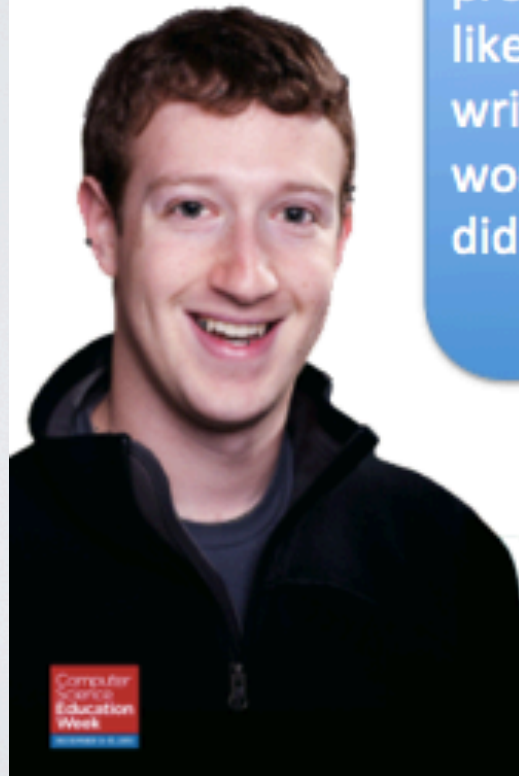


Hour of Code

Computer Science Education Week



“In fifteen years
we’ll be teaching
programming just
like reading and
writing...and
wondering why we
didn’t do it sooner.”

- Mark Zuckerberg

Friday, December 13th
@ 2nd Floor Lecture Hall
8:15 - 9:30 a.m.

**Join Mr. Lipson &
Mrs. Cullen**
In a #HourofCode

No prior experience needed.

To Register, Email:
LCullen@natickps.org or
MLipson@natickps.org

www.code.org • www.mrscullen.com • www.mikelipson.com

RESOURCES

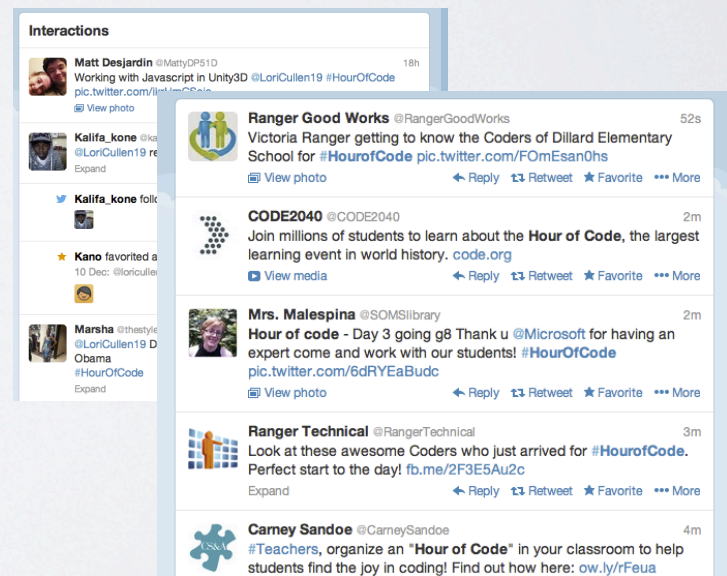
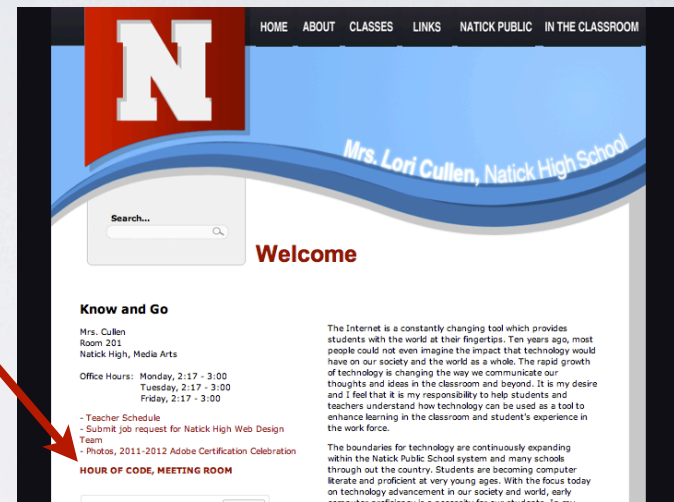
Hour of Code, Meeting Room

