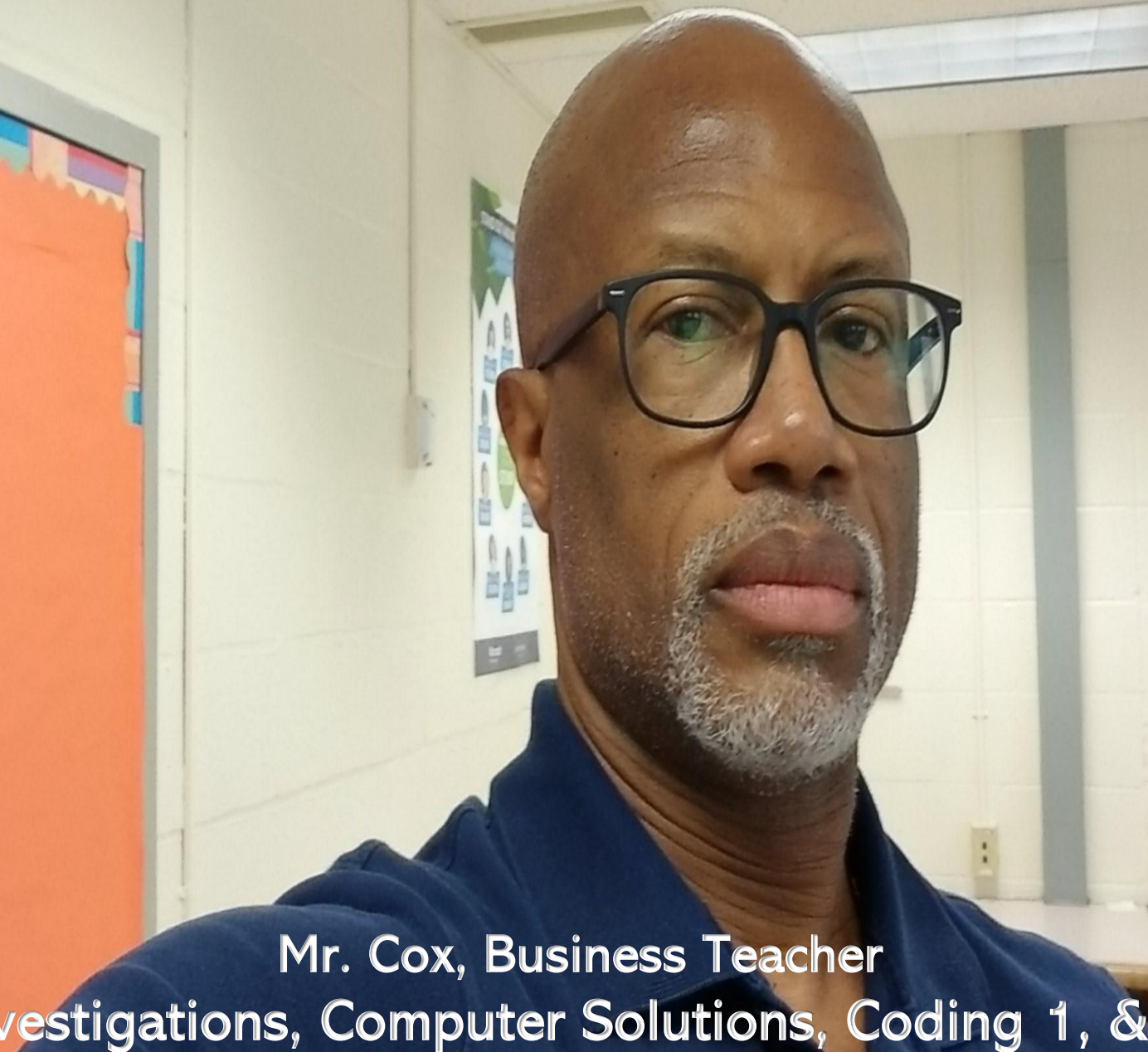
