

Passion + Technology

IMPORTANCE OF DIGITAL SKILLS IN EVERY PROFESSION

Objective: Students will understand that “tech savviness” (defined as Computing and Data Science literacy) is a versatile tool—not just a career path—that enhances their ability to succeed in their specific areas of interest. They will be motivated to enroll in Computer Science (if available) or join a relevant club or other opportunity.

Subject: Compliments an in-classroom or small group interest inventory lesson

Estimated Duration: 10-15 minutes

Grade Levels: 7th-12th grade

ASCA Student Standards Alignment

M 5: Belief in using abilities to their fullest to achieve high-quality results and outcomes

B-LS 4: Self-motivation and self-direction for learning

B-LS 5: Media and technology skills to enhance learning

B-LS 7: Long and short-term academic, career and social/emotional goals

Slide 1

92% of all jobs require digital skills.

Goal: Students understand that digital skills are important and advantageous across all interest areas.

Sources: 92% statistic from National Skills Coalition (2024).

Having the opportunity to take a high quality CS course in high school raised students’ likelihood of being employed by 2.6 percentage points and annual earnings by about 8 percent at age 24 (Liu, Conrad, & Blazar, 2024).

[Computer Science for All? The Impact of High School Computer Science Courses on College Majors and Earnings](#)

Slide 2

Your Passion + Tech Savviness = Open Doors.

Goal: Define “tech savviness” and highlight the benefits it brings.

Relevant Research: Having the opportunity to take a high quality CS course in high school raised students’ likelihood of being employed by 2.6 percentage points and annual earnings by about 8 percent at age 24 (Liu, Conrad, & Blazar, 2024). [Computer Science for All? The Impact of High School Computer Science Courses on College Majors and Earnings](#)

People with high digital literacy have shorter unemployment gaps because their skills are transferable across disparate sectors (e.g., from retail to administrative support). <https://academic.oup.com/ser/article/23/3/1225/8051295>

Slide 3

What does it mean to be tech savvy?

This slide features 4 questions—courtesy of [CSTA](#)—that illustrate the relevance of Computer Science (CS) to daily life. They also relate to some staple topics in CS: privacy/security, data science/analysis, ethics and social impact of tech, and programming/algorithms.

Goal: Students see the practical utility of CS in their lives. They understand that the point of high school CS is not to turn every student into a computer scientist, but to help every student become a more digitally powerful version of themselves.

Slide 4

Same Goal, Different Tools

This slide compares a professional who has passion (Social Work) to a professional who has passion + CS (Social Work + CS).

Goal: To provide a concrete example of how CS skills apply in a non-tech field and can amplify a person's impact. (Core message: It's not about becoming a Computer Scientist, it's about becoming a more digitally powerful version of yourself.)

Slide 5

The Digital Toolbox: Programming (Builder's Mindset), Data Analysis (Making Sense of Complexity), Computational Thinking (Brain Strategy), AI (Builder vs. User).

Goal: To break down the term "Computer Science" into relatable, high-value skills.

Slide 6

What Problem Do You Want to Solve? (Optional 5-10 min. activity)

The slide displays a table pairing each RAISEC code with an example of a relevant digital skill.

Goal: To engage students in a collaborative brainstorm that connects their Holland Code to a specific digital skill and gets them to think about how they can put their interests/skills to use in pursuit of their values.

Ask students to find someone with a different RAISEC (or Holland) code. Each person should think of a problem they would like to solve (or at least, work on) or a benefit/good they would like to provide to society in their future career. (e.g., "I want every kid to have a safe childhood," "I want to create wealth and jobs by starting a business," "I want to grow food"). The pair should choose one of those problems/goals, and explain how they would use their strengths and digital skills to work on that problem (or goal) together.

Slide 7

Take the Next Step (Customize to your local offerings)

Goal: To move students from interest to action by providing a map of reachable on-ramps.

Identify Local Opportunities and Customize the Slide:

Before the lesson, identify 1–2 items for the first two columns. If a column doesn't apply to your area, simply delete it; the remaining columns will expand to fill the space.

Column 1: At Our School

- If available, emphasize this option as the main call to action.
- Where to look: Check your course catalog for CS, Data Science, or CTE computing/tech pathways. Check with the "Maker Space" or Robotics coach.
- What to list: Class names, club meeting times, or the name of a specific teacher to talk to.

