CS4RI 2.0

<tag>insert clever tag line here</tag>

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Today’s Agenda

• CS4RI Overview and Context – 10 min.
• CS Standards for Rhode Island Update - 10 min
• Script Activity - 15 min.
• Next Steps / Ways to Get Involved – 5 min
• Q&A – 5 min.
CS4RI Overview and Context

• Computer Science is Important
  • More than 600,000 high-paying tech jobs across the US were unfilled last year
  • 51 percent of all STEM jobs are projected to be in computer science related fields
  • Computer science is important for many industries, including transportation, healthcare, education, and financial services

• Phase 1 Goal: Every public school in Rhode Island will teach computer science by December 2017
  • Building educator capacity, by providing access to quality computer science professional development opportunities.
  • Developing rigorous and sustainable K – 12 pathways, by supporting districts in curating a relevant set of CS implementation strategies and resources.
  • Accelerating demand and momentum for CS education, through a robust community of practice and partnerships with diverse stakeholders for both students and teachers.

http://CS4RI.org
What’s Working?

• Building Educator Capacity
  • Targeted PD interventions
  • Teacher PD grants
  • CS Standards

• Developing Rigorous Pathways
  • Menu of state funded program options
  • District coaching
  • Industry demand-driven pathways
  • Aligned to CTE Board Standards

• Accelerating Demand for CS Education
  • CS snapshot series
  • CS4RI Summit

• Strong Partnerships
  • Inter-agency partnerships
  • Industry partnerships
  • Matrix partnerships
  • District & school partnerships

http://CS4RI.org
What’s Working?

Building Educator Capacity
• 600+ teachers trained through CS4RI professional development opportunities
• 33% of these educators have engaged in more than one professional development opportunity

Developing Rigorous Pathways
• 3x the number of AP CS programs
• 747 dual/concurrent CS course enrollments & 80 ACN CS course enrollments
• In 2017, 260 students took AP CS exams, a 500% increase from 2015

Accelerating Demand for CS Education
• 1,700 students engaged in the 2017 CS4RI Summit
• 100% of traditional school districts offer CS opportunities

http://CS4RI.org
CS4RI Summits

2,000 attendees

92 booth presenters

21 interactive sessions

http://CS4RI.org
Matrix of CS Partners and Programs

### Matrix of CS4RI Programs, Courses, and Partners

#### CS4RI Elementary Level

<table>
<thead>
<tr>
<th>Program</th>
<th>Partner</th>
<th>Format and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative Computing with Scratch</td>
<td>Code.org</td>
<td>3-weeks project-based learning to teach students basic concepts of Scratch and its applications.</td>
</tr>
<tr>
<td>CS Through Game Design</td>
<td>Code.org</td>
<td>5-weeks project-based programming game to teach students basic concepts of Scratch and its applications.</td>
</tr>
<tr>
<td>Gateway</td>
<td>Project Lead the Way</td>
<td>3-weeks project-based learning to teach students basic concepts of Scratch and its applications.</td>
</tr>
<tr>
<td>Bootstrap: Objetivos</td>
<td>Bootstrap</td>
<td>20-weeks project-based learning to teach students basic concepts of Scratch and its applications.</td>
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</tbody>
</table>

#### CS4RI Middle and High School Level

<table>
<thead>
<tr>
<th>Program</th>
<th>Partner</th>
<th>Format and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bootstrap: Data Scientist</td>
<td>Bootstrap</td>
<td>12-weeks project-based learning to teach students basic concepts of programming.</td>
</tr>
<tr>
<td>AP CS Principles</td>
<td>Code.org</td>
<td>3-semester course leading to college credit, AP Scores, and college-level programming.</td>
</tr>
<tr>
<td>Intro to Programming</td>
<td>Microsoft TEALS</td>
<td>2-semester course leading to college credit, AP Scores, and college-level programming.</td>
</tr>
<tr>
<td>AP CS A</td>
<td>Microsoft TEALS</td>
<td>2-semester course leading to college credit, AP Scores, and college-level programming.</td>
</tr>
</tbody>
</table>

### Additional Information

- **Teacher Training**: No prior CS experience required. Proctor 1-day training for teachers or workshop styles. PD for in-service teachers.
- **Courseware**: Access to all materials. Online sequential curriculum.
- **Teacher Support**: No prior CS experience required. PD for in-service teacher training.

