

# WELCOME TO ITALY



## DIGITAL TEACHING in natural scientific subjects

## INTRODUCTION

Information and Communication Technology (ICT) is used in every field of our life: work, business, social relations, education.

In particular, as regards education, In Europe, the use of Information Technology is one of the main basic skills to be achieved and developed.

It's estimated that in the near future 90% of jobs will require IT skills, so it's essential that European education systems offer the required qualifications.

## ICT FOR EDUCATION IN ITALY

For over 30 years the Italian school system has been investing in the development of Information Technology.

Thanks to the European Structural Funds (the European Regional Development Fund and the European Social Fund), the development of digital technology in schools has accelerated considerably.

The recent Italian school reform (2015) established the National Digital School Plan which aims to develop the school system in the digital age.

## THE ITALIAN DIGITAL SCHOOL PLAN

Internet access with ultra-fast broadband  
Cabling of all environments (LAN / Wireless LAN)  
Innovative school building  
Digital environments  
Digital secretariat  
Digital school register  
Development of digital skills  
Coding and computational thinking  
Digital teacher training

## OUR SCHOOL

The whole school is wired (LAN / WLAN)

Almost all classrooms have an interactive whiteboard (IWB)

In the school there are 5 computer labs

Teacher digital training courses are organized

IT is a curricular subject for technical-economic and lyceum

We organize in-depth courses for the use of digital tools, for basic skills (European Computer Driving License), coding (Visual Basic and C++), Computer-Aided Design (CAD), 3D printing, and automation (Arduino systems).

## DIGITAL WORKSHOP

The purpose of this workshop is to provide the students with a direct and easy tool for creating original educational apps for mobile devices.

All students, divided into work groups, can create simple apps to be installed and used on their Android smartphones.

## APP INVENTOR

App Inventor is a free, cloud-based service that you access using a web browser.

App Inventor for Android is an application originally provided by Google and now maintained by the MIT, Massachusetts Institute of Technology. It allows anyone, including people unfamiliar with computer programming, to create software applications for the Android operating system. It uses a graphical interface that allows users to drag-and-drop visual objects to create an application that can run on the Android system.

App inventor allows you to manage numerous objects, including different sensors of your smartphone such as the accelerometer, the gyroscope, the sensor of localization, proximity and others.

## SOME PRACTICAL APPLICATION

Create an original app to calculate the perimeter and area of an equilateral triangle after reading the base and the height.

Create an app to calculate the potential energy of an object that is at the same altitude as your mobile phone. If the object falls, calculate the speed when it reaches sea level.

Create an original app to calculate energy consumption (calories) during a walk. Choice data.