

Computer Science Discoveries Syllabus

(A Semester or Year-long Course)

Jane Graham, Instructor



Course Description:

Introduction to Programming is a semester (or year-long) course for students in grade 8 to provide an understanding of basic computer programming concepts and logic. Students will be introduced to programming through a variety of projects and object-based programming activities and applications. Although students will primarily use the curriculum found on the Code.org website, students will also explore and demonstrate business related skills such as teamwork, interpersonal skills and ethics while completing their projects. Students will be offered opportunities to identify ethical issues pertaining to programming, gather information about careers in technology and business, and learn about financial literacy. Communication and critical thinking skills will be reinforced through the use of software applications. Simulations and projects promoting teamwork and leadership skills offer further opportunities for application of knowledge and skills. Students will be provided opportunities to learn and improve keyboarding skills as well.

Pre-requisite:

Computer Essentials is the suggested pre-requisite course, however it is not absolutely necessary for a successful learning experience. Keyboarding experience is helpful.

Program Name:

Business/Marketing Education

Course Goals:

- Read functionally to complete various tasks and projects
- Participate in and explain advantages of being a member of professional organizations like Future Business Leaders of America or Phi Beta Lambda
- Demonstrate problem solving, programming, employability, computer, and Internet skills
- Encourage critical thinking skills
- Promote educational values including economic understanding and consumer needs
- Promote character growth and development including human relations, good work habits, positive attitudes, and ethical standards
- Provide a realistic understanding of the work environment
- Enhance employability skills
- Reinforce basic skills in areas such as communication, mathematics, and technology
- Stimulate interest in career development and planning
- Foster an appreciation of the free enterprise system and financial literacy



Essential Questions:

- Why is proper data technique important to my health and completion of work tasks?
- Why should I stop and think before posting information to websites and social media, and how will what I post possibly have an impact on me in the future?
- Why should I begin planning for my future today?
- Why is financial knowledge important?
- How do I use software to create business/marketing items for products?
- How do I program or code software (games, applications, websites)?
- How do I anticipate, plan for, and respond to consumer/business needs and complaints when developing software?
- What are workplace skills and why do I need those skills in my future career?

Course Outline:

This class will meet for a semester and will roughly follow this outline.

- 1) Internet Safety, Ethics and Technology,
- 2) Keyboarding (typing)
- 3) Career Opportunities
- 4) Problem Solving
- 5) Web Development
- 6) Animations & Games
- 7) Design Process
- 8) Data & Society
- 9) Physical Computing
- 10) Software Development
- 11) Customer Service and Leadership

Culminating Products:

The first semester concludes with the students developing a personalized, interactive program. The second semester concludes with a design challenge that asks students to use the Circuit Playground as the basis for an innovation of their own design.

Assessment & Grading Scale:

Grades are weighted according to the Shelby County Schools and OMMS grading policy: Gold level 60% (tests and completed projects), silver level 30% (classwork, activities, following procedures, employability skills), and 10% (effort and participation).

Employability skills are the types of behaviors and skills that employers would find beneficial in their employees. Some examples of these behaviors would include being punctual, teamwork, helping fellow employees with problems, being able to solve problems by seeking assistance from appropriate resources, not annoying or harassing fellow employees, following oral and written instructions, time on task, and being neat and organized.

Homework:

Usually no outside homework assignments are associated with this class. However, there may be an **occasional** assignment or project. Check my blog for updates.

Classroom Rules:

All school rules will be enforced. You are expected to leave your workspace clean and ready for the next student. This includes logging out, cutting off speakers, placing textbooks neatly between computers, pushing in chairs, and disposing of any generated trash. You are expected to treat everyone in the same manner that you would like to be treated.

Consequences for misbehavior include but are not limited to the following: warning, loss of points from employability score, name taken, note home, parent notification by phone, extra assignment (i.e., a handwritten report on the history of computers, health dangers associated with computers, etc.), and referral to the office.

Rewards include recognition notices, additional time to study or do research on the computer, a pass to the media center, extra time to explore business simulations and educational games.

Supplies:

You may want to bring ear buds or headphones if you prefer not to use the ones we have in the classroom. Please do not bring expensive ones. A USB (thumb drive) is optional (and normally not necessary) if you want to save work to transport between school and home. We will not be responsible for lost or damaged supplies.

Missed/Incomplete Assignments:

In keeping with the spirit of the "Every Assignment Every Time" policy here at OMMS (see below) you are expected to complete all required lessons. Those assignments may be completed before school in the media center computer lab or at home. If you do not have Microsoft Office or a computer at home will need to complete your assignments in class or before school in the media center lab. You will need a flash drive to save the required files for the assignments. Allowances will be made for those students who are absent for extended periods of time (a week or more), but only at a parent's request. Late assignments not due to illness will be accepted for 75% of the earned grade up until the end of the current grading period. Due to the nature of this class and the availability of computers and other materials, Academic Saturday school will be assigned only as a last resort. Work not completed by the end of the grading period will result in a zero for those assignments. Students will not be allowed to make-up work for unexcused absences.

