

CodeCombat简单体验

yanwei, v0.1, 2018.12.19

1. 先上总结

用半天时间，从老师端和学生端整体体验了从账号注册、激活，课程设置、加入课程、上课等全部过程。由于学生端无法跳过进度，并且账号没有完整的license，有些功能受限，因此主要从老师端体验了一下各个级别的课程。

- 游戏化体验极佳，引导和帮助也到位，对孩子的吸引力毋庸置疑
- 适合中高年龄段（10+）孩子，门槛较高，但是总体课程设置上基本做到循序渐进
- 没有低幼年龄段的课程（网站只提供了13岁+的选择）
- 老师端教辅材料非常丰富，包括的课程总体大纲、相关知识图谱、每节课的详细解析等
- 本地化工作尚未完成，除极少数页面，大多数都是英文
- 游戏背景、风格、关卡设定、任务设置等需要适应国内市场和教育机构落地的需要

2. 入口

- 英文版：<https://codecombat.com/>
- 中文版：<https://codecombat.163.com>

用提供的两个体验账号分别注册了老师和学生身份。老师账号创建了班级和ClassCode，学生账号使用ClassCode加入班级。

此外，也可以开启独立账号，直接支付¥648元开通账号。不付费情况下可以免费体验课程的第一个等级。独立账号版本下，课程等级和教学版本基本相同，但是似乎稍有区别，比如，独立模式下没有**Game Development 3**。此外，第一关基本对应**Introduction to Computer Science**，但是似乎关卡数和教学版不一样多。因时间限制，没有逐个比对。



3. 教学系统

3.1. 学生端

可以查看自己的学习进度，或者加入新的班级。

The screenshot shows the 'My Student Dashboard' page. At the top, there's a logo for '极客战记' (CodeCombat) with the tagline '学编程 用玩的'. To the right are links for '教学版' (Teaching Edition), 'About', 'My Courses', 'Forum', and a 'My Account' button with a user icon. The main title 'My Student Dashboard' is centered above a section titled 'Current Classes'. Below this, a card for 'TestClass01 (Python)' is shown, featuring the teacher 'TestTeacher', the subject 'Introduction to Computer Science', and a progress bar indicating '33.3%'. A 'Continue' button is at the bottom of the card. Another section below is titled 'JOIN A CLASS' with a placeholder for a class code and a 'Join' button.

