

Mullen High School Department Essential Outcomes

Computer Science Department

#1: COMPUTATIONAL THINKING: Students will be able to **Use computational thinking to create custom code in various programming languages.** (*Grad at Grad: Excellence in Education*)

Students will:

- 1.1 Analyze large problems by breaking them into solvable chunks
- 1.2 Generate algorithms to solve problems
- 1.3 Demonstrate understanding of elegance as it relates to syntax

#2: COLLABORATION: Students will be able to **Engage with other classmates to conceive, design, develop and implement simple solutions in order to solve real world problems.** (*Grad at Grad: Excellence in Education, Respect for All Persons, Participation within Inclusive Community*)

Students will:

- 2.1 Solve larger group problems collaboratively
- 2.2 Implement software development techniques

#3: COMPUTING PRACTICE AND PROGRAMMING: Students will be able to **Explain and utilize the proper web program or application to solve problems.** (*Grad at Grad: Excellence in Education*)

Students will:

- 3.1 Create and organize a web page
- 3.2 Use specific programming languages to solve multiple problems
- 3.3 Compare and contrast a variety of file and database formats to determine proper use of applications

#4: COMPUTERS AND COMPUTATIONAL PRACTICE: Students will be able to **Understand the complexity of computational devices in detail.** (*Grad at Grad: Excellence in Education*)

Students will:

- 4.1 Generate abstract ideas about specific components and understand their roles in the computational spectrum
- 4.2 Identify and explain the main parts of a computer
- 4.3 Troubleshoot common hardware issues

#5: COMMUNITY, GLOBAL AND ETHICAL IMPACTS: Students will be able to **Understand and make ethical choices among various types of software.** (*Grad at Grad: Faith in the Presence of God, Concern for the Poor and Social Justice, Excellence in Education, Respect for All Persons, Participation within Inclusive Community*)

Students will:

- 5.1 Demonstrate respect for intellectual property including proprietary and open source
- 5.2. Use the latest accessibility standards in programming
- 5.3 Demonstrate digital citizenship
- 5.4 Develop a program that addresses a social justice need