



# Creating Opportunity for Idaho Students

**Computer Science and Career Kickstart**

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# Computer Science In Idaho

**2,746** Open computing jobs  
(**2.9x** the state average demand rate)  
with an average salary of **\$86,884**  
**38%** of public high schools teach a CS class  
(**25%** of Idaho High Schools teach AP  
Computer Science Principles)  
**577** Computer science graduates  
([Code.org](https://code.org))

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# Preparing the Technology Workforce in Idaho

## Computer Science

- **2,746** Open computing jobs
  - **2.9x** the state average demand rate
- with an average salary of **\$86,884**
- **38%** of public high schools teach a CS class, despite having a CS course mandate
  - **25%** of Idaho High Schools teach AP Computer Science Principles
- **577** Computer science graduates

(Code.org)

## Cyber Security

Demand for cyber-security jobs continues to increase in Idaho

- Boise Area: **2,695** new job openings
- Idaho Falls: **259** new job openings
- Coeur d'Alene: **141** job openings
- Pocatello: **105** job openings

The average pay for cyber security jobs in ID is **\$136,793/year**

- **Boise: \$135,934** annually
- **Nampa: \$135,724** annually
- **Coeur d'Alene: \$132,382** annually
- **Post Falls: \$127,069** annually
- **Pocatello: \$126,856** annually

(ziprecruiter.com)

CollegeBoard

# Career Kickstart

Powered by AP

# Career Kickstart

*Expanding the successful AP model to the CTE space*

# Four-year college is not the only path for students

- The **majority** of high school students are **not ready** for four-year college
- Four-year college **cost is at all-time high**; \$1.75 trillion student **debt** in US
- Employers are struggling to hire for good, in-demand jobs due to lack of skilled workforce and in response are **reducing unnecessary four-year degree requirements**
- In 2021, 41 states passed 138 **laws to better align education and workforce**

# Students want the skills required to launch careers

- Four-in-five high school **students want more career exploration** in high school
- In a large survey of families, “**Career Preparedness**” climbed from the **27<sup>th</sup>** ranked purpose of education in 2019 to the **6<sup>th</sup>** ranked in 2022
- 27% of jobs are “at high risk from AI revolution,” according to the OECD

# What is Career Kickstart?

New career-oriented courses launching nationwide 2026

Expanding the successful AP model to the career and technical education (CTE) space

Offers schools a new set of career-oriented high school courses that offer

1

Relevant, high-quality instruction and experiences that earn **HS credit**

2

Coursework that leads to **industry-recognized credentials (IRCs)**

3

Opportunity to earn **college credit** through an assessment

Students gain **exposure to growing career fields** and a **head start on their pathway** – whether that's 4-year college, 2-year college, or an apprenticeship.