www.mrscullen.com

Twitter Challenge

Tweet for Computer Science Education Week, create your own Tweet and then add the labels,

[@loricullen19](https://twitter.com/loricullen19) and [#hourofcode](https://twitter.com/hourofcode)



WHAT IS COMPUTER SCIENCE?

Formal Look

Computer Science education encompasses “the study of computers and algorithmic processes (step-by-step procedure for calculation), including their principles, their hardware and software designs, their applications, and their impact on society.”



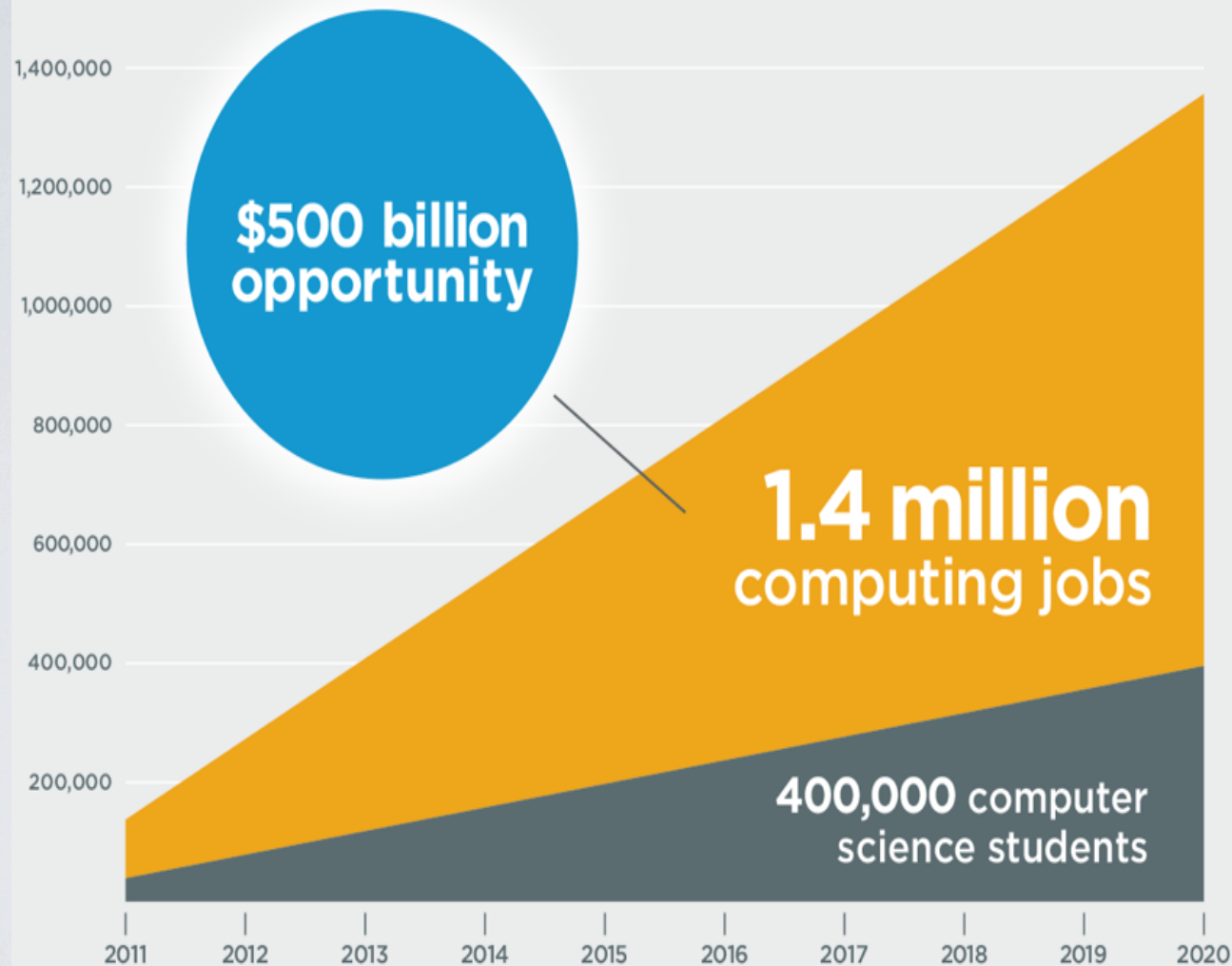
Quick Glance

1. Algorithmic problem-solving
2. Computing and data analysis (managing, processing, visualizing and interpreting data)