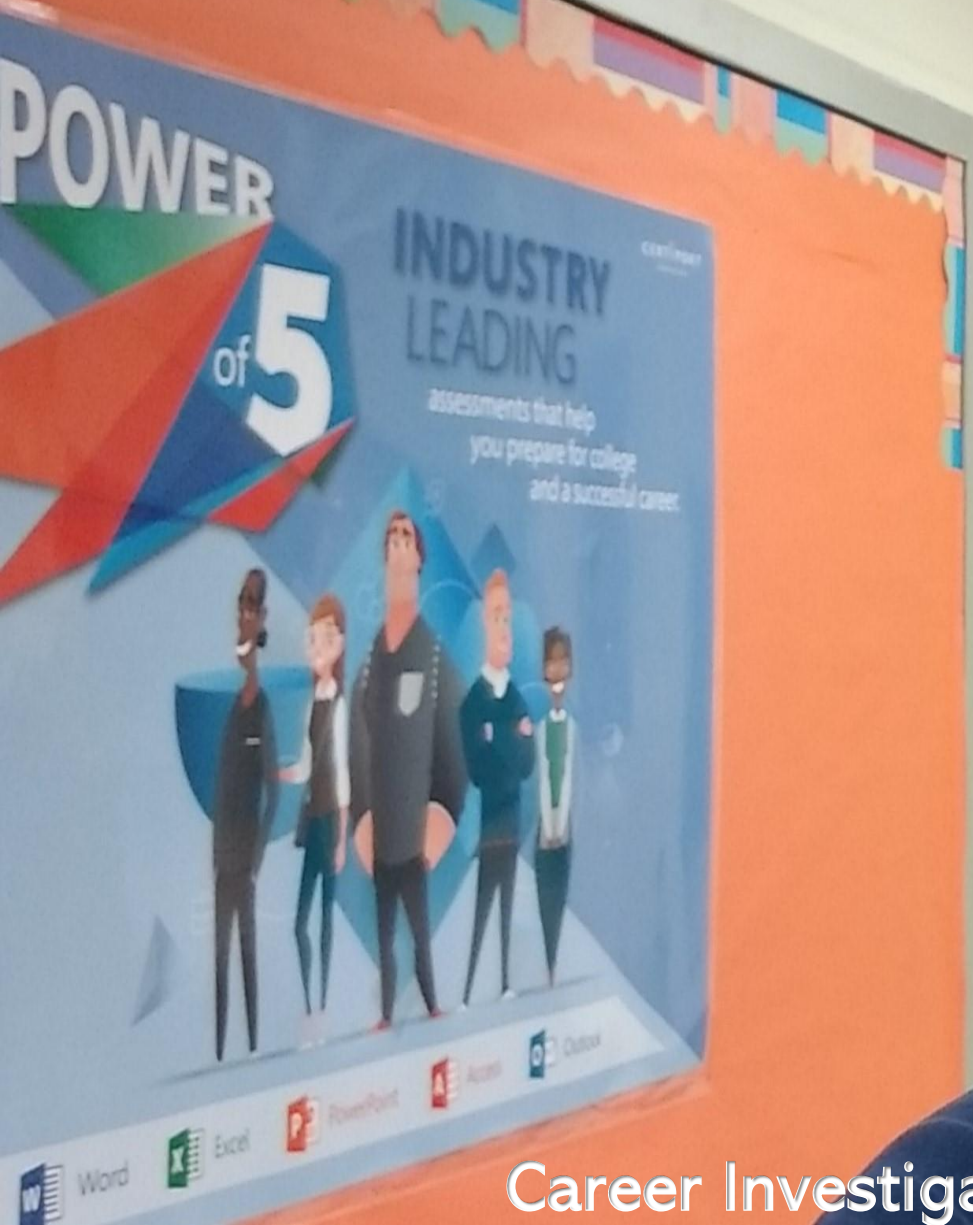


