**Computer Science Focused Face to Face STEM Workshops with Bexley Grammar School**

Workshop 1,2 & 3 Year 9 Computer Science Workshop

**Year 9 Computer Science – Activity Workshop**

Bexley Grammer School are hosting an Industry Day on Wednesday 24th November where all year groups will be off timetable and attend various session throughout the day gaining an insight into different industries.

On the same day Year 9 will be participating in 3 workshops which they get to select from an option of sessions in advance. One of the workshops on the day will be a Computer Science workshop which Lauriann’s STEM Club will be organising.

In the Computer Science workshop Students will be able to learn and gain insightful tips from technology professionals who will share their experience and deliver a computer science workshop tailored to the year 9 curriculum and their current skillset. The session should include an interactive and hands-on activity for students to engage with.

**Year 9 Curriculum and Skillset:**

* We use Python in year 9 almost exclusively.
* Most students use the online repl.it environment to write their code, although we also have the IDLE editor and some students prefer that.
* There is a very wide range of ability: most students are able to use for loops to iterate over a list and can use conditional statements.
* They still find the range() function quite difficult and we have not covered functions yet.
* Also, one activity the students did in the past was to develop a programme that can survey the whole's school's opinion on a topic and process the results. Another activity the students did in the past was to code a zoo activity; make the animals pair with animals that won’t eat them **(New content to be similar or equivalent)**

**Date and Time:** November – Wednesday 24th 2021 08:35AM – 3.00PM

**Platform:** Face to Face

**Venue:** Bexley Grammar School, Danson lane, Welling DA16 2BL

**Organisations/Partners/ Volunteers**

Stem ambassadors/Volunteers

**Host**

Lauriann’s STEM Club

**Outline of the day**

**Introduction** - 5 mins: Introduction into the outline of the lesson and introduce yourself & Introduce Lauriann's STEM Club

**Presentation** – 15 mins: 5 mins Career talk + 10 mins Lesson on Software Development.

**Activity** – 65 mins: 15 mins Analysis & Design + 35mins Building + 5 mins Testing + 15 mins Retrospective

**Feedback forms**– 10 mins**:**Students fill in feedback on how the session went.

**Materials**

* A3 Paper
* Post-its
* Markers
* BlueTac
* Wallspace

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| **Session** | **Times** | **Activities** |
| **1.** | 8.35 - 10.15  **(DOUBLE-p1&2)**  (1hr 40mins) | 8.40 – Presentation – 20 mins  9.00 – Analysis & Design – 15 mins  9.15 – Development – 30 mins  9.45 – Testing – 5 mins  9.50 – Retrospective – 15 mins  10.05 – Feedback Forms – 10 mins |
| **2.** | 10.55 - 12.35  **(DOUBLE-p3&4)**  (1hr 40mins) | 11.00 – Presentation – 20 mins  11.20 – Analysis & Design – 15 mins  11.35 – Development – 30 mins  12.05 – Testing – 5 mins  12.10 – Retrospective – 15 mins  12.25 – Feedback Forms – 10 mins |
| **3.** | 1.25 - 3.00  **(P5)**  (1hr 40mins) | 1.30 – Presentation – 20 mins  1.50 – Analysis & Design – 15 mins  2.05 – Development – 30 mins  2.35 – Testing – 5 mins  2.40 – Retrospective – 15 mins  2.55 – Feedback Forms – 5 mins |