**Computer Science Discoveries – 6th Grade**

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**Syllabus-**

Lesson: Intro to Problem Solving

Unit 1 is a highly interactive and collaborative introduction to the field of computer science, as framed within the broader pursuit of solving problems. You’ll practice using a problem solving process to address a series of puzzles, challenges, and real world scenarios. Next, you’ll learn how computers input, output, store, and process information to help humans solve problems. The unit concludes with a project in which you design an application that helps solve a problem of your choosing.

Lesson: The Design Process

Unit 4 introduces the broader social impacts of computing. Through a series of design challenges, you will learn how to better understand the needs of others while developing a solution to a problem. The second half of the unit consists of an iterative team project, during which teams have the opportunity to identify a need that they care about, prototype solutions both on paper and in App Lab, and test solutions with real users to get feedback and drive further iteration.

Lesson: Data and Society

Unit 5 is about the importance of data in solving problems and highlights how computers can help in this process. The first chapter explores different systems used to represent information in a computer and the challenges and tradeoffs posed by using them. In the second chapter you’ll learn how collections of data are used to solve problems, and how computers help to automate the steps of this process. The chapter concludes by considering how the data problem solving process can be applied to an area of the your choosing.