Liberty Middle School Curriculum Night



Mr. Cox, Business Teacher
Career Investigations, Computer Solutions, Coding 1, & Coding 2



Coding & Innovative Technology 1 CIT 1 – Coding 1



Why Take Coding 1?

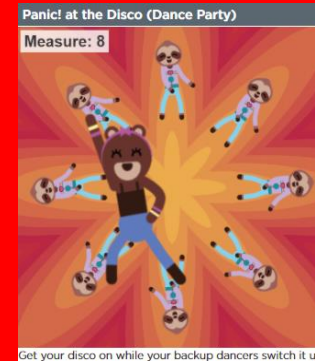
- Coding 1, a prerequisite to Coding 2, is a business elective that introduces students to coding and programming through hands-on projects utilizing block-based coding. Students learn:
- * Analytical and problem-solving skills
 - * Introductory coding concepts thru a variety of applications and interactive web sites
 - * How to use computational thinking to develop programs by dragging and dropping blocks.
 - * How to collaborate on small group projects
 - * How to challenge their creative, artistic, writing and mathematical skills in a technological environment

What You Learn ...

A Semester Long Class where students will learn to:

- * Apply coding principles, concepts, and practices
- * Syntax code without having to memorize syntax to write code
- * Practice and apply digital literacy
- * Use digital tools and resources
- * Explore careers in coding
- * Understand the fundamentals of computer programming
- * Design programs, such as games, in a fun and competitive atmosphere
- * Develop and edit a web page using HTML/CSS

What We Do ...



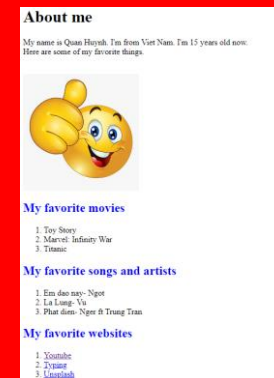
Portrait of a Graduate (POG)



```

<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
border: 1px solid black;
border-collapse: collapse;
}
th, td {
padding: 15px;
text-align: left;
}
#t01 trnth-child(even) {
background-color: #4CFE33;
}
#t01 trnth-child(odd) {
background-color: #33FFEC;
}
#t01 th {
color: white;
background-color: grey;
}
</style>
</head>
<body>
<h2>
Basic HTML Tables
</h2>

```





Coding & Innovative Technology 2

CIT 2 – Coding 2

(8th Grade only)



Why Take **Coding 2**?

In **Coding 2**, students who complete the Coding 1 prerequisite business class will continue to learn and refine coding concepts. Students will create programs using:

- * Text-based coding language Python
- * Interactive animation and gaming
- * Their critical thinking and problem-solving skills
- * The fundamentals of computer programming
- * Their creative, artistic, writing and mathematical skills in a technological environment
- * Their digital ethical and literacy skills

What You Learn ...

Utilizing **Code.org** and the **Carnegie Mellon University (CMU) Computer Science(CS) Academy**, this Semester Long Class covers:

- * Writing instructions and understanding the syntax of a text-based programming language
- * Modularity, algorithms and control
- * Position and movement
- * Variable/storing information
- * Exploring careers and workplace readiness skills in coding
- * Designing programs in a fun and competitive atmosphere
- * Collaborating in small group

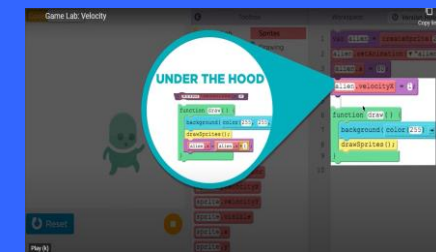
What We Do ...



Interactive Animations and Games	
Lesson 1: Programming for Entertainment	Lesson 19: Keyboard Input
Lesson 2: Picting Shapes	Lesson 16: Mouse Input
Lesson 3: Drawing in Game Lab	Lesson 17: Project: Interactive Card
Lesson 4: Shapes and Parameters	Lesson 18: Velocity
Lesson 5: Variables	Lesson 19: Collision Detection
Lesson 6: Random Numbers	Lesson 20: Mini-Project: Side Scroller
Lesson 7: Sprites	Lesson 21: Complex Sprite Movement
Lesson 8: Sprite Properties	Lesson 22: Collisions
Lesson 9: Text	Lesson 23: Mini-Project: Flyer Game
Lesson 10: Mini-Project: Captioned Scenes	Lesson 24: Functions
Lesson 11: The Draw Loop	Lesson 25: The Game Design Process
Lesson 12: Sprite Movement	Lesson 26: Using the Game Design Process
Lesson 13: Mini-Project: Animations	Lesson 27: Project: Design a Game
Lesson 14: Conditionals	



Portrait of a Graduate (POG)



Liberty Middle School



Mr. Cox

ecox@fcpspschools.net

Thank you for supporting the Computer Solutions, Coding 1, Coding 2 and

Career Investigations business electives and taking these courses with me!

Schoology

- * Weekly folders feature the schedule and all assignments
- * Resource folder contains course syllabus and other relevant material

SIS

- * A minimum of 8 graded assignments per quarter
- * A grade may reflect multiple assignments which will be a cumulative grade covering a learned unit (i.e., MS Word)
- * Schoology assignments are captured in SIS
- * Grading (*see syllabus in Resource folder of Schoology for details*)
 - Independent (Homework) – 0%
 - Formative – 30%
 - Summative – 70%

Comprehensive Focus of Courses

- * Skills learned in these courses supplement lessons students learn in course subjects: History, Reading/Writing, Math, Science
- * Problem solving (critical thinking) and creative thinking
- * Collaboration (working with others), Integrity and Respect
- * Listening and following step-by-step directions
- * Patience and Resilience (*It's ok to Make Mistakes, as long as you Learn from Them and Bounce Back!*)