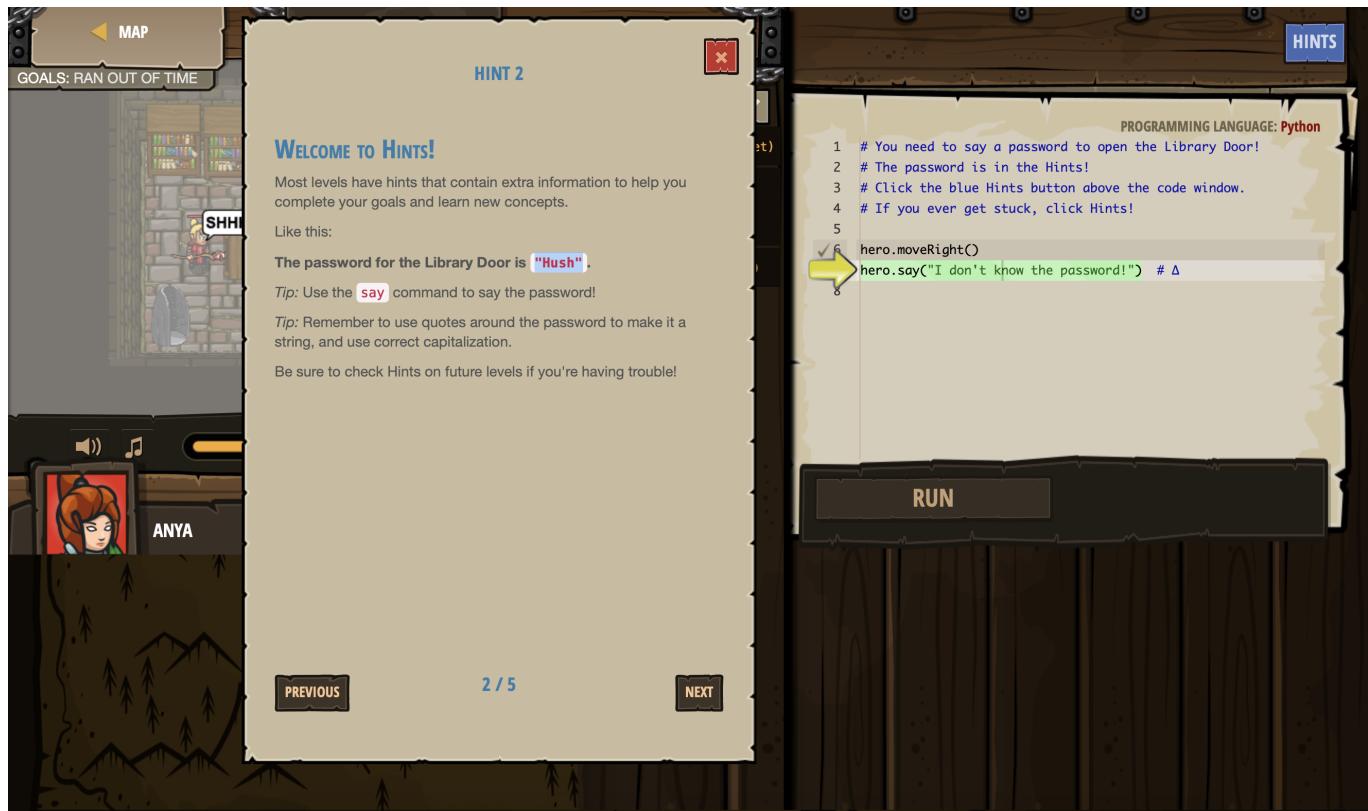
3.1.1. 游戏化体验

总的游戏化体验非常好，各个关卡的通关提示、帮助等非常到位。加上声音和视觉上的及时反馈，总体效果不错。

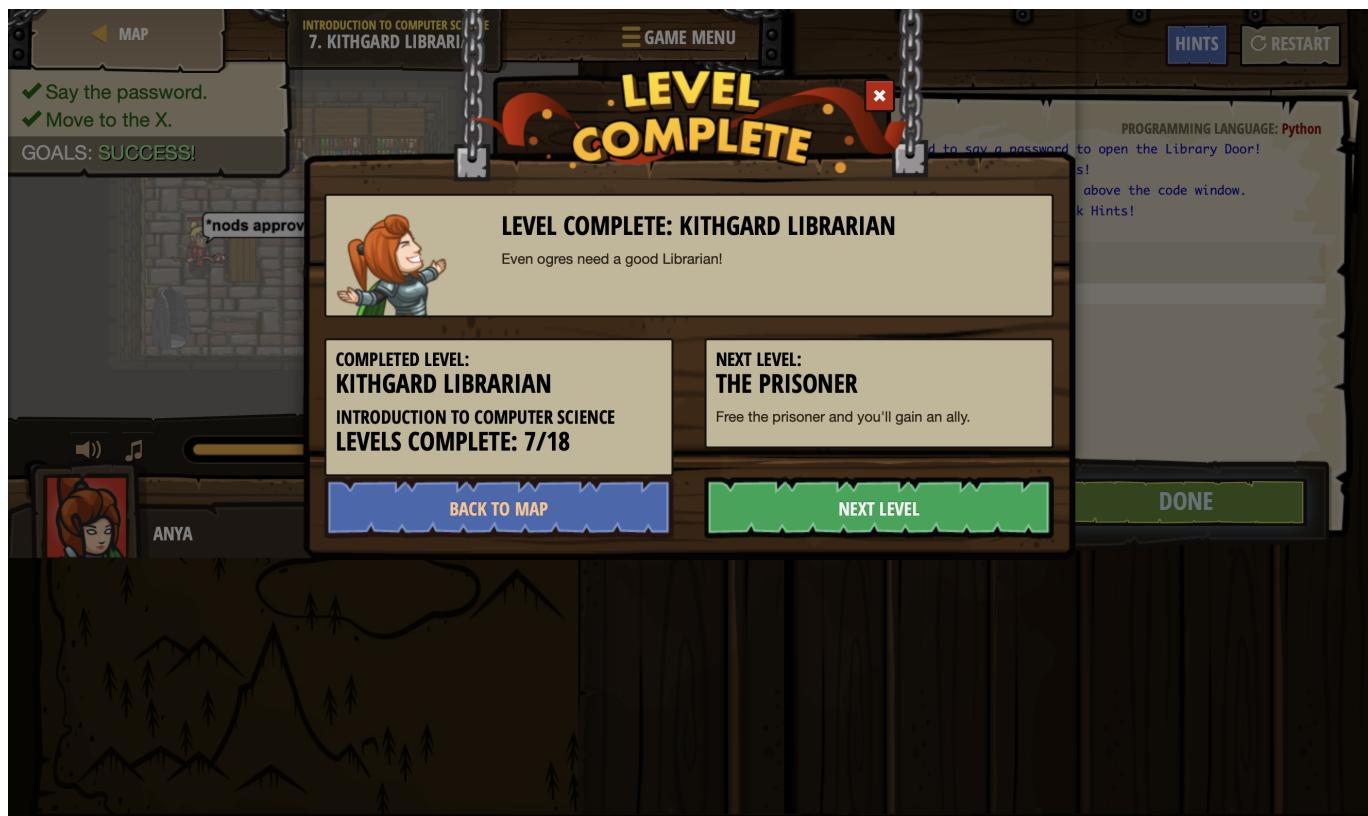


每个关卡/任务开始之前的说明：

学习过程中随时可以查看提示：



过关后有奖励（截图动作慢了点，下部的成就奖励自动消失了，没有截到）：



3.1.2. 学习过程

代码方式（Python、JavaScript、CoffeeScript）的互动学习过程，不同于Scratch等模块化编程环境，学生需要自己手动键入代码。不过代码提示和自动补全做的挺好，编程效率较高。

```

METHODS
shield()
attack(target)
cleave(target)
else
if/else
while-true loop
moveXY(x, y)
distanceTo(targe...
findNearestEnemy...
findNearestItem()
say(message)
findNearestFrien...

1 # Peasants and peons are gathering in the forest.
2 # Command the peasants to battle and the peons to go away!
3
4 while True:
5     friend = hero.findNearestFriend()
6     if friend:
7         hero.say("To battle, " + friend.id + "!")
8     # Now find the nearest enemy and tell them to go away.

RUN ↕ SUBMIT
  
```

3.2. 老师端

3.2.1. 我的班级

可以查看班级的总体情况，总体进度，以及班级内学生的详细情况。包括学生的学习进度、课程掌握情况，能力评估等。

44%

Quests Complete

Teacher's Quest for Success

Keep going! Here's what you can do next:

- Add Students
- Don't string your students along, teach them [strings](#).
- Get 75% of at least one class through [True Names](#)
- Use the Teacher Level Selector on [Course Guides](#) page to preview [True Names](#).

Keep your students in the loop about loops.

- Get 75% of at least one class through [Fire Dancing](#).
- Use the [Loops Activity](#) in the [CS1 Curriculum guide](#) to reinforce this concept.

(refresh the page to see updates)

[See all quests](#)

Current Classes

TestClass01

Language: Python Students: 1

[view class](#) [edit class settings](#) [archive class](#)

[My Classes > TestClass01](#)

TestClass01 [edit class settings](#)

Class Overview

Language: Python

Students: 1

Average level playtime: 2 minutes

Total play time: 20 minutes

Average levels completed: 9.0

Total levels completed: 9

Created: 12/18/2018

Earliest incomplete level:

Introduction to Computer Science: Level 3a
(TestStudent)

Latest completed level:

Introduction to Computer Science: Level 6
(TestStudent)

Add Students:

PushBedArm

Copy Class Code

Students can join your class using this Class Code. No email address is required when creating a Student account with this Class Code.

