



Coding Club Playbook:
Ignite the Spark of Computational Thinking

After School Club Checklist

Intro- duction



Are you looking to inspire the next generation of coders, programmers, and problem-solvers? Starting a coding club or after-school program can be an incredibly rewarding experience, not only for the students but also for the dedicated individuals who lead them. This Coding Club Playbook is your comprehensive guide to establishing and running a successful coding club, packed with practical advice, engaging activities, and essential resources.





Getting Started: Establishing a Coding Club



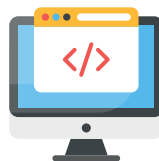
Determine the target audience: age range, skill level, and interests



Secure a suitable location, such as a classroom, library, or community center



Recruit volunteers or instructors with relevant expertise



Obtain necessary equipment and resources, such as computers, coding platforms, and supplies

Curriculum Planning

Identify

the core coding concepts and skills to cover, such as programming languages, algorithms, and computational thinking



Develop

a structured curriculum that balances instruction, hands-on activities, and project-based learning

Incorporate

a variety of teaching methods, including group discussions, individual projects, and collaborative exercises



Ensure

the curriculum is engaging, age-appropriate, and aligned with educational standards

Engaging Students: Strategies for Inspiration and Motivation



Foster

a welcoming and inclusive environment that celebrates diversity and individual strengths

Encourage

collaborative learning and peer-to-peer mentorship

Incorporate

real-world applications and project-based challenges to make coding relevant and meaningful

Celebrate

achievements and milestones, such as coding competitions or showcase events

Invite

guest speakers or industry professionals to share their experiences and inspire the students

Activity Ideas

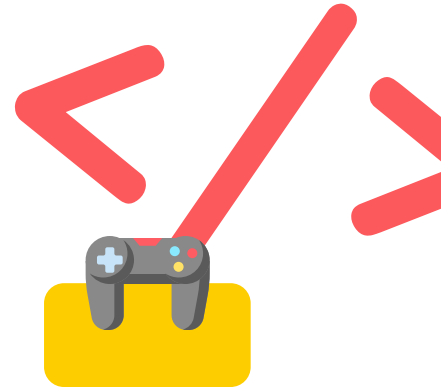
Beginner Level



Introduction to HTML, CSS, or Python



Robotics and physical computing (e.g., VEX Robotics)



Game design and interactive storytelling

Intermediate Level



Text-based programming - JavaScript

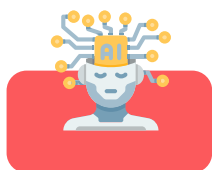


Data visualization and analysis

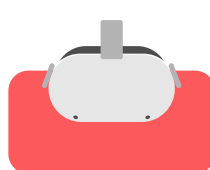


Web development and design

Advanced Level



Artificial intelligence and machine learning

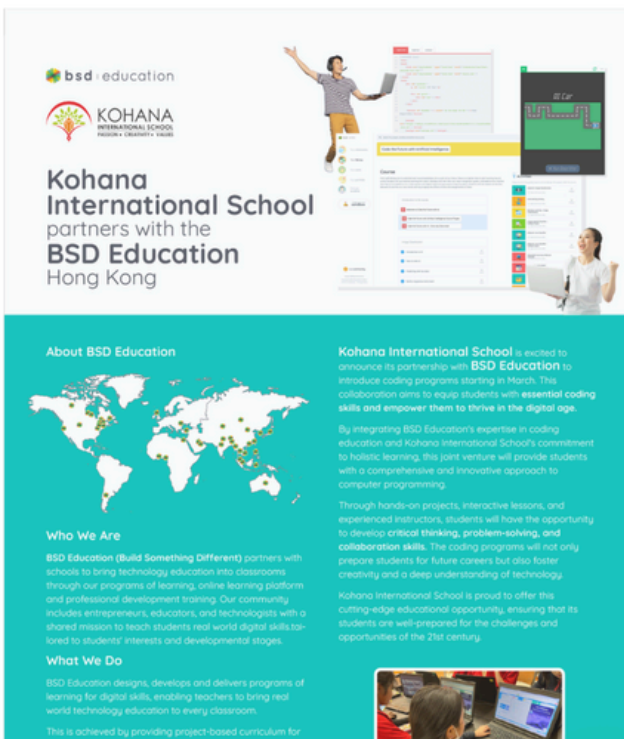


Virtual Reality



Mobile app development

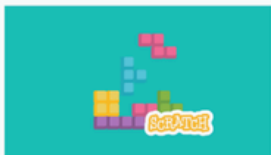
Promoting and Managing the Coding Club



- Club brochure or flyer
- Registration form
- Parent/guardian consent form
- Participant attendance tracker

2024-25 After School Program details

Remake Classic Games with Scratch



Get a great introduction to programming with the new and improved version of Scratch.

