

MSU x Pathlight Belize Coding Club Spring 2023

Orientation
11 January 2023



SIGSOFT



MICHIGAN STATE UNIVERSITY



PATHLIGHT BELIZE

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Spring 2023



SIGSOFT



IEEE Technical Council
on Software Engineering



MICHIGAN STATE UNIVERSITY



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Agenda

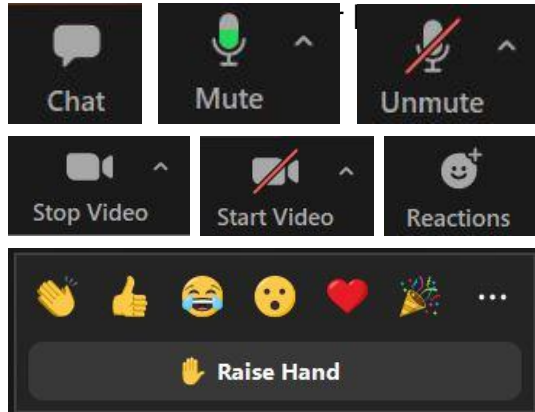
7:00-7:05 BZT	Would You Rather / This Or That	Main Room
<hr/>		Breakout
7:05-7:20 BZT	Zoom Orientation	
7:20-7:45 BZT	Getting to Know You Icebreaker	Breakout
<hr/>		Main Room
7:45-8:00 BZT	Spring Overview	
8:00 BZT	Attendance & Dismissal	

Zoom Orientation

Getting Started with Zoom

- Meeting Actions

- Chat (Everyone or DM)
- Mute/unmute
- Stop/start video
- Show captions
- Share your screen
- Reactions
- Raise your hand

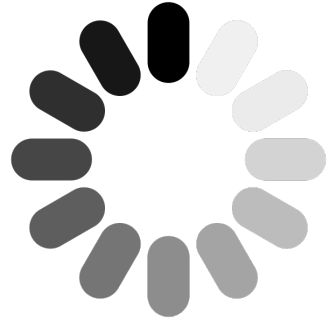


- Your turn!

- Send a chat to everyone telling us your favorite fruit
- Send a DM to me telling me your favorite color
- Raise your hand if you like:
 - Dogs
 - Cats
 - Reading
 - Swimming
 - Playing soccer (football)
- React with the “thumbs up” emoji

Technical Difficulties?

- Log in on a laptop or PC rather than a phone
- Use Google Chrome browser and close all the tabs not in use
- Exit other applications open on your computer
- Ask others in your household to avoid data intensive activities (i.e. streaming videos)
- Work close to the router
- Refresh the tab having issues
- Exit and rejoin the Zoom session



Icebreaker

Spring Overview

Saturdays: 10:00 am - 12:00 pm BZE (11 am - 1 pm EST)

- Games and icebreakers
- New lesson
- Explore examples on CodeHS
- Time to work on CodeHS
- Standup

Thursdays: 7:00 - 8:00 pm BZT (8:00-9:00 pm EST) (Bonus hours)

- Bonus Hour: optional time to drop in if you have any questions about the material, need help on assignments, or just want to chat!

Curriculum Overview: HTML and CSS

Do not worry if you have not coded before!
We will start from the very beginning!

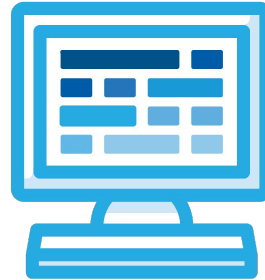
- Meeting 2: Intro to HTML
- Meeting 3: Formatting
- Meeting 4: Images
- Meeting 5: Lists and Tables
- Meeting 6: CSS 3.1-3.2
- Meeting 7: CSS 3.2-3.3
- Meeting 8-10: Work on Final Project
- Meeting 11: Present Final Project

You might not know what these terms mean now, but at the end of the club you will!

CSS



HTML

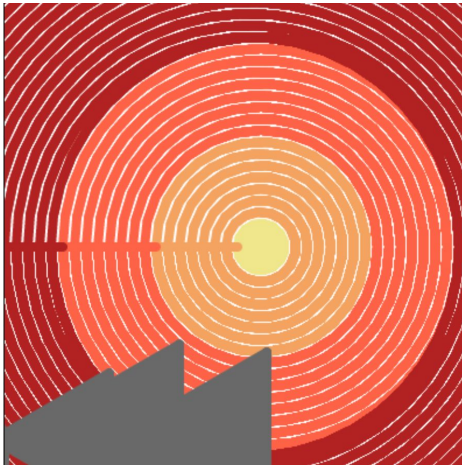


CodeHS

Final Project

The last three weeks of the club will be dedicated to working on your final project.

Here are some examples from last year, all made using code!

