Unit 3: Landscape Installation

Content Area: **CTE**
Course(s): **Horticulture III**
Time Period: **March**
Length: **30**
Status: **Published**

Unit Overview

Transferring your thoughts to paper so other people can see your design is important.

A landscape plan is used to sell the project to the client, to order necessary

construction materials, and as a guide for installation of hardscape and plant

materials. Therefore, the plan must be easy to understand. Placing the plants on

paper is done by following some basic steps.

Enduring Understandings

A landscape plan is a design of the property to be landscaped. The plan is produced by a landscape architect, designer, or landscaper to pull together all of the various design features of a site. Learning to use a landscape plan is essential to installing a proper design since it works like a map to provide the information needed about plant placement, hardscapes, and utilities.

Essential Questions

- **What is the purpose of the landscape?**
    - Is it for aesthetic appeal, recreation, privacy, or environmental benefits?
- **What is the local climate?**
    - How will temperature, rainfall, and sunlight impact plant selection and installation?
- **What is the soil condition?**
    - Is it sandy, clay, or loamy? What amendments might be needed for optimal plant health?
- **What are the site's existing features?**
    - Are there trees, slopes, or structures that will influence design and plant choice?
- **What are the local zoning and landscaping regulations?**
    - Are there restrictions on plant types, heights, or structures?

- **What is the budget for the project?**
    - How much can be allocated to plants, materials, labor, and maintenance?
- **What maintenance will be required?**
    - How much time and resources can be dedicated to upkeep after installation?
- **What are the desired plant and material selections?**
    - Are there specific species that fit the vision, and are they appropriate for the environment?
- **How will water be managed?**
    - Is there a need for irrigation, drainage solutions, or sustainable practices like rain gardens?
- **What is the timeline for the installation?**
    - When will the project start, and what are the phases of installation?
- **Who will be involved in the installation?**
    - Will professionals be hired, or is it a DIY project?
- **How will the landscape evolve over time?**
    - What is the long-term vision for growth, changes, and sustainability?
- **What wildlife considerations should be made?**
    - How will the landscape affect local wildlife, and are there any plants that attract or repel certain species?
- **How can the landscape support biodiversity?**
    - Are there opportunities to include native plants or create habitats?
- **What are the desired seasonal impacts?**
    - How will the landscape look throughout the year, and how can seasonal interest be created?

- How is a landscape plan interpreted?

Lesson Titles/Objectives

- Installing and Maintaing Irrigation Systems
- Installing Fences and Walls
- Installing Patios, Walk, and Decks
- Installing Woody landscape Pants, Groundcovers, Perennials, and Annuals

- Preparing the landscape Site

Standards/Indicators/Student Learning Objectives (SLOs)

- Determine irrigation requirements
- Determine water capacity and pressure
- Select sprinklers and establish spacing ranges
- Establish sprinkler circuits and install valves
- Locate controllers and size wiring
- Prepare the final irrigation plan
- Interpret a landscape plan
- Discuss the preparation of the landscape site
- Compare the types of materials used in paving
- Explain how to select patio materials
- Describe how to install a walkway or patio
- Discuss proper deck installation procedures
- Explain the reasons for installing a fence or wall
- Identify the different parts of a fence
- Discuss how to properly install a fence
- Describe the different materials used to build a retaining wall
- Explain how to install a retaining wall

9.3.12.AG	Agriculture, Food & Natural Resources
9.3.12.AG.1	Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster.
9.3.12.AG.2	Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy.
9.3.12.AG-ANI.6	Classify, evaluate and select animals based on anatomical and physiological characteristics.
9.3.12.AG-ANI.7	Apply principles of effective animal health care.
9.3.12.AG-BIZ	Agribusiness Systems
9.3.12.AG-BIZ.4	Develop a business plan for an AFNR business.
9.3.12.AG-FD.4	Explain the scope of the food industry and the historical and current developments of food products and processing.
9.3.12.AG-NR	Natural Resources Systems
9.3.12.AG-BIZ.2	Use record keeping to accomplish AFNR business objectives, manage budgets and comply with laws and regulations.

Career Readiness, Life Literacies, & Key Skills

TECH.9.4.12.CI.1	Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
TECH.9.4.12.CI.2	Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
TECH.9.4.12.CI.3	Investigate new challenges and opportunities for personal growth, advancement, and

	transition (e.g., 2.1.12.PGD.1).
TECH.9.4.12.CT.1	Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).

Inter-Disciplinary Connections

- 10. English Language Arts
- 10.8.12. Science and Technical Subjects: 9-12
- 10.8.12.SC12. Science and Technical Subjects: 11-12
- 10.8.12.SC12.3. 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.

Diversity

Asian American Islander Mandate

Topic: Equitable farming programs and practices

- **Masako Ikegami and Gloria Lau:** These two landscape architects are actively working to increase diversity and representation within the field. They've been involved in various initiatives and projects, and their work often highlights the intersection of urban landscape, resilient infrastructure, and equitable design.
- **Other Landscape Architects and Designers:** Many Asian American landscape architects and designers are sharing their work on platforms like Instagram and LinkedIn. While they might not have a huge following specifically as "influencers," their work often inspires and informs others in the field.