Column 2: In Our Community

Where to look:

- **Local Libraries:** Search their event calendars for "Coding," "Teens & Tech," or "Maker Lab."
- **4-H & Scouts:** Both organizations have robust STEM and robotics tracks that are widely available in rural areas.
- **Community Colleges:** Look for Dual Enrollment or Summer Bridge programs at the nearest Community College.

- **Local Nonprofits:** Look for organizations like the Boys & Girls Club which often host national tech curriculums.
- **Curated online directories:** Check [Connected Girls](#) (most of the listed opportunities are not limited to girls) or [Science Near Me](#)

Column 3: Online & Global (Pre-filled)

- **Hack Club:** A global community of makers. Start your own club or join the Slack to build projects with other teens.
- **Girls Who Code:** Free virtual and local clubs focused on coding for social good.
- **freeCodeCamp:** A completely free, self-paced way to earn professional certifications in data and web design.
- **Code.org:** The best starting point for beginners. Their Hour of AI and CS Fundamentals are highly interactive and visual.
- **Aspirations in Computing:** Connect with high school, college, and early career people who want to build a better world with tech – because YOU belong in tech!

Resources:

1. Free Online Learning Platforms

These platforms are the “gold standard” for self-paced learning. They require only an internet connection and a desire to learn.

- **Code.org:** The best starting point for beginners. Their “Hour of AI” and “CS Fundamentals” are highly interactive and visual.
- **Khan Academy (Computing):** Offers excellent intro courses in JavaScript, HTML/CSS, and SQL. It’s structured like a classroom, making it easy to track progress.
- **Harvard’s CS50x (via edX):** A world-famous introductory course. It’s challenging but incredibly rewarding for motivated high schoolers. Students can audit the entire course for free.
- **freeCodeCamp:** A non-profit that offers thousands of hours of certifications in Web Design, Python, and Data Analysis. It is entirely free and project-based.
- **Swift Playgrounds:** An iPad and Mac app that makes learning Apple’s “Swift” language feel like a video game. Great for students interested in app development.

2. Clubs and Community Networks

If your school doesn’t have a club, these organizations help students start their own or join a global network of peers.

- **Aspirations in Computing:** The Aspirations in Computing Community supports students and early-career professionals interested in computing and engineering. Connect with like-minded high school, college, and early career people in tech – because YOU belong!
- **Hack Club:** A non-profit network of student-led coding clubs. They provide free stickers, a global Slack community of 80k+ teens, and even small “micro-grants” to help students start their own club at school or in a library.
- **Girls Who Code Clubs:** Free after-school programs for 6th–12th grade girls and non-binary students. They provide the curriculum and a sisterhood of support.

3. Rural & Underserved Area Initiatives

Specific resources designed to bridge the digital divide in rural or high-poverty communities.

- **Rural Technology Fund (RTF):** This organization provides grants for technology equipment (like Raspberry Pi kits or robotics) to rural schools and libraries. Teachers can apply for funding to start a “maker space” or after-school tech program.

- **[Amazon Future Engineer:](#)** Offers free CS curriculum and virtual field trips. They also provide massive scholarships and internship opportunities for students from underserved communities.
- **[National Digital Navigator Corps:](#)** Operates in many rural and Tribal communities to help residents get affordable internet, devices, and digital skills training.

4. Competitive & Summer Opportunities (Free/Low-Cost)

For students looking for an intensive experience or a “college-ready” resume builder.

- **[Congressional App Challenge:](#)** A prestigious national competition where students create and submit an original app. It’s open to all middle and high schoolers, regardless of coding experience level.
 - **[Google Code Next:](#)** A free program (both virtual and in-person in select cities) that provides high school students from underrepresented communities with tech mentorship and skills.
 - **[USA Computing Olympiad \(USACO\):](#)** For students who enjoy math and logic. It’s a series of free online contests in competitive programming.
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5. Professional “Mini-Certifications”

For students who want to go straight into the workforce or build a professional LinkedIn profile.

- **[Grow with Google Certificates:](#)** While these usually have a monthly fee via Coursera, financial aid is widely available for high schoolers. They offer career paths in Cybersecurity, Data Analytics, and IT Support.
- **[Microsoft Learn:](#)** Offers free learning paths for cloud computing and AI that lead to industry-recognized certifications.