Additional Fees and FBLA Membership:

Optional fees for this class include Future Business Leaders of America (FBLA) membership fees which total \$10.00. Students in this class are highly encouraged to join FBLA as a requirement of being in this class (according to the state curriculum). However, membership is still optional. Students may be asked to bring additional funds for parties and other events if members do not raise enough money to cover expenses.

Students will be introduced to FBLA and asked to join. Students who choose not to join FBLA ("inactive" members) will still be able to participate in and learn from club activities sometimes held within class. Active members will receive an FBLA membership card identifying them as an official member, the option to attend club meetings before or after school, have their club photo in the yearbook, may run for an FBLA officer position (President, Vice-President, Secretary, etc.), and be able to sign-up for FBLA competitive events. Members will learn about business skills while participating in community service projects and other activities. Past activities have included operating the concession stand after school and donating a portion of the proceeds to a deserving non-profit organization, disinfecting frequently touched surfaces during the cold

and flu season to help cut down the illness here at OMMS, and selling OMMS sweatpants with a major portion of the proceeds being donated to local charities. Projects are determined locally by the student membership and sponsor.

Oak Mountain Middle School Mission Statement

The Oak Mountain Middle School community will model and promote the behaviors necessary for academic and social success. We will provide a safe and caring environment where students are invited to explore who they are and what they want to be. We expect and encourage nothing but the best in each child. We recognize that a student is not a vessel to be filled but a torch to be lit. To this end we dedicate our time, our talents, and our resources.

Our Staff Believes:

1. All students should be offered a variety of experiences to enhance their individual success and to develop them intellectually, emotionally, socially, and culturally.
2. Diversity and high expectations will increase student learning.
3. Teachers should provide students with the tools needed to become self-directed with creative thinking skills.
4. Teachers have a responsibility to act as positive role models and provide a safe and caring environment to promote student learning.
5. A student's self-esteem is enhanced by positive relationships and mutual respect among and between students and staff.
6. The home and community are vital components of the school support team.

Oak Mountain Middle School Every Assignment Every Time (EAET)

Philosophy:

Oak Mountain Middle School expects and encourages nothing but the best in each child. Teachers hold high expectations and provide students with the tools needed to become self-directed learners. Students are actively engaged in meaningful learning experiences which will prepare them to be productive citizens in our global society. The home and community are vital components of the school support team.

Policy:

Assignments are a vital component of a child's learning experience. Work is expected to be completed on time. Incomplete and/or poorly attempted assignments are not acceptable.

Procedure:

- If an assignment is incomplete, poorly attempted, or not submitted on time, the student will receive a notice requiring a parent signature and an opportunity to complete the assignment.
- Students who turn in the parent-signed notice and completed assignment on time the following school day (refer to EAET form) will receive 60% of the earned grade. Failure to do so results in an Academic Saturday School referral, and the assignment will be completed for 50% of the earned grade.
- Upon the fourth and subsequent EAET form (per subject, per grading period), the assignment may be completed for 50% of the earned grade, and the student will be automatically referred to Academic Saturday School.
- Long-term projects may be based on each teacher's rubric for the project, which will include penalties for late work.
- Core academic classes will follow this procedure while Physical Education and elective courses may have exceptions based on their course content.

Syllabus Acknowledgement Form – Computer Science Discoveries

****Please complete the top portion of this sheet to indicate you have seen the syllabus and provide contact information. Completion of the bottom is optional.

Student's Name (please print) Period

Parent's Name (please print)

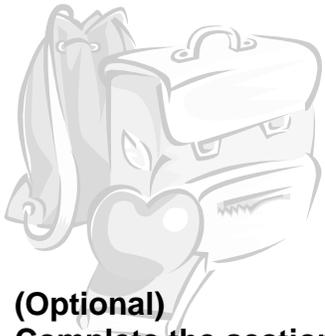
Parent's Signature

***The best way to contact me is: _____ At home.

Home Phone _____

**** (Be sure to complete this section.)

Home Email _____



_____ At work.

Work Phone _____

Work Email _____

_____ By cell phone.

Cell Phone _____

(Optional)

Complete the section below if you would be able to come speak about your career or are willing to serve on our Career Tech Advisory Committee.

We need you!

We love to have parents and other professionals come speak to us (the students) about business professions and/or business skills as they relate to other professions (for example, filing or purchasing in a medical office or the importance of computer skills in various positions).

The Advisory Committee **meets only twice a year**. The primary purpose of the committee is to keep parents and career technology teachers aware of changing trends and issues in the workplace and career education, and to offer assistance to teachers in the form of suggestions, guest speakers (yourself or someone else), and volunteering to assist with projects when possible. Meetings are usually brief and held here before or after school. The meeting is a fun time of sharing and usually involves light refreshments. Meetings will be arranged to accommodate as many members' schedules as possible.

This year our business education department is undergoing business and industry review. Please consider serving on the advisory committee.

_____ I would be willing to speak about my career, which is _____
Job Title Employer

_____ I would be willing to serve on the Career Tech. Advisory Committee.

My career is _____
Job Title Employer

_____ I am unable to help at this time.