LOUISIANA DEPARTMENT OF EDUCATION

Computer Science Education Week 2025: December 8-12

Computer Science Education Week

The Computer Science Education Week theme this year, CS Powers AI Innovation, highlights how computer science shapes the foundation of AI. This document contains resources that could be used during Computer Science Education Week to plan a 30-45 minute lesson that exposes students to computer science. In addition to computer science resources, the Louisiana Department of Education (LDOE) offers a Student Guide to Cybersecurity to enhance students' digital literacy and learning.

Suggested Resources

Resource Description	Suggested Level of Teacher CS Experience	Grade Level
Amazon Future Engineer offers free virtual field trips for grades 3-8 to inspire and showcase various career possibilities related to computer science, such as data science. Teachers need to sign up for the Teacher Toolkit to get started.	No CS teaching experience needed.	3-8
Common Sense Education offers interactive lessons and activities for students in grades K-12 in cyber citizenship, such as privacy and safety, cyberbullying and online harms, and information and media literacy. Resources are free and do not require a download.	No CS teaching experience needed.	K-12
CS Unplugged is a collection of free, engaging material that includes computer science games, puzzles, and activities, such as the data-bit game Mind-reading Magic, Binary Challenge, and Squeezing Pictures Into Codes.	No CS teaching experience needed.	K-12
Cyber.org offers lessons highlighting many aspects of cybersecurity, including lessons on multi-factor authentication, layered security, and malware attacks. Access is free, but teachers must create an account first.	It is suggested that teachers be familiar with CS skills and teaching.	K-12
Experience CS provides free cross-curricular lessons and interactive projects using Scratch for grades 3-8. Activities include concepts that can be integrated with core content. Teachers should watch the tutorial video before planning. Also, teachers need to create an account and set up classes to get started.	Teachers must know coding and be familiar with computer science.	3-8

Resource Description	Suggested Level of Teacher CS Experience	Grade Level
Google offers interactive games for students to explore various aspects of cybersecurity, cyber safety, cyberbullying prevention, and digital responsibility. Be Internet Awesome includes traditional lesson plans and games to engage students in grades 2-6.	No CS teaching experience needed.	2-6
NASA's Space Place offers a game that combines coding with Exploring Mars. The game is designed for grades K-4 and contains images, facts, and technology tools used by NASA scientists.	No CS teaching experience needed.	K-4
PBS NOVA Labs, in conjunction with cybersecurity experts, offers the Cybersecurity Lab, a game in which players will discover how to keep their digital lives safe and develop an understanding of cyber threats and defenses. An educator guide is available to assist teachers with planning.	No CS teaching experience needed.	K-8
Scratch Jr. allows students ages 5-7 to explore block-based coding through activities such as programming animations. Students need a device with the free app installed to use this resource.	Familiarity with coding is recommended to facilitate this resource.	K-5
Tynker is an online learning platform that introduces children to coding through puzzles and games, including the beginner block-based coding game Space Quest and the more advanced Python coding game, Life on Land. Teachers should follow the planning guide to create a free account, add students to the class, and begin guided coding activities.	Some CS teaching experience needed.	K-12
Code.org provides Careers with Computer Science, a collection of pre-recorded videos featuring Computer Science and Tech professionals, allowing students to gain insight into these career opportunities. A suggested viewing guide with a student reflection sheet is provided.	No CS teaching experience needed.	6-12
Experience CS provides free cross-curricular lessons and interactive projects using Scratch for grades 3-8. Activities include concepts that can be integrated with core content. Teachers should watch the tutorial video before planning. Also, teachers need to create an account and set up classes to get started.	Teachers must know coding and be familiar with computer science.	6-8

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Geeky Ventures offers Code Monster, a free web-based tutorial where students can learn Javascript code. Students can modify code and see the effects in real-time. This free service requires no downloads or user accounts.	No CS teaching experience needed.	6-8
Grok Academy offers a cybersecurity minicourse that helps students stay safe online. Students learn to secure passwords, avoid phishing, maintain security settings, and practice responsible social media usage. This free activity comes with a teacher lesson plan.	No CS teaching experience needed.	6-12
Microsoft MakeCode for micro:bit allows students to learn coding concepts using a virtual version of the micro:bit. Micro:bit is a small, programmable computer designed to help learn how to code and create physical coding projects such as a randomized rock paper scissors game using Block, Python, or Javascript coding.	No CS teaching experience needed.	6-12
Scratch, a block-based coding program designed for ages 8 to 16, offers students an opportunity to create a story, make animations, or even practice math skills such as positive and negative integers in the Make A Chase Game. Step-by-step tutorials are freely available, as are activities and ideas for using Scratch.	No CS teaching experience needed.	6-8
Tinkercad is a free, online 3D modeling program for 3D design, electronics, and coding. This resource allows students to create models, experience various technologies, and utilize block-based programming to create 3D models such as personalized name tags.	Teachers are advised to be familiar with basic coding terminology and block-based coding.	6-12
Students use VEXcode VR to code a virtual robot through various challenges. Teachers who are comfortable using code should allow students to choose a playground. Otherwise, teachers should choose a class playground challenge. No logins or user profile accounts are required.	Some CS teaching experience suggested.	6-12