Advanced micro: Bit Workshop
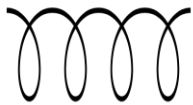
PURPOSE OF THE DAY

To further explore Computer Science as a discipline with emphasis on Embedded Systems(ALT 4)

To illustrate the pedagogical importance of the design process prior to coding

To continue to explore the concept of a nonlinear approach to the teaching and learning around the Computer Science strands.

PURPOSE OF THE DAY (CONTINUED)

To highlight and promote the role of Digital Technologies in the teaching, learning and assessment of LCCS.

To provide a platform for teachers to work, learn and cultivate a deeper understanding in this area .

To re-iterate the importance of group work and group dynamics in the teaching, learning and assessment of LCCS.

PURPOSE OF THE DAY (CONTINUED)

To engage teachers with the advanced features offered by the micro:bit.

To empower teachers to draw upon a range of pedagogical approaches for teaching LCCS so that they can confidently develop their own advanced units of work.

Empower

KEY MESSAGES

There are many ways to navigate through the LCCS specification.

LCCS can be mediated through a constructivist pedagogical approach.

ALTs ALTs provide an opportunity to teach theoretical aspects of LCCS.

Advanced micro:bit features can be used to introduce traditionally challenging (threshold concepts) at an earlier stage.

Group work is a key feature in the teaching, learning and assessment of LCCS.

Critical reflection is a central component of the LCCS teacher's PD journey.

Digital technologies can be used to enhance collaboration, learning and reflection.
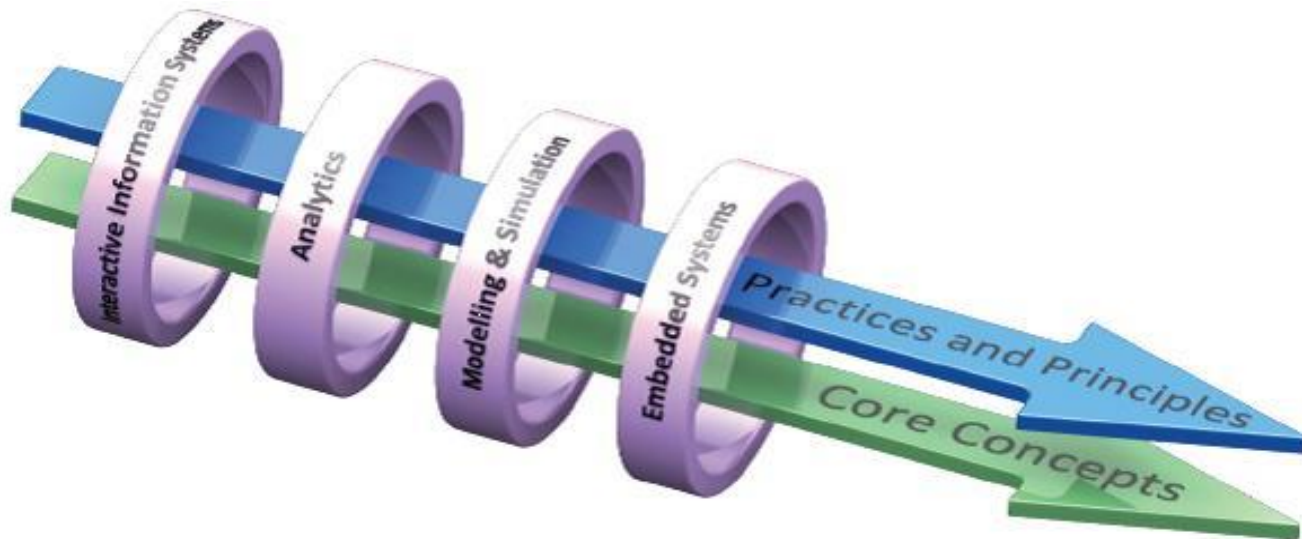
Learning Outcomes

Figure 4: Structure of Leaving Certificate Computer Science

SCHEDULE

Session 1 10:15-11.45

- ❑ Introduction
- ❑ Part 1 - Radio Comms & Serial Data
- ❑ Part 2 - Solar Challenge
- ❑ Part 3 - Regroup/Reflect

Session 2 12:00-13:15

- ❑ Part 1 - Motors and Circuits
- ❑ Part 2 - Breakout Boards
- ❑ Part 3 - Regroup/Reflect

Session 3 14:15-15:45

- ❑ Part 1 - Laundry Challenge
- ❑ Part 2 - The Great Escape
- ❑ Part 3 - Wrap Up

PDST
Professional Development | An tSeirbhís um Fhorbairt
Service for Teachers | Ghairmiúil do Mhúinteoirí

Additional Support

Slides used throughout the day and videos for the breakout tasks will be available after the workshop.

Ice Breaker