

# Nursery/Landscape

Academic Content Area: Environment and Ecology – Grade 10

## Career Development Event Content

1. Demonstrate a knowledge, understanding and ability in the following:
  - Plant Materials – identify nursery and landscape plants materials and turf grasses
  - Plant Disorders – identify plant conditions due to physical, chemical or mechanical injury
  - Cultural Practices – propagation, growth requirements and techniques, harvest, marketing
  - Design and Construction – principles and techniques of landscape design and construction
  - Supplies and Equipment – identify, select, use and maintain supplies and equipment
  - Safety – safety practices in nursery and landscape operations
  - Interpersonal Relations – oral and written business communication
  - Marketing – marketing principles and proper sales and service skills
  - Record and Reports – prepare accurate/legible records and interpret business documents

## Related Academic Standards/Anchors

Objective 1: **4.1.10.B,D; 4.3.10.C; 4.5.10.A,B,C; 4.6.10.B,C; 4.9.10.A**

## Connecting Examples: CDE Objectives and Standards/Anchors

Ex. 1 – Related to 4.3.10.C: Explain biological diversity as an indicator of a healthy environment. Sub-point explain species diversity. **Students are required to use their knowledge of nursery and landscape species diversity to complete the components of the career development event.**

Ex. 2 – Related to 4.5.10.B: Analyze health benefits and risks associated with integrated pest management. Sub-point, identify the health risks associated with chemicals used in common pesticides. **As a component in nurseries and the landscaping industry, students are required to have an understanding of pesticides needed and the health risks associated with such pesticides.**

Ex. 3 – Related to 4.9.10.A: Explain why environmental laws and regulations are developed and enacted. Sub-point, identify local and state environmental regulations and their impact on environmental health. **Students must have a general knowledge of local and state environmental regulations they may encounter in the nursery/landscape industry.**

# Nursery/Landscape

Academic Content Area: Mathematics – Grade 11

## Career Development Event Content

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  - Plant Materials – identify nursery and landscape plants materials and turf grasses
  - Plant Disorders – identify plant conditions due to physical, chemical or mechanical injury
  - Cultural Practices – propagation, growth requirements and techniques, harvest, marketing
  - Design and Construction – principles and techniques of landscape design and construction
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  - Safety – safety practices in nursery and landscape operations
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## Related Academic Standards/Anchors

Objective 1: 2.2.11.A,B,E; 2.3.11.A,B,C; 2.5.11.A,B,C

## Connecting Examples: CDE Objectives and Standards/Anchors

Ex. 1 – Related to 2.2.11.A: Develop and use computation concepts, operations and procedures with real numbers in problem-solving situations. **Students involved in the nursery/landscape career development event will use computation concepts, operations and procedures to solve problems during the general knowledge exam, landscape drawing practicum, landscape estimation practicum, assessment and solution of long problems, written customer assistance practicum and team activity. For example, the pool volume is 860 gallons of water when completely filled. How long will it take the 40 GPM pump to totally recycle all the water through the waterfall in the filled pool?**

Ex. 2 – Related to 2.5.11.A: Select and use appropriate mathematical concepts and techniques from different areas of mathematics and apply them to solving non-routine and multi-step problems. **Students must be able to identify the needed and appropriate mathematical concepts and techniques needed to solve non-routine and multi-step problems. For example, the client has requested a decorative mulch of bark nuggets under trees number 1, 12 and 24 rather than the shredded bark planned everywhere else. You obtain this mulch in bags that cover 12 square feet at the proper depth. If these tree rings will be 3 feet in diameter, how many bags of mulch do you need?**

# Nursery/Landscape

Academic Content Area: Reading, Writing, Speaking and Listening – Grade 11

## Career Development Event Content

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  - Plant Materials – identify nursery and landscape plants materials and turf grasses
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  - Cultural Practices – propagation, growth requirements and techniques, harvest, marketing
  - Design and Construction – principles and techniques of landscape design and construction
  - Supplies and Equipment – identify, select, use and maintain supplies and equipment
  - Safety – safety practices in nursery and landscape operations
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## Related Academic Standards/Anchors

Objective 1: **1.1.11.A,C,E,F**; **1.2.11.A**; **1.4.11.B,C**; **1.5.11.A,B,C,D,E,F,G**; **1.6.11.A,C,D,E**

## Connecting Examples: CDE Objectives and Standards/Anchors

Ex. 1 – Related to 1.1.11.F: Understand the meaning of and apply key vocabulary across the various subject areas. **Students must have a proficient knowledge and understanding of the vocabulary used within the nursery/landscape industry.**

Ex. 2 – Related to 1.5.11.B: Write using well-developed content appropriate for the topic. Sub-point, employ the most effective format for purpose and audience. **Students are required to develop a problem diagnosis and recommendations for the written customer assistance practicum. Students should choose the most effective format and consider the purpose for their response.**

Ex. 3 – Related to 1.6.11.D: Contribute to discussion. **During the team activity students must exhibit and are evaluated on relevant and clarifying questions, response with relevant information, ability to listen and acknowledge the contributions of others, adjust tone and involvement to encourage equitable participation, and facilitate total group participation in one way or another.**

# Nursery/Landscape

Academic Content Area: Science and Technology – Grade 10

## Career Development Event Content

1. Demonstrate a knowledge, understanding and ability in the following:
  - Plant Materials – identify nursery and landscape plants materials and turf grasses
  - Plant Disorders – identify plant conditions due to physical, chemical or mechanical injury
  - Cultural Practices – propagation, growth requirements and techniques, harvest, marketing
  - Design and Construction – principles and techniques of landscape design and construction
  - Supplies and Equipment – identify, select, use and maintain supplies and equipment
  - Safety – safety practices in nursery and landscape operations
  - Interpersonal Relations – oral and written business communication
  - Marketing – marketing principles and proper sales and service skills
  - Record and Reports – prepare accurate/legible records and interpret business documents

## Related Academic Standards/Anchors

Objectives 1: **3.1.10.A,D; 3.2.10.B,D; 3.4.10.C; 3.5.10.A,B; 3.6.10.A; 3.7.10.A,B**

## Connecting Examples: CDE Objectives and Standards/Anchors

**Ex. 1 – Related to 3.1.10.D: Apply scale as a way of relating concepts and ideas to one another by some measure. Sub-points, apply dimensional analysis and scale as a ratio and convert one scale to another.** Students are required to complete a landscape drawing and estimation practicum. Within the practicum students must convert scales and ratios. For example, draw the plan using  $1/8" = 1"$  scale and in the photocopy the drawing is slightly stretched (purposely) (about 1% or 0.1" for every 10"). Keep measurements on the plan to the closest  $1/2$  foot scale equivalency.

Ex. 2 – Related to 3.5.10.B: Explain sources and uses of earth resources. Sub-point, evaluate land use (e.g., agricultural, recreational, residential, commercial) in Pennsylvania based upon soil characteristics. **Students must understand soil profiles and characteristics to be able to select appropriate land for appropriate usage.**

Ex. 3 – Related to 3.7.10.A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions. **Students must have adequate knowledge, understanding of and ability to use and identify tools and equipment used in the nursery/landscape industry. For example, understanding of small gasoline engine parts and theory are required.**