3. Human-computer interaction
4. Modeling and simulating real-world problems
5. Creating and manipulating graphics
6. Programming (including game design)
7. Security (including cryptography)
8. Web design (illustrating principles of programming, human-computer interaction and abstraction)
9. Robotics (designing and programming)
10. Ethical and social issues in computing

INFOGRAPHICS

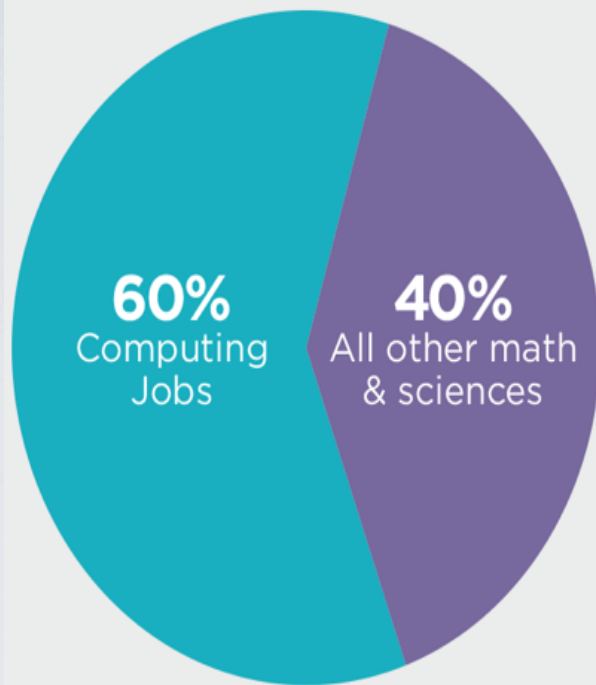
What's wrong with this picture...

1,000,000 more jobs than students by 2020

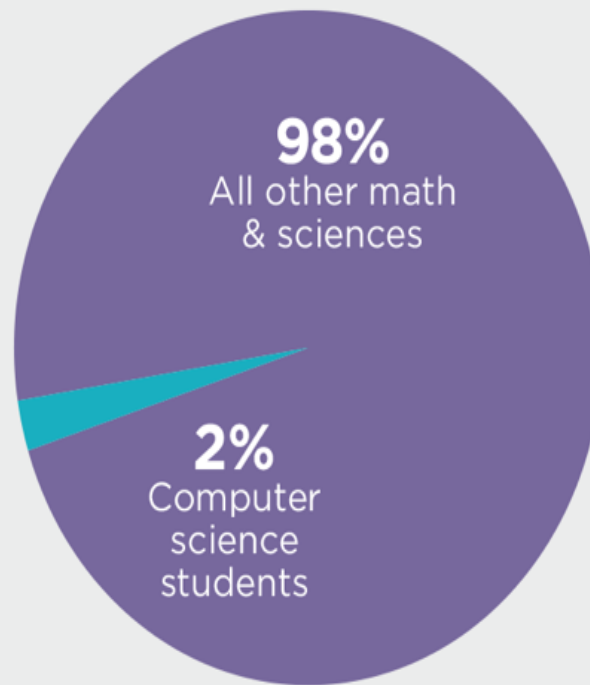


Computer science
**is a top paying
college degree**
and computer
programming
**jobs are growing
at 2X the
national average.**

