

# A Brief History for CS in Education

Growth, often exponential, is a well known effect of digital technologies. The amount of data created each day, the number of transistors on a chip, the number of Internet devices. As humans, we have become accustomed to experiencing unprecedented rates of change with digital technology. As educators helping young people engage with CS, we are aware of the effects of the technology in shaping what and how we teach.

No-one would be surprised to hear CS being described as a new or young subject; referring to the study and practice of Computing Science in Universities and industry. Of course it is also follows that teaching CS in schools is also quite a recent development.

It might be interesting and instructive to put some numbers to frame this and then reflect on what can be observed about how people think about computing science and how it compares to other subjects.

Chart 1: All of these areas of study below are over 1000 years old. They may not have been taught in a formal way but they have been closely bound to the evolution of human civilisation for a long time. Chat with some others to place each topic on the time line.

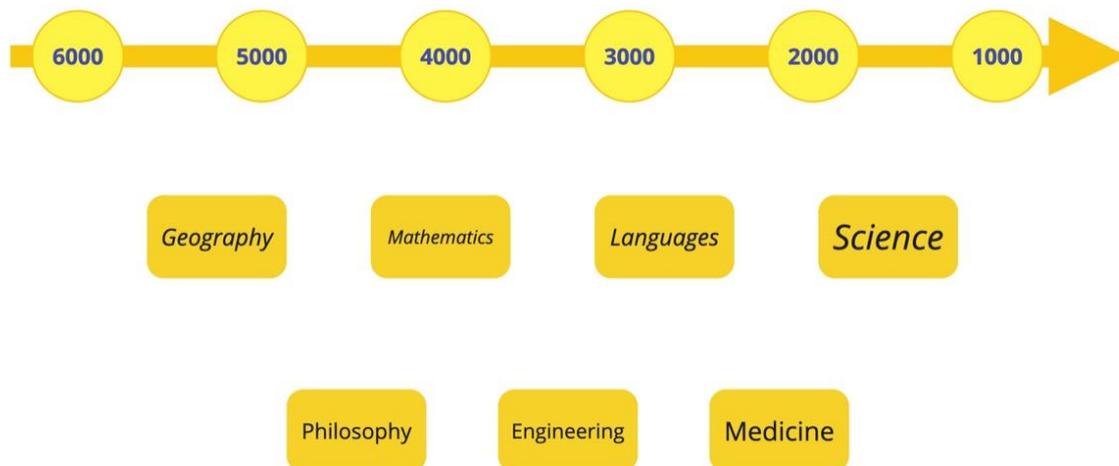


Chart 2: Pioneers of of Computing Science like Dijkstra and Knuth had strong opinions about how they described CS, see below. These views influenced the development of the subject and they changed as CS grew and spread into almost all human endeavours. Chat with some others to place each statement on the time line. Which statements do feel might be an appropriate guide for our young learner as they progress in understanding the subject. Are any less helpful?

(You can read a related article by Peter J Denning at <https://www.americanscientist.org/article/the-great-principles-of-computing> )

