GEORGIA | PEACH STATE PATHWAYS

Career, Technical, & Agricultural Education

BUSINESS & COMPUTER SCIENCE

PATHWAY: Computing

COURSE: Beginning Programming

UNIT: 1.2 Computing Career Action Plan

INTRODUCTION

Annotation: Students will explore careers in computing. Particularly, students will examine careers that combine Computer Science and another field. This project will mainly be project based, and students will be developing a short presentation. Students will use technology for research and development of presentation materials.

Grade(s):

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

Time: 1-2 weeks

Author: Jason Naile

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:

BCS-BP-1 Students will explore careers in computing.
a. Describe the daily tasks and responsibilities of a professional in the field of computing.
b. Compare and contrast the top jobs in computing.
c. Explore careers that combine computing with another field.

GPS Academic Standards:

ELA11W2 The student demonstrates competence in a variety of genres.

ELA11W3 The student uses research and technology to support writing.

ELA11LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

National Standards:

UNDERSTANDINGS & GOALS

Enduring Understandings:

- Students will understand the fields within Computer Science that combine computing with other fields. Additionally, students will learn the importance of setting goals and developing a professional action plan to reach these goals. Finally, students will be able to describe the daily task and responsibilities of those who are in the Computer Science field.

Essential Questions:

- What are the responsibilities of a computing professional?
- What are the characteristics of the top job in computing?
- What careers combine computing with another field?
- What are the daily stresses of a computing professional?

Knowledge from this Unit:

- Students will be able to describe the daily tasks and responsibilities of a professional in the field of computing.
- Students will be able to discuss, compare, and contrast the top jobs in computing.
- Students will create a profile and action plan of a career that combines computing with another field.

Skills from this Unit:

- Students will create effective presentations to summarize information.

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
_____ 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
_X_ Subjective assessment/Informal observations
__ Essay tests
_x_ Observe students working with partners
_x_ 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: Teacher should conduct daily informal checks to ensure students are progressing through the project.

Assessment(s) Description/Directions: Using a checklist or notes sheet, the teacher should visit students individually. Teacher should discuss any problems the student is having and provide formative evaluation of their profiles.

Attachments for Assessment(s):

Web Resources:

http://computingcareers.acm.org/?page_id=8

http://online.wsj.com/careers

http://www.bls.gov/k12/azlist.htm

Web Resource Title: Career Resources for Student to Use

Web Resource Description: A list of resources for student to use when choosing and researching careers.

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.**

   BCS-BP-1 Students will explore careers in computing.
   a. Describe the daily tasks and responsibilities of a professional in the field of computing.
   b. Compare and contrast the top jobs in computing.
   c. Explore careers that combine computing with another field.

2. **Review Essential Questions.**

   - What are the responsibilities of a computing professional?
   - What are the characteristics of the top job in computing?
   - What careers combine computing with another field?
   - What are the daily stresses of a computing professional?

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

4. **Assessment Activity.**

(Based on a 50 minute period)

Day 1: Topic introduced and discussion led on combining computing with other fields

Day 2: Students research and choose careers

Days 3-5: Career researched, profiles and action plan developed

Days 6-7: One page summary of career developed

Day 8 (optional): Presentation of Career profile and action plan

Technology Connection/Integration

Students will use technology to research careers using the Internet. Students will use desktop publishing to create a timeline and one page summary.

Attachments for Learning Experiences: Please list.

Notes & Reflections:

CULMINATING PERFORMANCE TASK (Optional)

Culminating Unit Performance Task Title: **Career Resources for Student to Use**

Culminating Unit Performance Task Description/Directions/Differentiated Instruction:

Student will research a career and create a career profile. Students will then develop a career profile and action plan to gain employment in the desired career. The career chosen should combine Computer Science and another field.

Complete student directions and rubric may be found in the attached document.

Attachments for Culminating Performance Task:

Rubric for Performance Task:

Career Profile and Action Plan

Directions:

1. Search for and identify a career that combines computing with another field (Examples of possibilities: Music Technology, Healthcare Technology, etc.).
2. Once you have identified a career create a short profile of that career field. Include the following components:
    a. Salary Range
    b. Skills needed
    c. Daily tasks
    d. Leading companies employing individuals in that field
    e. Job outlook
    f. Educational requirements and certifications needed
    g. Career ladder
3. Next, create an action plan to secure a job in that particular field. Include the following components in the plan and place the following events on a timelines.
    a. Education
    b. On the job experience
    c. Obtaining certifications
    d. Progression through career ladder
4. Create a one page profile of your career.

Resources:
http://computingcareers.acm.org/?page_id=8
http://online.wsj.com/careers
http://www.bls.gov/k12/azlist.htm

Grading Checklist

	Incomplete	Satisfactory	Excellent
Career identified combining computing and other field	1	2	3
Career Profile	1	2	3
Action Plan	1	2	3
One page profile	0	.5	1

Total Points: / 10

Comments:

UNIT RESOURCES

Web Resources:

Attachment(s):

Materials & Equipment:

Computer

Internet

Network storage space

Desktop Publishing software

Project (optional)

Screening (optional)

What 21st Century Technology was used in this unit:

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