Correlation of

Landscape Design, Installation, and Management,

by

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to

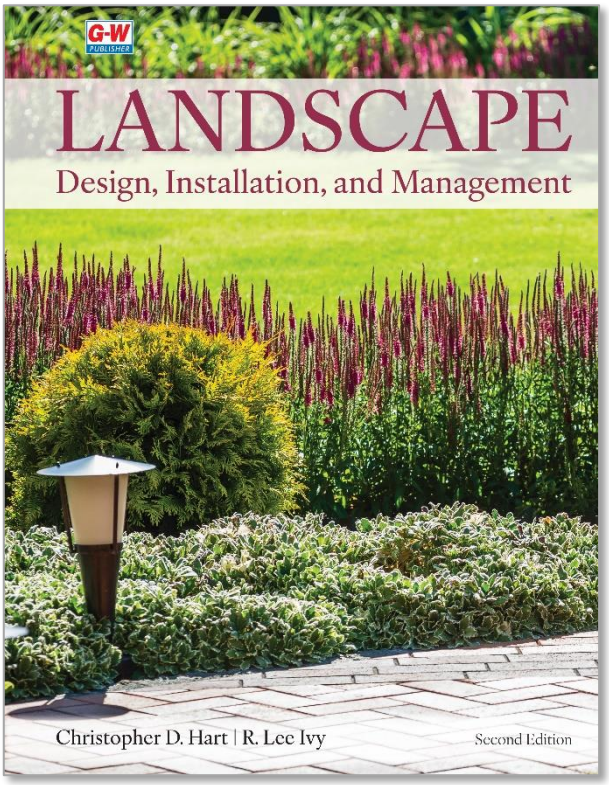
California Career Technical Education Model Curriculum Standards

and

California Standards for Career Ready Practice

Goodheart-Willcox is pleased to provide the following correlations for *Landscape Design, Installation, and Management* to the California CTE Education Model Curriculum Standards in the Ornamental Horticulture Pathway and the California Standards for Career Ready Practice.

The correlation chart below lists the California Standards in the left column and corresponding content from *Landscape Design, Installation, and Management* in the right column.



Standards	Textbook Pages
F. Ornamental Horticulture Pathway	
01.0 Compare and contrast the hierarchical classification of plants.	
01.1 Practice how to classify and identify plants by order, family, genus, and species.	Plant Nomenclature pp212-213 Scientific Classification pp213-217 Figure 9-4, p214 CT #2, #4 p230 SA #3 p231

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01.2 Demonstrate how to identify plants by using a dichotomous key.	Plant Nomenclature pp212-213 Scientific Classification pp213-217 Hands-On Landscaping: Creating a Dichotomous Key p231
01.3 Illustrate how common plant parts are used to classify the plants.	Plant Nomenclature pp212-213 Scientific Classification pp213-217 Hands-On Landscaping: Creating a Dichotomous Key p231 Figure 9-7, p216 SA #2 p231
01.4 Distinguish how to classify and identify plants by using botanical growth habits, landscape uses, and cultural requirements.	Plant Nomenclature pp212-213 Scientific Classification pp213-217 Hands-On Landscaping: Creating a Dichotomous Key p231 CT #4, p230 SA #1, p231
01.5 Identify and select plants for local landscape applications.	Choosing Plant Materials pp126-130 Nursery/Landscape Plant Identification (illustrated glossary), pp255-269 SA #3, p155 CT #3, p230 SA #1, #3, p231
02.0 Summarize plant physiology and growth principles.	
02.1 Understand plant systems, nutrient transportation, structure, and energy storage.	Plant Processes pp224-227 CT #5-7, p230 CT #1, p230
02.2 Diagram the seed's essential parts and explain the functions of each.	Seeds pp223-224 SA #6, p231 SA #8, p254
02.3 Explain how primary, secondary, and trace elements are used in plant growth.	Plant Nutrition pp227-228 CT #7, p230 SA #7, p231
02.4 Experiment with the factors that influence plant growth, including water, nutrients, light, soil, air, and climate.	Substrates pp187-190 Transplants and Soil Types pp203-304 SA #4, p137 SA #1, p209 SA #5, p231 SA #3, p314 SA #1, p563
02.5 Differentiate the tissues seen in a cross section of woody and herbaceous plants.	Plant Parts pp219-224 Figure 9-15 p220
02.6 Explore the factors that affect plant growth.	Water Movement p119 Soil Compaction p122 Physical Hardiness and Life Cycle pp126-127 Water Needs pp127-128 Environmental Adaptation p129 Temperature for Optimum Growth pp129-130 USDA Hardiness Zones pp130-131 AHS Heat Zones p131 Cardinal Directions pp132-133 CT #5-6, p230 SA #5, p231

