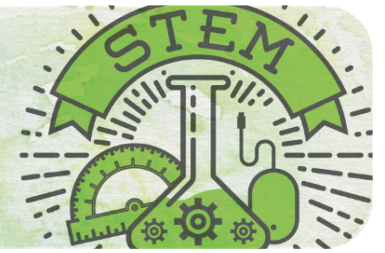# Louisiana STEM INITIATIVE

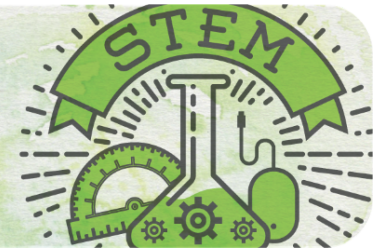## Computer Science Education Week (CSEd Week): December 4-8

The STEM team has collaborated with STEM Teacher Leader Advisors and our STEM Pathway providers to generate the sample activities below that could be utilized during CSEd week. These activities are designed to be 30-45 minutes in duration, arranged with a suggested daily focus topic, and assembled below for grades 9-12. The list also lists the level of computer science the teacher may need in order to facilitate the activity. The theme of this year's CSEd Week is **Computer Science (CS) Everywhere!,** highlighting the impact computer science has on our students' world. **If you have questions please contact STEM@la.gov.**

Day of the week	Focus Topic	Description
Monday	**Cybersecurity and Cybersafety**	Helping students understand cybersecurity with grade appropriate resources
Tuesday	**Computer Science Career Exploration**	What are the CS careers in Louisiana? Nationally? What do we do to prepare for them?
Wednesday	**Computer Coding**	Computer Coding resources and activities for students and their families
Thursday	**Responsible Social Media Awareness and Usage**	How to avoid cyberbullying and the best practices for responsible Social Media usage
Friday	**Applying CS to Your Students' Interests**	CS unplugged activities using hands-on learning, robotics, digital media, computational thinking, data analysis, digital photography, and opportunities to showcase CS courses that are active in your school/community.

If your school would like a visitor to share in the excitement and fun of your activity please complete this form.

Please use the following social media tags so we can help celebrate your event: @LABelieves, @LACSEdWeek, @CSLA, and @LASTEM.
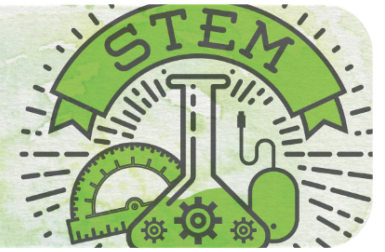
9-12 Suggested Resources

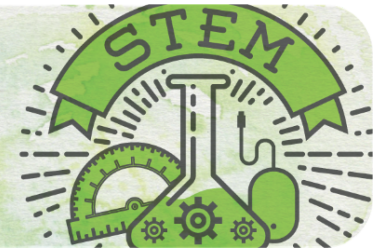| Day of the Week	Description of Resource/ How to use/ Website Link	Teacher CS Experience Needed
Monday	The Louisiana Department of Education's Digital Learning team's resource helps students understand digital citizenship. This resource can be virtually shared with students and utilized to explore and discuss many aspects of cyber safety and cybersecurity.	No CS Teaching Experience Needed
Monday	Cyber.org has resources for grade level lessons. These lessons highlight many aspects of cybersecurity, cyber safety, cyber bully prevention, and digital citizenship. Teachers will need to preview and select the lesson they wish to utilize prior to the resource use. Teachers will need to create a free account with cyber.org in advance of accessing resources.	Familiarity with CS skills and teaching are suggested
Monday	PBS's NOVA Lab Cybersecurity Lab- NOVA has teamed up with cybersecurity experts to create the Cybersecurity Lab, a game in which players will discover how they can keep their digital lives safe and develop an understanding of cyber threats and defenses. Players will advance by using computer coding, logical reasoning, critical thinking, and vulnerability detection to solve various problems. Students will not need any prior cybersecurity or coding expertise to succeed. Video introduction on what the Internet is and how it formed is also located here.	No CS Teaching Experience Needed
Tuesday	Amazon Future Engineer has created a free set of *virtual field trips* to inspire and show students career possibilities. These can be used with Kahoot, but it is not required.	No CS Teaching Experience Needed

9-12 Suggested Resources (continued)

Day of the Week	Description of Resource/ How to use/ Website Link	Teacher CS Experience Needed
Tuesday	Code.org has created Careers with Computer Science. This resource allows students to see and hear from a variety of professionals in pre-recorded videos. A suggested viewing guide with student reflection sheet are also provided.	No CS Teaching Experience Needed
Tuesday	Code.org has a free service to help connect guest speakers with classrooms. The "Find a Local Volunteer" program is a great way to plan an in-person or virtual talk. Teachers will need to do some logistical work to set up these events.	No CS Teaching Experience Needed
Wednesday	The Hour of Code is a global movement reaching tens of millions of students in 180+ countries. Anyone, anywhere can organize an Hour of Code event or try any of the over 500+ one-hour tutorials, available in over 45 languages.	No CS Teaching Experience Needed
Wednesday	Geeky Ventures offers Code Monster. Students have the ability to follow instructions and see both Javascript commands and visual changes in real time. This free service requires no downloads or user accounts. There are 50 total lessons that students may progress through.	No CS Teaching Experience Needed; Students need 1:1 devices with internet access
Wednesday	Google First is an eight lesson series that can be completed with students to use Scratch to create music or video game design. This is a free service, but students must create accounts. Teachers need to examine the resources and plan appropriate time for the lessons. This is not intended to be a novice resource.	Teacher must know coding and be familiar with computer science

9-12 Suggested Resources (continued)

Day of the Week	Description of Resource/ How to use/ Website Link	Teacher CS Experience Needed
Thursday	Grok Academy has a fun cybersecurity minicourse that helps students stay safe online. Students learn how to secure passwords, avoid phishing, maintaining security settings, and practicing responsible social media usage. This free activity comes with a teacher lesson plan.	No CS Teaching Experience Needed
Friday	CS Unplugged is a collection of free teaching materials that engage students with hands-on games, puzzles, and activities that involve computing. These lessons use cards, string, crayons, and moving around to experience CS without a computer!	No CS Teaching Experience Needed
Friday	Students use VEX Robotics, to code a virtual robot through a series of challenges. Teachers that 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.	No CS Teaching Experience Needed
Friday	The Hour of Code is a global movement reaching tens of millions of students in 180+ countries. Anyone, anywhere can organize an Hour of Code event or try any of the over 500+ one-hour tutorials, available in over 45 languages.	No CS Teaching Experience Needed