<https://codecombat.163.com/stu>

Copy Class URL

You can also post this unique class URL to a shared webpage.

Export Student Progress (CSV)

[Students](#) [Course Progress](#) [Assessments](#) [License Status](#)

Select All



Sort by: [Name](#) [Progress](#)

Select course: [Computer Science 2](#)

Assign Course

Remove Course



TestStudent

ad_codecombat4274@163....

Latest completed:

Introduction to Computer Science: Level 6



x [remove](#)

[Students](#) [Course Progress](#) [Assessments](#) [License Status](#)

Select course to view: [Introduction to Computer Science](#)

Progress color key:

Level Complete

Level in Progress

Project or Arena

Level Not Started

Introduction to Computer Science: Course Overview

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
16 17 18 [View Arena Ladder](#)

Sort by: [Name](#) [Progress](#)

TestStudent
ad_codecombat4274@163....

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
16 17 18 [Arena](#)

course incomplete

The screenshot shows the teacher dashboard interface. At the top, there are four tabs: Students, Course Progress, Assessments, and License Status. Below these, a message says "Select course to view: Introduction to Computer Science". A progress color key indicates: In Progress (yellow), Not Started (grey), and Partially Complete (green). The student "TestStudent" (ad_codecombat4274@16...) has progress bars for various courses: Basic Syntax (In Progress), Arguments (Not Started), Strings (In Progress), Combo (Partially Complete), While Loops (Not Started), Variables (Not Started), and another Combo course (Not Started).

3.2.2. 我的课程

可以查看当前支持的完整课程体系，目前包含11个等级。

- Introduction to Computer Science
- Game Development 1
- Web Development 1
- Computer Science 2
- Game Development 2
- Web Development 2
- Computer Science 3
- Game Development 3
- Computer Science 4
- Computer Science 5
- Computer Science 6

每个等级有简要知识点说明，以及每节课的详细解析等。老师端还可以直接跳过学生端的限制，直接体验每一节课课程的内容。

The screenshot shows the "Courses" section of the teacher dashboard. It includes a logo for "极客战记" (Geek War) with the tagline "学编程 用玩的". The navigation bar has links for "TEACHER DASHBOARD", "MY CLASSES", "COURSE GUIDES" (which is underlined), "STUDENT LICENSES", "RESOURCE HUB", and "EDUCATOR FAQ". On the right, there are links for "教学版", "About", "My Classes", "Forum", and "My Account".

Courses

Review course overviews and levels

The screenshot shows two course overviews. For "Introduction to Computer Science", it says: "Learn basic syntax, while loops, and the CodeCombat environment." Concepts covered include: Basic Syntax, Arguments, Strings, While Loops, Variables, Algorithms. Buttons for "Level Overviews and Solutions — JavaScript" and "Level Overviews and Solutions — Python". A link to "Show changes to this course's levels". On the right, there are dropdowns for "Select language: Python" and "Select level: 1. Dungeons of Kithgard", and a "Play Level" button. For "Game Development 1", it says: "Learn to create your own games which you can share with your friends." Concepts covered include: Basic Syntax, Arguments, Place game objects, Construct mazes, Create a playable, sharable game project. A note says: "Level solutions are available for teachers who have licenses." On the right, there are dropdowns for "Select language: Python" and "Select level: 1. Over the Garden Wall", and a "Play Level" button.

[Level Overviews and Solutions — JavaScript](#) [Level Overviews and Solutions — Python](#)

[Show changes to this course's levels](#)

Web Development 1

Learn the basics of web development in this introductory HTML & CSS course.

Concepts covered: Basic HTML, Basic CSS, Alter existing web pages, Create a sharable web page

Level solutions are available for teachers who have licenses.

