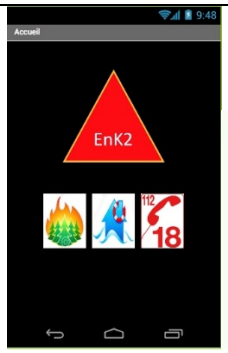
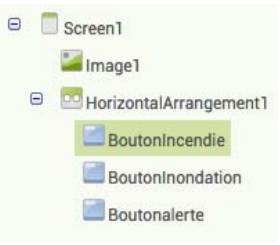
In Case 4

Create a smartphone application to adapt to a natural major risk

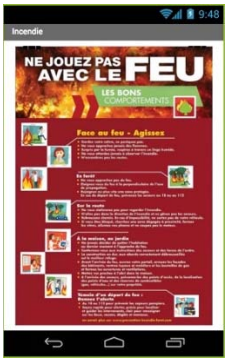
Type of pedagogical project, activity, action, accompanying	**Creating an app for mobile phones about major natural risks**
Key words of relevant disciplines/ Pedagogical content	Mathematics / Algorithm / Programming /Application / smartphone / Natural risks / flood / forest fire / natural disaster / security
Problematic	**How to react and communicate in case of natural disaster?**
Thematic	Consequences: observe the increase in the frequency of extreme weather events in the Mediterranean regions. Adaptations: what to do in case of a natural disasters (floods / forest fires). Societies against these extreme phenomena.
Disciplines (sciences, geography)	Mathematics / Technology
Pedagogical Objectives/New targeted skills	**The students will be able to:** **D1: Languages to think and communicate** - Use algorithmic and programming to create simple applications. **D2: Methods and tools for learning** - Organize their work, save their researches and activities. - Cooperate and carry out projects, organize in a group work. **D4: Natural systems and technical systems / Leading a scientific approach, solving a problem** - Use drawings, sketches. - Design objects and technical systems. - Create, improve by identifying and taking into account the constraints. **D5: Representation of the world and human activity** - Reason, imagine, elaborate, produce.
Public target(s) (age, requested skills…)	11-17 years old *Prerequisite: algorithmic skills to create a computer program*
Description (step by	**Step 1)**

step)	**Classroom (2h): make the App Architecture:** The application will contain 4 screens: - screen1: Home screen - screen2: Flood Screen - screen3: Fire Screen - screen4: Give the alert Screen On screen1, it is necessary to position a logo then 3 buttons which will allow users to reach the other screens. Students will draw each screen by positioning the buttons and choosing the graphic aspects. **Step 2)** **Computer room (1h): Familiarize yourself with AppInventor:** Make sure you have access to a computer connected to the internet and a smartphone that runs on Android. Then you have to: - **Create a Gmail address**: https://mail.google.com/ - connect the smartphone directly to the computer or on the same network as the computer. - **Install the application "MIT AI2 Companion"** on the smartphone - go to the address **http://ai2.appinventor.mit.edu/** You have to think about setting the software in the user's language. For a first approach, we can follow the tutorial https://youtu.be/w4_oX2t3B6g which can create a very simple program. **Step 3)** **Computer room (3h) programming:** - Start by creating the home page in the "Design" tab. We can introduce it like this:





- Then you have to create the other 3 screens

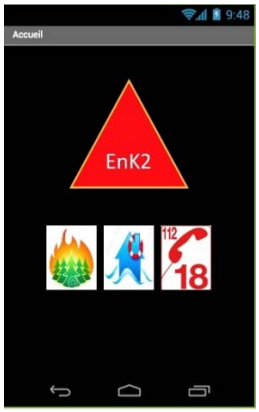


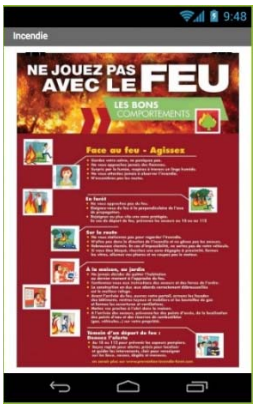
In each screen you can either insert a photo that summarizes the actions to perform, or customize it a little more by making a display corresponding to the work of the students.

- Finally, we must create a program that allows you to switch from one screen to another by clicking on the different buttons (use the "text" menu to enter the name of the desired screen).

Place (meeting room, outside space, …)	Classroom, computer room
Individual and / or collective actions	Design and programming in teams of 4 students maximum
Material needed	Computer, access to the internet, Android smartphone, Gmail address
Duration of pedagogical project or activity	**6 hours**
Evaluation of the new acquired skills	Quality of the design and operativity of the app.
Eco-citizen adaptation, knowledge enhancement and links to other topics	**Link to:** **Activities:** **Exploring the consequences of climate change in our environment** **Activity on flood risks in your area** **Project:** **Adaptation to natural major risks by creating an application for smartphone** **Forest Fires and Climate Change: a burning issue!** **Knowledge:** **CC&Floods** **Wildfires in Mediterranean countries and Climate Change** **----------Organise the links in the different language in this setting-------** **Multilanguage:** • Website by Google to create your own app for smartphone. http://ai2.appinventor.mit.edu **Italian:** • Links about AppInventor: http://disi.unitn.it/~montreso/ct/slides/lezione8.pdf https://ltaonline.wordpress.com/2014/03/06/creare-applicazioni-a-scuola-ecco-app-inventor/

	• Links about what to do in case of fire and flood: https://www.focus.it/cultura/curiosita/che-cosa-fare-in-caso-di-incendio http://www.protezionecivile.gov.it/attivita-rischi/meteo-idro/sei-preparato/cosa-fare-in-caso-di-alluvione **Greek:** • https://iguru.gr/2018/09/26/7-smartphone-apps-for-disasters/ (smartphone applications for Natural Disasters) **French:** • Liste des phénomènes météo en région PACA : http://www.keraunos.org/region/provence-alpes-cote-d-azur/orages-violents-paca-grele-foudre-vent-tornade-inondations-pluie-extreme.html • Vidéos amusantes sur la marche à suivre en cas de catastrophes naturelles. https://www.gouvernement.fr/risques/tutos-risques • Un site local pour la région Provence Alpes Côte d'Azur: http://observatoire-regional-risques-paca.fr/
Observations	





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