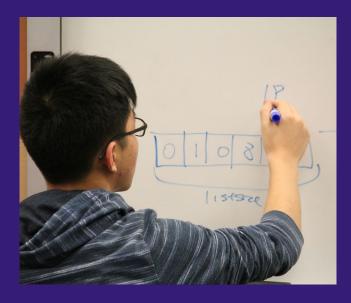


# ATCS @ BCA





## ATCS - Who are we?

#### A Diverse Group

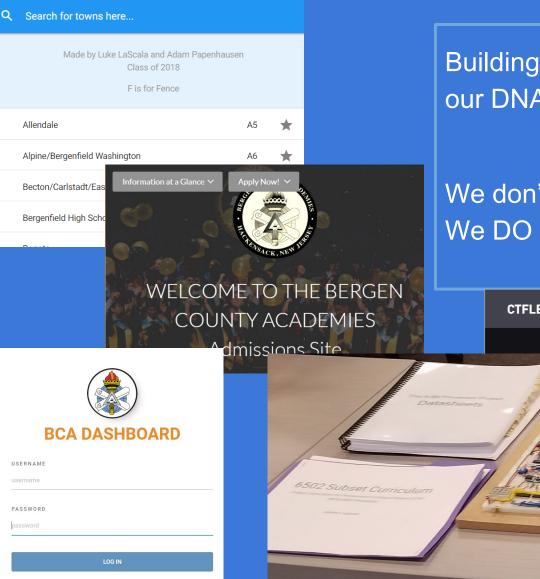
- Builders
- Competitors
- Advocates
- Innovators
- Learners
- People who serve



Though we are all different, we are united by excitement about technology.



## We are **Builders** and **Innovators**



Buildings tools and applications is part our DNA.

We don't just learn computer science, We DO computer science.

CTFLEARN V2 Problems Scoreboard Activity Groups Feedback Changelog

hproving

learn and practice

han a hundred high 1y, forensics, web

## We are **Competitors**

- Fun challenge.
- Sharpen our skills.
- Go beyond the curriculum.

00121021210 vederants m (10, 17); 00011021212 Al probade ability sidered & FL-3305 Using namespace shill ME -> 400 ifstream in (" - in"); of pream at (" - out"); D-3 11-3 13 77 A 30 B 31 int n, ansio; 2025 vedocvedorcints > m (676, vectorcints(676)); [AA->0 [A]->1 for (int : = 0; icn ; i++) { FLA ME string city, shite; in >> city >> state; 6 FLB MI BA -> 26 MIAMI FL int city -vn = 26\* (city 6] - 'A') MIAMI FL DALLAS TX 22 nt we wil = 26# (state[0]-'A') FLINT MI 26-67 CLEMSON SC + (shite[j]-'x') BOSTON MA MI m[c.17-v+1][state\_v+1]++; ORLANDO FL for ( int := 0; i < 676; i++)5 for (n) k+ ini j k < 676 j k++) { 3 anst= m[:] [B] \* m[[+][C]]; out clans ( " 'n"; in doser); out closel); the vorbice water (5) (5) return o; ializita) 9 (3+10+5) incore and and and 5(10+3) 000

### **Recent Competitions**

- American Computer Science League (ACSL)
- Technology Student Association (TSA)
- CyberStart
- picoCTF
- Canadian Computing Competition
- USA Computing Olympiad
- Congressional App Challenge



 $\sim$ 

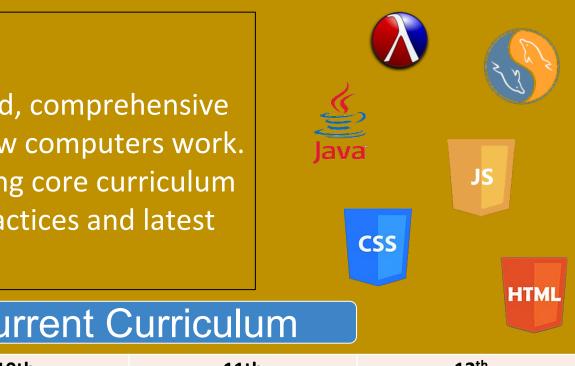




## We are Learners: Core Curriculum

#### **Guiding Principles**

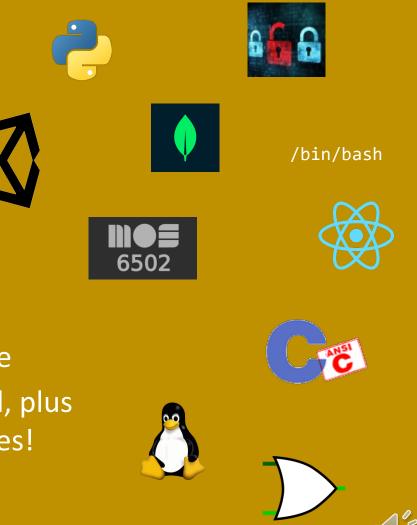
- Students gain a broad, comprehensive understanding of how computers work.
- Continuously updating core curriculum to align with best practices and latest research.



9th	10th	11th	12 <sup>th</sup>
AP Computer Science A	Applied Computer Science	Adv. Topics in Computer Science	CS Capstone
Control Structures, Methods, Objects and Inheritance, Arrays and ArrayLists	Algorithms and Data Structures Relational Databases Web Application Development	Boolean Algebra Functional Programming Lambda Calculus Computational Theory	Year-long group project in which students build a product for a client. Emphasis on project management skills, including
Aligned to College Board's AP Computer Science A Curriculum		· · ·	Agile.

## We are Learners: Optional Electives

- C Programming
- Machine Learning
- Artificial Intelligence
- Assembly Language (6502)
- Sockets and Networking
- MERN Stack Web Development
- Software Engineering in C#/Unity
- Processor Design and Architecture
- More are always being developed, plus electives from the other academies!



# **Frequently Asked Question**

1. Do I still take biology, chemistry, gym, math, etc? ABSOLUTELY! All BCA students must take the core courses required of all NJ high school students.

2. Can I take electives in other areas, or am I limited to Computer Science?
You are encouraged to take electives across the school.
Every BCA student is free to do this. You are in no way limited to computer science.



# **Frequently Asked Question**

I have not programmed before. Can I still succeed in ATCS? ABSOLUTELY!

In a typical 9th grade class:

- 50% have little to no coding experience.
- 35-40% have a bit of experience
- 10-15% have significant experience

\*\* Interest in technology and in using technology is the key!



## ATCS - We are a **Community**

