Libraries [Ready to Code]

Is Your Library [Ready to Code]? YES!

Sarah Creech
Adult Services Coordinator
Belgrade Community Library

October 14, 2018
PLD/ASLD Fall Retreat
Agenda

● What is the Libraries Ready to Code (RtC) initiative?
● What is Computational Thinking?
● BCL RtC Activities
● The Facilitation Pathway
● Close & Final Q & A
What is Ready to Code (RtC)?

Libraries Ready to Code is an initiative of the American Library Association, sponsored by Google, to ensure libraries have the **resources, capacity, and inspiration** to design and implement activities that promote computational thinking and computer science among our nation’s youth.

http://www.ala.org/tools/readytocode
http://www.ala.org/tools/readytocode/post-work

#ReadytoCode
Phase 3

Libraries [Ready to Code]

28 school and public libraries
Created unique CT programs and
Built a Community of Practice
Phase 3

Cohort library staff participated in webinars and online discussions that gave them the chance to gain skills and knowledge and share experiences related to the 5 core themes of RtC.
| Broadening participation | Recognizes that equitable and inclusive learning environments are required to reach diverse youth through library CT activities. | Learn how to design equitable and inclusive learning environments to support CT and plans potential strategies for the unique environment. | Implements equitable and inclusive CT learning environments, including focused recruitment and retention efforts. | Communicates the value of CT learning environments that are equitable and inclusive, especially in ways that show evidence of effectiveness. |
| Connecting youth interests and emphasizing youth voice | Recognizes that connecting to youth interests and emphasizing their voice can strengthen engagement and learning in CT. | Learns about local youth’s interests and how to give these youth opportunities to design and implement CT activities. | Implements CT activities that embed youth interests and youth leadership. | Communicates the value of embedding youth voice and interests in CT activities. |
| Engaging with communities | Recognizes the value of working with community members, organizations, and a variety of stakeholders in planning and implementing CT activities. | Learns about expertise available in the community to support CT activities and explores ways to make connections with individuals and organizations. | Implements partnerships with community members, organizations, and stakeholders in the design and implementation of CT activities. | Communicates the value of connecting with community members, organizations, and stakeholders in supporting the CT learning needs of youth. |
| Engaging with families | Recognizes that family can play a key role in supporting CT learning, by connecting CT to learning that happens in other places. | Learns about the needs and interests of local families in order to design and implement community and family-based CT activities. | Implements CT activities in which families are actively engaged through participation and/or communication. | Communicates the value of family engagement as a part of CT library activities. |
| Demonstrating impact through outcomes | Recognizes that CT activities can be strengthened and of more value when there is measured impact on youth, families, the library, and community stakeholders. | Learns how to measure the impact of the library’s CT activities to address community CT needs and develops a plan for evaluation and/or measurement. | Implements short- and long-term data gathering that can be used for program improvement and that can demonstrate the effect of CT activities on youth, families, libraries and the community. | Communicates the value that using evidence of effectiveness for CT activities can bring to program design, advocacy, funding, and expansion. |
Compu-what?

When kids tinker, create, design, build, code, and make, they engage in CT.

http://www.ala.org/tools/readytocode/computational-thinking
**Concepts include:**

- **sequence**: identifying a series of steps for a task
- **loops**: running the same sequence multiple times
- **parallelism**: making things happen at the same time
- **events**: one thing causing another thing to happen

- **conditionals**: making decisions based on conditions
- **operators**: support for mathematical and logical expressions
- **data**: storing, retrieving, and updating values
Practices include:

- **experimenting and iterating:** developing a little bit, then trying it out, then developing more
- **testing and debugging:** making sure things work — and finding and solving problems when they arise
- **reusing and remixing:** making something by building on existing projects or ideas
- **abstracting and modularizing:** exploring connections between the whole and the parts
Perspective targets:

- **expressing**: realizing that computation is a medium of creation, "I can create."
- **connecting**: recognizing the power of creating with and for others, "I can do different things when I have access to others."
- **questioning**: feeling empowered to ask questions about the world, "I can (use computation to) ask questions to make sense of (computational things in) the world."
Belgrade’s Story

Partnerships with Community
Mentors from MSU
Coding Club
Showcase with External Presenters & Families
Coding Camp
Field Trip to MSU and ACRM
Ready to Code: GAME ON Coding Club

Game On
Coding Club with Scratch

Create your own video games!
Design and program your own video games using code and computer science. Learn important gaming concepts while building racing games, mazes, and other games.

Bring your friends!
No previous computer experience is necessary. Have your friends join too — the Game On Coding Club is social and fun! This club is FREE for students grades 6-8.

Program Details
Belgrade Community Library
106 N Broad
Belgrade, MT 59714

Tuesday and Thursday
November 28-December 21
4:00 p.m. to 5:30 p.m.

Families are invited to a showcase night Thursday, January 4 at 6:00 p.m.

Register at (406)388-4346

This program is funded by the ALA Libraries
Ready to Code project.

Scratch is a project of the Lifelong Kindergarten
group at the MIT Media Lab. It is available for free at http://scratch.mit.edu.

#ReadytoCode
Introduce computer science to kids

Join over 1 million teachers, parents, and students in creating fun projects with the free CS First curriculum
CS First around the world

1,000,000+ students. 30,000+ classes. 75+ countries.
Primary Goals of the Program

- Increase understanding of career opportunities in computer science
- Teach problem-solving techniques
- Inform parents of educational pathways in computer science, including admission standards for CS in Montana universities
Interest Powered

Graphic from CL Alliance:
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<th>#ReadytoCode</th>
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<td><strong>Advocate</strong></td>
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Showcase in January

- Club members and their families
- MSU mentors
- Outside presenters:
  - MSU Admissions
  - Information Technology Program Director at Gallatin College
  - CNC Program Director at Gallatin College
  - Former Chief Technology Officer at Wisetail in Bozeman and current Chief Architect at Alchemy Systems (Wisetail’s parent company).

- Present a game and answer some questions
- Eat food and show off!
Ready to Code: Coding Camp

Grades 4-8  12-5pm  March 12 & 13

**Day 1: Unplugged**
We’ll learn to think and solve problems the way computers do.

**Day 2: Python**
We’ll learn to code in a common programming language: python.

Sign-up at the Belgrade Community Library.
Lunch provided.

#ReadytoCode
Count the Dots
Binary Numbers
Your story
Questions?

Thank you!

http://www.ala.org/tools/readytocode
#ReadytoCode

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