

Standard ID	Standard Text	Edgenuity Lesson Name
	Level 3A: 9-10	
3A-CS.	Computing Systems	
3A-CS-01	Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects. (P. 4.1)	Block Programming The WWW Using the Internet Web Programming
3A-CS-02	Compare levels of abstraction and interactions between application software, system software, and hardware layers. (P. 4.1)	Abstractions Binary World Can Anything Be Random? Career Spotlight Choosing Hardware and Software How Do We Communicate? Operating Systems Other Languages Software
3A-CS-03	Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and fix errors. (P. 6.2)	Career Spotlight Finding and Handling Errors
3A-NI.	Networks and the Internet	
3A-NI-04	Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing. (P. 4.1)	Computer Networking Basics Local versus Wide Area Network Protocol Transmitting Data
3A-NI-05	Give examples to illustrate how sensitive data can be affected by malware and other attacks. (P. 7.2)	Malware

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3A-NI-06	Recommend security measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts. (P. 3.3)	Career Spotlight Hackers and Unauthorized Access How "Useless" Math Research Made the Internet Safer Impact of Cybercrime Media Reliability Concerns Workplace Crime
3A-NI-07	Compare various security measures, considering tradeoffs between the usability and security of a computing system. (6.3)	Cybersecurity Measures
3A-NI-08	Explain tradeoffs when selecting and implementing cybersecurity recommendations. (P. 7.2)	Solutions to Security Issues Write Password Evaluator
3A-DA.	Data and Analysis	
3A-DA-09	Translate between different bit representations of real-world phenomena, such as characters, numbers, and images. (P. 4.1)	Analyzing Images Career Spotlight File Types and Storing Programs Music and Video Files User-Defined Data Types
3A-DA-10	Evaluate the tradeoffs in how data elements are organized and where data is stored. (P. 3.3)	Reading a File Searching Complex Data Writing to a File
3A-DA-11	Create interactive data visualizations using software tools to help others better understand real-world phenomena. (P. 4.4)	Analyzing Data Career Spotlight Dictionaries Searching Sorting

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3A-DA-12	Create computational models that represent the relationships among different elements of data collected from a phenomenon or process. (P. 4.4)	Computational Models
3A-AP.	Algorithms and Programming	
3A-AP-13	Create prototypes that use algorithms to solve computational problems by leveraging prior student knowledge and personal interests. (P. 5.2)	Career Spotlight Data Types Design Specifications Do You Have a Plan? Input and Output Let's Get Started Making Decisions Manipulating Data Types Manipulating Strings Program Execution Variables and Numerical Operators
3A-AP-14	Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables. (P. 4.1)	Arrays Collections Lists Multidimensional Arrays Tuples
3A-AP-15	Justify the selection of specific control structures when tradeoffs involve implementation, readability, and program performance, and explain the benefits and drawbacks of choices made. (P. 5.2)	For Loops Nested Loops While Loops
3A-AP-16	Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. (P. 5.2)	Creating a Game Using Events

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3A-AP-17	Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects. (P. 3.2)	Class Structure Classes Guessing Game Math Functions Scope and Parameters The Python Standard Library Using Functions
3A-AP-18	Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs. (P. 5.2)	Implementing Object Oriented Programming Multiple Computing Platforms Python Art
3A-AP-19	Systematically design and develop programs for broad audiences by incorporating feedback from users. (P.	Customer Relations
3A-AP-20	Evaluate licenses that limit or restrict use of computational artifacts when using resources such as libraries. (P.	The License Police
3A-AP-21	Evaluate and refine computational artifacts to make them more usable and accessible. (P. 6.3)	Accessibility Evaluating Your Program String Formatting
3A-AP-22	Design and develop computational artifacts working in team roles using collaborative tools. (P. 2.4)	Managing a Team
3A-AP-23	Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs. (P. 7.2)	Best Practices The Software Development Process Visual Python VPython Applications
3A-IC.	Impacts of Computing	
3A-IC-24	Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices. (P. 1.2)	Career Spotlight Collaboration Ethics

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3A-IC-24	Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices. (P. 1.2)	Computer Scientists Computer Terminology Course Overview Cultural Differences in a Team Digital Citizenship Digital Etiquette Emerging Ethical Issues Ethics Five Computer Science Fields Global Information Concerns How Computers Have Changed Your World Scalability The Big Picture Where are We Going? Where Did It Get Started?
3A-IC-25	Test and refine computational artifacts to reduce bias and equity deficits. (P. 1.2)	Bias and Equity Refining Your Program
3A-IC-26	Demonstrate ways a given algorithm applies to problems across disciplines. (P. 3.1)	Math and Computer Science Connections Programming Across Disciplines
3A-IC-27	Use tools and methods for collaboration on a project to increase connectivity of people in different cultures and career fields. (P. 2.4)	Career Organizations Career Spotlight Global Connections
3A-IC-28	Explain the beneficial and harmful effects that intellectual property laws can have on innovation. (P. 7.3)	Intellectual Property Law
3A-IC-29	Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users. (P. 7.2)	Privacy Concerns Social Networking Issues

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3A-IC-30	Evaluate the social and economic implications of privacy in the context of safety, law, or ethics. (P. 7.3)	Social Networking Issues