Oklahoma Computer Science

Sixth Grade

Computing Systems 6.CS

D. Devices 6.CS.D

1 Evaluate existing computing devices and recommend improvements to the design based on personal interaction with the device. 6.CS.D.01

HS. Hardware & Software 6.CS.HS

1 Model multiple methods of combining hardware and software to collect and exchange data. 6.CS.HS.01

T. Troubleshooting 6.CS.T

1 Identify and resolve software and hardware problems with computing devices and their components involving settings and connections. 6.CS.T.01

Networks & The Internet 6.NI

NCO. Network Communication & Organization 6.NI.NCO

1 Model a simple protocol for transferring information using packets. 6.NI.NCO.01

CY. Cybersecurity 6.NI.CY

1 Identify existing cybersecurity concerns with the Internet and systems it uses. 6.NI.CY.01

2 Explain the importance of secured websites and describe how encryption works. 6.NI.CY.02

Data Analysis 6.DA

S. Storage 6.DA.S

1 Create multiple representations of the same data. 6.DA.S.01

CVT. Collection, Visualization, & Transformation 6.DA.CVT

1 Collect data using computational tools and transform the data to make it more useful. 6.DA.CVT.01

IM. Inference & Models 6.DA.IM

1 Use data to highlight or propose cause-and-effect relationships, predict outcomes, and communicate ideas. 6.DA.IM.01

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Algorithms & Programming 6.AP

A. Algorithms 6.AP.A

1 Use an existing algorithm in natural language or pseudocode to solve complex problems. 6.AP.A.01

V. Variables 6.AP.V

Students will continue to apply the standards and practices from the previous grade levels.

C. Control 6.AP.C

1 Develop programs that utilize combinations of repetition, conditionals, and the manipulation of variables representing different data types. 6.AP.C.01

M. Modularity 6.AP.M

1 Decompose problems into parts to facilitate the design, implementation, and review of programs. 6.AP.M.01

PD. Program Development 6.AP.PD

1 Seek and incorporate feedback from team members to refine a solution to a problem. 6.AP.PD.01

2 Incorporate existing code, media, and libraries into original programs and give attribution. 6.AP.PD.02

3 Test and refine programs using teacher provided inputs. 6.AP.PD.03

4 Break down tasks and follow an individual timeline when developing a computational artifact. 6.AP.PD.04

5 Document text-based programs in order to make them easier to follow, test, and debug. 6.AP.PD.05

Impacts of Computing 6.IC

CU. Culture 6.IC.CU

1 Explain how computing impacts people's everyday activities and careers. 6.IC.CU.01

2 Identify and discuss the technology proficiencies needed in the classroom and the workplace, and how to meet the needs of different users. 6.IC.CU.02

SI. Social Interactions 6.IC.SI

1 Describe and use safe, appropriate, and responsible practices (i.e., netiquette) when participating in online communities. 6.IC.SI.01

2 Individually and collaboratively develop and conduct an online survey that seeks input from a broad audience. Use the survey to evaluate whether it is feasible to solve a problem computationally. 6.IC.SI.02

SLE. Internet Safety, Law, & Ethics 6.IC.SLE

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1 Differentiate between appropriate and inappropriate content on the Internet, and identify the characteristics of unethical and illegal online behavior. 6.IC.SLE.01