: Structure and Function			C8.0	D5.0, D6.0
LS1.B: Growth and Development of Organisms	A5.0, A8.0, A9.0, A11.0	B10.0	C8.0	D5.0, D6.0
LS1.D: Information Processing	A5.0, A8.0, A10.0, A11.0	B1.0, B3.0, B8.0, B10.0	C5.0, C6.0, C7.0, C9.0, C10.0	D5.0, D6.0, D8.0, D10.0, D12.0

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Life Sciences – LS *(continued)*				
LS2: Ecosystems: Interactions, Energy, and Dynamics				
LS2.A: Interdependent Relationships in Ecosystems	A5.0, A6.0	B4.0, B7.0, B9.0	C5.0, C6.0, C8.0	D5.0, D6.0, D8.0
LS2.C: Ecosystems Dynamics, Functioning, and Resilience		B4.0, B6.0, B7.0		D6.0
LS2.D: Social Interactions and Group Behavior	A2.0, A5.0, A6.0, A7.0, A10.0	B5.0, B7.0	C2.0, C3.0, C5.0, C6.0, C9.0	D6.0, D8.0, D10.0, D12.0
LS3: Heredity: Inheritance and Variation of Traits				
LS3.A: Inheritance of Traits	A5.0	B6.0	C5.0	D5.0
LS3.B: Variation of Traits	A5.0		C5.0	D5.0
LS4: Biological Evolution: Unity and Diversity				
LS4.B: Natural Selection	A4.0, A5.0, A6.0	B6.0		
LS4.C: Adaptation	A5.0, A7.0, A8.0		C5.0	D5.0, D6.0
LS4.D: Biodiversity and Humans	A2.0, A3.0, A9.0	B10.0	C2.0, C3.0, C4.0, C7.0, C8.0, C12.0	D1.0, D4.0, D5.0, D6.0, D8.0, D10.0, D12.0
Earth and Space Sciences – ESS				
ESS2: Earth's Systems				
ESS2.A: Earth Materials and Systems	A2.0, A3.0, A4.0	B4.0		D7.0
ESS2.B: Plate Tectonics and Large-Scale System Interactions	A2.0, A3.0, A4.0		C4.0	D7.0
ESS2.D: Weather and Climate	A4.0	B3.0	C4.0	D7.0
ESS3: Earth and Human Activity				
ESS3.A: Natural Resources	A2.0, A11.0	B1.0, B4.0, B6.0, B9.0, B10.0	C10.0	
ESS3.B: Natural Hazards		B4.0, B6.0		D7.0
ESS3.C: Human Impacts on Earth Systems		B1.0, B4.0, B6.0, B9.0, B10.0	C2.0, C3.0, C8.0	
ESS3.D: Global Climate Change		B1.0, B4.0, B6.0, B9.0, B10.0		