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03.0 Demonstrate plant propagation techniques.	
03.1 Explain the different forms of sexual and asexual plant reproduction.	Plant Propagation pp191-194 Sexual Propagation pp191-192 Asexual Propagation pp192-194 Reproduction pp226-227 CT #1, #3 p209
03.2 Demonstrate the various techniques for successful plant propagation (e.g., budding, grafting, cuttings, seeds).	Figure 8-1, p186 Plant Propagation pp191-194 Asexual Propagation pp192-294 Pruning, Grafting, and Budding Tools pp92-94
03.3 Utilize and monitor plant reproduction for the development of a saleable product.	STEM Connection: Science in Plant Production—Micropropagation p6 Nursery Production p7 Plant Production p5-8 Nursery Plant Production pp197-203 Container Production pp197-199 Pot-in-Pot Production pp199-200 Field Production pp200-201 Balled-and-Burlapped p201 Bare Root p201 Plant Propagation p191 Reproduction pp226-227
04.0 Develop and implement a plan for basic integrated pest management.	
04.1 Read and interpret pesticide labels and understand safe pesticide management practices.	Chapter 22 Pest Management pp565-603 Pesticide Labels pp583-586 Pesticide Application pp586-590 Storage and Disposal pp589-590 CT #4-5, p594 SA #1, p595
04.2 Research how pesticide regulations and government agencies affect agriculture.	Required Information p583 Pesticide Names pp583-584 EPA Registration Number p584 Active Ingredients and Mode of Action p584 Toxicity p584 Lethal Dose and Lethal Concentration pp584-585 Signal Words p585 Precautionary Statements p585 Restricted Entry Interval p586 Licenses and Certifications p586 CT #1, p594 SA #8, p595

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04.3 Identify common horticultural pests and diseases and methods of controlling them.	Chapter 22 Pest Management pp565-603 Pests, Disorders, and Beneficial Insects Identification (illustrated glossary) pp596-603 Types of Pests pp573-577 Identifying the Plant and Pest p567 Monitoring the Pest p567 Threshold Levels pp567-568 IPM Control Methods pp568-573 Plant Diseases pp577-578 Vertebrates pp578-579 Herbicides pp579-580 Insecticides pp580-581 Pesticide Formulations pp581-582 CT #2, p594 SA #3, p595 SA #8, p595
04.4 Design an integrated approach to solving plant problems.	Using IPM pp566-568 IPM Control Methods pp568-p573 CT #2, p594 SA #2, p595
05.0 Summarize water and soil (media) management practices.	
05.0 Summarize water and soil (media) management practices.	Substrates pp187-190 Transplants and Soil Types pp203-304 CT #2, p137 SA #6, p137
05.1 Explain how basic soil science and water principles affect plant growth.	Substrates pp187-190 Soil Types p203 Transplants and Soil Types pp203-304 Water Movement p204 SA #2, p209
05.2 Illustrate basic irrigation design and installation methods.	Chapter 14 Irrigation Design, Installation, and Management pp345-375 Irrigation System Components pp350-354 Irrigation Systems pp354-357 Irrigation Design pp357-362 Installing the System pp363-368 Maintenance and Repair pp368-370 SA #1, #3, #5, p374
05.3 Prepare and amend soils, implement soil conservation methods, and compare results.	Substrates pp187-190 Amendments p189 CT #2, p137 CT #3, p137 SA #1-2, p209 SA #3, p563
05.4 Research major issues related to water sources and water quality.	Water Sources pp346-349 SA #6, p595

