



EMS CODING CLUB

09/14/2021

What's in this session?

- Club Goals
- Club Activities
- Competitions
- How to join?
- Coaching opportunities
- Volunteer opportunities

Chair and Co-Chair Introduction

- Club Chair: Raina Lodha
- Club Co-chair: open

Goals

- **Inspire**
 - Get students interested in computer science
- **Learn**
 - Programming, Computational thinking, Computer Science concepts
- **Build**
 - Projects based on interest
- **Participate**
 - Coding competitions

Current registrations

- Students registered: 53
- Parent volunteers: 23
- Please note: There is no fee to join the coding club.

Club Activities - 1

- Introduction to Computational Thinking
 - Various stages of computational thinking
 - Decomposition, Pattern recognition, Abstraction and Algorithm
- Basic programming Concepts (Python used as a primary language)
 - Variables
 - Control Structures
 - Data Structures
 - Syntax
 - Tools

Club Activities - 2

- Project based learning (<https://projects.raspberrypi.org/en/projects>)
 - What a typical club meeting will look like?
 - 10 min Project background
 - 35 min Coding
 - 10 min Sharing
 - 5 min Reflection
- Example projects:
 - *Create your own rock, paper, scissor game* (Introduces variables and conditional statements)
 - *Secret Messages* (Encryption program that introduces iteration (looping) over text string)
 - *Fetching the weather* (HTTP requests, RESTful APIs)
 - *Password generator* and many more

Competitions

- **American Computer Science League (ACSL)**

- **Junior / Intermediate Division** - Each contest consists of an online 30-minute, 5-question short answer test and an online programming problem to solve in 72 hours.
- There are four contests during the regular season. The window during which each contest can be accessed on HackerRank is as follows.
 - **Contest #1:** available Nov. 1, 2021; closes Sunday January 16, 2022 @ 11:59pm EST
 - **Contest #2:** available Dec. 27, 2021; closes Sunday March 6, 2022 @ 11:59pm EST
 - **Contest #3:** available Jan. 31, 2022; closes Sunday April 10, 2022 @ 11:59pm EDT
 - **Contest #4:** available March 7, 2022; closes Sunday May 15, 2022 @ 11:59pm EDT
- Based on the scores during the regular season, top students in all divisions will be invited to participate in an online Finals competition:
 - Invitations E-mailed: May 1, 2022 through May 16, 2022
 - Invitational Finals: Saturday, May 28, 2022 (Memorial Day weekend)

Competitions

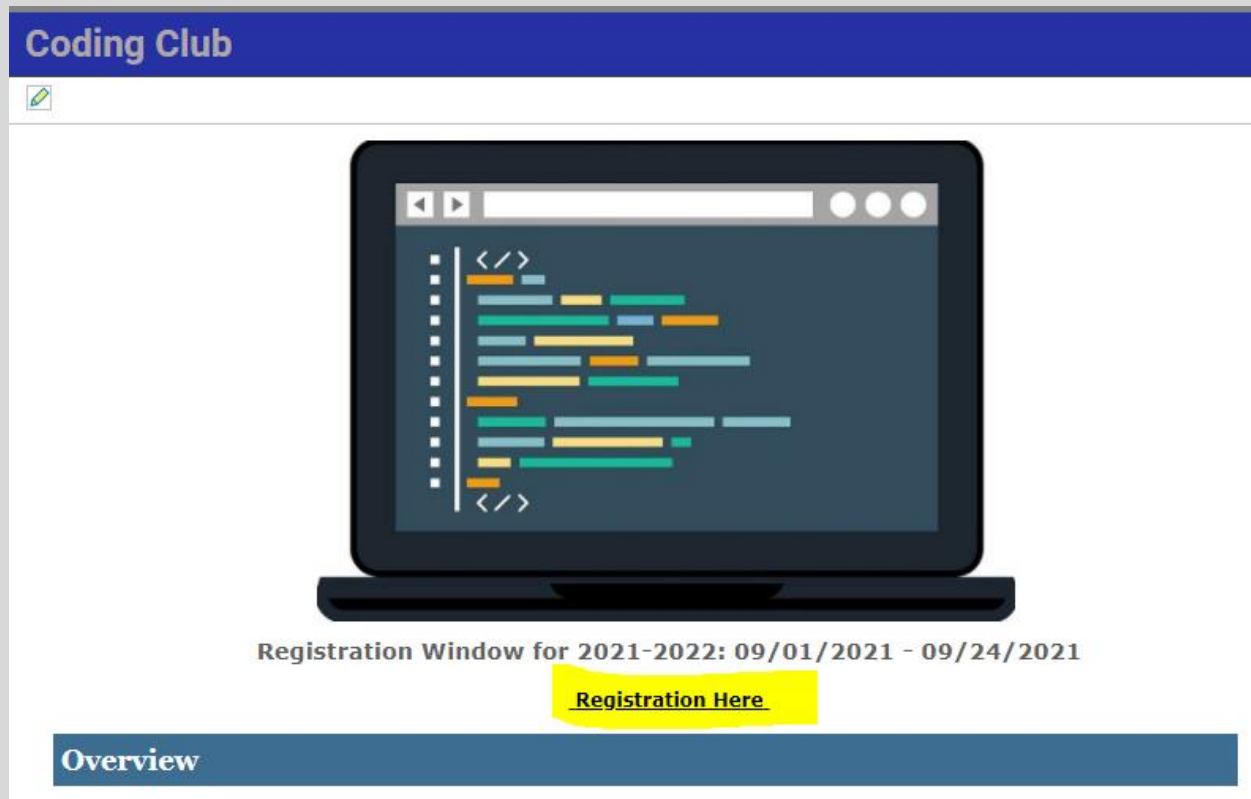
- **Bebras Computing Challenge** (First round: November 8-21, 2021)
 - The Bebras challenge is designed to help students explore their talents and passion for informatics and computational thinking with engaging challenges.
 - Benjamins (age 10-12) / Cadets (age 12-14) - Each group will get 3 sets of 5 tasks. The 3 sets each have a level of difficulty: easy, medium or hard. They will have 45 minutes to complete the tasks.
- **Congressional App Challenge**
 - Students create and submit their original apps for a chance to win
- **Hackathons**
 - **Code day (<https://www.codeday.org/>)**

Things to note!

- Students need to use their own device (separate from school computer).
- Club meetings will be virtual for now.
- Club meetings will be weekly. Every Wednesday 6:00pm – 7:00pm.

How to register?

- Go to the EMS PTSA website: <https://evergreenptsa.org/Page/Enrichment/CodingClub>



Coaches and Volunteers

Thanks to all who put their name for volunteering!

Coaches' jobs:

- Teach a programming concept
- Lead a project
- Guide students to participate in competitions

Other Volunteer jobs:

- Help kids with their technical issues
- Help with checking kids work
- Administrative work (register teams for competitions etc.)
- Others as needed

