Teaching the Computing Pathways In Georgia

By Deepa Muralidhar
Ga Virtual School
What is Computer Science?

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

- Hadi Patrovi
code.org
## Computing Pathway in Georgia

<table>
<thead>
<tr>
<th>Non AP Track</th>
<th>AP Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Digital Technology</td>
<td>Introduction to Digital Technology</td>
</tr>
<tr>
<td>CS Principles</td>
<td>AP CS Principles</td>
</tr>
<tr>
<td>Programming, Game Design &amp; App Development</td>
<td>AP Computer Science</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Big Ideas</th>
<th>Computational Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Creativity</td>
<td>1. Analyzing effects of computation</td>
</tr>
<tr>
<td>2. Abstraction</td>
<td>2. Creating computational artifacts</td>
</tr>
<tr>
<td>3. Data</td>
<td>3. Using abstraction and models</td>
</tr>
<tr>
<td>5. Programming</td>
<td>5. Communicating processes and results</td>
</tr>
<tr>
<td>7. Impact</td>
<td></td>
</tr>
</tbody>
</table>
AP CS Principles

- History

- Currently being Piloted
  - 2011 – 2015

- AP Exam
  - 2016- 2017

- Counts as a 4th Science / Math for graduation
CS Principles

- Project Based
- Collaborative
- Specific Rubrics
- Counts as a 4\textsuperscript{th} Science / Math for graduation
Computational Thinking Tools for CS Principles

- Scratch
- Alice
- Java
- www.code.org
AP Computer Science

• Concepts: Programming in Java
  • Counts as a 4th 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](http://code.org/stats)
Goals of Teaching Computer Science

• Computational Thinking

• Increase Women and Minority
Computational Thinking Assessments

• http://www.bebras.org/
NCWIT

- https://www.ncwit.org/programs-campaigns/aspirations-computing
CS Ed Week: Dec 7th – Dec 11th

- Hour of Code:
  - www.hourofcode.com
  - https://www.youtube.com/watch?v=-PoN8cNzSVQ

- 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?

• Email me:
  Deepa.muralidhar@gmail.com

www.iteachcs.com