[Level Overviews and Solutions — HTML](#)

Select language:

HTML

Select level:

1. Humble Beginnings

[Play Level](#)

Computer Science 2

Introduces arguments, variables, if statements, and arithmetic.

Concepts covered: Basic Syntax, Arguments, Strings, While Loops, Variables, If Statements, Functions, Parameters, Advanced Strings

Level solutions are available for teachers who have licenses.

[Level Overviews and Solutions — JavaScript](#) [Level Overviews and Solutions — Python](#)

Select language:

Python

Select level:

1. Defense of Plainswood

[Play Level](#)

Game Development 2

Learn more advanced game development.

Concepts covered: Basic Syntax, Functions, Strings, If Statements, Arguments, Basic Input Handling, Basic Game AI, Create a playable, sharable game project

Level solutions are available for teachers who have licenses.

[Level Overviews and Solutions — JavaScript](#) [Level Overviews and Solutions — Python](#)

Select language:

Python

Select level:

1. Guard Duty

[Play Level](#)

[Show changes to this course's levels](#)

Web Development 2

Learn more advanced web development, including scripting to make interactive webpages.

Concepts covered: Basic Syntax, Strings, While Loops, Variables, Arguments, If Statements, Functions, Basic HTML, Basic CSS, Basic Web Scripting, Advanced HTML, Basic JavaScript, Basic Event Handling, Create a sharable interactive web page

All classes program in HTML / JavaScript for this course. Classes that have been using Python will start with extra JavaScript intro levels to ease the transition. Classes that are already using JavaScript will skip the intro levels.

Level solutions are available for teachers who have licenses.

[Level Overviews and Solutions — JavaScript](#) [Level Overviews and Solutions — Python](#)

Select language:

HTML / JavaScript

Select level:

1. JavaScript: True Names

[Play Level](#)

Computer Science 3

Introduces arithmetic, counters, advanced while loops, break, continue, arrays.

Concepts covered: Basic Syntax, Arguments, If Statements, Variables, Strings, While Loops, Arithmetic, Advanced Strings, Input Handling, Functions, Parameters, Boolean Logic, Arrays, Break Statements, Continue Statements

Level solutions are available for teachers who have licenses.

[Level Overviews and Solutions — JavaScript](#) [Level Overviews and Solutions — Python](#)

Select language:

Python

Select level:

1. Friend and Foe

[Play Level](#)

Game Development 3

Learn more advanced game development.

Concepts covered: Basic Syntax, Event Data

Level solutions are available for teachers who have licenses.

[Level Overviews and Solutions — JavaScript](#) [Level Overviews and Solutions — Python](#)

Select language:

Python

Select level:

1. The Rule of the Square

[Play Level](#)

Computer Science 4

Introduces object literals, for loops, function definitions, drawing, and modulo.

Concepts covered: Basic Syntax, Arguments, Variables, Strings, If Statements, Arithmetic

Select language:

Python

Concepts covered: Basic Syntax, Arguments, Variables, Strings, If Statements, Arithmetic, While Loops, Arrays, Functions, Parameters, Object Literals, For Loops, Boolean Logic

Level solutions are available for teachers who have licenses.

Level Overviews and Solutions – JavaScript Level Overviews and Solutions – Python

Select level: 1. Dust

Play Level

[Show changes to this course's levels](#)

Computer Science 5

Introduces function parameters, function return values and algorithms.

Concepts covered: Basic Syntax, Arguments, Variables, Strings, While Loops, Arrays, For Loops, Functions, If Statements, Boolean Logic, Algorithms, Break Statements, Math Library Operations, Object Literals, Arithmetic, Graphics, Advanced Strings, Parameters, Continue Statements

Level solutions are available for teachers who have licenses.

Level Overviews and Solutions – JavaScript Level Overviews and Solutions – Python

Select language: Python

Select level: 1. Vital Powers

Play Level

[Show changes to this course's levels](#)

Computer Science 6

Dive deeper into more advanced algorithms, data structures, and computation.