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05.5 Explain the components of soilless media and test the use of those media in various types of containers.	Substrates pp187-190 SA #4, #7, p155 SA #2, p209 SA #9, p533
06.0 Apply ornamental plant nutrition practices.	
06.1 Analyze how primary and secondary nutrients and trace elements affect ornamental plants.	Plant Nutrition pp227-228 SA #7, p231
06.2 Use basic nutrient testing procedures on soil and plant tissue.	Plant Nutrition pp227-228 CT #2, p137 CT #5-7, p230
06.3 Analyze organic and inorganic fertilizers to understand their appropriate uses.	Management Plans pp537-543 SA #7, p209 SA #3, p563
06.4 Read and interpret labels to properly apply fertilizers.	SA #8-9, p137 Management Plans pp537-545 Rates of Application pp542-543 Fertilizer Application Methods pp543-544
07.0 Develop a plan for the selection, installation, and maintenance of turf.	
07.1 Explain the selection and management of landscape and sports field turf.	Athletic Fields and Golf Courses p274 Cool-Season Turfgrasses pp275-280 Warm-Season Turfgrasses pp280-284 Chapter 12 Turfgrass Installation and Management p293 SA #7, p291 SA #3, p314 SA #5, #7, p315
07.2 Demonstrate how to select, install, and maintain a designated turfgrass area.	Chapter 11 Turfgrass Selection pp271-291 Chapter 12 Turfgrass Installation and Management p293 SA #1, p290 SA #1, p314 SA #4, p315 SA 10, p533
07.3 Distinguish how the use of turf benefits the environment.	Types of Lawns pp274-275 Sustainability pp284-285 CT #2, #3, p290 CT #2, p314

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08.0 Employ nursery production principles.	
08.1 Demonstrate the proper use of production facilities and common nursery equipment.	Nursery Production p7 Plant Production pp5-8 Chapter 8 Plant Production pp185-209 Substrates pp187-191 Workplace Readiness Skills: Ornamental Plant Production p190 Plant Propagation pp191-194 American Standard for Nursery Stock pp196-197 Nursery Plant Production pp197-203 Container Production pp197-199 Pot-in-Pot Production pp199-200 Field Production pp200-201 Balled-and-Burlapped p201 Bare Root p201 Transporting Nursery Stock pp202-203
08.2 Use common nursery production practices.	Nursery Production p7 Plant Production pp5-8 Chapter 8 Plant Production pp185-209 Substrates pp187-191 Workplace Readiness Skills: Ornamental Plant Production p190 Plant Propagation pp191-194 American Standard for Nursery Stock pp196-197 Nursery Plant Production pp197-203 Container Production pp197-199 Pot-in-Pot Production pp199-200 Field Production pp200-201 Balled-and-Burlapped p201 Bare Root p201 Transporting Nursery Stock pp202-203
08.3 Demonstrate how to propagate and maintain a horticultural crop to the point of sale.	Plant Propagation pp191-194 Nursery Plant Production pp197-203
08.4 Design a marketing and merchandising strategy to use in nursery production.	Nursery Production p7 American Standard for Nursery Stock pp196-197 Nursery Plant Production pp197-203 Using Demographics pp441-443 Identifying a Target Market p442 Niche Markets pp442-443

