Missouri Computer Science

2nd Grade

Computing Systems

Devices

1 Select and use a computing device to perform a variety of tasks for an intended outcome. 2.CS.D.01

Hardware & Software

1 Identify the components of a computer system and what the basic functions are (e.g., hard drive and memory) as well as peripherals (e.g., printers, scanners, external hard drives) and external storage features and their uses (e.g., cloud storage). 2.CS.HS.01

2 Independently choose appropriate software to perform a variety of tasks. 2.CS.HS.02

Troubleshooting

1 Identify using accurate terminology, simple hardware and software problems that may occur during use (e.g., app or program is not working as expected, no sound is coming from the device, caps lock turned on) and discuss problems with peers and adults. 2.CS.T.01

Networks & the Internet

Network Communication & Organization

1 Recognize that computing devices can be connected at various scales (e.g., Bluetooth, Wi-Fi, hotspot, LAN, WAN, peer-to-peer). 2.NI.NCO.01

Cybersecurity

1 Recognize what passwords are and why we do not share them. Explain why we use them and why we use strong passwords to protect devices and information from unauthorized access. 2.NI.C.01

Data & Analysis

Storage

1 With guidance, create, copy, locate, modify and delete a file on a computing device, use appropriate file- naming conventions and recognize that the file exists within an organizational structure (e.g., drive, folder, file) - define the information stored as data. 2.DA.S.01

Collection, Visualization & Transformation

1 With guidance, collect and present the same data in various visual formats. 2.DA.CVT.01

Inference & Models

1 With guidance, construct and interpret data and present it in a chart or graph (visualization) in order to make a prediction, with or without a computing device. 2.DA.IM.01

Algorithms & Programming

Algorithms

1 With guidance, model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks verbally, kinesthetically, with robot devices or a programing language. 2.AP.A.01

Variables

1 Model the way a computer program manipulates grade level appropriate data (e.g., print, numbers, kinesthetic movement, symbols, robot manipulatives). 2.AP.V.01

Control

1 With guidance, create programs using a programming language, robot device or unplugged activity that utilize sequencing and simple looping to solve a problem or express ideas both independently and collaboratively. 2.AP.C.01

Program Development

1 Independently or with guidance, create a grade level appropriate document of the plan, ideas and sequence of events (step-by- step) manner (e.g., story map, storyboard, sequential graphic organizer) to illustrate what the program will do. 2.AP.PD.01

2 Give credit to ideas, information, creations and solutions of others while writing and developing programs. 2.AP.PD.02

3 Independently and collaboratively, debug programs, which include sequencing and simple loops, to accomplish tasks as a means of creative expression or problem solving using a programming language and/or unplugged activities. 2.AP.PD.03

4 Use correct terminology (e.g., debug, program input/output, code) to explain the development of an algorithm to solve a problem in an unplugged activity, hands on manipulatives or a programming language. 2.AP.PD.04

Impacts of Computing

Culture

1 Identify and describe how people use many types of technologies in their daily work and personal lives. 2.IC.C.01

Social Interactions

1 Develop a code of conduct, explain and practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior and know how to report concerns of cyberbullying. 2.IC.SI.01

Safety, Law & Ethics

1 Identify safe and unsafe examples of online communications. Learn that the information put online leaves a digital footprint. 2.IC.SLE.01