

EXPLORING CREATIVE CODING

Coding and art are not usually synonyms in fact, they are usually thought as having nothing common. The apps and computer programs we use have many purposes: they make our lives easier and entertain us, while others save our lives. However, coding is a creative outlet that lets you pursue your passions.

As an art medium, computing gained national and international attention with [Non-Fungible Tokens \(NFTs\)](#), [Tupac's 'hologram'](#) and immersive art exhibits that let you 'step into' paintings.

Introducing the passion project—here is your chance to ask questions, research, create, and gain in-demand skills along the way. In this expedition, you will learn about creative coding and develop a passion project of your choosing that uses code to express yourself. You will further develop your technical abilities and add to your portfolio of projects to share with employers.

Passion Project Elements

REFLECT

Think deeply about your skill sets, learning goals, and purpose.

STRETCH

Engage in learning beyond the bell to expand your knowledge and skills.

INNOVATE

Create solutions for real-world problems you are passionate about and want to solve.

SHOWCASE

Share your innovative solutions to the world in a powerful way.

REFLECT »»



Click the thumbnail above to watch.

Zach Latta (The Art of Code) merged his passion for video games with his interest in computer science and used code to showcase his passion. How can Zach inspire you? Reflect on the following questions:

- What is an activity that, when immersed in it, you lose track of time?
- What computer science skills that you can use to express yourself?
- What message do you want to share with the world that technology can help you express?

STRETCH >>

LEARN:

UNITY TO MAKE PROFESSIONAL VIDEO GAMES

- Check out [Unity's learning hub](#) with over 750 hours of live and on-demand beginner to advanced resources.

- Enroll in [Harvard's Computer Science for Game Development](#) course

PHOTOSHOP TO MAKE BEAUTIFUL VISUAL ART

- Take [advanced tutorials](#) from Adobe Photoshop.

ADVANCED PYTHON TO USE IN YOUR CREATIVE PROJECTS

- Earn a certificate from Google to [learn how to automate with Python](#)
- Take a [university-level course](#) that will cover beginner to advanced topics
- Create 3D objects and more using Blender, then watch the video series on [Scripting for Artists](#) to take it your work to the next level!

ADVANCED JAVASCRIPT

- Take on [JavaScript projects](#) to build your skills
- Enroll in a [university-level course](#) and make a complete project with JavaScript and React

CREATE MUSIC WITH CODE AND ADD VARIETY TO YOUR SONGS WITH EFFECTS

- Use the built-in curriculum in [EarSketch](#) to mix music using Python, JavaScript or block coding.
- Learn how to [set effects](#) to your EarSketch songs

INNOVATE >>

Brainstorm

- 1 What problem do I want to solve? What do I want to communicate with my art? What skills do I need to develop for my solution?

Research

- 2 What solutions already exist? Find out more about your users. Collect visual resources related to your idea. Ask and answer the following question again: what skills do I need to develop for my solution?

Design

- 3 Inexpensively create a scaled-down version of your solution for feedback. Experiment: you may create many prototypes during this step that you accept, reject, or re-examine. Share it and invite others to experience your solution.

Do

- 4 Create your project. Build a support team of mentors and supporters. Join communities of creative coders, share your work, and actively cultivate mentors.

Test and improve

- 5 Ask yourself:
 - Does my solution meet the needs of my users?
 - Does my art effectively communicate my message through my solution?
 - How can I improve what I have made based on user feedback?

Select what you would like to innovate from the following choices.*

DEVELOP VIDEO GAME

Coding video games is possible for everyone using beginner to advanced coding skills. All you need is an idea!

[Code.org's Game Lab](#) makes it easy to create a game with pre-made characters, objects and more. If you have coding experience, identify other development environments like [Unity](#).

CREA MASTERPIECE

Use ProcessingJS to create any artwork you can imagine and add animation or other dynamic elements.

Check out these award-winning [self-portraits](#) for inspiration and get started with your own artwork with

PRODUCE MUSIC

EarSketch offers clips of Ciara, Pharrell, Common and more. It is a platform that allows you to use code to produce music by applying its built-in functions to code with blocks, Python or JavaScript. Use the [EarSketch book](#) and built-in curriculum in [EarSketch](#) to start producing your own music!

