**COURSE DESCRIPTION**

**Course Title:** Computer Science Discoveries

**Course Number:** 00500

**Course Prerequisites:** None

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| --- | --- |
| **Course Description:** | *Computer Science Discoveries* is an introductory computer science course that empowers students to create authentic artifacts and to engage with computer science as a medium for creativity, communication, problem solving, and enjoyment. The two coding languages that are explored include JavaScript and HTML. |

**Suggested Grade Level**: Grade 6

**Length of Course:** One Semester

**Units of Credit:** .5

**PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:**

K-12 Business Information Technology – CSPG 33

To find the CSPG information, go to <https://www.education.pa.gov/Educators/Certification/Staffing%20Guidelines/Pages/default.aspx>

**Certification verified by the office of Curriculum, Instruction, and Assessment:** [x] Yes [ ] No

**WCSD STUDENT DATA SYSTEM INFORMATION**

**Course Level:** Academic

**Mark Types:** Check all that apply.

[x] F – Final Average [x] MP – Marking Period [ ] EXM – Final Exam

**GPA Type**: [ ]  GPAEL-GPA Elementary [x]  GPAML-GPA for Middle Level [ ]  NHS-National Honor Society

[ ]  UGPA-Non-Weighted Grade Point Average [ ]  GPA-Weighted Grade Point Average

**State Course Code**: 10011

To find the State Course Code, go to <https://nces.ed.gov/forum/sced.asp>, download the Excel file for *SCED*, click on SCED 6.0 tab, and chose the correct code that corresponds with the course.

**TEXTBOOKS AND SUPPLEMENTAL MATERIALS**

**Board Approved Textbooks, Software, and Materials:**

**Title:**

**Publisher:**

**ISBN #:**

**Copyright Date:**

**WCSD Board Approval Date:**

**Supplemental Materials:** Computer Science Discoveries Curriculum from Code.org website, Spheros, iPad Pros, Hummingbird Kits

**Curriculum Document**

**WCSD Board Approval:**

**Date Finalized:** 12/5/2019

**Date Approved:**  1/13/2020

**Implementation Year:** 2020-2021

**SPECIAL EDUCATION, 504, and GIFTED REQUIREMENTS**

The teacher shall make appropriate modifications to instruction and assessment based on a student’s Individual Education Plan (IEP), Chapter 15 Section 504 Plan (504), and/or Gifted Individual Education Plan (GIEP).

**SCOPE AND SEQUENCE OF CONTENT, CONCEPTS, AND SKILLS**

|  |  |  |
| --- | --- | --- |
| **Performance Indicator** | **PA Core Standard and/or Eligible Content** | **Month Taught and Assessed for Mastery**  |
| Discuss and analyze problem solving process. | 3B-AP-24 | SeptemberJanuary |
| Explore and analyze the computer and central process unit. | 1B-CS-02 | SeptemberJanuary |
| Discuss the process of the input and outputs of the computer. | 1B-CS-01 | SeptemberFebruary |
| Explore Apps and storage solutions. | 3A-AP-13 | SeptemberFebruary |
| Plan, design, and present an App. | 3A-AP-13, 3A-AP-22 | SeptemberFebruary |
| Explore websites and analyze how they are formatted. | 3B-AP-19 | OctoberFebruary |
| Communicate with HTML language. | 2-AP-14 | OctoberMarch |
| Create and use the language of HTML. | 2-AP-14, 3B-AP-19 | OctoberMarch |
| Develop debugging skills within the HTML language. | 1B-AP-15 | OctoberMarch |
| Create and use the Styling Elements and Text with CSS. |   | OctoberMarch |
| Investigate sources and search engines. | 1B-IC-21 | NovemberMarch |
| Present and share creation of HTML Website. | 3B-AP-24 | NovemberApril |
| Investigate programming entertainment such as game design. | 1B-AP-12 | NovemberApril |
| Create variables and spirtes with JavaScript. | 2-AP-11, 3A-AP-14 | NovemberApril |
| Analyze Booleans and conditionals. | 1B-AP-10 | DecemberMay |
| Create an interactive greeting card using JavaScript. | 3B-AP-24 | DecemberMay |
| Investigate the game design process. | 3A-AP-18 | JanuaryMay |
| Design an interactive game using JavaScript. | 3A-AP-18, 1B-AP-12 | January |

**ASSESSMENTS**

**PSSA Academic Standards, Assessment Anchors, and Eligible Content:** The teacher must be knowledgeable of the PDE Academic Standards, Assessment Anchors, and Eligible Content and incorporate them regularly into planned instruction.

**Formative Assessments:** The teacher will utilize a variety of assessment methods to conduct in-process evaluations of student learning.

**Effective formative assessments for this course include:** Journal Question Responses, Sharing Projects using online platform, Progress Checks of Projects

**Summative Assessments:** The teacher will utilize a variety of assessment methods to evaluate student learning at the end of an instructional task, lesson, and/or unit.

**Effective summative assessments for this course include:** Creation of an App Project (Unit 1), HTML with CSS Styling Website (Unit 2), Interactive Game Design (Unit 3), quizzes, and tests.