GEORGIA | PEACH STATE PATHWAYS

Career, Technical, & Agricultural Education

FOUNDATION SKILLS

PATHWAY: All Pathways

COURSE: All CTAE Courses

UNIT 4.2: Problem Solving When Decisions are to be Made

INTRODUCTION

Annotation: Briefly describe the unit topics, tasks, methods, etc.

In this unit students will develop skills in decision making using the problem solving method.

Grade(s):

X	9th
X	10th
X	11th
X	12th

Time: Two 50 minute periods.

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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: Please list the standard and elements covered.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

GPS Academic Standards:

National / Local Standards / Industry / ISTE:

ESS03 Problem-Solving and Critical Thinking: Solve problems using critical thinking skills (analyze, synthesize, and evaluate) independently and in teams. Solve problems using creativity and innovation.

UNDERSTANDINGS & GOALS

Enduring Understandings: Enduring understandings are statements summarizing important ideas and have lasting value beyond the classroom. They synthesize what students should understand – not just know.

Students will understand that problem solving is a process.

Essential Questions: Essential questions probe for deeper meaning and understanding while fostering the development of critical thinking and problem-solving skills. Example: Why is life-long learning important in the modern workplace?

- When will problem solving skills be useful in life?
- What are the skills used in problem solving?

Knowledge from this Unit: Factual information.

Students will list the seven steps of the problem solving process.

Skills from this Unit: Performance.

Students will use the problem solving method to solve problems where decisions are to be made.

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
- X 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: Problem Solving Test

Assessment(s) Description/Directions:

Administer attached Problem Solving Test to students.

Attachments for Assessment(s): Please list.

Problem Solving Exam

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.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

2. Review Essential Questions.

- When will problem solving skills be useful in life?
- What are the skills used in problem solving?

3. Show the Power Point on problem solving

4. Review the seven steps of problem solving shown in the PowerPoint.

1. Recognize the problem.
2. Define the problem.
3. Determine possible solutions.
4. Determine factors to evaluate solutions.
5. Test each possible solution.
6. Select a workable solution.
7. Carry out your solution.

5. Have students select a problem from the suggested list or use a problem in their everyday lives.

6. Have students complete the problem solving guide sheet for their problem.

7. Score each student's problem solving ability using a rubric.

8. Administer exam.

Attachments for Learning Experiences: Please list.

Steps in Problem Solving Power Point

Notes & Reflections: May include notes to the teacher, pre-requisite knowledge & skills, suggestions, etc.
Problems in the unit are defined as any situation in which a person must weigh many factors to arrive at a decision. The problems may have several correct answers. The teacher should ensure that the student follow the problem solving method and logical thinking. The most important thing is that the student be able to defend their answer, citing facts, using logic and referring to the factors relevant to making their decision.

CULMINATING PERFORMANCE TASK (Optional)

Culminating Unit Performance Task Title: Problem Solving Skills

Culminating Unit Performance Task Description/Directions/Differentiated Instruction:

1. Write a description of a possible problem in your life. The problem can be fiction or non- fiction but try to use a real-life situation. Use the 7 steps to solving a problem to come up with the best possible solution to the problem.
2. Complete the problem solving guide sheet for the problem selected above.
3. You will be graded on the rubric shown below.

Attachments for Culminating Performance Task: Please list.

FS-4.2 Problem Solving Scenarios

	Excellent	Satisfactory	Average	Poor
Written description of Problem				
Possible solutions to the problem				
Listed important factors to consider				
Ability to list and follow problem solving steps				
Selected an appropriate solutions				
Defended answer effectively with facts and logic				
Overall participation				

UNIT RESOURCES

Web Resources:

Attachment(s): Supplemental files not listed in assessment, learning experiences, and performance task.

Materials & Equipment:

What 21st Century Technology was used in this unit:

X	Slide Show Software		Graphing Software		Audio File(s)
	Interactive Whiteboard		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		