



Computer Science Principles - Level 9 & 10

Computer Science Principles covers many topics including the Internet, Big Data and Privacy, and Programming and Algorithms. The curriculum is flexible to be taught as an AP or non-AP course.

- Audience: High school students, grades 9 - 12
- Curriculum length: 32 Hours
- Prior knowledge: None! Just bring your curiosity

CSP Unit 1 - Digital Information

CSP Unit 2 - The Internet

CSP Unit 3 - Intro to App Design



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CSP Unit 1 - Digital Information

Lesson 1: Welcome to CSP

Lesson 2: Representing Information

Lesson 3: Circle Square Patterns

Lesson 4: Binary Numbers

Lesson 5: Overflow and Rounding

Lesson 6: Representing Text

Lesson 7: Black and White Images

Lesson 8: Color Images

Lesson 9: Lossless Compression

Lesson 10: Lossy Compression

Lesson 11: Intellectual Property

Lesson 12: Project - Part 1

Lesson 13: Project - Part 2

Lesson 14: Assessment Day



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CSP Unit 2 - The Internet

Lesson 1: Welcome to the Internet

Lesson 2: Building a Network

Lesson 3: The Need for Addressing

Lesson 4: Routers and Redundancy

Lesson 5: Packets

Lesson 6: DNS and HTTP

Lesson 7: Project - Internet Dilemmas Part 1

Lesson 8: Project - Internet Dilemmas Part 2



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CSP Unit 3 - Intro to App Design

Lesson 1: Introduction to Apps

Lesson 2: Introduction to Design Mode

Lesson 3: Project - Designing an App Part 1

Lesson 4: Project - Designing an App Part 2

Lesson 5: The Need for Programming Languages

Lesson 6: Intro to Programming

Lesson 7: Debugging

Lesson 8: Project - Designing an App Part 3

Lesson 9: Project - Designing an App Part 4

Lesson 10: Project - Designing an App Part 5