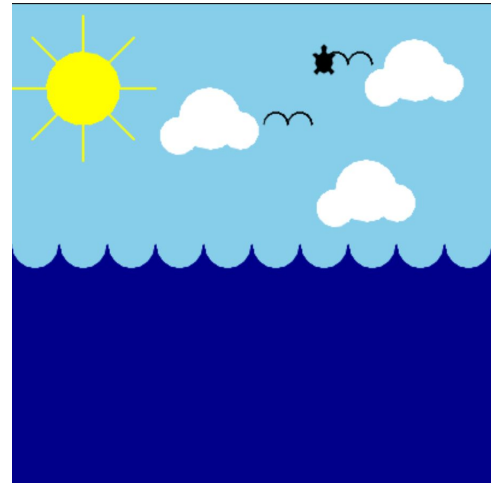


Sun with Mountains
By Avani Singh 2021



Harry Potter
By Lilia Hall 2021

Beach Scenery
By Jishitha Ratakuntla 2021



Attendance

See you Saturday @ 10a BZT!



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Spring Overview

Spring Overview

- 60 students from grades 9-12
- 3 cohorts of 20 students each
- 1 curriculum, 1 platform, 1 schedule, 1 vision
- 14 hour-and-a-half sessions over 7 weeks for 21 contact hours
- 6 hour (paid 🎓💰!!!) mentorship commitment per week
- Weekly routine
 - Monday: Leadership Meeting @ 5p-6p
 - Tuesday: Review Lesson @ 4:30p-7p
 - Wednesday: All-Hands Mentor Meeting @ 7p-8p
 - Thursday: Bonus Hour @ 7p-8p
 - Saturday: New Lesson @ 10:30a-1p
 - On your own: Work through curriculum on your own

Spring Overview

- Monday: Leadership Meeting @ 5p-6p
 - Quick updates, planning, and administrative items
 - Leads only
- Tuesday: Review Lesson @ 4:30p-7p
- Wednesday: All-Hands Mentor Meeting @ 7p-8p
 - Teambuilding and leadership development with SGWC
 - Lessons learned with SGWC
 - Debrief of previous week
 - Overview of week ahead
 - Role assignment
- Thursday: Bonus Hour @ 7p-8p
 - An opportunity for students to ask questions and learn about life in tech
 - Two mentors each week, rotating
- Saturday: New Lesson @ 10:30a-1p
- On your own: Work through curriculum
 - Get comfortable with content and exercises before each meeting

Spring Overview

- Class Meetings
 - All virtual via Zoom
 - T-30: Login and welcome students
 - T+00: Icebreaker
 - T+10: Spotlight
 - T+20: Lesson/Codealong
 - T+40: Exercises/Challenges
 - T+80: Standup and post-survey
 - T+90: Mentor debrief
 - T+120: Done!
- Tuesdays: Review
- Saturdays: New Content

Spring Overview

- Meeting 1: Orientation and CodeHS Setup
- Meetings 2, 4, 6, 8: New material on Saturday
 - Meeting 2: Intro to Tracy
 - Meeting 4: For Loops
 - Meeting 6: Functions
 - Meeting 8: Variables, Conditionals, and While Loops
- Meetings 3, 5, 7, 9: Review material on Tuesday
- Meeting 10: Final project discussion and brainstorm
- Meetings 11-13: Final project work time
- Meeting 14: Final project show-and-tell + celebration
- Dates: 1/11 through 2/26

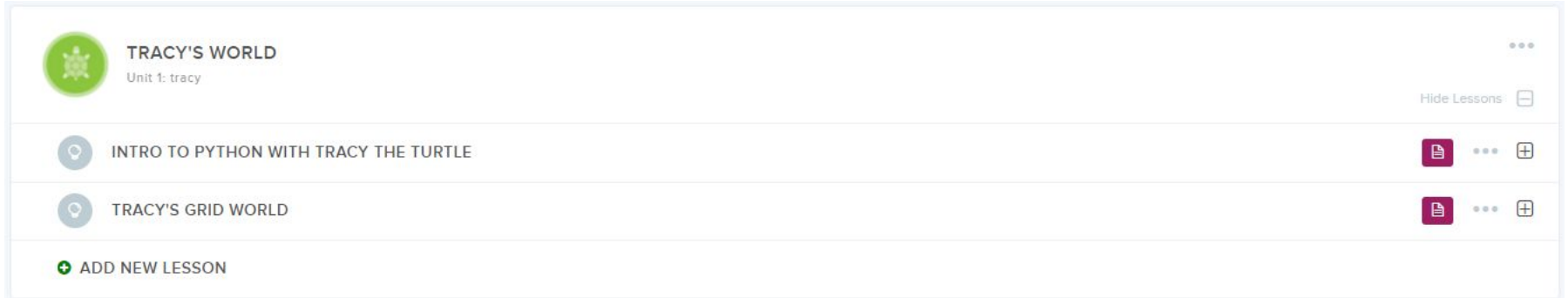
Curriculum Overview

Curriculum Overview

- Meeting 1: Orientation and CodeHS Setup
- Meetings 2, 4, 6, 8: New material on Saturday
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Curriculum Overview

- Meeting 2 (1/15): Intro to Tracy
- Meeting 3 (1/18): Review















The screenshot shows a curriculum overview interface for a course titled "TRACY'S WORLD". The interface is organized into a list of lessons. At the top, there is a header for "TRACY'S WORLD" with a green circular icon containing a white starburst and the text "Unit 1: tracy". To the right of the header is a "Hide Lessons" button with a minus sign icon. Below the header, there are two lesson entries, each with a light blue circular icon containing a white lightbulb. The first lesson is "INTRO TO PYTHON WITH TRACY THE TURTLE" and the second is "TRACY'S GRID WORLD". To the right of each lesson entry is a purple document icon, a three-dot menu icon, and a plus sign icon. At the bottom of the list is a green plus sign icon followed by the text "ADD NEW LESSON".