Concepts covered: Basic Syntax, Arguments, Variables, Strings, If Statements, While Loops, Arrays, For Loops, Functions, Boolean Logic, Algorithms, Break Statements, Arithmetic, Object Literals, Parameters, Vectors, Math Library Operations, Recursion

Level solutions are available for teachers who have licenses.

Level Overviews and Solutions – JavaScript Level Overviews and Solutions – Python

Select language: Python

Select level: 1. Misty Island Mine

Play Level

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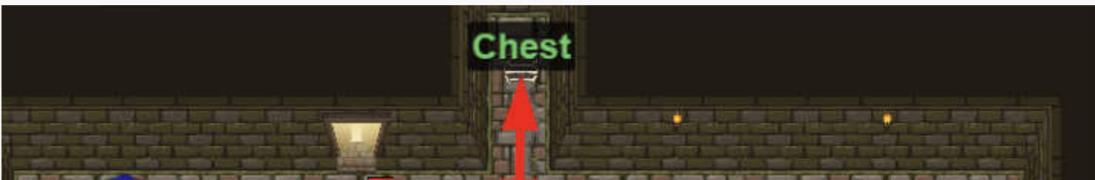
3.2.3. 教辅材料

提供了非常丰富的教辅材料。从课程总体大纲、相关知识图谱、每节课的详细解析等，非常齐全。

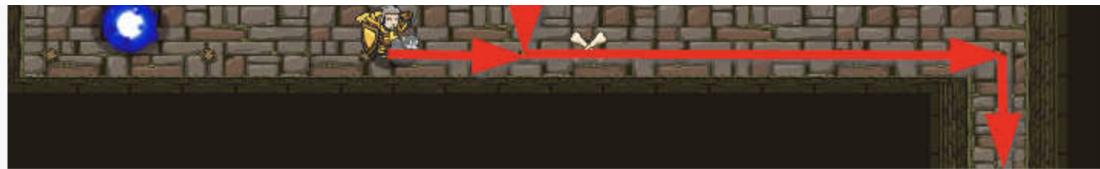
#13. Hack and Dash

Level Overview and Solutions

Intro



9 / 13



The danger in the air. You should escape from the dungeon. However, how about to check that "Chest" before? Attack it to open. Then use a **while-loop** to escape.

Default Code

```
# You can write code before a loop.
hero.moveRight()
# Break open the "Chest" before using the loop to escape the maze!

# Return back back into the main hallway.

while True:
    # Move 3 times.
    hero.moveRight(3)
    # Move 3 times more.
```

Overview

You're not fast enough to outrun the Sprite without drinking the Speed Potion.

Before the **while-loop**, you'll want to `moveUp()` and attack the "Chest", then `moveDown()` back into the main hallway.

Inside the **while-loop**, you need to add `moveDown()`. Use an argument to `moveDown()` multiple times without having write more lines of code.

Don't worry, the Sprite is activated by stepping on the X, so you'll have time to grab the potion!

Hack and Dash Solution

```
# You can write code before a loop.
hero.moveRight()
# Break open the "Chest" before using the loop to escape the maze!
hero.moveUp()
hero.attack("Chest")
# Return back back into the main hallway.
hero.moveDown()
while True:
    # Move 3 times.
    hero.moveRight(3)
    # Move 3 times more.
    hero.moveDown(3)
```



学编程 用玩的

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Resource Hub

Getting Started

Classroom-in-a-Box Pacing Guides

Learn how to incorporate all of CodeCombat's resources to plan your school year!

[Elementary School Pacing Guide](#) | [Middle School Pacing Guide](#) | [High School Pacing Guide](#)

Educator FAQ

Frequently asked questions about using CodeCombat in your classroom or school.

Teacher Getting Started Guide

New to CodeCombat? Download this Teacher Getting Started Guide to set up your account, create your first class, and invite students to the first course.