The job/student gap in computer science



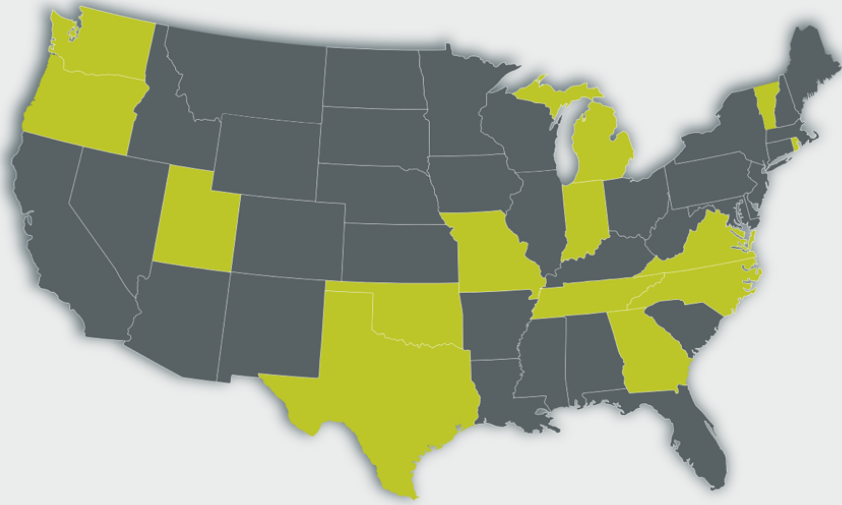
Jobs



Students

Less than 2.4% of college students graduate with a degree in computer science. And the numbers have dropped since last decade.

Computer science in America



in 36 of 50 states,
computer science
**doesn't even
count towards
high school
graduation math
or science
requirements.**



Massachusetts State Facts *

- **20,499** open computing jobs
(growing at **3.2x** the state average)
- **2,134** computer science graduates
- **120** schools teach computer science

* Sources: The Conference Board, National Science Foundation, Code.org. More info.

Gender Inequity



While, 57% of bachelor's degrees are earned by women, **just 12% of computer science degrees** are awarded to women.

WHAT TO EXPECT

Job increase of 19% between 2010 - 2020

Average Salary = \$89,000

Job Opportunities

1. Software Engineer
2. Software Developer
3. Web Developer
4. Network Engineer
5. Graphic Designer

Top Cities Hiring

1. Washington D.C.
2. San Jose
3. New York
4. San Francisco
5. Boston

Top Companies: Microsoft, Amazon, AppLaps, Raytheon

WHAT PEOPLE ARE SAYING

Tell the World!

Leaders and trendsetters agree more students should learn computer science



President Bill Clinton

"At a time when people are saying "I want a good job - I got out of college and I couldn't find one," every single year in America there is a standing demand for 120,000 people who are training in computer science."



Marco Rubio

Senator, Florida

"Computer programmers are in great demand by American businesses, across the tech sector, banking, entertainment, you name it. These are some of the highest-paying jobs, but there are not enough graduates to fill these opportunities."



Bill Gates

Chairman, Microsoft

"Learning to write programs stretches your mind, and helps you think better, creates a way of thinking about things that I think is helpful in all domains."



Mark Zuckerberg

Founder, Facebook

"Our policy at Facebook is literally to hire as many talented engineers as we can find. There just aren't enough people who are trained and have these skills today."



will.i.am

Musician/The Black Eyed Peas and Entrepreneur

"Here we are, 2013, we ALL depend on technology to communicate, to bank, and none of us know how to read and write code. It's important for these kids, right now, starting at 8 years old, to read and write code."



