Nevada Standards Alignment Overview: Concepts

Algorithms and Programming:
Algorithms and programming are central to the CodeHS curriculum. Students learn the core principles of developing their own algorithms and implementing them in several programming languages across the pathway. Algorithms, variables, control, modularity, and program development are all taught in our courses.

Computing Systems:
Computing systems is a core concept throughout the CodeHS pathway. Students learn about various computing devices and how humans interact with them, including devices that extend the capabilities of humans. Students learn about computer organization including the relationship between hardware and software. Troubleshooting computing systems is a core concept of CodeHS curriculum as well. Students are expected to identify problems in their programs and fix them.

Data & Analysis:
CodeHS courses teach students how data is stored in a computer as an abstract representation. Students learn exactly how text and image data is organized and stored as physical bits in a computing system. Students also learn how sensors must convert physical data into a digital representation that can be stored in a computer, and how data collection can be automated with sensors

Impacts of Computing:
Computing has had significant impacts in many fields. In CodeHS courses, students learn about the positive and negative impacts computing innovations and the Internet have had on culture, social interactions, safety, and privacy. Students also learn the ethical considerations of sharing and using shared media online.

Networks & the Internet:
Students learn learn about network communication and organization, Internet protocols, Internet addressing, the benefits of the packet-switched architecture of the Internet, and the effect of hierarchy and redundancy on the scalability and reliability of the Internet. Students learn about the importance of cybersecurity and the various security measures we take to protect information and privacy on the Internet.

Nevada Standards Course Alignment

Computing Ideas

The Computing Ideas course is a first computer science course introducing the basics of programming with Karel the Dog, the basics of designing a web page, and how information and images are represented with computers. Students will learn to code using blocks to drag and drop, but they can switch between blocks and text as desired.

With a unique focus on creativity, problem solving and project based learning, Computing Ideas gives students the opportunity to explore several important topics of computing using their own ideas and creativity and develop an interest in computer science that will foster further endeavors in the field.

Course:	Nevada Benchmarks Addressed			
Grades 6-8	6-8.AP.A.1 6-8.AP.PD.2 6-8.AP.PD.3	6-8.AP.PD.4 6-8.AP.PD.5 6-8.AP.C.1	6-8.AP.M.1 6-8.AP.M.2 6-8.DA.S.1	6-8.IC.C.1 6-8.IC.SLE.2 6-8.NI.NCO.1
Grades 9-12	9-12.AP.A.1 9-12.AP.PD.5 9-12.AP.C.2	9-12.AP.M.1 9-12.AP.M.2 9-12.CS.HS.1	9-12.CS.D.1 9-12.DA.S.1 9-12.IC.SLE.1	

Web Design

In today's world, web pages are the main medium for sharing ideas and information. Learning to design websites is an incredibly useful skill for any career path.

The CodeHS Web Design course is a project-based course that teaches students how to build their own web pages. Students will learn the languages HTML and CSS, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi-page websites.

Course:	Nevada Benchmarks Addressed
Grades 6-8	6-8.AP.PD.2 6-8.IC.C.1

CodeHS

Nevada Standards Course Alignment

Introduction to Cybersecurity

As our world becomes increasingly dependent on technology, cybersecurity is a topic of growing importance. It is crucial that companies and individuals take precautions to protect themselves from the growing threat of cyber attacks. This course prepares students with crucial skills to be responsible citizens in a digital future.

Students will learn foundational cybersecurity topics including networking fundamentals, software security, and basics of cryptography, all through the CodeHS web-based platform.

Course:	**Nevada Benchmarks Addressed**			
Grades 6-8	6-8.AP.A.1 6-8.AP.PD.2 6-8.AP.PD.3 6-8.AP.PD.4	6-8.AP.PD.5 6-8.AP.C.1 6-8.AP.M.1 6-8.AP.M.2	6-8.DA.S.1 6-8.IC.C.1 6-8.IC.SLE.2 6-8.IC.SLE.1	6-8.IC.SLE.2 6-8.NI.C.1 6-8.NI.C.2 6-8.NI.NCO.1
Grades 9-12	9-12.AP.A.1 9-12.AP.PD.5 9-12.AP.C.2 9-12.AP.M.1	9-12.AP.M.2 9-12.CS.HS.1 9-12.CS.D.1 9-12.DA.S.1	9-12.IC.SLE.1 9-12.IC.SLE.2 9-12.IC.SLE.3 9-12.NI.C.1	9-12.NI.C.2 9-12.NI.C.3 9-12.NI.C.4 9-12.NI.NCO.1
Grades 9-12 (adv.)	A9-12.IC.SLE.1 A9-12.NI.C.1			

Introduction to Computer Science in JavaScript

The CodeHS introduction to computer science curriculum teaches the foundations of computer science and basic programming, with an emphasis on helping students develop logical thinking and problem solving skills. Once students complete the CodeHS Introduction to Computer Science course, they will have learned material equivalent to a semester college introductory course in Computer Science and be able to program in JavaScript.