Materials Used: https://www.farmers.gov/your-business/lgbtq

Addresses the Following Component of the Mandate:

Items

Add List Item

0x	Economic
0x	Political
0x	Social

Holocaust Mandate

Created By: DePasquale, Michele, 8/4/2022 10:01:57 AM, Type: , Published

Edit Content

Actions

Topic: Gender equality and sustainable agriculture

Materials Used: https://www.ifpri.org/blog/achieving-agricultural-sustainability-depends-gender-equality

Addresses the Following Component of the Mandate:

Items

Add List Item

0x	Bias
0x	Bigotry
0x	Bullying
0x	Holocaust Studies
0x	Prejudice

Asian American Pacific Islander Mandate

Created By: DePasquale, Michele, 8/4/2022 10:02:19 AM, Type: , Published

Edit Content

Actions

Topic: Programs and opportunities for AAPI individuals in agriculture

Materials Used: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/me/about/outreach/sep/?cid=nrcs141p2_003242

Holocaust Mandate

Topic: Gender equality and sustainable agriculture

Materials Used: https://www.ifpri.org/blog/achieving-agricultural-sustainability-depends-gender-equality

Instructional Strategies, Learning Activities, and Levels of Blooms/DOK

- PPT Presentation
- Small group google slide presentations
- Philadelphia Flower Show
- NJ State Horticultural Expo
- Student Compete in (CDE)
- Greenhouse Aquaponic
- Greenhouse Hydroponics

- acronyms
- conferencing
- cooperative learning
- Create and Install pathways
- Designing Residential and commercial Landscapes
- Field Trips
- inquiry based learning
- Install Landscape Design
- Landscape Design Presentation
- Mulching Flower beds
- Problem Solving
- Propagating plants
- Research Projects

Modifications

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HE.K-12.2.2.1	Demonstrate responsible personal conduct such as working cooperatively with others as well as following rules and routines.
HE.K-12.2.2.5	Demonstrate appropriate social interaction in a variety of settings.
SCI.K-12.5.4	All students will develop an understanding of technology as an application of scientific principles.
SCI.K-12.5.4.1	Recognize tools and their functions (e.g., know that a scale is used to measure weight).
SCI.K-12.5.4.2	Select the most appropriate tool to complete a task.
SCI.K-12.5.4.3	Utilize tools for everyday purposes (e.g., use a thermometer to determine temperature).
SCI.K-12.5.6.2	Demonstrate appropriate care (cleaning, nourishing, maintaining) of living things.
	Science and technology are interdependent. Technology can assist students in learning

how to complete everyday tasks. Students need to know the range of technological tools available and how to use them to improve the quality of life and enhance independence.

ELL Modifications

- Choice of test format (multiple-choice, essay, true-false)
- Continue practicing vocabulary
- Provide study guides prior to tests
- Read directions to the student
- Read test passages aloud (for comprehension assessment)
- Vary test formats

504 and IEP Accommodations & Modifications

- Allow for redos/retakes
- Assign fewer problems at one time (e.g., assign only odds or evens)
- Differentiated center-based small group instruction
- Extra time on assessments
- Highlight key directions
- If a manipulative is used during instruction, allow its use on a test
- Opportunities for cooperative partner work
- Provide reteach pages if necessary
- Provide several ways to solve a problem if possible
- Provide visual aids and anchor charts
- Test in alternative site
- Tiered lessons and assignments
- Use of a graphic organizer
- Use of concrete materials and objects (manipulatives)
- Use of word processor

Gifted and Talented Modifications

- Alternate assignments/enrichment assignments
- Enrichment projects
- Extension activities
- Higher-level cooperative learning activities
- Pairing direct instruction with coaching to promote self-directed learning
- Provide higher-order questioning and discussion opportunities

- Provide texts at a higher reading level
- Tiered assignments
- Tiered centers

At Risk

- Additional time for assignments
- Adjusted assignment timelines
- Agenda book and checklists
- Answers to be dictated
- Assistance in maintaining uncluttered space
- Books on tape
- Concrete examples
- Extra visual and verbal cues and prompts
- Follow a routine/schedule
- Graphic organizers
- Have students restate information
- No penalty for spelling errors or sloppy handwriting
- Peer or scribe note-taking
- Personalized examples
- Preferential seating
- Provision of notes or outlines
- Reduction of distractions
- Review of directions
- Review sessions
- Space for movement or breaks
- Support auditory presentations with visuals
- Teach time management skills
- Use of a study carrel
- Use of mnemonics
- Varied reinforcement procedures
- Work in progress check

Formative Assessment

- Class Discussion
- Group Work
- Guided Practice

- Oral Response/Questions
- Performance Assessment
- Teacher Observation
- Warm up

Benchmark Assessments

Benchmark Assessments:
Skills-based assessment
Reading response
Writing prompt
Lab practical

Alternative Assessments

Alternative assessments:
Performance tasks
Project-based assignments
Problem-based assignments
Presentations
Reflective pieces
Concept maps
Case-based scenarios
Portfolios

Summative Assessment

- MPA
- Performance Assessment
- Unit Assessment

Resources & Materials

- Teacher's Supplemental Website(My Caert.com)
- Unit Specific Power Point Presentation

- United Streaming (Related Videos

Technology

TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
TECH.8.1.12.A.3	Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.
TECH.8.1.12.A.4	Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.
TECH.8.1.12.A.CS2	Select and use applications effectively and productively.
TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.12.B.CS1	Apply existing knowledge to generate new ideas, products, or processes.
TECH.8.1.12.C.1	Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.
TECH.8.1.12.D	Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.