

Land Use and Management

Academic Content Area: Environment and Ecology – Grade 10

Career Development Event Content

1. Evaluate features of the land and soil which best describes the physical feature.
2. Evaluation of soil properties will help determine capability class and subclass.
3. Identify needed land use and conservation practice alternatives.
4. Identify hazards for special usage of the land.

Related Academic Standards/Anchors

Objectives 1-4: **4.1.10.A,B,D; 4.4.10.B,C; 4.8.10.C**

Connecting Examples: CDE Objectives and Standards/Anchors

Ex. 1 – Related to 4.4.10.B: Assess the influence of agricultural science on farming practices. **Students must be able to compare the practices of no-till farming to traditional soil preparation and analyze and explain the various practices of nutrient management on the farm through evaluation of land and soil features, capability classes, land use and conservation practices and special usage of land.**

Ex. 2 – Related to 4.8.10.C: Analyze how human activities may cause changes in an ecosystem. **Students must be able to use their observations of the designated land to analyze and evaluate changes in the environment that are the result of human activity and be able to compare and contrast the environmental effects of different industrial strategies for the plot of land they are observing.**

Land Use and Management

Academic Content Area: Mathematics – Grade 11

Career Development Event Content

1. Evaluate features of the land and soil which best describes the physical feature.
2. Evaluation of soil properties will help determine capability class and subclass.
3. Identify needed land use and conservation practice alternatives.
4. Identify hazards for special usage of the land.

Related Academic Standards/Anchors

Objectives 1-4: 2.1.11.A; 2.2.11.A,B; 2.3.11.A,B,C

Connecting Examples: CDE Objectives and Standards/Anchors

Ex. 1 – Related to 2.2.11.B: Use estimation to solve problems for which an exact answer is not needed. **Students will need to measure the various soil layers using their selected way. Soil layers do not have exact lines and may require and estimation.**

Ex. 2 – Related to 2.3.11.A: Select and use appropriate units and tools to measure to the degree of accuracy required in particular measurements situations. **Students must be able to measure the depth of various soil type layers, depth to mottling and percent slope on the land.**

Ex. 3 – Related to 2.3.11.B: Measure and compare angles in degrees and radians. **Students must calculate the percent slope on the land.**

Land Use and Management

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

Career Development Event Content

1. Evaluate features of the land and soil which best describes the physical feature.
2. Evaluation of soil properties will help determine capability class and subclass.
3. Identify needed land use and conservation practice alternatives.
4. Identify hazards for special usage of the land.

Related Academic Standards/Anchors

Objectives 1-4: 1.1.11.A,C,F; 1.2.11.A; 1.6.11.A

Connecting Examples: CDE Objectives and Standards/Anchors

Ex. 1 – Related to 1.1.11.A: Locate various texts, media and traditional resources for assigned and independent projects before reading. **Students must be able to locate and organize/utilize resources related to land use and management for advancement of their knowledge and preparation for the career development event.**

Ex. 2 – Related to 1.2.11.A: Read and understand essential content of informational texts and documents in all academic areas. Sub-point, distinguish between essential and nonessential information across a variety of sources, identifying the use of proper references or authorities and propaganda techniques where present. **Students must be able to distinguish between essential and nonessential information during their preparations for the career development event for more effective preparation.**

Land Use and Management

Academic Content Area: Science and Technology – Grade 10

Career Development Event Content

1. Evaluate features of the land and soil which best describes the physical feature.
2. Evaluation of soil properties will help determine capability class and subclass.
3. Identify needed land use and conservation practice alternatives.
4. Identify hazards for special usage of the land.

Related Academic Standards/Anchors

Objectives 1-4: **3.1.10.D; 3.5.10.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. Students must apply dimensional analysis and scale as a ratio and convert one scale to another by means of plot size and related land surrounding the plot in addition to slope.

Ex. 2 – Related to 3.5.10.A: Relate earth features and processes that change the earth. Sub-point, describe and identify major types of rocks and minerals. Students must be able to identify major types of rocks and minerals for determination of soil and land features and capability classes.

Ex. 3 – Related to 3.5.10.B: Explain sources and uses of earth resources. Sub-point, evaluate land use (e.g., agriculture, recreational, residential, commercial) in Pennsylvania based upon soil characteristics. **This is precisely the purpose of this career development event. Part IV of the event requires the students to determine land usage based upon soil characteristics.**