Students will learn the basics of game design and character animation in a well-structured and easy-to-learn environment as they reimagine classic arcade games, such as Tetris and Flappy Bird. What's more, they will learn to make art with code using the new code blocks in Scratch.

No previous experience is required for this course.

AGE 6-8

3D Game Design and Development with Roblox



Students will use the world-famous gaming platform, Roblox Studio, to design and develop their own games. They will use programming logic like functions, loops, and conditions to customize and develop an engaging story that captures the player's interest, and design heroes that take on the interactive world.

Students will work on their game design skills and learn to think creatively about designing worlds, creating themes and setting objectives and goals, mimicking how professional developers.

AGE 9-11

Code the Future with Artificial Intelligence



From self-driving cars to entertainment recommendations, AI is a part of our future. There is no better time to start learning how AI works.

Students will use Machine Learning and code to develop

Checklist for Success

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- 01**

Establish clear club goals and objectives
 - 02**

Recruit dedicated volunteers or instructors
 - 03**

Secure necessary equipment and resources
 - 04**

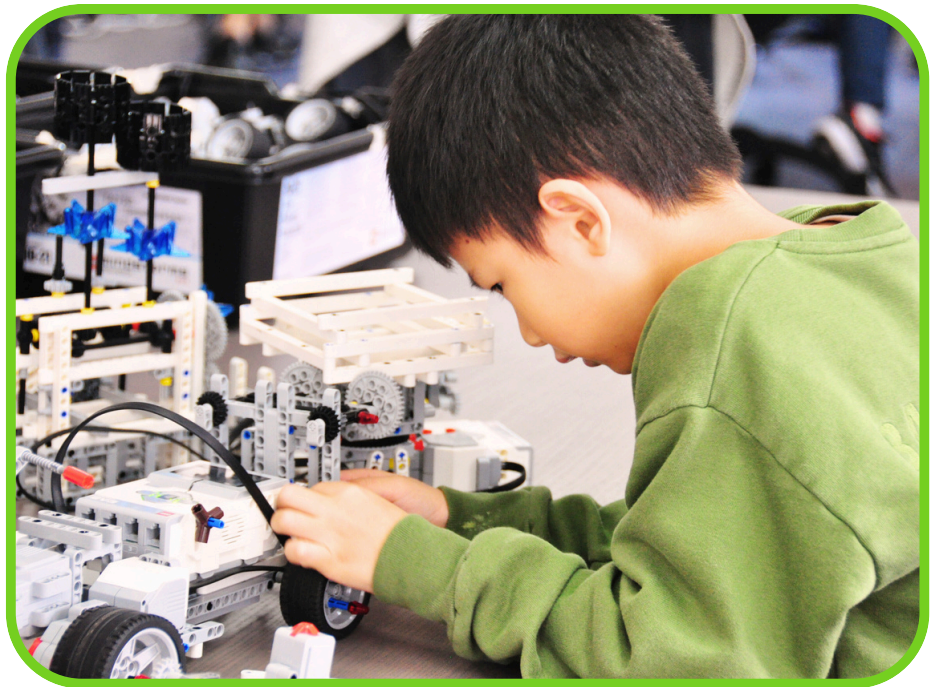
Develop a comprehensive curriculum
 - 05**

Promote the club and attract participants
 - 06**

Foster a positive and inclusive environment
 - 07**

Continuously evaluate and improve the program
 - 08**

Celebrate student achievements and milestones
-



Conclusion

Starting a coding club or after-school program is a rewarding journey that can ignite a passion for computational thinking and inspire the next generation of tech leaders. By following the guidance and resources provided in this Coding Club Playbook, you'll be well on your way to creating a transformative learning experience for your students. Embrace the power of coding, nurture their curiosity, and watch their skills and confidence soar.





Let's Build Something Different Together

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