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES

	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Engineering, Technology, and the Applications of Science – ETS				
ETS1: Engineering Design				
ETS1.A: Defining and Delimiting an Engineering Problem	A2.0, A3.0, A4.0, A5.0, A7.0, A12.0			D5.0, D8.0
ETS1.B: Developing Possible Solutions	A2.0, A3.0, A4.0, A5.0, A7.0, A12.0			D5.0, D8.0
ETS1.C: Optimizing the Design Solution	A2.0, A3.0, A4.0, A5.0, A7.0, A12.0			D5.0, D8.0
ETS2: Links Among Engineering, Technology, Science, and Society				
ETS2.A: Interdependence of Science, Engineering, and Technology		B3.0, B9.0, B10.0	C3.0	
ETS2.B: Influence of Engineering, Technology, and Science on Society and the Natural World	A7.0	B3.0, B6.0, B7.0, B8.0, B10.0	C4.0, C7.0, C8.0, C9.0, C10.0	
HISTORY/SOCIAL SCIENCE				
Principles of American Democracy and Economics – AD				
12.1 Students explain the fundamental principles and moral values of American democracy as expressed in the U.S. Constitution and other essential documents of American democracy.	A1.0	B1.0	C5.0, C6.0	D1.0, D4.0
12.2 Students evaluate and take and defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.	A9.0	B2.0, B5.0, B11.0	C1.0, C5.0, C9.0	D2.0, D4.0, D11.0, D12.0
12.3 Students evaluate and take and defend positions on what the fundamental values and principles of civil society are (i.e., the autonomous sphere of voluntary personal, social, and economic relations that are not part of government), their Interdependence, and the meaning and importance of those values and principles for a free society.	A1.0	B1.0	C1.0	D4.0
12.5 Students summarize landmark U.S. Supreme Court interpretations of the Constitution and its amendments.	A1.0	B.1.0	C1.0	D4.0
12.6 Students evaluate issues regarding campaigns for national, state, and local elective offices.	A1.0	B1.0	C1.0	D12.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Principles of American Democracy and Economics – AD *(continued)*				
12.7 Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.	A3.0, A9.0	B1.0, B4.0, B5.0, B10.0, B12.0	C1.0, C3.0, C7.0	D1.0, D4.0, D7.0
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.	A1.0	B1.0	C1.0	D1.0, D4.0
Principles of Economics – PE				
12.1 Students understand common economic terms and concepts and economic reasoning.				
12.1.1. Examine the causal relationship between scarcity and the need for choices.	A1.0, A2.0, A11.0	B1.0, B5.0, B7.0, B11.0	C1.0, C10.0, C11.0, C12.0	
12.1.2. Explain opportunity cost and marginal benefit and marginal cost.	A1.0, A2.0, A11.0	B1.0		
12.1.3. Identify the difference between monetary and non-monetary incentives and how changes in incentives cause changes in behavior.	A1.0, A2.0, A11.0	B1.0		
12.1.4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.	A1.0, A2.0, A11.0	B1.0		
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).		B12.0		
12.2 Students analyze the elements of America's market economy in a global setting.				
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.	A1.0	B1.0, B5.0	C1.0	D1.0
12.2.2. Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.	A1.0	B1.0	C1.0	D1.0
12.2.3. Explain the roles of property rights, competition, and profit in a market economy.		B1.0	C1.0, C2.0	
12.2.4. Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.		B1.0, B7.0		
12.2.5. Understand the process by which competition among buyers and sellers determines a market price.	A1.0	B1.0, B6.0, B10.0	C1.0	D1.0
12.2.6. Describe the effect of price controls on buyers and sellers.	A1.0	B1.0, B6.0, B8.0	C1.0	D1.0
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.	A1.0	B1.0, B6.0	C1.0	D1.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
Principles of Economics – PE *(continued)*				
12.2.8. Explain the role of profit as the incentive to entrepreneurs in a market economy.	A1.0	B1.0	C1.0	D1.0
12.2.9. Describe the functions of the financial markets.		B1.0		
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.		B1.0, B9.0		
12.3 Students analyze the influence of the federal government on the American economy.				
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.		B3.0, B4.0, B5.0, B12.0	C1.0, C2.0, C3.0, C8.0	D4.0
12.3.3. Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.		B3.0, B4.0, B5.0, B12.0	C1.0, C2.0, C3.0, C8.0	D4.0
12.4 Students analyze the elements of the U.S. labor market in a global setting.	A1.0		C1.0	D2.0
12.5 Students analyze the aggregate economic behavior of the U.S. economy.		B12.0	C1.0	
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.		B6.0	C1.0	D1.0
U.S. History and Geography – US				
11.3 Students analyze the role religion played in the founding of America, its lasting moral, social, and political impacts, and issues regarding religious liberty.		B2.0, B10.0		D1.0
11.8 Students analyze the economic boom and social transformation of post–World War II America.		B1.0, B2.0, B4.0, B5.0, B7.0, B10.0, B12.0		D1.0, D2.0
11.10 Students analyze the development of federal civil rights and voting rights.			C1.0, C5.0	D4.0
11.11 Students analyze the major social problems and domestic policy issues in contemporary American society.	A1.0, A8.0, A9.0, A10.0	B1.0, B4.0, B5.0, B6.0, B7.0, B9.0, B11.0, B12.0	C3.0, C5.0, C7.0, C8.0, C9.0, C10.0, C12.0	D1.0, D8.0, D4.0, D6.0, D11.0, D12.0

Academic Alignment Matrix

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES	PATHWAYS			
	A. Child Development	B. Consumer Services	C. Education	D. Family and Human Services
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.				
10.3.5. Understand the connections among natural resources, entrepreneurship, labor, and capital in an industrial economy.	A1.0	B1.0, B12.0	C1.0	D1.0
10.11 Students analyze the integration of countries into the world economy and the information, technological, and communications revolutions (e.g., television, satellites, computers).	A1.0	B.10, B6.0	C1.0, C6.0	D1.0