Lesson Title	Icon	Actions
TRACY'S WORLD	Green starburst icon	More options (three dots)
Unit 1: tracy		Hide Lessons (minus icon)
INTRO TO PYTHON WITH TRACY THE TURTLE	Light blue lightbulb icon	Document icon, More options (three dots), Add (plus icon)
TRACY'S GRID WORLD	Light blue lightbulb icon	Document icon, More options (three dots), Add (plus icon)
ADD NEW LESSON	Green plus icon	



















Curriculum Overview

- Meeting 4 (1/22): For Loops
- Meeting 5 (1/25): Review

	MOVING TRACY EFFICIENTLY Unit 2: tracy	...
Hide Lessons 		
	TURNING TRACY	 ... 
	FOR LOOPS	 ... 
	TURNING TRACY USING ANGLES	 ... 
	ADD NEW LESSON	































Curriculum Overview

- Meeting 6 (1/29): Functions
- Meeting 7 (2/1): Review

	DESIGNING AND COMMUNICATING SOLUTIONS Unit 3: tracy	...
		Hide Lessons 
	COMMENTS	 ... 
	NAMING GUIDELINES	 ... 
	FUNCTIONS	 ... 
	ARTISTIC EFFECTS	 ... 
	TOP DOWN DESIGN	 ... 
	ADD NEW LESSON	

Curriculum Overview

- Meeting 8 (2/5): Variables, Conditionals, and While Loops
- Meeting 9 (2/8): Review

	CONTROLLING TRACY WITH VARIABLES Unit 4: tracy	...
Hide Lessons 		
	VARIABLES	 ... 
	USER INPUT	 ... 
	PARAMETERS	 ... 
	USING I IN FOR LOOPS	 ... 
	EXTENDED LOOP CONTROL	 ... 
	ADD NEW LESSON	
	MAKING DECISIONS Unit 5: tracy	...
Hide Lessons 		
	IF STATEMENTS	 ... 
	IF/ ELSE STATEMENTS	 ... 
	WHILE LOOPS	 ... 
	ADD NEW LESSON	

Curriculum Overview

- Meeting 10: Final project discussion and [brainstorm](#)
- Meetings 11-13: Final project work time
- Meeting 14: Final project show-and-tell + celebration



TECHNOVATI N



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F21 Technovation Final Project Brainstorm

To end Technovation on a high note, Tracy has challenged you to create a drawing in CodeHS which showcases all you've learned this fall! This is an open-ended challenge: you're free to draw whatever you'd like using Python and Tracy.

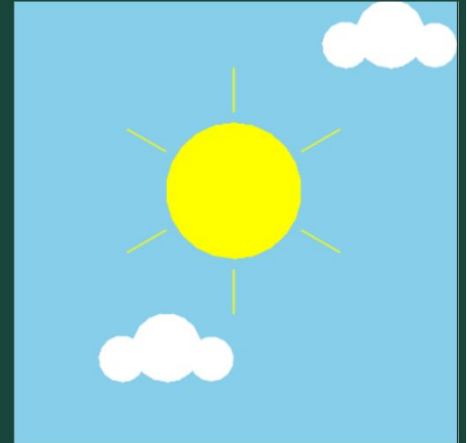
You'll have the next two Saturdays, 11/6 and 11/13, to code your masterpiece, and will present your work at our final showcase session on 11/20 to your peers. As a reward for your hard work, we'll be mailing stickers and certificates your way after our final meeting of the fall!

We'll have you come up with two final project ideas here, then select one to work on moving forward. If you finish your first final project idea early, you'll be able to come back and complete the second idea!

Let's get brainstorming!

Final Project: Brainstorm

- Examples
 - Here is Katie's Final Project so far!
 - Check out the code [here](#)
 - [Here](#) are more examples!
- Share your ideas
 - What are you passionate about?
 - Favorite place or animal?
 - Food
 - Cool geometric shapes or patterns
 - Try spelling out words



Curriculum Overview

- Differences from F21 Technovation
 - No custom exercises: these were somewhat out-of-order and asked too much of our students!
 - No hidden activities: we will tell students which modules we expect them to complete and which are bonus, but we will leave all modules visible for those who wish to go above and beyond
 - Scheduled review time: if we need to carry over parts of a lesson to a second day, we have time
 - Session length: 90 minute instead of 120