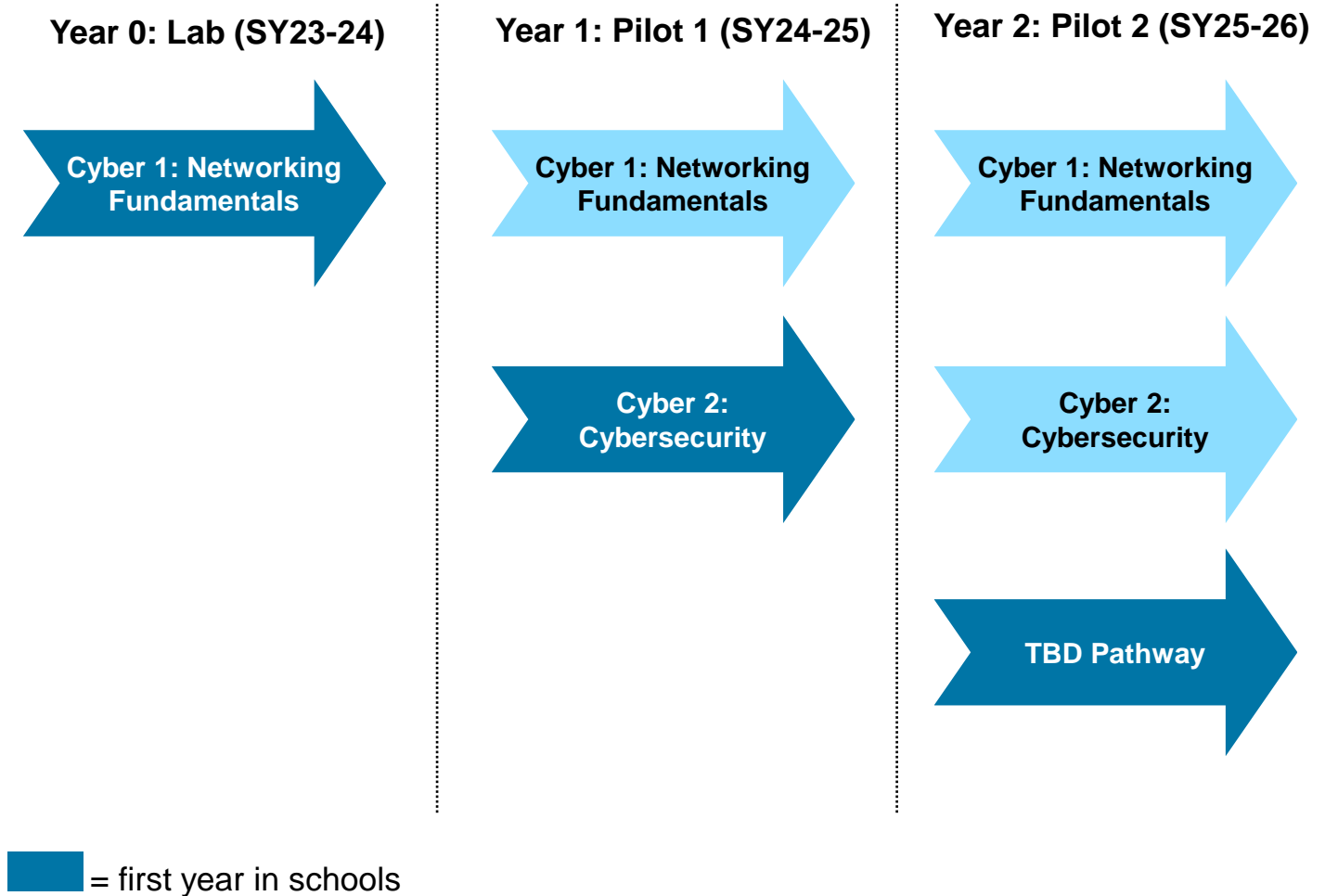
# Why Cybersecurity?

Entering the CTE space in a high-demand field

\* a CTE **pathway** is an organized group of courses and activities design to develop the knowledge and skills necessary for success in the workforce

## First CK Pathway\*: Cybersecurity

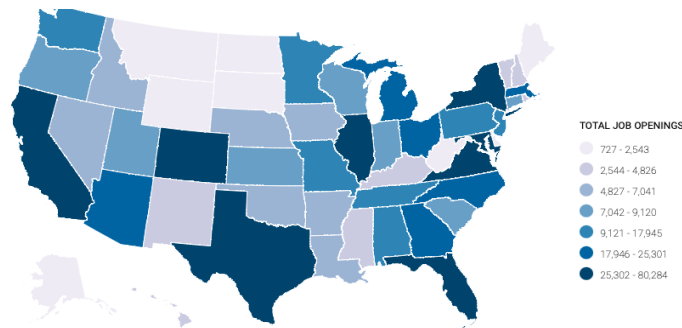
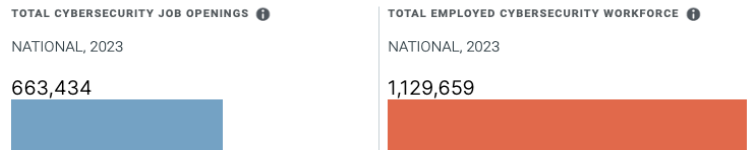
Propelling students to high-growth industries



