



# Teaching the Computing Pathways In Georgia

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# What is Computer Science?

Computer Science : Is a fundamental, foundational science for the 21st century.

- Hadi Patrovi  
code.org

# Computing Pathway in Georgia

| Non AP Track                               | AP Track                           |
|--------------------------------------------|------------------------------------|
| Introduction to Digital Technology         | Introduction to Digital Technology |
| CS Principles                              | AP CS Principles                   |
| Programming, Game Design & App Development | AP Computer Science                |



2 AP Courses in the CTAE Pathway!!!

# Introduction to Digital Technology

- Fundamental Introduction to Computing

- Hardware

- Software

- Internet

- Web Design

- Graphic Design

# CS Principles & AP CS Principles

## Big Ideas

1. Creativity
2. Abstraction
3. Data
4. Algorithms
5. Programming
6. Internet
7. Impact

## Computational Thinking

1. Analyzing effects of computation
2. Creating computational artifacts
3. Using abstraction and models
4. Analyzing problems and artifacts
5. Communicating processes and results
6. Working effectively in teams.

# AP CS Principles

- History
- Currently being Piloted
  - 2011 – 2015
- AP Exam
  - 2016- 2017
  - Counts as a 4<sup>th</sup> Science / Math for graduation

# CS Principles

- Project Based
- Collaborative
- Specific Rubrics
- Counts as a 4<sup>th</sup> Science / Math for graduation



# Computational Thinking Tools for CS Principles

- Scratch
- Alice
- Java
- [www.code.org](http://www.code.org)

# AP Computer Science

- Concepts: Programming in Java
  - Counts as a 4<sup>th</sup> Science / Math for graduation
- AP Exam:
  - 1 semester college credit

# AP Computer Science Exam Preparation


- Beginning with the **2016** AP Computer Science A Exam:
  - \* The multiple-choice section will be lengthened by 15 minutes, to 1 hour and 30 minutes.
  - \* The free-response section will be shortened by 15 minutes, to 1 hour and 30 minutes.
- The **total time for the exam will remain unchanged** at three hours, and each section will continue to count as 50 percent of the overall exam score.

# Programming, Game Design & App Development

- Programming : in Python
- Game Design: Game Designer, Unity, Scratch
- App Development:
  - App Inventor, Android Development Kit

# Some Stats...

- <http://code.org/stats>



# Goals of Teaching Computer Science

- Computational Thinking
- Increase Women and Minority

# Computational Thinking Assessments

- <http://www.bebbras.org/>

# NCWIT

- <https://www.ncwit.org/programs-campaigns/aspirations-computing>



# CS Ed Week: Dec 7<sup>th</sup> – Dec 11th

- Hour of Code:
- [www.hourofcode.com](http://www.hourofcode.com)
  - <https://www.youtube.com/watch?v=-PoN8cNzSVQ>
- [www.csedweek.org](http://www.csedweek.org)

# Ga CSTA

- National CSTA
  - <http://www.csta.acm.org/>
- Georgia CSTA
  - <https://sites.google.com/site/georgiacsta/>
  - Fall Elections
  - Please join. Let us collaborate!!!!



# In Conclusion

Computer Science is fun!!!

# Questions?

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[www.iteachcs.com](http://www.iteachcs.com)