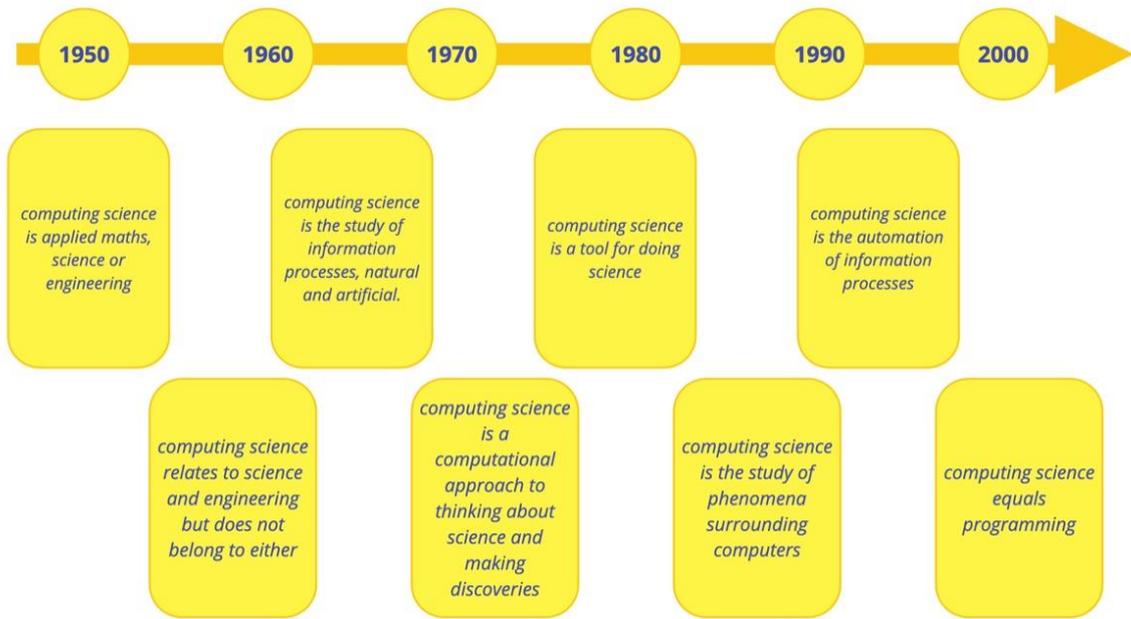
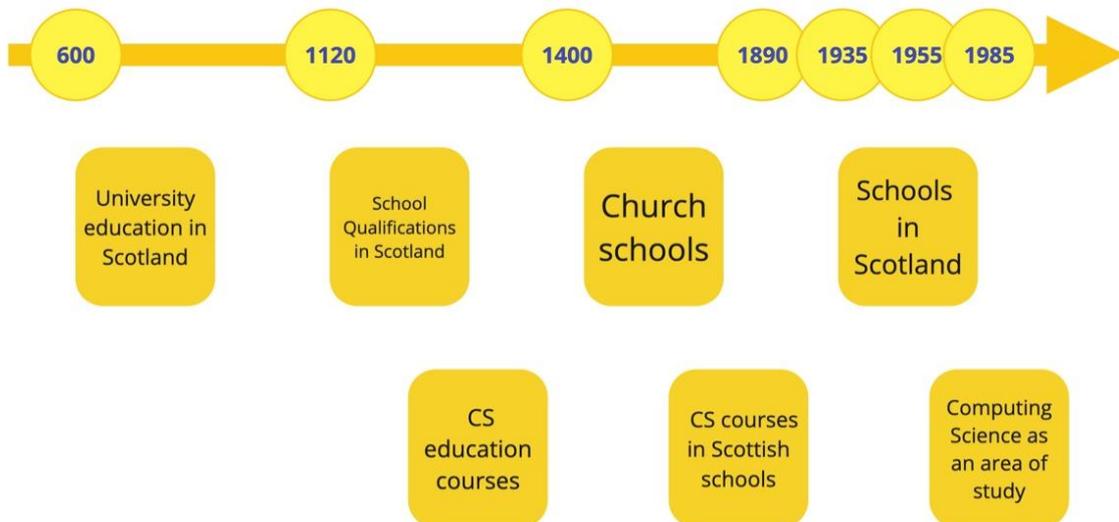


Chart 3: CS has taken its place only quite recently in schools. School education itself has been around for some time but has also changed as society places increasing importance and expectations on it. Chat with some others to place each milestone on the time line, see below.



Take a moment to thread these three time-perspectives. Perhaps think about the degree to which some other ideas, like Science, are long embedded within our society, the recentness of CS as an area of study and as a school subject and finally the shifting narrative around what even the subject experts say about such a young subject. Are there any insights for us as CS educators and how we think about ourselves, our subject our practice, our pedagogy? Are there messages for others, outside of our classrooms?

(Perhaps use a search engine or ask an AI for the answers!)