Sheryl Sandberg

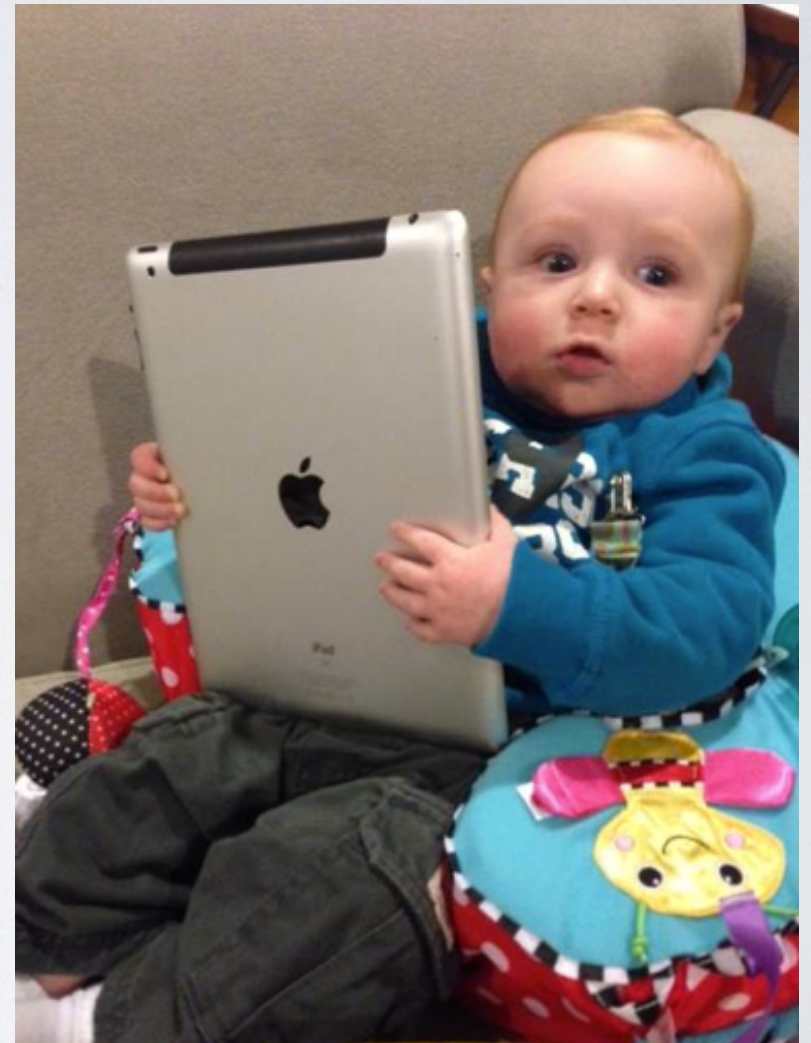
Chief Operating Officer, Facebook

"An understanding of computer science is becoming increasingly essential in today's world. Our national competitiveness depends upon our ability to educate our children - and that includes our girls - in this critical field."

MAKE AN IMPACT

Current and past generations have provided **you** with devices and social media.

What are **you** going to provide to the next generation?



OUR TURN @ NATICK HIGH

Code On....

code.org/learn



LEARN TEACH PROMOTE HOW TO HELP

Learn an Hour of Code

Beyond One Hour

Find Local Schools + Camps

Tutorials for beginners

Educator Notes



Write your first computer program
Code.org

Learn the basic concepts of Computer Science with drag and drop programming. This is a game-like, self-directed tutorial starring video lectures by Bill Gates, Mark Zuckerberg, Angry Birds and Plants vs. Zombies. Learn repeat-loops, conditionals, and basic algorithms. Available in 20 languages

Ages 6-106 | Modern browsers, smartphones, tablets

3,357,275 participants

<http://hourofcode.com/co>
Teacher's Notes

Go



Tutorials that teach JavaScript



An introduction to JavaScript
KhanAcademy

Learn the basics of JavaScript programming while creating fun drawings with your code. Do it on your own or with your