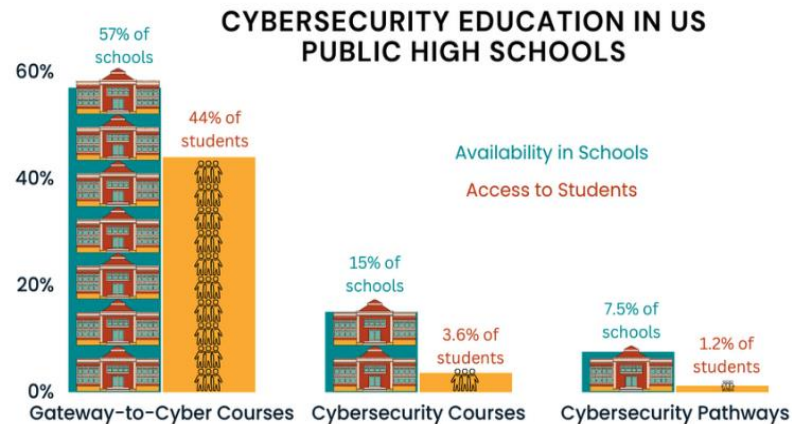
# Lack of Access

Cybersecurity positions are available, but HS students lack access to information and training at an appropriate level

Approximately 663,000 open cybersecurity positions available.



~4% of high school students in the US have access to a cybersecurity courses.



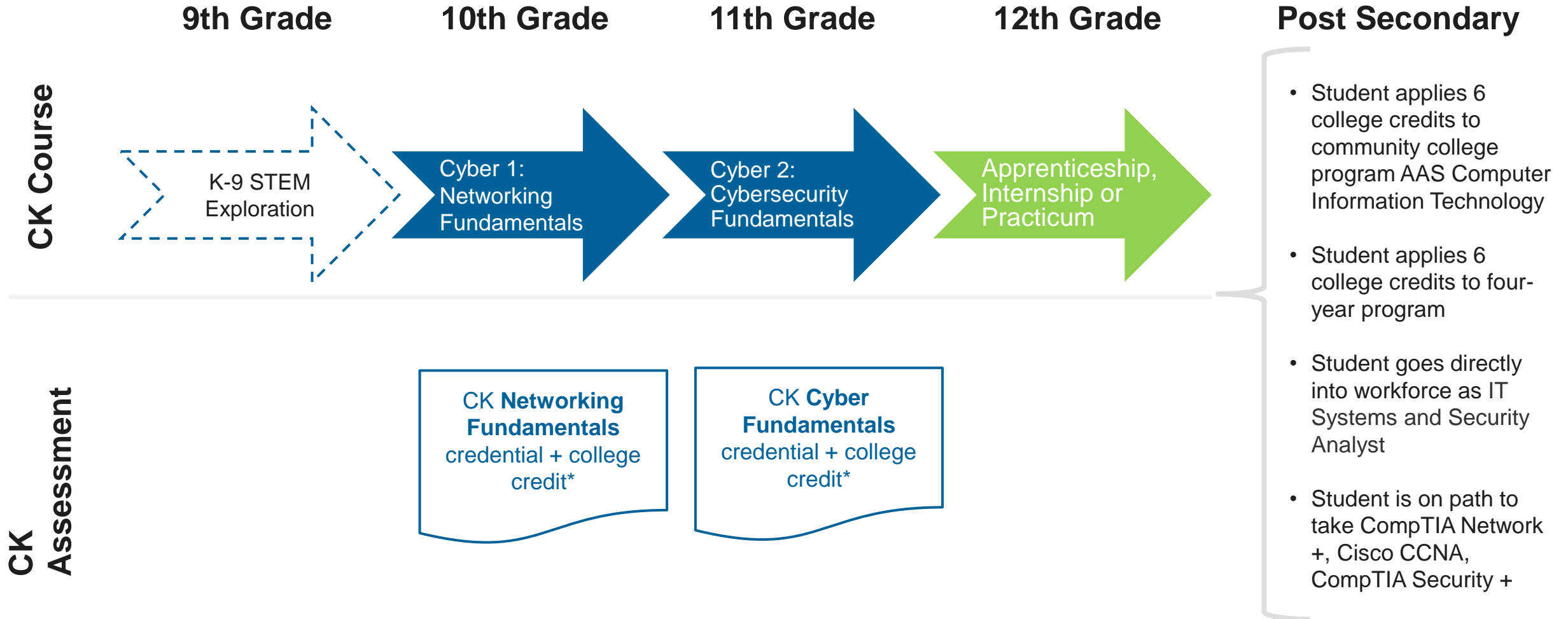
Source:  
Cybersupply.org

*" We must also make cyber training and education more broadly available so that even those persons currently underrepresented in the cyber workforce are qualified to pursue well-paying, fulfilling cyber jobs."*

