PATHWAY: Architectural Drawing and Design

COURSE: Architectural Drawing and Design II

UNIT: 6-Site Plans



# INTRODUCTION

#### **Annotation:**

This unit includes lessons on general codes, symbols, and information used in planning site plans. Students will learn what information needs to be included on a site plan. They will draw a site plan using a given plot.

# Grade(s):

	9 <sup>th</sup>
Χ	10 <sup>th</sup>
Χ	11 <sup>th</sup>
Χ	12 <sup>th</sup>

Time: 25 hours

**Author:** Carole Ray

# Additional Author(s):

#### **Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



# FOCUS STANDARDS

#### **GPS Focus Standards:**

ACT-ADDII-1: Students will prepare site plans.

- a. Understand general codes related to site planning.
- b. Draw a site plan for a building with a given plot of land using correct symbols.

#### **GPS Academic Standards:**

SCSh4: Students will use tools and instruments for observing, measuring, and manipulating scientific equipment and materials.

MM1P4: Students will make connections among mathematical ideas and to other disciplines.

ELA9RL5: The student understands and acquires new vocabulary and used it correctly in reading and writing.

## National / Local Standards / Industry / ISTE:

ADDA: Advanced CADD Skills



# **UNDERSTANDINGS & GOALS**

## **Enduring Understandings:**

Site plans must be drawn using the codes set forth by the state and local government.

#### **Essential Questions:**

- What is the importance of learning and using codes set forth by the state and local government?
- Why is it important to know what information is included on a site plan?
- What is the purpose of a site plan?

#### **Knowledge from this Unit:**

- Understand the reason for local codes and standards and why they are different in certain parts of the country.
- Explain the different symbols used on site plans.
- Identify the symbols for plants and vegetation used on site plans.
- Explain what topographical lines show.

#### Skills from this Unit:

- Students will be able to read site plans on blueprints.
- Students will be able to prepare site plans for residential lots.



# ASSESSMENT(S)

**Assessment Method Type:** Select one or more of the following. Please consider the type(s) of differentiated instruction you will be using in the classroom.

	Pre-test Pre-test
Х	Objective assessment - multiple-choice, true-false, etc.
	X_ Quizzes/Tests
	Unit test
	Group project
Х	Individual project
Χ	Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
	<u>x</u> _Self-check rubrics
	Self-check during writing/planning process
	Journal reflections on concepts, personal experiences and impact on one's life
	Reflect on evaluations of work from teachers, business partners, and competition judges
	Academic prompts
	Practice quizzes/tests
	Subjective assessment/Informal observations
	Essay tests
	Observe students working with partners
Χ	Observe students role playing Peer-assessment
	Peer editing & commentary of products/projects/presentations using rubrics
V	<ul><li>x_ Peer editing and/or critiquing</li><li>Dialogue and Discussion</li></ul>
<u>X</u>	Student/teacher conferences
	Student/ teacher conferences Partner and small group discussions
	<u>x</u> Whole group discussions
	Interaction with/feedback from community members/speakers and business partners
	Constructed Responses
	Chart good reading/writing/listening/speaking habits
	Application of skills to real-life situations/scenarios
	Post-test

# Assessment(s) Title:

Test: Site Plan Vocabulary

Individual Project: Draw a Site Plan.

## Assessment(s) Description/Directions:

Draw a site plan for a residence using correct symbols, using instructions provided by the teacher.

## Attachments for Assessment(s):

Test: Site Plan Vocabulary

Rubric: Site Plans



# LEARNING EXPERIENCES

Instructional planning: Include lessons, activities and other learning experiences in this section with a brief description of the activities to ensure student acquisition of the knowledge and skills addressed in the standards. Complete the sequence of instruction for each lesson/task in the unit.

#### **Sequence of Instruction**

1. Identify the Standards. Standards should be posted in the classroom for each lesson.

ACT-ADDII-1: Students will prepare site plans.

- a. Understand general codes related to site planning.
- b. Draw a site plan for a building with a given plot of land using correct symbols.

#### 2. Review Essential Questions.

- What is the importance of learning and using codes set forth by the state and local government?
- Why is it important to know what information is included on a site plan?
- What is the purpose of a site plan?

### 3. Identify and review the unit vocabulary.

Bearing line	Contour interval	Contour lines
Easement	Estimated contours	Landscape plan
Meridian arrow	Plat	Property lines
Setback lines	Site analysis	Site plan

Survey Topography Zoning ordinances

- 4. Discuss building codes related to site planning.
- 5. Draw a site plan for a building using correct symbols.
- 6. Interest approach Mental set

How do codes and standards protect homeowners and their property?

#### Lesson 1: Site Plans

#### Discussion

- 1. Identify the standards.
- 2. Review essential questions: What is the purpose of a site plan? Why is it important to learn and use codes set forth by the state and local government? Why is it important to know what information needs to be included on a site plan?
- 3. Classroom discussion on unit vocabulary (site plans); why are these terms important?

- 4. Working in small groups, have students identify vocabulary embedded in site plans. This will give students a review as well as presenting the information in a different way to reach different types of learners and levels.
- 5. Give guiz on unit vocabulary (site plans).
- 6. Discuss state and local building codes.
- 7. After discussion of codes, terms, and essential questions, have students write about these in complete sentences as a follow-up quiz (optional).
- 8. Review a site plan on a set of blueprints. Go over symbols and all information that needs to be included.
- 9. Give students a site plan. Ask questions for students to answer related to the plan.
- 10. Plan and draw a site plan using correct symbols (information to be provided by instructor).

# **Attachments for Learning Experiences:**

- Site Plan Vocabulary & Definitions
- Test: Site Plan Vocabulary & Key
- Rubric: Site Plans

Notes & Reflections: May include notes to the teacher, pre-requisite knowledge & skills, suggestions, etc.

Check for understanding frequently. Review site plan vocabulary and symbols, as needed. Reteach, if needed.

Students will critique each others' drawings to make sure that everything that is needed is included and drawn correctly.

Students can be given a copy of the site plan rubric, so that they will know how they are to be graded.

The amount of time needed for activities is determined by whether the students are doing traditional (board) drafting or using a CAD system. The instructor should choose the appropriate instruction to support either board or CAD drafting.



# CULMINATING PERFORMANCE TASK (Optional)

#### **Culminating Unit Performance Task Title:**

Site Plan Drawing

## **Culminating Unit Performance Task Description/Directions/Differentiated Instruction:**

Students will draw a site plan, using plot and directions provided by instructor

Attachments for Culminating Performance Task: Please list.

Rubric: Site Plans



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# Attachment(s):

# **Materials & Equipment:**

Depending on the medium used, you may need the following:

- Basic drafting tools
- CAD software

# What 21st Century Technology was used in this unit:

	Slide Show Software		Graphing Software		Audio File(s)
Χ	Interactive Whiteboard	Χ	Calculator		Graphic Organizer
	Student Response System		Desktop Publishing		Image File(s)
	Web Design Software		Blog		Video
	Animation Software		Wiki		Electronic Game or Puzzle Maker
	Email		Website	Χ	CAD Software