



# GEORGIA

PEACH STATE PATHWAYS

Career, Technical, & Agricultural Education

## ACCT—ARCHITECTURAL DRAWING

**PATHWAY:** Architectural Drawing and Design

**COURSE:** Architectural Drawing and Design II

**UNIT:** 4-Residential Sections and Details: Fireplace Details



## INTRODUCTION

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**Annotation:**

This unit includes lessons on drawing fireplace details. Students will learn to identify the components and dimensions that are needed in drawing fireplace details.

**Grade(s):**

<input type="checkbox"/>	9 <sup>th</sup>
<input checked="" type="checkbox"/>	10 <sup>th</sup>
<input checked="" type="checkbox"/>	11 <sup>th</sup>
<input checked="" type="checkbox"/>	12 <sup>th</sup>

**Time:** 10 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

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### **GPS Focus Standards:**

ACT-ADDII-2: Students will prepare sections and details.  
c. Draw a fireplace detail.

### **GPS Academic Standards:**

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

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

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

### **National / Local Standards / Industry / ISTE:**

ADDA: Advanced CADD Skills



## UNDERSTANDINGS & GOALS

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### **Enduring Understandings:**

Fireplace details must be included in a set of plans if the structure has a fireplace.

### **Essential Questions:**

- Why do fireplace details need to be included in a set of plans?
- How many drawings of a fireplace need to be included in a set of plans?

**Note: Depending on when or whether traditional (board) drafting is going to be taught in addition to CAD systems, activities may need to be supplemented or changed accordingly.**

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

- Students will learn the vocabulary associated with fireplaces.
- Students will be able to correctly identify the parts of a fireplace.
- Students will be able to identify fireplace details on blueprint drawings.

### **Skills from this Unit:**

- Students will be able to read fireplace sections and details.
- Students will be able to draw fireplace details.



# ASSESSMENT(S)

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**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
- ☒ Objective assessment - multiple-choice, true- false, etc.
  - ☒ Quizzes/Tests
  - ☐ Unit test
- ☐ Group project
- ☒ Individual project
- ☒ Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - ☒ 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
  - ☐ Observe students role playing
- ☒ Peer-assessment
  - ☐ Peer editing & commentary of products/projects/presentations using rubrics
  - ☒ Peer editing and/or critiquing
- ☒ Dialogue and Discussion
  - ☐ Student/teacher conferences
  - ☐ Partner and small group discussions
  - ☒ 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: Quiz: Fireplace Vocabulary

Test: Identifying Parts of a Fireplace

Individual Project: Have students draw a fireplace detail with dimensions.

**Assessment(s) Description/Directions:**

See instructions attached to each test.

Individual Project: The teacher will assign a fireplace detail for students to draw. Dimensions will be added to the drawing.

**Attachments for Assessment(s):**

Quiz: Fireplace Vocabulary & Key

Quiz: Identifying Parts of a Fireplace & Key

Rubric: Fireplace Details



## 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-2: Students will prepare sections and details.

c. Draw a fireplace detail.

#### 2. Review Essential Questions.

- Why do fireplace details need to be included in a set of drawings?
- How many drawings of a fireplace need to be included in a set of plans?

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

Ash Dump	Ash Pit	Damper
Fireclay	Flue	Hearth
Lintel	Saddle	Single-face
Smoke Chamber	Smoke Shelf	Three-face
Throat	Two-face (adjacent)	Two-face (opposite)

#### 4. Explain the purpose of a fireplace detail.

#### 5. Draw a fireplace detail to scale.

#### 6. Interest approach – Mental set

Ask students how using different types of materials (brick, stone, wood) can affect how a fireplace is built.

#### Lesson 1: FIREPLACE DETAILS

##### Discussion

1. Identify the standards.
2. Review essential questions.
3. Ask students why fireplace details need to be included in a set of plans.
4. Classroom discussion on unit vocabulary (fireplace terminology).
5. Give quiz on fireplace terminology.
6. Have students write a paragraph on one of the following:
  - a) Why do fireplace details need to be included in a set of drawings?

- b) How can using different types of materials affect how a fireplace is built?
- c) Explain the purpose of a fireplace detail.

## Lesson 2: DRAWING A FIREPLACE DETAIL

### Discussion

1. Identify the standards.
2. Give out handout on the Parts of a Fireplace.
3. Go over the parts and dimensions that need to be included on a fireplace detail.
4. Assign a fireplace detail to be drawn, using CAD or board drafting.
5. Draw and dimension a fireplace detail to scale.
7. Give quiz on identifying the Parts of a Fireplace.

### **Attachments for Learning Experiences:**

- Fireplace Vocabulary & Definitions
- Test: Fireplace Vocabulary & Key
- Parts of a Fireplace Handout
- Test: Identifying Parts of a Fireplace & Key
- Rubric: Fireplace Details

### **Notes & Reflections:**

Check for understanding frequently. Review fireplace vocabulary, as needed.

Additional vocabulary words can also be added to the quiz. Students can be given a copy of the fireplace details rubric, so that they will know how they are to be graded.

Any fireplace drawing can be used for the test. Numbers on the drawing can be re-arranged so that the study sheet and the test are not in the same order.

Students will critique each others' drawings to make sure that they are being drawn correctly.

Students can be given a copy of the fireplace 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)

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### Culminating Unit Performance Task Title:

Drawing a Fireplace Detail

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

Students will draw and dimension a fireplace detail. The fireplace detail with instructions is to be provided by instructor.

### Attachments for Culminating Performance Task:

Fireplace Details Rubric



## UNIT RESOURCES

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### Web Resources:

### 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:

<input type="checkbox"/>	Slide Show Software	<input type="checkbox"/>	Graphing Software	<input type="checkbox"/>	Audio File(s)
<input checked="" type="checkbox"/>	Interactive Whiteboard	<input checked="" type="checkbox"/>	Calculator	<input type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Student Response System	<input type="checkbox"/>	Desktop Publishing	<input type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Web Design Software	<input type="checkbox"/>	Blog	<input type="checkbox"/>	Video
<input type="checkbox"/>	Animation Software	<input type="checkbox"/>	Wiki	<input type="checkbox"/>	Electronic Game or Puzzle Maker
<input type="checkbox"/>	Email	<input type="checkbox"/>	Website	<input checked="" type="checkbox"/>	CAD Software