**- Office of the National Cyber Director**



# CK Student Experience



# CK Student Experience: Meet Colin, line cook to SOC Analyst



**Colin Kline** · 1st  
Security Operation Center Analyst  
United States · [Contact info](#)

Belcan  
 Lakota West High School

Colin is making **\$73,000** out of high school in Ohio.

Enrolls in a  
Cybersecurity  
Pathway

Gets a  
Cybersecurity  
Internship

Gets  
Certifications

**SOC Analyst**

## Education

**Lakota West High School**  
High School Diploma  
2019 - 2023

## Experience

**Line Cook**  
Thunderdome Restaurant Group · Part-time  
Sep 2021 - Jan 2023 · 1 yr 5 mos  
Cincinnati, Ohio, United States

**Skills:** Service Quality · Cashier · Point of Sale (POS) Systems · Fast Food · Dishwashing · Order Taking

## SOC Intern

Part-time  
Jan 2023 - Jun 2023 · 6 mos

**Skills:** Anti-phishing · Data Analysis  
Information Security · Service Quality

## Licenses & certifications

**CompTIA Security+**  
CompTIA  
Issued Apr 2023 · Expires Apr 2026  
Credential ID T3SZXEG5NEB1QHWP

Show credential ↗

**TestOut Ethical Hacker Pro Certification**  
TestOut Corporation  
Issued Nov 2022  
Credential ID 6-2CG-S367T

Show credential ↗

## Experience

**Belcan**  
8 mos

• **SOC Analyst 1**  
Full-time  
May 2023 - Present · 4 mos

• **SOC Intern**  
Part-time  
Jan 2023 - Jun 2023 · 6 mos

**Skills:** Anti-phishing · Data Analysis · Information Security · Service Quality

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# Hope for Idaho Students

The CK team wants to develop the **best cybersecurity pathway for Idaho students** that prepares them for **careers in cybersecurity**. Scaling will require a multifaceted approach. The approach in Idaho will address **student engagement** and access to **high-quality instruction, teacher availability and retention**, as well as increasing the **capacity for partnerships between K-12, higher education, policymakers, and industry**.

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# What does Idaho Need to Expand Opportunities for Students?

**Becoming a Career Kickstart Pilot State and partner in Developing expanded Graduation Pathways**

**Meet the current Computer Science course offering mandate for more high schools and more students**

- **Increase Teacher capacity in Computer Science and Cyber Security Career Kickstart courses**
  - Innovative strategies to certify CS and CK teachers utilizing approved professional development
  - Changes to the certification and licensure requirements that will allow some flexibility to recruit and train existing teachers and new teachers
  - Identify existing funds that can be accessed for expanded teacher training or incentives to teach these courses
- **Identify Districts and Schools as pilot sites**
- **Identify relevant Business and Higher Ed partners**
- **Ensuring students receive Community College or College credit**
- **Leadership**
  - At the site, district, and state policy level to make this a priority for High Schools
  - At the community level to define the needs for the workforce in Idaho
- **Accountability**
  - Are the courses students are taking leading to an industry or technical credential, 2- or 4-year pathway?
  - How can we better utilize incentives to meet these demands?



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# Thank you!

For further information or questions, Please contact

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Career Kickstart information and implementation

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*Penny Kotterman, Sr. Director, Government Relations*

Policy or program information for elected officials or policy makers

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*Lee McIlroy, Director, State and District Partnerships*

Program information for districts or schools

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# Additional information

The Career Kickstart Course

CK is powered by AP, but designed for CTE. So we have all the wonderful AP offerings for CTE programs plus more!

