Grow Your Computer Science Program

Session Links:

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Director of Education
CodeVA

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Computer Science Honor Society Manager
Teacher - Albemarle Schools
CodeVA is a statewide nonprofit that works to bring Computer Science Education to all Virginia students.

www.codevirginia.org
CodeVA’s Programs

Advocacy and Outreach

Teacher Training

Student Programs

Clubs and Camps
Robotics Team
CS Honor Society
CodeVA by the Numbers

2017 teacher training:
- Percentage of VA districts with at least 1 teacher trained: 59%
- Total number of teachers trained in 2017: 568

Total number of teachers trained by CodeVA since 2014: 1,614

2065
Why are we here?

- Why are you at VSTE?
  - You are passionate about teaching computer science!

- Why are you in this session?
  - You want to grow your computer science program.
  - You want to know more about computer science honor society.
  - You wandered in room B5.
Who are we?

- Rebecca Dovi
  - Director of Education & co-founder of Code Virginia
  - Twenty years as a high school computer science teacher
  - NCWIT Educator Award Winner and Google Computer Science Trailblazer
  - Instructor, content developer for the AWS Education Amazon Future Engineer Pathway
  - Founding PRresident of Virginia chapter of CSTA
Who are we?

- Buffie Holley
  - High School Teacher *(Mathematics Certification)*
  - Computer Science Honor Society Director
  - NCWIT Educator Award Winner 2018 *(Virginia)*
  - GenCyber Program Facilitator
  - Tapestry Presenter
  - National Board Certified Teacher
  - Graduate Student *(M.S. Computer Science)*
Computer Science Club

- What does Computer Science Club look like?
  - Meeting schedule that works for you and your students
  - Variety of activities to engage new and veteran students
  - Fun atmosphere that fosters support and comradery
  - Open to ALL students
Suggested CS Club Activities

► Programming Competitions
  ► ACSL American Computer Science League
  ► Zero Robotics
  ► USA Computing Olympiad
  ► Virginia Tech High School Programming Contest

► Check with local Universities or Community colleges to see if they do any local competitions.
Suggested CS Club Activities

- Cybersecurity Competitions
  - PicoCTF (September)
  - EasyCTF Usually February
  - HSCTF Ususally May
  - TJCTF Usually June
  - RUSecure CTF Spring
  - CyberPatriot New Season Starts Spring
  - Code Quest Upsually April
  - VA Cyber Range!!
How to start your own CSHS Chapter

▶ Handout provided with the steps
▶ Application copy provided
▶ Constitution copy provided
  ▶ Service centered organization (10 hours per year)
  ▶ Students must have taken highest level course at your school
▶ Minimum grade requirement B average in courses
Suggested CS Club Activities cont.

- Logic
  - Puzzle Boxes
  - Logic Puzzles
  - Problem Solving
- CS Game Competitions
  - Potato Pirates (Programming Card Game)
  - Boolean (Logic Gate Card Game)
- Guest Speakers
  - Experts in the field (University, Companies, Local business)
  - Previous students
Suggested CS Club Activities

- Community Outreach
  - Partner with a middle school or elementary school to have a monthly event
  - Host an Hour of Code (at your school or another)
  - Invite community members to see projects or activities
  - Host a CTF (Capture the Flag) or Programming Competition
Why start a Computer Science Honor Society Chapter?

- Now that you have students engaged in your courses it is time to recognize their skills and achievements.
- Provide leadership opportunities for students.
- Provide you with an army of workers and walking advertisers for your program.
- Have a great time doing awesome things with your students to increase awareness around CS.
- Starting and maintain a chapter is currently FREE (pins and graduation cords do have a cost)
Success Story #1

- Powhatan High School
  - Rural Virginia (1,500 students)
  - 17 students 1st year (1500 service hours)
  - 50+ Members Currently (3000+ hours last year)
  - 50% female membership
  - Now TWO CS teachers!
Success Story #2

- Albemarle High School (Suburban Central VA)
  - 2000 Students
  - 1 Section of AP CSA 2012 ➔ 5 Sections AP CSA + AP CSP 2018
  - 21 Members Graduated 2018 with 50% Majoring in CS or related field
  - NCWIT Aspirations State and National winners each year
From the Advisor Perspective

▶ Lake Braddock High School (Northern VA)

▶ “Although it has added to my workload, it has been such a pleasure to see these students working hard for CS. I wasn’t sure if they would like the pins, they were wearing them and putting them on their backpacks when we left. So cute!” -Mrs. Anderson (CSHS Advisor)
CodeVA Programs

Other junk we do
- Parchment Paper
- Rubber Ducks
- Etsy
- Roll Book
- Potato Pirates
Questions?

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