

SDHXCS Enrichment Classes (才艺课)

Subject (科目):	Computer Science		
Course Name (课程名称):	Media Computing with Python (电脑编程) 公众号链接		
Teacher Name (教师姓名)	Paul Cao, PhD (曹英俊)	Phone	(440) 320 - 2818
		email	cs4fun.sd@gmail.com
Teacher's Background (教师简介):	Dr. Paul Cao is currently a lecturer in the Computer Science & Engineering Department at University of California San Diego (UCSD) who won the best teacher award at UCSD in 2021. Before coming to UCSD, he was an Associate Professor of Computer Science at Ashland University (OH). He received his Ph.D. in Computer Engineering at Duke University. Paul has extensive teaching experience at the undergraduate and K-12 levels. He is in charge of undergraduate courses such as Computer Programming I and II, Computer Organization, and Advanced Data Structure. He is well known nationally on his research on Computer Science education, especially at the K-12 level. Paul Cao 目前是加州大学圣地亚哥分校 (UCSD) 计算机科学与工程系的讲师，他于 2021 年获得 Jacob 工程学院最佳教师称号。在加入加州大学圣地亚哥分校之前，他是亚什兰大学的计算机科学副教授。他具有杜克大学计算机工程专业的博士学位。Paul 在本科和 K-12 教育领域拥有丰富的教学经验。他在 UCSD 负责发展本科课程，如计算机编程 I 和 II，计算机组织和高级数据结构。他在美国计算机科学教育，尤其 K-12 教育研究领域中有较高声誉。		
Course introduction (课程简述):	This class is an introductory programming class designed for 6th – 8th grade students. We will use image manipulation in Python to inspire students in computational thinking and improve their problem-solving skills. The objective is to be able to produce a fairly advanced and functional program within a 31-week period. 本课程将使用 Python 中的图像处理和游戏创建来激发学生的计算思维，提高他们解决问题的能力。学生的目标是在学习一学年后能够制作有趣的游戏。下半学年将使用 Pygame 工具制作 Arcade 风格的游戏。		
Course Objectives (课程目标):	1. Start from Scratch and write a functional code in Python. 2. Be able to understand variables and basic flow controls (conditional statements and loops). 3. Design basic algorithms involving fundamental array concepts and nested loops. 4. Be able to implement methods that accept parameters and return a value.		

	5. Be familiar with a realistic coding environment. 1.学习 scratch, 用 Python 编写功能代码。 2. 能够理解变量和基本流量控制（条件语句和循环）。 3. 可以设计基本数组概念和嵌套循环的基本算法。 4. 能够掌握接受参数并返回值的方法。 5. 熟悉现实的编码环境			
Pre-requisite/Student Ages (先决要求/学生年龄要求):	4th - 8th grade Students need to bring their own laptops (pc or mac) 4-8 年级, 学生要自带手提电脑。			
Student Evaluation / Presentation (评分方法 (演出、比赛、展示等)):	The evaluations will be based on regular homework assignments and final projects. 根据学生完成与否定期的家庭作业和最终项目给予期末评估。			
Class Size (最多招生人数限制):	Min: 5 Max: 15			
Course Fee (报名费 / 学费):	Registration & material fee	\$600 / year	Course Time & Location	Sundays 12:30 Pm - 1:20 Pm Building S5