CREATE A DYNAMIC VIDEO OR IMAGE

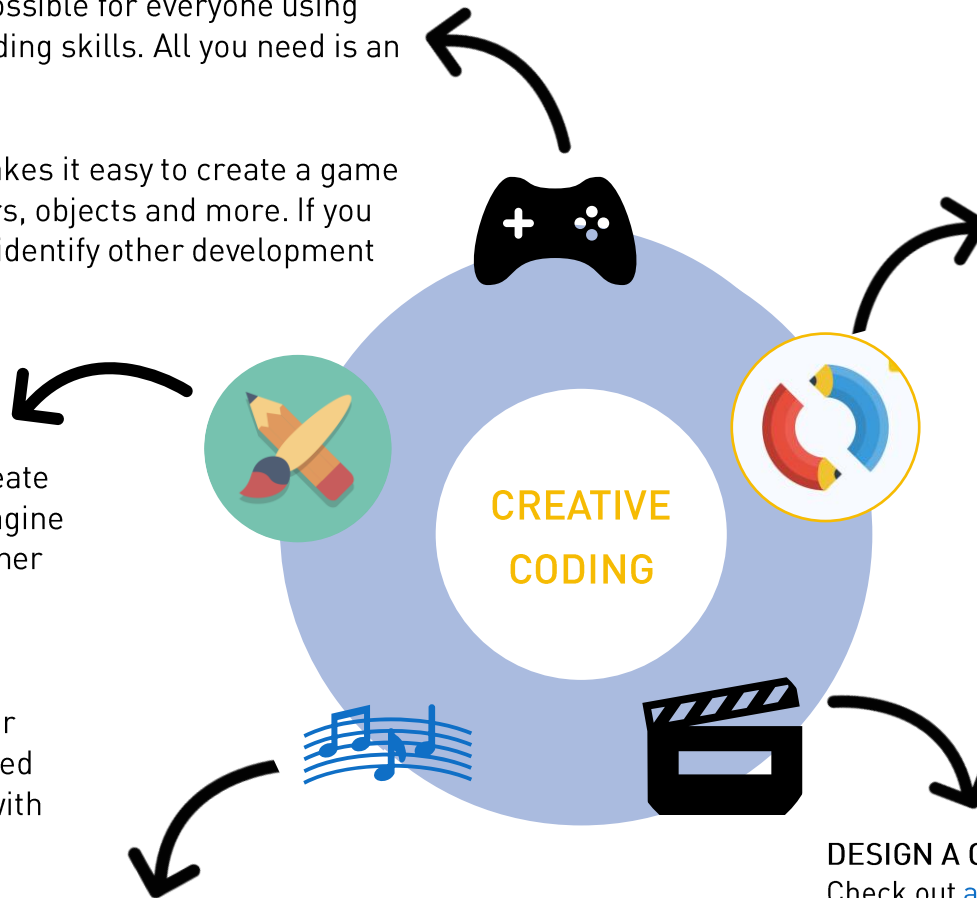
[p5.js](#), a JavaScript library, allows you to create visualizations. The library was designed to make "coding accessible and inclusive for artists, designers, educators, beginners, and anyone else!"

Take an [Introduction to Creative Coding with p5.js](#) tutorial to get started with your own creative coding!

DESIGN A GALLERY SHOW OF GIFS OR MEMES

Check out [a student created GIF](#) on Vidcode for inspiration. Create an account and follow this [tutorial](#) to get started. If you are more comfortable with software, find out how to make [an animated GIF using Adobe Photoshop](#).

**If you want to create a product that does not fit any of these choices, that's OK! We want you to do something that excites you! Discuss it with your educator then GO FOR IT!*



SHOWCASE >>

Use the choice board as a source of inspiration and choose a creative method to showcase your passion project.

**PUBLISH YOUR MUSIC
MADE WITH CODE ON
SOUNDCLOUD**

[Uploading Tracks](#)

**PUBLISH YOUR APP
ON CODE.ORG'S
PUBLIC GALLERY**

[Get Started](#)

**PUBLISH YOUR
APP IN AN APP
STORE**

[Publish in Google Play](#) \$

[Publish in Apple App Store](#)
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**PUBLISH YOUR ART ON
A WEBPAGE**

[Wix](#)

[Google Sites](#)

[GitHub Pages](#)

**CREATE AN
IN-PERSON ART
EXHIBIT**

[How-to](#)
[Best Practices](#)

**CREATE AN
ONLINE ART
PORTFOLIO**

[Bulb](#)
[Google Sites](#)

ENTER A COMPETITION

[Submit Song to EarSketch](#)
[Competition](#)

[Enter the Congressional App](#)
[Challenge](#)

**CREATE A YOUTUBE
VIDEO**

[Upload Videos](#)

[Best practices](#)

**CREATE A VR
EXHIBIT**

[Make your Own VR](#)
[Exhibitions](#)