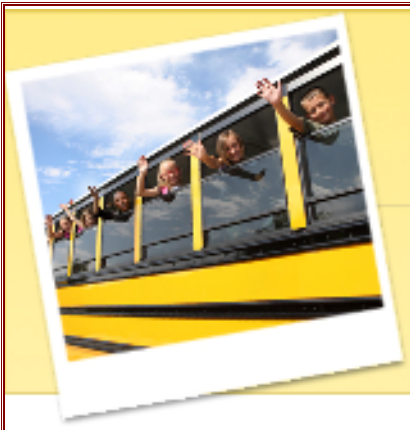

GEORGIA MIDDLE SCHOOL Instructional Resources

CAREER, TECHNICAL, & AGRICULTURAL EDUCATION

BUSINESS & COMPUTER SCIENCE

COURSE: Business & Computer Science

UNIT 8: Databases

INTRODUCTION

Annotation:

In the unit, students will demonstrate the basic skills necessary to create and manipulate the data in a database. Students will become familiar with the structure of the database, particularly, the menus and tool bars that allow the creation of the database and the movement between its different views.

Grade(s):

X	6th
	7th
	8th

Time:

4 hours

Author:

Debra Sutton

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 appropriately. 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. Many students (both with and without disabilities) who struggle with reading may benefit from the use of text reading software or other technological aids to provide access to printed materials. Many of these are available at little or no cost on the internet.

FOCUS STANDARDS

GPS Focus Standards:

MSBCS-BCSI-10- Students will develop and apply basic database skills**.**

a) Identify the purpose of databases.
b) Acquire efficient research strategies to locate information.
c) Efficiently retrieve, update, and edit a database.
d) Utilize a database to create an electronic portfolio.
e) Learn database terminology.
f) Understand when database software is an appropriate tool.
g) Create a basic database from data provided.

GPS Academic Standards:

ELA6R2 The student understands and acquires new vocabulary and uses it correctly in reading and writing.
ELA6RC3 The student acquires new vocabulary in each content area and used it correctly.
ELA6W3 **T**he student uses research and technology to support writing.
ELA6W4 The student consistently uses the writing process to develop, revise, and evaluate writing.
ELA6C1 The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.
ELA6LSV1 The student participates in student-to-teach, student-to-student, and group verbal interactions.
ELA6LSV2 The student listens to and views various forms of text and media in order to gather and share information, persuade others, and express and understand ideas. The student will select and critically analyze messages using rubrics as assessment tools.
M6N1 Students will understand the meaning of the four arithmetic operations as related to positive rational numbers and will use these concepts to solve problems.
M6A2 Use proportions to describe relationships and solve problems, including percent problems.
M6N1 Using fractions, decimals and percents interchangeably.
M6D1 Students will pose questions, collect data, represent and analyze the data, and interpret results.
M6P1 Students will solve problems (using appropriate technology).
M6P3 Students will communicate mathematically.
M6P4 Students will make connections among mathematical ideas and other disciplines.
M6P5 Students will represent mathematics in multiple ways.
MRC Students will enhance reading in all curriculum areas.
S6CS2 Students will use standard safety practices for all classroom laboratory and field investigations.

National / Local Standards / Industry / ISTE:

NBEA NATIONAL STANDARDS:
Standard 1. Use technology to enhance the effectiveness of communication.
Standard 2. Apply basic mathematical operations to solve problems.
Standard 3. Use algebraic operations to solve problems.
Standard 4. Analyze and interpret data using common statistical procedures.
Standard 5. Use mathematical procedures to analyze and solve business problems.

Standard 6. Identify, evaluate, select, install, use, upgrade, and customize application software; diagnose and solve problems resulting from an application software's installation and use.
Standard 7. Use input technologies appropriately to enter and manipulate text and data.
Standard 8. Gather, evaluate, uses, and cite information from information technology sources.
Standard 9. Database Management Systems: Use, plan, develop, and maintain database management systems.
Standard 10. Utilize information and technology tools to conduct business effectively and efficiently.

UNDERSTANDING & GOALS

Enduring Understandings:

- Proper keyboarding technique should be used when entering data into all technology tools.
- Technology tools have changed the way information is handled.

