| Lift Off with CodeX | Fundamentals of Computer Science Standards | Mission 1: Intro | Mission 2: Lift off | Mission 3: Conserve Energy | Mission 4: Hatch Lock | Mission 5: Alert System | Mission 6: Life Support | Mission 7 Solar Tracking | Mission 8: Prepare Landing | Mission 9: Auto Garden | Mission 10: Explore Surface | Final Coding Project | ADDITIONAL LESSONS | Pre-Mission | Technology | Digital Citizenship | Computer Science Careers | Web Pages | Final CS Project | OPTIONAL LESSONS | Mission 1 Extensions & CC | Mission 2 Extensions & CC | Mission 3 Extensions & CC | Mission 4 Extensions & CC | Mission 5 Extensions & CC | Mission 6 Extensions & CC | Mission 7 Extensions & CC | Mission 8 Extensions & CC | Mission 9 Extensions & CC | Mission 10 Extensions & CC |
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| (1) Employability. The student identifies various employment opportunities in the computer science field. | (A) Identify job and internship opportunities and accompanying job duties and tasks and contact one or more companies or organizations to explore career opportunities | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| | (B) Examine the role of certifications, resumes, and portfolios in the computer science profession | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| | (C) Employ effective technical reading and writing skills | | X | X | X | X | X | X | X | X | X | X | | | | | | | X | | X | X | X | X | X | X | X | X | X | X |
| | (D) Employ effective verbal and non-verbal communication skills | | X | X | X | X | X | X | X | X | X | X | | | | | | X | X | | X | X | X | X | X | X | X | X | X | X |
| | (E) Solve problems and think critically | | X | X | X | X | X | X | X | X | X | X | | X | | | | X | X | | X | X | X | X | X | X | X | X | X | X |
| | (F) Demonstrate leadership skills and function effectively as a team member | | | | | | | | | | | X | | | | | | | X | | | X | X | X | X | X | X | X | X | X |
| | (G) Demonstrate an understanding of legal and ethical responsibilities in relation to the field of computer science | | | | | | | | | | | | | X | | | X | | | | | | | | | | | | | X |
| | (H) Demonstrate planning and time-management skills | | | | | | | | | | | X | | | | | | X | X | | | X | X | X | X | X | X | X | X | X |
| | (I) Compare university computer science programs | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| (2) Creativity and innovation. The student develops products and generates new knowledge, understanding, and skills. | (A) Investigate and explore various career opportunities within the computer science field and report findings through various media. | | | | | | | | | | | | | | | | X | X | | | | | | | | | | | | |
| | (B) Create algorithms for the solution of various problems. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (C) Discuss methods and create and publish web pages using a web-based language such as HTML, Java Script, or XML | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| | (D) Use generally accepted design standards for spacing, fonts and color schemes to create functional user interfaces, including static and interactive screens. | | | | X | X | | | X | | X | | | | | | | X | | | | | | X | X | | | X | | X |
| (3) Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. | (A) Seek and respond to advice or feedback from peers, educators, or professionals when evaluating problem solutions. | | | | | | | | | | | X | | | | | | | | | | X | X | X | X | X | X | X | X | X |
| | (B) Debug and solve problems using reference materials and effective strategies. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (C) Publish information in a variety of ways such as print, monitor display, web pages, or video. | | X | X | X | X | X | X | X | X | X | X | | | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X |
| (4) Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. | (A) Demonstrate the ability to insert external stand alone objects such as scripts or widgets into web pages. | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| | (B) Communicate an understanding of binary representation of data in computer systems, perform conversions between decimal and binary number systems, and count in binary number systems. | | | | | | | | | | | | | X | X | | | | | | X | | | | | | | | | |
| | (C) Identify a problem's description, purpose and goals. | X | X | X | X | X | X | X | X | X | X | X | | | | | | | X | | X | X | X | X | X | X | X | X | X | X |
| | (D) Demonstrate coding proficiency in a programming language by developing solutions that create stories, games and animations. | | X | X | X | X | X | X | X | X | X | X | | | | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (E) Identify and use the appropriate data type to properly represent the data in a program problem solution. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (F) Communicate an understanding of and use variables within a programmed story, game or animation. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (G) Use arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division, and modulus division. | | | X | X | X | X | X | X | | X | X | | X | | | | | | | | | X | X | X | X | X | X | X | X |
| | (H) Communicate an understanding of and use sequence within a programmed story, game or animation. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | | X | X | X | X | X | X | X | X | X |
| | (I) Communicate an understanding of and use conditional statements within a programmed story, game or animation. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | | X | X | X | X | X | X | X | X | X |
| | (J) Communicate an understanding of and use iteration within a programmed story, game or animation. | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | | X | X | X | X | X | X | X | X | X |
| | (K) Use random numbers within a programmed story, game or animation. | | | | X | | | | | | | | | | | | | | | | | X | | X | | | | | | |
| | (L) Test program solutions by investigating intended outcomes. | | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | X | X | X | X | X | X | X | X | X |
| (5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology | (A) Discuss privacy and copyright laws and model ethical acquisition of digital information by citing sources using established methods. | | | | | | | | | | | | | | | X | | X | | | | | | | | | | | | |
| | (B) Compare various non-copyright asset sharing options such as open source, freeware and public domain. | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

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| relating to the use of technology and information. | (C) Demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks. | | | | | | | | | | | | | X | | X | | | | | | | | | | | | | | |
| | (D) Explain the value of strong passwords and virus detection and prevention for privacy and security. | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| | (E) Discuss and give examples of the impact of computing and computing-related advancements on society | X | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | | | | | | | | | | | | |
| | (F) Analyze how electronic media can affect the reliability of information. | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| (6) Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. | (A) Identify and explain the function of basic computer components, including a central processing unit (CPU), storage, and peripheral devices. | X | X | X | X | X | X | X | X | X | X | X | | X | X | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (B) Use system tools, including appropriate file management. | X | X | X | X | X | X | X | X | X | X | X | | X | X | | | | | | X | X | X | X | X | X | X | X | X | X |
| | (C) Compare different operating systems. | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| | (D) Describe the differences between an application and an operating system. | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| | (E) Use various input, processing, output and primary/secondary storage devices | X | X | X | X | X | X | X | X | X | X | X | | X | X | | | | | | X | X | X | X | X | X | X | X | X | X |