Lesson Plan - A level transition

## Introduction

This resource is designed as an introduction to learners preparing to take Computer Science at A level. The lesson starts by looking at the future of Computer Science with quotes and statistics, and reminding students of the career paths available. Learners can read further about how Computer Science and technology has inspired others through the CS stories found on the Ada Computer Science website. An introduction to the Ada Computer Science platform is provided with ready-made, self-marking quizzes for students to work on over the summer break.

## Learning objectives

* Understand the opportunities available when studying Computer Science at A level
* Understand the key concepts that will be covered at A level
* To be confident in what to expect from your A level Course
* To know how Ada Computer Science can support teachers and students

## Preparation

If you are a teacher looking to prepare to teach Computer Science you can find information about our teacher mentor programme [here.](https://adacomputerscience.org/pages/teacher_mentoring_2024?examBoard=all&stage=all)

You may want to register as a teacher before the session and create groups for your sessions. You can do this by creating an account [here](https://adacomputerscience.org/register?examBoard=all&stage=all).

## Outline plan

*\*Timings are rough guides*

| **Objectives**  (Slides 1-3)  5-10 mins | **Slide 1 - Introduction**  **Slide 2 - Starter - Decrypt the message -** Students are provided with a message using the substitution cipher and given a small clue to help them decrypt the message. The question can be found here <https://adacomputerscience.org/questions/encrypt_04?examBoard=all&stage=all>  **Slide 3 - Learning Objectives** |
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| **Careers and roles in CS**  (Slides 4- 6)  20 mins | **Slide 4 - Look to the future -** Learners and teachers to look at the statistics on the future of Computing. Source: <https://wifitalents.com/statistic/computer-science-job/#sources>  **Slide 5 -** Careers in Computer Science - Learners are provided with a short list of the most popular roles in Computer Science.  **Slide 6 -** Computer Science Stories - Learners can visit [Computer Science stories page on Ad](https://adacomputerscience.org/pages/computer_science_stories?examBoard=all&stage=all)a and read success stories from other A level students. |
| **A level Content & Ada Computer Science**  (Slides 7 -13)  10 mins | **Slide 7 -** What is Ada Computer Science? Free online platform to students and teachers written by Computer Science experts.  **Slide 8 -** Ada Computer science covers all the strands listed in this slide, with over 50 topics within those strands.  **Slide 9 -**  Students could be given time to look at the exam specification page, choosing their exam board and reviewing content for either GCSE or A level.  **Slide 10-13 -** Students should be encouraged to look at other features that are on the Ada Computer Science platform. |
| **Summer Task**  (Slides 14-15)  10mins | **Slide 14 -** Sign up and login - Learners can register on the [Ada Computer Science sign up page](https://adacomputerscience.org/register?examBoard=all&stage=all) as a student. If you have created a class group, you can share this code with your students to see their progress. You can read more on how to do this [here.](https://adacomputerscience.org/support/teacher/assignments?examBoard=all&stage=all)  **Slide 15- Summer Task -** To help prepare learners for the transition from GCSE to A level, there are three summer quizzes that have been created on Ada computer science. The links to these questions can be found on slide 15 or below:  [Quiz 1 - Computing Systems - GCSE to A level transition](https://adacomputerscience.org/quizzes/view?examBoard=all&stage=all#june24-quiz1)  [Quiz 2 - Programming - GCSE to A level transition](https://adacomputerscience.org/quizzes/view?examBoard=all&stage=all#june24-quiz2)  [Quiz 3 - Networks - GCSE to A level transition](https://adacomputerscience.org/quizzes/view?examBoard=all&stage=all#june24-quiz3)  Time taken to complete the quizzes will vary depending on learners prior knowledge. Learners are not expected to complete these as part of the lesson. |
| **Plenary** | **Slide 16** - Review learning objectives and advise students on what they can do next. |



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