Essential Questions:

- What situations are appropriate for using databases?
- What terms are unique to the structure of databases?
- How are databases used to organize and retrieve data efficiently?

Knowledge from this Unit:

Students will be able to:

- Define databases.
- Explain the purposes of databases.
- Identify the parts of a database.

Skills from this Unit:

Students will be able to:

- Determine if organizing data in a database would be beneficial.
- Design, create, update, edit, retrieve, sort, and print the data in a database.
- Organize a collection of related data into a database.

ASSESSMENTS

Assessment Method Type:

_____ Pre-test
_x_ Objective assessment - multiple-choice, true- false, etc.
  _x_ Quizzes/Tests
  _x_ Unit test
_____ Group project
_x_ 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
__ Observe students role playing

_____ Peer-assessment
__ Peer editing and 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
_x_ Application of skills to real-life situations/scenarios

x Post-test

Assessment(s) Title:

Database Test

Assessment(s) Description/Directions:

Create a database. Sort the data in ascending order by team name. Print a report of the data.

Attachments for Assessment(s):

Database Test
Database Rubric

LESSON PLANS

- **INTRODUCTION**

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

MSBCS-BCSI-10- Students will develop and apply basic database skills**.**

a) Identify the purpose of databases.
b) Acquire efficient research strategies to locate information.
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f) Understand when database software is an appropriate tool.
g) Create a basic database from data provided.

2. Review Essential Questions

- What situations are appropriate for using databases?
- What terms are unique to the structure of databases?

- How are databases used to organize and retrieve data efficiently?

3. Identify and review the unit vocabulary

Record – collection of fields occupying one row of a table
Objects – the views of a database
Primary key – column used to identify the records in a table
Field – a single item of data in a database; a column in a table
Cell – intersection of one row and one column in a table
Data type – property or description of the data in a field
Query – method of retrieving data from one or more tables in a database using criteria
Currency – money data; dollars/cents
Text – alphanumeric data
Report – database view that allows data to be displayed attractively
Table – collection of records or rows organized by columns

4. Assessment Activity

Students will design and create a database from data collected from peer questionnaires.
Students will create a database from a table containing given data.

• LESSON 1 : INTRODUCTION TO DATABASE SOFTWARE

- Students will complete the activating activity, Database Wordsplash (handout).
- Possible modifications: Write sentences with terms rather than structured paragraph.
- Students will create the sample database as the teacher models the process.
- Students will define the database terms (Activity 2 handout).

• LESSON 2 : DESIGNING A DATABASE

- Students will compare spreadsheet and database features (Activity 1 handout).
- Students will create a database (Activity 3 & 4 handouts).
- Students will complete the Database Quiz.
- Students will answer the peer Database Questionnaire to be used in Lesson 3.
- Possible modification: Rather than words, use clip art pictures for answers.

• LESSON 3 : APPLYING DATABASE KNOWLEDGE

- Students will create a database (Activity 5).
- Possible modification: Convert ½, ¼, 1 ½ only.
- Students will complete the assessment, Database Test.

• LESSON 4 : CHECKING FOR DATABASE SKILLS

- Students will complete the database team project (Activity 6).

- **ATTACHMENTS FOR LESSON PLANS**

  - DB Activating Activity
  - Database Sample
  - Activity 1
  - Activity 2
  - Activity 3
  - Activity 4
  - Activity 4-Key
  - Activity 5
  - Activity 5-Key
  - Database Quiz
  - Database Test
  - Database Rubric
  - Database Questionnaire
  - Database Project

- **NOTES & REFLECTION:**

  - Students need basic word processing skills.
  - Students need basic spreadsheet skills.
  - Students need to be able to navigate the Internet given a web site address.

CULMINATING PERFORMANCE TASK

Culminating Unit Performance Task Title:

Database Project

Culminating Unit Performance Task Description/Directions/Differentiated Instruction:

Students will design and create a database that contains the class's responses to the Database Questionnaire.

Attachments for Culminating Performance Task: Please list.

- Database Questionnaire
- Database Project
- Database Rubric

UNIT RESOURCES

Web Resources:

- http://office.microsoft.com/en-us/help
- http://www.math.com/

Materials & Equipment:

- Computer
- Database software

What 21st Century Technology was used in this unit:

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