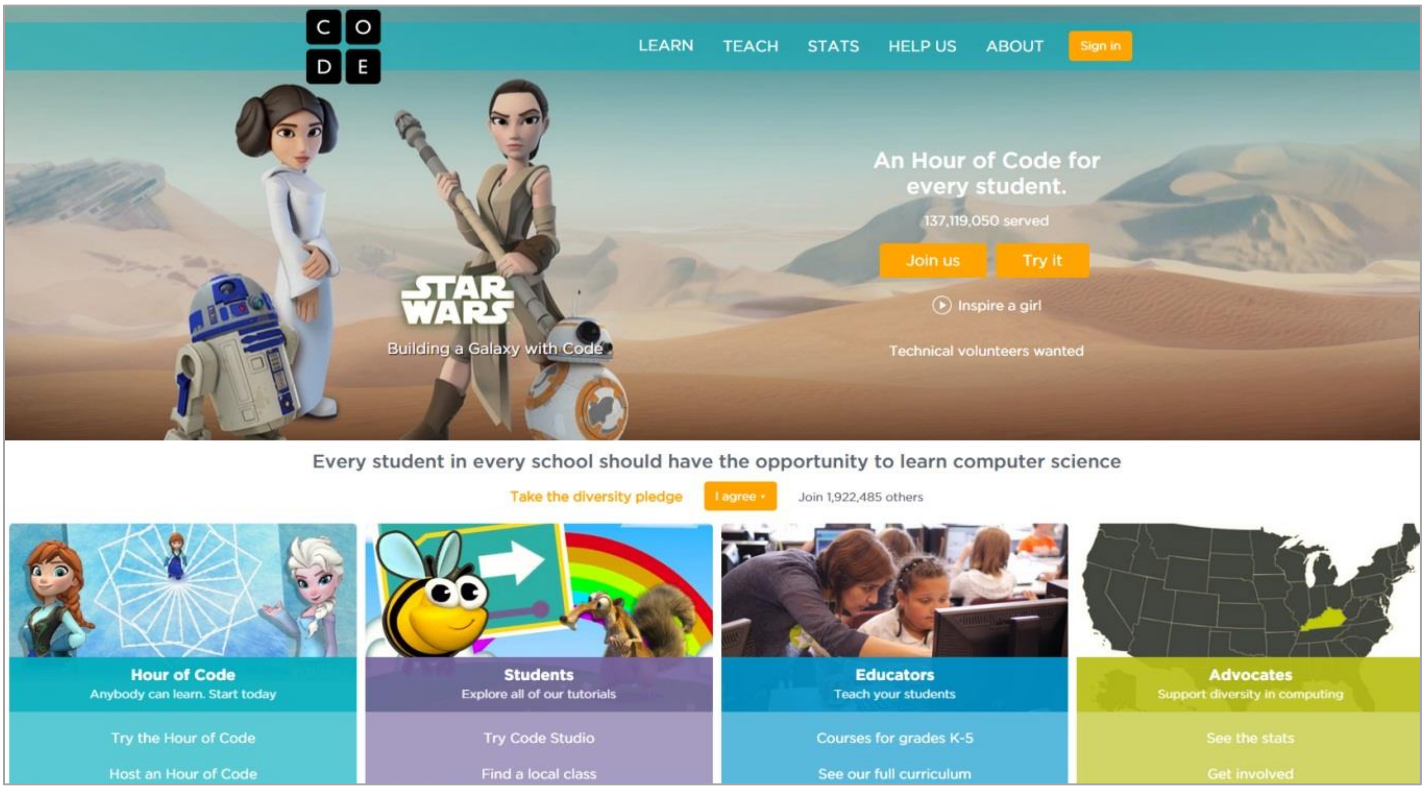
Intro to Coding using Code.org

Code.org is an excellent web based system with hundreds of online lessons to teach **Computational Thinking** and **Programming**. Computing Science is becoming a necessity in all areas of schooling with How Good Is Our School 4, Developing Scotland's Young Workforce and the number of digital jobs that are continually growing.

Code.org uses modern games and areas of interest like **Angry Birds, Plants vs Zombies, Star Wars, Frozen, Minecraft** etc. as problem solving scenarios to teach coding from 4 years old up upwards. There are video tutorials to explain each task and how to solve the problem. Teachers can setup class accounts that allow full tracking of progress.



An Hour of Code for every student.