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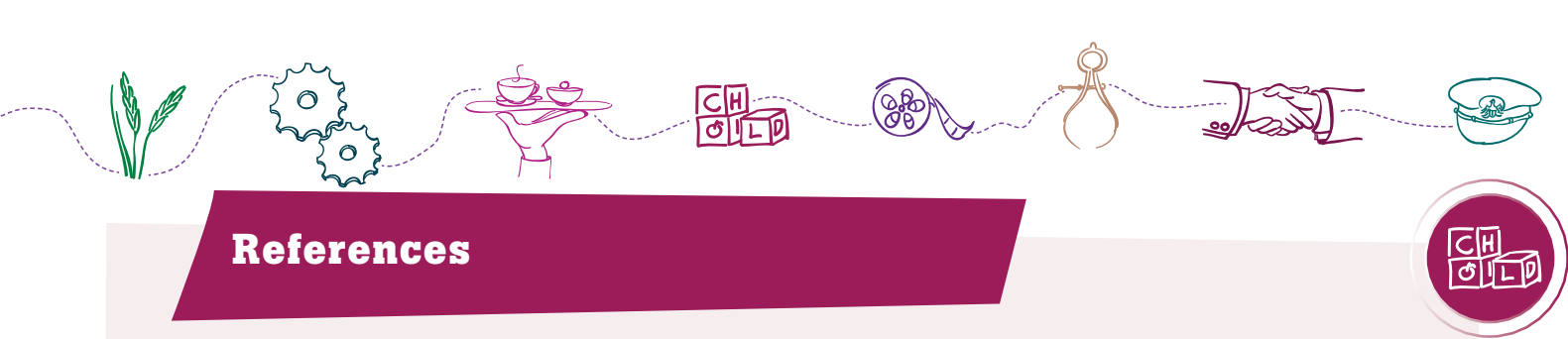**Kent Braithwaite,** Instructor, Conejo Valley Unified School District

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ACT. 2010. *A First Look at the Common Core and College and Career Readiness.* http://www.act.org/research/policymakers/pdf/FirstLook.pdf (accessed December 4, 2012).

American Association of Colleges for Teacher Education (AACTE) and the Partnership for 21st Century Skills. 2010. "Preparing Students for the 21st Century Economy." http://www.edsynergy.org/wp-content/uploads/2011/07/PREPARING-STUDENTS-FOR-THE-21ST-CENTURY-ECONOMY-3.doc (accessed December 4, 2012).

Anderson, Lorin W., David R. Krathwohl, Peter W. Airasian, Kathleen A. Cruikshank, Richard E. Mayer, Paul R. Pintrich, James Rahts, and Merlin C. Wittrock. 2001. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* New York: Pearson.

Association of American Colleges and Universities. 2007. *College Learning for the New Global Century.* http://www.aacu.org/advocacy/leap/documents/GlobalCentury_final.pdf (accessed December 4, 2012).

Association of American Colleges and Universities and Peter D. Hart Research Associates, Inc. 2006. *How Should Colleges Prepare Students to Succeed in Today's Global Economy?* http://www.aacu.org/leap/documents/Re8097abcombined.pdf (accessed December 4, 2012).

California Department of Education. 2006. *California Career Technical Education Model Curriculum Standards, Grades Seven Through Twelve.* http://www.cde.ca.gov/ci/ct/sf/documents/ctestandards.pdf (accessed December 4, 2012).

———. 2007. *Career Technical Education Framework for California Public Schools, Grades Seven Through Twelve.* http://www.cde.ca.gov/ci/ct/sf/documents/cteframework.pdf (accessed December 4, 2012).

———. 2011. California *Education Code,* Table of Contents. http://leginfo.ca.gov/ (accessed December 20, 2012).

California Department of Social Services. 2007. Child Care, Residential, and Family Child Care Licensing. http://www.dss.cahwnet.gov/ord/PG240.htm (accessed December 20, 2012).

California Employment Development Department. 2010. *California's Green Economy: Summary of Survey Results.* http://www.labormarketinfo.edd.ca.gov/contentpub/GreenDigest/CA-Green-Economy-SummarySurveyResults.pdf (accessed December 4, 2012).

Children Now. 2010. *California Report Card 2011–12: Setting the Agenda for Children.* http://www.childrennow.org/uploads/documents/reportcard_2011.pdf [Link no longer valid] (accessed December 4, 2012).

The Conference Board, Partnership for 21st Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management. 2006. *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.* http://www.shrm.org/research/surveyfindings/documents/are they really ready to work survey report.pdf (accessed December 4, 2012).

Conley, David T. 2010. *College and Career Ready: Helping All Students Succeed Beyond High School.* San Francisco: Jossey-Bass.

Conley, David T., Kathryn V. Drummond, Alicia de Gonzalez, Jennifer Rooseboom, and Odile Stout. 2011. *Reaching the Goal: The Applicability and Importance of the Common Core State Standards to College and Career Readiness.* Eugene, OR: Educational Policy Improvement Center. http://www.epiconline.org/publications/documents/ReachingtheGoal–FullReport.pdf (accessed December 4, 2012).

