Computer Science offers a focused curriculum designed around foundational computer science concepts, including computer systems, programming, networks, and data management. The course also introduces students to foundational computer science skills such as coding, troubleshooting, and being a responsible digital citizen.

Course topics include the basic computer functionality; programming and software development; programming for modern, global audiences; differing computing systems; digital information and data visualization; web design and cybersecurity; and ethics and safety with emergent technologies and social media. Students discover new concepts through guided instruction and confirm their understanding in an interactive, feedback-rich environment.

A variety of activities encourage students to explore different aspects of computer science. Lab activities guide students through coding their own programs. Project and Explore activities reinforce critical thinking, research, writing, and communication skills. In addition, Project activities guide students through the development of different types of computer artifacts. In Discussions, students conduct research on current computing topics and then exchange ideas with their peers. Practice activities provide additional opportunities for students to apply learned concepts and practice their writing, reasoning, and computer literacy skills.

This course is built to Nevada state standards.

Length: Two Semesters

Unit 1: Computers and You

- Interacting with Computers
- Computers and Your Career
- Computers and You Wrap-Up

Unit 2: Programming

- Algorithms
- Programming with MakeCode Arcade
- Programming Concepts
- Programming Wrap-Up

Unit 3: Software Development

- Software Development Life Cycle and Initial Phases
- Design Your Own Game
- Software Development Wrap-Up

Unit 4: Developing Programs for Everyone

- Algorithms Impact the World
- Revising Your Game for a Larger Audience

- Developing Programs for Everyone Wrap-Up

Unit 5: Semester Wrap-Up

Unit 6: Computing Systems

- The Computer
- Hardware and Software
- Robotics and Troubleshooting
- Computing Systems Wrap-Up

Unit 7: Digital Information

- Data
- Collecting, Visualizing, and Analyzing Data
- Digital Information Wrap-Up

Unit 8: The Internet

- Structure of the Internet
- Cybersecurity
- Fundamentals of Web Design
- The Internet Wrap-Up

Unit 9: Your Digital Responsibility

- Safety, Law, and Ethics
- Emerging Technologies
- Social Media
- Your Digital Responsibility Wrap-Up

Unit 10: Semester Wrap-Up