

■ 第一冊：

《Scratch 程式設計 × 創意互動入門篇》

Volume 1: Scratch Programming × Creative Interaction Essentials

中文簡介：本冊是 Scratch 教學的全方位入門指南，涵蓋從程式語言介紹、積木邏輯、專案建立，到角色創建、語音互動、動畫設計與文化創作。透過 13 個模組化章節，學生將學會如何使用 Scratch 建立互動專案、設計角色與背景、創作音樂與舞蹈動畫，甚至模擬生態系統與 AI 簡報。教材強調「視覺化 × 模組化 × 創意導向」，適合初學者、教師與跨領域創作者使用。

English Summary: This volume offers a comprehensive introduction to Scratch programming, covering language fundamentals, block logic, project creation, character design, voice interaction, animation, and cultural storytelling. Through 13 modular chapters, learners will build interactive projects, design visuals, create music and dance animations, and simulate ecosystems and AI presentations. With a focus on visualization, modularity, and creative thinking, this book is ideal for beginners, educators, and interdisciplinary creators.

■ 第二冊：

《Scratch 數學與圖形演算法篇》

Volume 2: Scratch – Mathematical Graphics & Algorithmic

Modeling

中文簡介：本冊聚焦於 Scratch 在數學與圖形演算法上的應用。從電子鐘設計、幾何繪圖、圓形與橢圓繪製，到自訂函數、特徵值分析、主成分分析（PCA）與微積分模擬，教材引導學生以 Scratch 實作數學模型與圖形演算法。後半章節更延伸至文字處理、翻譯工具與 Micro:bit 整合，打造跨模組、跨感測器的互動學習環境。

English Summary: This volume focuses on applying Scratch to mathematical modeling and graphic algorithms. Topics include digital clock design, geometric drawing, circles and ellipses, custom functions, eigenvalue analysis, PCA, and calculus simulation. Learners will implement math models and visual algorithms using Scratch. Later chapters expand into text processing, translation tools, and Micro:bit integration, creating a sensor-enhanced, modular learning experience.

第三冊：

《Scratch × Python × JavaScript 數學視覺化篇》

Volume 3: Scratch × Python × JavaScript – Mathematical Visualization

中文簡介：本冊為進階整合篇，結合 Scratch、Python 與 JavaScript，打造跨語言的數學視覺化模組。教材涵蓋二維與三維函數圖形繪製、曲面建模、語法與邏輯轉換、Turtle 與 Canvas 實作，以及多功能科學計算器設計。學生將學會如何在不同語言間轉換邏輯、繪製互動圖形，並設計可擴充的計算模組，適合進階學習者與教材開發者使用。

English Summary: This advanced volume integrates Scratch, Python, and JavaScript to build cross-language mathematical visualization modules. Topics include 2D and 3D function graphing, surface modeling, syntax and logic conversion, Turtle and Canvas implementation, and multifunction scientific calculator design. Learners will master logic translation across languages, interactive graphics, and modular calculator construction—ideal for advanced learners and curriculum developers.