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http://CS4RI.org
CS4RI 2.0 Goals and Strategies

• Build capacity to provide high quality CS education to **ALL** K-12 students in Rhode Island
  • Eye on Broadening Participating in Under Represented Groups

• Strengthen CS workforce development

• Align with other state and national education and workforce efforts

• Make data driven decisions

• Obtain adequate funding

http://CS4RI.org
Update: CS Education Standards for RI

What are standards?

Standards:
1. Define the knowledge, practices, and skills student should possess at critical points in their educational career.
2. Help frame realistic pathways for all students.

Why now?

RI Computer Science Education Standards Advisory Committee

RI Teachers

http://CS4RI.org
Update: CS Education Standards for RI

Participation by:
- Elementary, Middle, & High School Teachers
- Higher Education Faculty
- District/STEM Coordinators
- Administrators
- Industry
- Media/Information Literacy Specialists
- Cybersecurity experts
- Code.org
- RISTE (Rhode Island Society of Technology Educators)
- Next Generation Science Standards National Committee
- Cyber Innovation Center

Timeline
- Mar. 2017 Initial meeting of the CS Ed Advisory Committee
- March-December 2017 Development of CS Ed Standards
- Feb. 2018 Review of Standards by external reviewers
- April 2018 Presented to Rhode Island Board of Education
- http://CS4RI.org
Update: CS Education Standards for RI

What are the next steps?

Implementation!

CS4RI Content Providers
District Workshops
CSTA-RI
Resources & Support

http://CS4RI.org
Visioning K-12 Computer Science Pathways

http://CS4RI.org
### What kinds of visions of impact are referenced in talk about universal computer science education?

<table>
<thead>
<tr>
<th>Economic &amp; Workforce Development (EWR)</th>
<th>Citizenship &amp; Civic Engagement (CC)</th>
<th>Competencies &amp; Literacies (CL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological, Social, &amp; Scientific Innovation (TSS)</td>
<td>Equity &amp; Social Justice (ESJ)</td>
<td>School Reform &amp; Improvement (SRI)</td>
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<td></td>
<td></td>
<td>Personal Agency, Joy &amp; Fulfillment (PJA)</td>
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</table>
Hands-on, active participation workshops to empower district and school teams to answer the “WHY” question; to value different perspectives; and to equip with tools and supports for prioritizing and decision making at the local level.

- **Audience:**
  District / School Leaders & Educators

- **Save the Dates:** (2 - Two Day Workshop)
  URI - August 15th and 16th
  RIC - August 21st and 22nd

- **Time:**
  8:30 – 3:30

- **Registration:**
  [https://www.cs4ri.org/upcoming-events/](https://www.cs4ri.org/upcoming-events/)
CS4RI Team Next Steps

• RIDE in partnership with URI and the RI STEAM Center will implement CS4RI’s Phase Two goals. This partnership will support Rhode Island in meeting both secondary and postsecondary goals.

• RIDE and the RI STEAM Center will be bringing Computer Science Standards to the K-12 Council in April for possible endorsement. Standards, developed by RI’s educator and business leaders, will support educators looking to expand computer science.

• RIDE in partnership with Districts and Schools will improve and streamline data collections related to CS courses and programming. This will inform data driven decisions by all to best support the CS4RI goals.

http://CS4RI.org
Ways for **YOU** to Get Involved in CS4RI

- Script Workshops for School Leaders and Educators
  - Strategic planning support; grounding activities securing community buy-in; district / school tools, resources and support
- Matrix Partner Professional Development for Educators
  - Program / Course specific professional development
  - Late spring and Summer 2018 – register online
- Community of Practice for Educators
  - Practical focus on pathway support and decisions, standards implementation, strategies and advice
  - Monthly meetings – register online
- Volunteers
- 2018 CS4RI Summit
  - Student engagement is the name of the game!
  - Student presenters & active participants
  - School Leader activities and sessions
  - Save the Date: December 2018

http://CS4RI.org
Questions and Open Conversation

http://CS4RI.org
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  • Carol Giuriceo - cgiuriceo@ric.edu
  • Jessie Barrett - jwbarrett@uri.edu

• Website: http://CS4RI.org