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09.0 Demonstrate the proper use of containers and horticultural tools, equipment, and facilities.	
09.0 Demonstrate the proper use of containers and horticultural tools, equipment, and facilities.	Chapter 4 Tools and Equipment pp79-115 Container Production pp197-199 SA #1, p76 CT #4, p105 SA #7, p155
09.1 Use different types of containers and demonstrate how to maintain growing containers in controlled environments.	Container Production pp197-199 Pot-in-Pot Production pp199-200 SA #7, p155
09.2 Operate and maintain selected hand and power equipment safely and appropriately.	Chapter 4 Tools and Equipment pp79-115 Maintenance p81 SA #1, p76 CT #1, p105 SA #5, p105
09.3 Select proper tools for specific horticultural jobs.	Chapter 4 Tools and Equipment pp79-115 Measuring Devices pp82-84 Leveling Tools pp84-85 Handheld Impact Tools pp85-86 Digging and Planting Tools pp86-89 Raking and Scraping Tools pp89-90 Material Handling Tools pp90-91 Pruning, Grafting, and Budding Tools pp92-94 Tools for Sharpening Blades pp94-95 Landscaping Power Equipment 96-99 Large Equipment pp99-101 Transportation and Hauling Equipment pp101-102 Nursery and Landscaping Equipment and Supplies Identification pp106-115 SA #3, #4, p105
09.4 Install landscape components and electrical, land, and water features.	The Installation Process pp513-519 Installing the System pp363-368 Hardscape Installation pp394-398 SA #1-7, pp343 CT #3, pp343
10.0 Understand basic landscape planning, design, construction, and maintenance.	
10.1 Utilize terms associated with landscape and design in appropriate context.	Landscape Design pp11-14 Principles and Elements of Design p139 Glossary p618
10.2 Produce a residential design, including how to render design to scale using design technology and principles.	Choosing Plant Materials pp126-130 Principles pp140-145 Site Considerations pp150-152 SA #1, #2, p183 SA #1, #2, #5, p254

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10.3 Use proper landscape planting and maintenance practices.	Planting Trees and Shrubs pp519-524 Management vs. Maintenance p536 Landscape Maintenance pp15-16 Planting Trees and Shrubs p519 Planting Bedding Plants and Vines p524 CT #4, p105 CT #2, p254 SA #6, p315 SA #2, p485
10.4 Prune ornamental shrubs, trees, and fruit trees.	Trees pp234-238 Shrubs pp238-240 SA #4, p563 CT #1, p563
10.5 Produce clear and concise landscape business contracts.	Gathering Information pp460-462 Project Estimates and Bids p466 Quotes and Bids pp477-486 Bid Solicitation pp494-498 Quotes and Business Contracts pp498-502 SA #2, p507
11.0 Understand basic floral design principles. N/A	
California Standards for Career Ready Practice	
1.Apply appropriate technical skills and academic knowledge.	Time Management p37 Decision Making and Problem Solving p38
2.Communicate clearly, effectively, and with reason.	Communicating in the Workplace pp39-41
3.Develop an education and career plan aligned with personal goals.	Research and Education pp8-10 Setting Goals pp28-30 Vision and Mission Statements p30 Setting Goals pp440-441
4.Apply technology to enhance productivity.	Performing a Soil Analysis p121 Principles and Elements of Design p139 Creating the Design p405 Productivity of Equipment p470 Logistics p559
5. Utilize critical thinking to make sense of problems and persevere in solving them.	Decision Making and Problem Solving p38 **Note:** Critical Thinking questions and activities are at the end of each chapter.

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6. Practice personal health and understand financial literacy.	Health and Hygiene p36 Occupational Safety p51 Personal Protective Equipment pp55-58 Accounting p445 Budgets and Costs p446
7. Act as a responsible citizen in the workplace and the community.	Community Presence p453
8. Model integrity, ethical leadership, and effective management.	Professional Behavior p38 Ethical Workplace Behavior p39 Using Social Media Responsibly p40 Interpersonal Skills pp41-42 Leadership pp42-44 Conflict Management pp44-45
9. Work productively in teams while integrating cultural and global competence.	Leadership pp42-44 Belonging to Organizations p44 Business Structures pp432-436 Setting Goals pp440-441 Workplace Readiness Skills: Enhancing Your Observation Abilities p325 SA #1, p25 SA #1, p155 SA #3, #7, p209
10. Demonstrate creativity and innovation.	Landscape Design pp11-14 Creating the Design p405 SA #2-3, p183 SA #3, p403 SA #7, p429
11.Employ valid and reliable research strategies.	Research and Education pp8-10 Water Sources pp346-349 SA #1, p25 SA #7, p209 SA #1, p485 SA #1, p533 SA #9, p533
12.Understand the environmental, social, and economic impacts of decisions.	Decision Making and Problem Solving p38 Impacts of the Landscaping Industry pp4-18 The Green Industry p5

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