Student Quick Start Guide [PDF]

You can distribute this guide to your students before starting CodeCombat so that they can familiarize themselves with the code editor. This guide can be used for both Python and JavaScript classrooms.

Progress Journal [PDF]

Encourage students to keep track of their progress via a progress journal.

AP Computer Science Principles

AP Computer Science Principles gives students a broad introduction to the power, impact, and possibilities of Computer Science. The course emphasizes computational thinking and problem solving while also teaching the basics of programming.

Introduction to Computer Science

Introduction to Computer Science - Curriculum Guide

Scope and sequence, lesson plans, activities and more for Course 1.

Course 1 Python Syntax Guide [PDF]

Cheat sheet with references to common Python syntax that students will learn in Introduction to Computer Science.

Course 1 JavaScript Syntax Guide [PDF]

Cheat sheet with references to common JavaScript syntax that students will learn in Introduction to Computer Science.

Arena Levels - Teacher Guide

Instructions on how to run Wakka Maul, Cross Bones and Power Peak multiplayer arenas with your class.

Engineering Cycle Worksheet [PDF] *View example*

Use this worksheet to teach students the basics of the engineering cycle: Assess, Design, Implement and Debug. Refer to the completed example worksheet as a guide.

Pair Programming Activity

Introduce students to a pair programming exercise that will help them become better listeners and communicators.

Game Development 1

Game Development 1 - Project Guide

Use this to guide your students as they create their first shareable game project in 5 days.

Game Development 1 - Project Rubric

Use this rubric to assess student projects at the end of Game Development 1.

Web Development 1

Headlines & Headers Activity [PDF] *View sample solution*

Why are paragraph and header tags important? Use this activity to show how well-chosen headers make web pages easier to read.

There are many correct solutions to this!

HTML Syntax Guide [PDF]

One-page reference for the HTML style students will learn in Web Development 1.

CSS Syntax Guide [PDF]

One-page reference for the CSS and Style syntax students will learn in Web Development 1.

Computer Science 2

Computer Science 2 - Curriculum Guide

Scope and sequence, lesson plans, activities and more for Course 2.

Game Development 2

Game Development 2 - Curriculum Guide

Lesson plans for Game Development 2.

Web Development 2

jQuery Functions Syntax Guide [PDF]

One-page reference for the jQuery functions students will learn in Web Development 2.

Quizlet Planning Worksheet [PDF] *View instructions & examples*

Before your students build their personality quiz project at the end of Web Development 2, they should plan out their quiz questions, outcomes and responses using this worksheet. Teachers can distribute the instructions and examples for students to refer to.

Computer Science 3

Computer Science 3 - Curriculum Guide

Scope and sequence, lesson plans, activities and more for Course 3.

Game Development 3

[Game Development 3 - Curriculum Guide](#)

Lesson plans for Game Development 3.

Computer Science 4

[Computer Science 4 - Curriculum Guide](#)

Scope and sequence, lesson plans, activities and more for Course 4.

Computer Science 5

[Computer Science 5 - Curriculum Guide \(Python\)](#)

Scope and sequence, lesson plans, activities and more for Course 5 classes using Python.

[Computer Science 5 - Curriculum Guide \(JavaScript\)](#)

Scope and sequence, lesson plans, activities and more for Course 5 classes using JavaScript.

Additional guides coming soon!

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GETTING STARTED

Frequently Asked Questions

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4. 课程体系

时间限制，只能用老师端账号在11个等级中，每个等级随机抽1-2个关卡玩了玩。总体可玩性不错，难度适中并逐级递进。整个课程体系基于相似的游戏背景，从低到高，逐渐构筑一个较为复杂的游戏。

整个课程完整覆盖了编程中的基本概念和算法，以及Python、HTML、CSS、JavaScript等基本的语法知识点。并且通过游戏化方式，初步介绍了游戏开发中的一些基本概念和方法，如事件驱动、游戏策略等。

通过整体课程的学习，学生应该能够具备基本的编程知识和概念，具备进一步学习完整的编程语言、软件开发方法、算法和数据结构的基础。