

## TEACHING UNIT PLAN: MY OWN STATISTICS APP

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| Name of school      | IESO "MANUEL DE GUZMÁN"   |
| Theme of the lesson | MY OWN STATISTICS APP<br><i>Introducing algorithm fundamentals with the goal of programming a smartphone application (statistics calculator).</i>   |
| Pupils' age range   | 13-14   |
| Timeline            | 16 lessons: 3rd December 2018-11th January 2019   |
| Objectives          | <ol style="list-style-type: none"> <li>1. To use APP INVENTOR individually to learn the main schemes of programming algorithms.</li> <li>2. To develop the programming basis of the code block, acquiring a relevant control in the required statements.</li> <li>3. To use the learnt schemes to code a dynamic statistical app based on labels.</li> <li>4. To make a short presentation about the coded app, improving their self-confidence.</li> </ol>   |
| Methods             | <ol style="list-style-type: none"> <li>1. Individually they will build different applications to learn algorithm schemes achieving an advance control on the use of accelerometers, sprites and variables.</li> <li>2. Students will use AI2 Companion to learn how to code blocks to build an app based on labels.</li> <li>3. Individually, they will build a statistical calculator app to work out central tendency measures and deviation measures.</li> <li>4. Each student will show the results of their work with a presentation.</li> </ol> |
| Materials           | Laptops, smartphones, blackboard, screen and projector.   |
| Used Apps/Websites  | <ul style="list-style-type: none"> <li>- APP INVENTOR (MIT): Website used to learn a programming language.</li> <li>- MIT AI2 Companion: App used to check the proper operation of each partial outcome in students' smartphones.</li> </ul>  |
| Assessment          | <p>Presentation of the steady progress, coming up with improvement proposals.</p> <p>Oral questioning.</p> <p>Presentation of the final app, checking the properly functioning.</p>   |