

COURSE SYLLABUS
Technology Solutions
SY 2016 - 2017

COURSE DESCRIPTION

Technology Solutions/Exploring Computer Science introduces students to the field of computer science through an exploration of engaging and accessible topics. This course is also designed to focus on the conceptual ideas of computing and helping students to understand why certain tools and materials might be utilized to solve particular problems. The goal of Technology Solutions/Exploring Computer Science is to develop in students the computational practices of algorithm development, problem solving and programming with the context of problems that are relevant to the lives of today's students.

INSTRUCTOR INFORMATION

Name:	Dr. Donna S. Mason
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RECOMMENDED MATERIALS

Composition Notebook
Pens/Pencils
Notebook Binder
Flash Drive (Optional)



**Exploring
Computer
Science**

EXPECTED COURSE OUTCOMES

Units to Be Covered in Technology Solutions/ECS:

Unit 1 - Human Computer Interaction

Students are introduced to the concepts of computer and computing while investigating the major components of computers and the suitability of these components for particular applications.

Unit 2- Problem Solving

Students become "computational thinkers" by applying a variety of problem-solving techniques as they create solutions to problems in a variety of contexts.

Unit 3 - Web Design

Students are prepared to take the role of a developer by expanding their knowledge of programming and web page design and applying it to the creation of web pages, programs and documentation for users and equipment.

Unit 4 - Programming

Students are introduced to some basic issues associated with program design and development. Students design programming solutions to a variety of computational problems including animated stories, video games and community based projects using the programming language Scratch.

Unit 5 - Computer and Data Analysis

Students explore how computing has facilitated new methods of managing and interpreting data. Students use computers to translate, process and visualize data in order to find patterns and test hypotheses.

Unit 6 - Robotics

Students apply previous concepts to the study of robotics and work in small groups to build and program a robot to perform a requires task.

COURSE ASSESSMENT

<u>Grading Factors</u>	<u>Grade Percentage</u>	<u>Grading Scale</u>
Assessment	40%	A= 100-90
Classwork	50%	B = 89-80
Homework	10%	C = 79-70
		D = 69-60
		E = 59-0