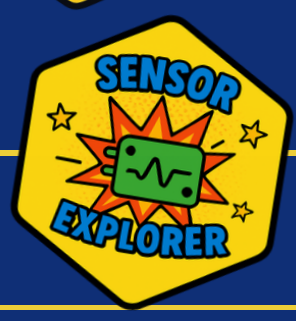
Code for Fun

Bring the energy of innovation straight into your classroom with the **Code for Fun Innovation Hackathon!** Students dive into a **fast-paced, hands-on experience where they learn computational thinking, coding and maker skills** in quick, exciting bursts and then immediately apply them to **solve real-world challenges.**

Hackthon Outline

Hour-1 Hackathon Kickoff and Challenge Reveal	• Welcome & Reveal hackathon theme • Students form innovation squad: pick roles and responsibilities • Introducing Computational Thinking: Adventure Challenge • Understanding Design Thinking to help students frame the Design Challenge
Hour-2 Microcontroller Crash Course	• Hands-on with micro:bit (or equivalent) • Simple interactive task (LED chase, emoji display) • Students work in pairs to collect sticker badges by completing mini-quests.
Hour-3 Onboard Sensors & Actuators Challenge	• Explore built-in buttons, sensors, sound, LED matrix • Create a reaction-time or step counter game • Students compete in Kahoot quests to earn points
Hour-4 External Sensors & Actuators Quest	• Extend learning using external sensors and actuators • Students work in pairs to collect sticker badges by building mini projects with sensors and actuators to solve problems posed
Hour-5 AI & Computer Vision	• Students work in pairs to collect sticker badges by building projects with AI-cameras, computer vision and Machine Learning to solve real-world problems • Fun image-recognition activity (Teachable Machine or CreateAI) • Discuss real-world uses, dangers of AI, AI Bias and responsible use of AI
Hour-6 Theme Kit & Special Components Exploration	• Introduce thematic and advanced sensors/actuators from theme kit • Brainstorm how thematic sensors/actuators could be used for the challenge
Hour-7 Design Thinking Sprint	• Quick empathy exercise (Create AI personas and interview them) • Define “How Might We” statements • Innovation Squads earn the Design Thinking Dynamo badge by generating an Idea Map.
Hour-8 to 9 Hack Build Sprint (2 hrs)	• Innovation Squad begin building with kit, sensors and code • Instructors circulate to coach and guide • Test prototype and Collect peer feedback in a gallery walk. • Earn the Prototype Pro badge by Iterating and refining their prototype.
Hour-10 Pitch and Celebrate!	• Prepare a 2-minute pitch with demo • Present to peers/teachers/judges • Awards: Best Design, Best Tech Use, Best Teamwork



Programme Highlights:

- Students take on exciting challenges and earn collectible badges along the way.
- Activities are differentiated for G1–G3 groups to match their learning levels.
- Students engage and collaborate using the Padlet digital platform. All learning materials including instructional videos are pre-loaded here.
- Top three student teams recognised with prizes for Best Use of Technology, Best Design, and Best Teamwork
- Hardware kits and 10-hours training are 100% sponsored by IMDA.

www.tinyurl.com/cffinfo2026

Click here to view:
- Hardware Kits
- Project Theme Kits
- Student Project Ideas

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AI for Fun (AIFF)

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