Darling-Hammond, Linda, Ruth Chung Wei, Alethea Andree, Nikole Richardson, and Stelios Orphanos. 2009. *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad.* Palo Alto, CA: National Staff Development Council and the School Redesign Network at Stanford University. http://learningforward.org/docs/pdf/nsdcstudy2009.pdf (accessed December 4, 2012).

Institute of Education Sciences, National Center for Education Statistics. 2012. *The Condition of Education.* http://nces.ed.gov/programs/coe/ (accessed December 4, 2012).

International Center for Leadership in Education. 2012. "Rigor/Relevance Framework." Rexford, NY. http://www.leadered.com/rrr.html [Link no longer valid] (accessed December 4, 2012).

Intersegmental Committee of the Academic Senates (ICAS) of the California Community Colleges. 2002. *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* http://asccc.org/sites/default/files/AcademicLiteracy.pdf (accessed December 4, 2012).

Kober, Nancy, and Diane Stark Rentner. 2011. *States' Progress and Challenges in Implementing Common Core State Standards.* Washington, DC: Center on Education Policy. http://www.cep-dc.org/displayDocument.cfm?DocumentID=343 (accessed December 4, 2012).

Marzano, Robert J., and John S. Kendall. 2007. *The New Taxonomy of Educational Objectives.* 2nd ed. Thousand Oaks, CA: Corwin Press. http://www.marzanoresearch.com/site/default.aspx [Link no longer valid] (accessed December 4, 2012).

MetLife, Inc. 2011. *The MetLife Survey of the American Teacher: Preparing Students for College and Careers.* https://www.metlife.com/assets/cao/contributions/foundation/american-teacher/MetLife_Teacher_Survey_2010.pdf (accessed December 6, 2012).

National Association of State Directors of Career Technical Education Consortium (NASDCTEc). 2011. "CTE and College and Career Ready Standards: Preparing Students for Further Education and Careers." Silver Spring, MD. http://www.careertech.org/ (accessed December 4, 2012).

———. 2012. "Introduction to the Common Career Technical Core."

National Center for Education Statistics. 2008. *Trends in International Mathematics and Science Study 2007.* http://nces.ed.gov/timss/index.asp (accessed December 4, 2012).

National Governors Association, Council of Chief State School Officers, and Achieve, Inc. 2008. *Benchmarking for Success: Ensuring U.S. Students Receive a World-Class Education.* Washington, DC: National Governors Association. http://www.nga.org/files/live/sites/NGA/files/pdf/0812BENCHMARKING.PDF (accessed December 4, 2012).
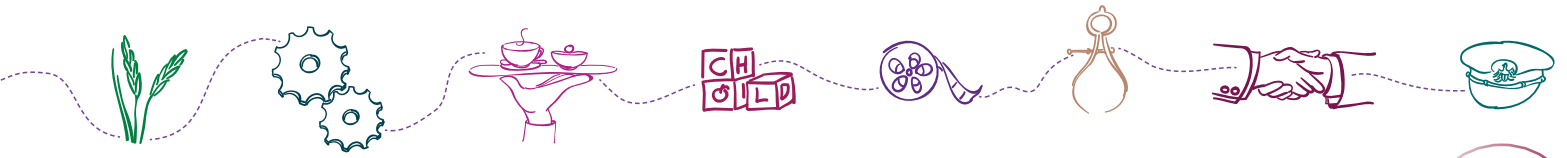
Organisation for Economic Co-operation and Development (OECD). 2011. *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States.* Paris, France. http://www.oecd.org/pisa/46623978.pdf (accessed December 4, 2012).

Owen Wilson, Leslie. 2006. "Dr. Leslie Owen Wilson's Curriculum Pages: Beyond Bloom—A New Version of the Cognitive Taxonomy." Stevens Point, WI: University of Wisconsin–Stevens Point. http://www4.uwsp.edu/education/lwilson/curric/newtaxonomy.htm (accessed December 4, 2012).

Public Broadcasting Service (PBS). 2012. PBS TeacherLine: Professional development for PreK–12 educators. http://www.pbs.org/teacherline (accessed December 4, 2012).

United States Department of Labor, Employment and Training Administration. 2009. "Secretary's Commission on Achieving Necessary Skills." http://wdr.doleta.gov/SCANS/ (accessed December 4, 2012).

WestEd, the California Department of Education, and the California Community Colleges Chancellor's Office. 2008. *2008–2012 California State Plan for Career Technical Education.* http://www.schoolsmovingup.net/cte/downloads/cteplan_122808.pdf (accessed December 5, 2012).