137,119,050 served

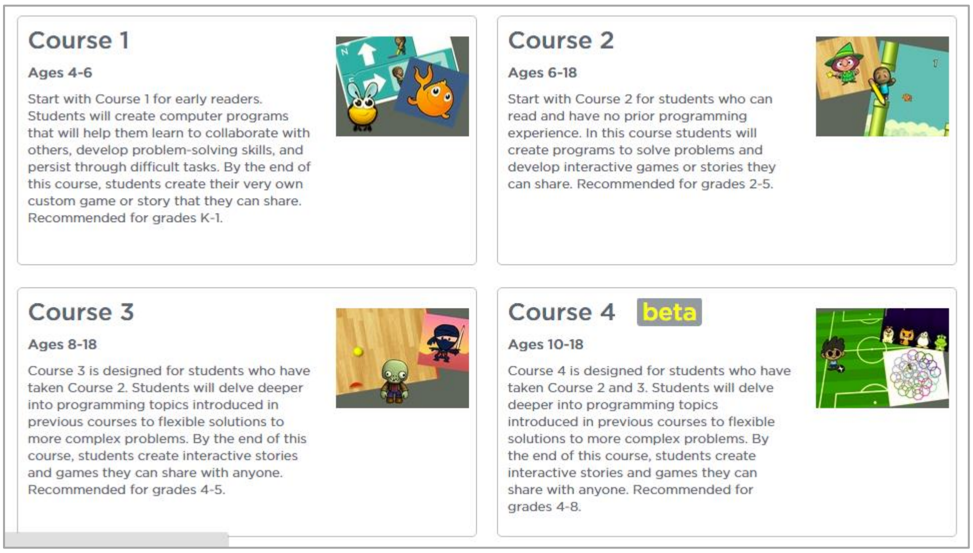
Every student in every school should have the opportunity to learn computer science

Join 1,922,485 others

Pupil Levels

There is a wide range of courses available for you to choose the most suitable and relevant for your class.

There are even more specific and focused courses that can be used in the secondary BGE phase.



Course 1

Ages 4-6

Start with Course 1 for early readers. Students will create computer programs that will help them learn to collaborate with others, develop problem-solving skills, and persist through difficult tasks. By the end of this course, students create their very own custom game or story that they can share. Recommended for grades K-1.

Course 2

Ages 6-18

Start with Course 2 for students who can read and have no prior programming experience. In this course students will create programs to solve problems and develop interactive games or stories they can share. Recommended for grades 2-5.

Course 3

Ages 8-18

Course 3 is designed for students who have taken Course 2. Students will delve deeper into programming topics introduced in previous courses to flexible solutions to more complex problems. By the end of this course, students create interactive stories and games they can share with anyone. Recommended for grades 4-5.

Course 4 beta

Ages 10-18

Course 4 is designed for students who have taken Course 2 and 3. Students will delve deeper into programming topics introduced in previous courses to flexible solutions to more complex problems. By the end of this course, students create interactive stories and games they can share with anyone. Recommended for grades 4-8.

Teacher Setup

To make Code.org as simple as possible for the pupils it is best that you setup a Teacher account on Code.org. This is a 10 minute video tutorial that will take you through the whole system and process.

Learning and Teaching Approaches

Pupils can easily work independently and all ages can pick up the working of the system quickly – early use has seen a number of pupils continuing on at home in their own time.

Paired programming can be useful where one pupil is the "navigator" and looks closely at the problem and traces with finger on screen with their partner the "driver" who builds the code. The pupils can switch roles each task. It is important at times to pull pupils together to read, discuss and write about code. It is easy to project and show specific programs on a board to talk about together and even show good solutions from individual pupils to everyone.

The "unplugged" lessons are very useful for giving hands-on kinaesthetic tasks to try to get pupils acting out and visualising the working of their everyday devices and applications they use. Barefoot (http://barefootcas.org.uk/) have great unplugged materials available.

Progression

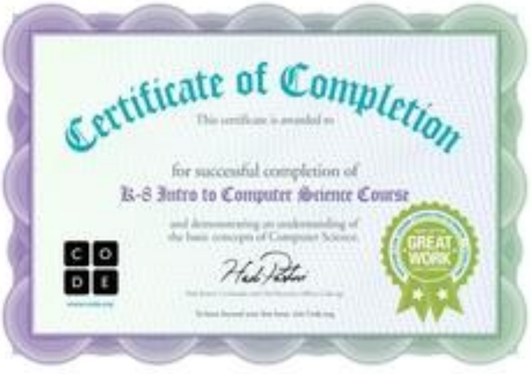
The 4 main areas of Computational Thinking (Decomposition, Algorithms, Patterns, Abstraction) are quite complex but Code.org subtly and gradually build these skills. There are numerous extra tasks and sections to allow differentiation for more able pupils while also allowing pupils to take their time and work at their own pace – the **system can even be set to different languages**.

By upper primary it may be useful for pupils to start work on Scratch. Scratch allows you to fully create your own programs and in particular games using similar style blocks that the pupils have used in Code.org. There is a clear transition into Secondary as we would still use Code.org, more advanced Scratch and creative games.

Assessment and Tracking

Setting up a class will allow the teacher to see individual progress on each task. You can see pupils who are struggling and other who may need more help.

The system has built-in awards, trophies and certificates that can be printed to help motivate learners.



Certificate of Completion

This certificate is awarded to

for successful completion of

K-8 Intro to Computer Science Course

and demonstrating an understanding of the basic concepts of Computer Science.

CO
DE
GREAT WORK

Experiences and Outcome

I am developing problem solving strategies, navigation and co-ordination skills, as I play and learn with electronic games, remote control or programmable toys. (**TCH 0-09a / TCH 1-09a**)

Significant Aspects of Learning (SALs)

- Understanding the world through computational thinking
- Designing, building and testing computing solutions

For more information or support please contact…

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