Course:	**Nevada Benchmarks Addressed**			
Grades	6-8.AP.A.1	6-8.AP.PD.1	6-8.AP.PD.2	6-8.AP.PD.3

CodeHS

Nevada Standards Course Alignment

6-8	6-8.AP.PD.5 6-8.AP.M.2	6-8.AP.V.1 6-8.DA.S.1	6-8.AP.C.1	6-8.AP.M.1
Grades 9-12	9-12.AP.A.1	9-12.AP.V.1	9-12.AP.M.1	9-12.AP.M.2
Grades 9-12 (adv.)	A9-12.AP.A.4	A9-12.AP.PD.4	A9-12.AP.PD.5	

Introduction to Computer Science in Python			
 The CodeHS introduction to Python course teaches the fundamentals of computer programming as well as some advanced features of the Python language. Students use what they learn in this course to build simple console-based games. This course is equivalent to a semester-long introductory Python course at the college level.			
Course:	**Nevada Benchmarks Addressed**		
Grades 6-8	6-8.AP.A.1 6-8.AP.PD.1 6-8.AP.PD.3	6-8.AP.PD.4 6-8.AP.PD.5 6-8.AP.V.1	6-8.AP.C.1 6-8.AP.M.1 6-8.AP.M.2
Grades 9-12	9-12.AP.A.1 9-12.AP.PD.4 9-12.AP.PD.5	9-12.AP.V.1 9-12.AP.C.1 9-12.AP.C.2	9-12.AP.M.1 9-12.AP.M.2
Grades 9-12 (adv.)	A9-12.AP.A.4		

Nevada Standards Course Alignment

AP Computer Science Principles

AP Computer Science Principles is the newest AP® course from the College Board. This course introduces students to the foundational concepts of computer science and explores the impact computing and technology have on our society. Students learn about the internet, digital information, programming, data, and apply these concepts through creative projects, while building their portfolio.

Course:	Nevada Benchmarks Addressed			
Grades 9-12	9-12.AP.A.1 9-12.AP.PD.1 9-12.AP.PD.4 9-12.AP.PD.5 9-12.AP.C.1	9-12.AP.C.2 9-12.AP.M.1 9-12.AP.M.2 9-12.CS.D.1 9-12.CS.T.1	9-12.DA.S.1 9-12.DA.S.2 9-12.DA.CVT.1 9-12.DA.IM.1 9-12.IC.C.1	9-12.IC.C.3 9-12.IC.SLE.2 9-12.NI.C.1 9-12.NI.NCO.1
Advanced 9-12	A9-12.AP.A.2 A9-12.AP.A.3 A9-12.AP.A.4 A9-12.AP.PD.2 A9-12.AP.PD.4	A9-12.AP.PD.5 A9-12.AP.PD.6 A9-12.AP.PD.7 A9-12.AP.V.1 A9-12.AP.M.1	A9-12.AP.M.2 A9-12.AP.M.3 A9-12.CS.T.1 A9-12.DA.CVT.1 A9-12.DA.CVT.2	A9-12.DA.IM.1 A9-12.IC.C.1 A9-12.IC.C.2 A9-12.IC.C.3 A9-12.NI.C.1

AP Computer Science in Java

The CodeHS AP Java course is a year-long course designed to help students master the basics of Java and equip them to successfully pass the College Board AP Computer Science A Exam at the end of the school year.

Course:	Nevada Benchmarks Addressed			
Grades 9-12	9-12.AP.A.1 9-12.AP.PD.1 9-12.AP.PD.4 9-12.AP.PD.5	9-12.AP.V.1 9-12.AP.C.1 9-12.AP.C.2 9-12.AP.M.1	9-12.AP.M.2 9-12.CS.D.1 9-12.CS.T.1 9-12.IC.C.3	
Advanced 9-12	A9-12.AP.A.3 A9-12.AP.A.4 A9-12.AP.PD.4	A9-12.AP.PD.5 A9-12.AP.PD.6 A9-12.AP.PD.7	A9-12.AP.V.1 A9-12.AP.C.1 A9-12.AP.M.1	A9-12.AP.M.2 A9-12.AP.M.3 A9-12.DA.IM.1