	<b>Course Element</b>	<b>Advance Placement</b>	<b>Career Kickstart</b>
<b>Curricular Framework</b>	Course Framework w/Units, Learning Objectives and Essential Knowledge	<b>Yes</b>	<b>Yes</b>
	Technical Skills	<b>Yes</b>	<b>Yes</b>
	Professional/Durable Skills	Sometimes	<b>Yes</b>
	Work Based Learning	No	<b>Yes</b> , not in Pilot
	Number of Courses	Ala carte	2 per pathway
<b>Instructional Supports</b>	Summer Institute PL (CKSI)	<b>Yes</b>	<b>Yes</b>
	Through Year PL	<b>Yes</b>	<b>Yes</b> , partial in Pilot
	CK Classroom	<b>Yes</b>	<b>Yes</b> , partial in Pilot
	Sample Lesson Plans	No	<b>Yes</b>
	Teacher Community	<b>Yes</b>	<b>Yes</b>
<b>Exam</b>	End of Course Exam	<b>Yes</b>	<b>Yes</b>
	Exam = College Credit	<b>Yes</b>	<b>Yes</b> , not in Pilot
	Exam = IRC aligned	No	<b>Yes</b>

# Course Framework

In CTE, *how* you teach the content is as important as *what* you teach (the framework). The course was built to ensure (1) **engaging** hands-on instruction from the start, and (2) **scaffolding** to allow access regardless a student's entry point. CK authored and provided in the framework **original visuals** in order to reduce barriers created by literacy and language differences.

**Next year:** In SY24-25, CK will pilot cyber competitions in the classroom.

## Engaging Lesson Plans

### Unit 1 Sample Flashlights



Students use flashlights as a physical representation of the on/off states of bits to prompt students to transmit information. Teachers use the strengths and limitations of this representation to motivate the need for protocols and multiple bits in a row to represent and transmit data.

### Unit 2 Sample Cable Construction



Students build their own ethernet cables to deepen their understanding that all data sent in a network eventually run through a physical cable. Students learn that the strengths and drawbacks of cables are related to the physical properties of the transmission medium.

### Unit 3 Sample Number Cards

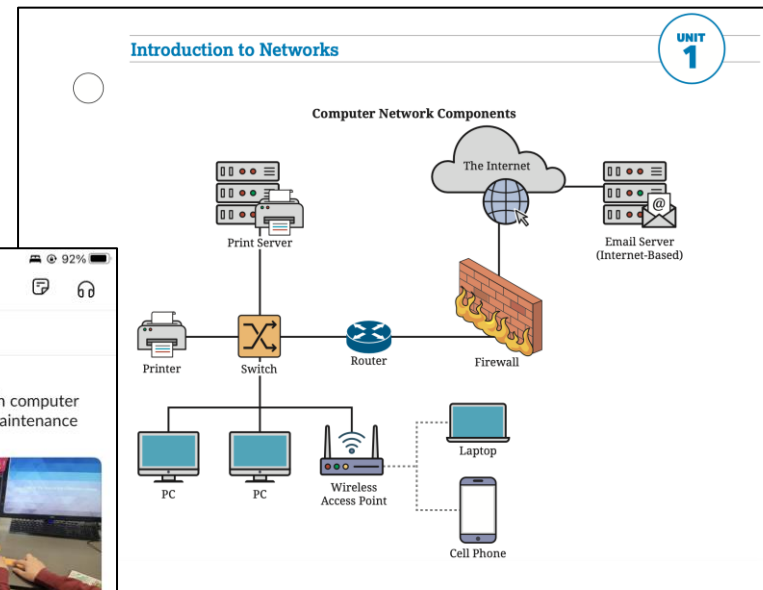


Students develop a conceptual understanding of number systems using printable base-10 (decimal) and base-16 (hexadecimal) cards. Students use the cards to physically model a number's place value. This lesson builds upon a previous lesson where students use cards to understand the base-2 (binary) number system.

Picture from one of our lab teachers executing one of the lessons



## Visuals from Guide



*"The lessons were fun, scaffolded, and differentiated! It was an example of taking a hard look at something I had taught and felt I had done well at before and really replacing that lesson with a better experience for students." - Lab Teacher*