CompuScholar, Inc.

Alignment to New York Computer Science and Digital Fluency Standards

6th - 8th Grade

New York Standards Information:

CS Page	New York Computer Science Education Page
Standards Link:	See above for link to latest standards draft (to be finalized Aug 2021)

CompuScholar Courses in this Grade Band:

Course Title:	**Digital Savvy**, ISBN 978-0-9887070-8-5
	Course Description and Syllabus
Course Title:	**Web Design**, ISBN 978-0-9887070-3-0
	Course Description and Syllabus
Course Title:	**Python Programming**, ISBN 978-1-946113-00-9
	Course Description and Syllabus

New York's Computer Science and Digital Fluency standards are broken into grade bands that list skills that should be mastered by the end of the band. They may be taught in any order over any combination of courses.

This document describes the CompuScholar course(s) that can be used to meet each standard. The citations DS, WD, PP correspond to the courses listed above. For example, "DS, PP" means the skill is covered in our Digital Savvy and Python Programming courses.

NOTE: This document is based on the January 2020 draft, which may be subject to change.

New York Computer Science and Digital Fluency Standards (6th - 8th Grade)

Impacts of Computing	COMPUSCHOLAR COURSES
Society	
6-8.IC.1 - Compare and contrast tradeoffs associated with computing technologies that affect individuals and society.	DS
6-8.IC.2 - Evaluate the impact of laws or regulations on the development and use of computing technologies and digital information.	DS, WD, PP
Ethics	
6-8.IC.3 - Identify and discuss issues of ethics surrounding computing technologies and current events.	DS, WD, PP
6-8.IC.4 - Identify and discuss issues of ethics related to the collection and use of data with different computing technologies.	DS, WD, PP
6-8.IC.5 - Analyze potential sources of bias that could be introduced to complex computer systems and the potential impact of these biases on individuals.	DS, PP

Accessibility	
6-8.IC.6 - Assess the accessibility of a computing device or software application in terms of user needs.	DS, WD
Career Paths	
6-8.IC.7 - Explore a range of computer science-related career paths	DS, WD, PP

Computational Thinking	COMPUSCHOLAR COURSES
Modeling and Simulation	
6-8.CT.1 - Compare the results of alternative models or simulations to determine and evaluate how the input data and assumptions change the	DS
Data Analysis and Visualization	
6-8.CT.2 - Collect and use digital data in a computational artifact.	DS, PP
6-8.CT.3 - Refine and visualize a data set in order to persuade an audience.	DS, PP
Abstraction and Decomposition	
6-8.CT.4 - Decompose a program into distinct parts in order to write functions to reduce repetition and increase readability.	PP
6-8.CT.5 - Identify multiple layers of abstraction and create generalizations that can be placed into one or more abstraction(s)	PP
Algorithms	
6-8.CT.6 - Design an algorithm and use it within a program.	DS, PP
6-8.CT.7 - Compare and refine algorithms for a specific task.	PP
6-8.CT.8 - Modify, remix, or incorporate portions of an existing program into one's own work.	PP
Programming	
6-8.CT.9 - Utilize variables to store and modify data when designing or remixing a program.	DS, PP
6-8.CT.10 - Develop or remix a program that effectively combines one or more control structures for creative expression or to solve a problem.	DS, PP
6-8.CT.11 - Read and interpret code to predict the outcome of various control structures for the purposes of debugging drawing on a range of debugging strategies.	DS, PP
6-8.CT.12 - Document the iterative design process of developing a computational artifact that incorporates user feedback and preferences.	DS, WD, PP

Network and Systems Design	COMPUSCHOLAR COURSES
Hardware & Software	
6-8.NSD.1 - Design a user interface for a computing technology that takes into account usability, accessibility, and desirability.	WD
6-8.NSD.2 - Design a project that combines hardware and software components to collect and use data to perform a function.	N/A
6-8.NSD.3 - Identify and fix problems with computing devices and their components using a systematic troubleshooting method or guide.	DS, WD, PP
Networks and the Internet	
6-8.NSD.4 - Design a protocol for transmitting data through a multi-point network.	N/A
6-8.NSD.5 - Summarize how remote data is stored and accessed in a network.	DS, WD

Cybersecurity	COMPUSCHOLAR COURSES
Risks	
6-8.CY.1 - Determine the types of personal information and digital resources that an individual may have access to that needs to be protected.	DS, PP
Safeguards	
6-8.CY.2 - Describe physical, digital, and behavioral safeguards that can be employed in different situations.	DS, WD, PP
6-8.CY.3 - Describe trade-offs of implementing specific security safeguards.	DS, WD, PP
6-8.CY.4 - Describe the limitations of cryptographic methods.	DS, WD
Response	
6-8.CY.5 - Describe actions to be taken when an application or device reports a security problem or behaves unexpectedly.	DS, PP

Digital Literacy	COMPUSCHOLAR COURSES
Digital Use	
6-8.DL.1 - Type on a keyboard while demonstrating proper keyboarding technique, with increased speed and accuracy.	DS
6-8.DL.2 - Communicate and collaborate with others using a variety of digital tools to create and revise a collaborative product.	DS, WD, PP
6-8.DL.3 - Compare types of search tools, choose a search tool for effectiveness and efficiency, and evaluate the quality of search tools based on returned results.	DS
6-8.DL.4a - Select and use digital tools to create, revise, and publish digital artifacts.	DS
6-8.DL.4b - Transfer knowledge of technology operations in order to explore new technologies.	DS, WD, PP

Digital Citizenship	
6-8.DL.5 - Explain the connection between the persistence of data on the Internet, personal online identity, and personal privacy.	DS, WD, PP
6-8.DL.6 - Describe safe, appropriate, positive, and responsible online behavior; identify types of cyberbullying, and identify strategies to combat cyberbullying/harassment.	DS, WD, PP