



Student Work Book

COMPUTING

Meet the team!

Hello from the Stockton Riverside College Schools Team!

We want to let you know we are here to help you as restrictions start to ease in any way that we can. Remember that although your exams have been cancelled your place at Stockton Riverside College hasn't.



We know everyone is very keen to get started with us in September, and we can't wait to see you all then! We've developed these workbooks to help support you and help you fine-tune your knowledge and skills before you join us. Working closely with course tutors, we've come up with some tasks to help ensure you're up to speed once you start with us in September. We'll also be sending out more guides and top tips to get you started before you enroll!

Don't forget to follow us on our social channels for regular updates, competitions and campus news. Every Tuesday the Schools Team host weekly course takeover Q&A sessions on Instagram to answer any questions you may have! We hope you're as excited as we are for you to start your journey with us. If you have any questions, please get in touch via social media or check out our website for FAQs and latest updates relating to government guidelines.



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We hope to see you soon!

Firstly, all of us would like to congratulate you on the acceptance of your chosen course. We eagerly await to meet you in the coming months!

We continue to find ourselves in unfamiliar times, so let's focus on the future and the journey you will soon be beginning. This booklet contains several different activities to complete. The following tasks are aimed at preparing you for your new chapter. Please email your completed work to adam.howe@the-etc.ac.uk Good luck!

Teacher name: Simon Patterson
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Welcome to your Summer Induction Pack for Computing Level 3.

This year promises to be a challenging one educationally, creatively and personally and it will take a good deal of commitment and enthusiasm on your part.

For our part, we will:

- Provide a safe environment for learning
- Support in your learning
- Provide advice and guidance regarding your future plans whether that be Higher Education or employment

We look forward to seeing you in September.

Kind regards,
Simon

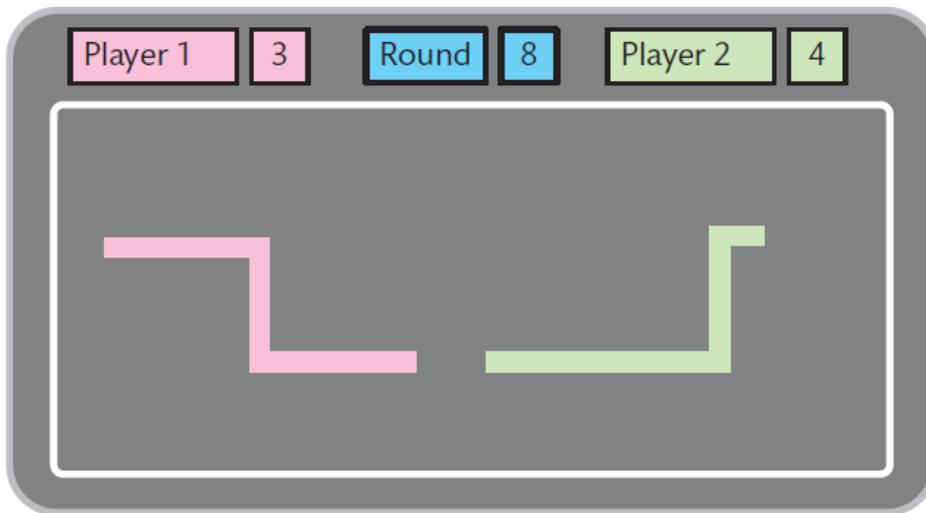


TASK 1

UNIT 01 - PRINCIPALS OF COMPUTER SCIENCE

Matteusz has been asked to create a simple 2D 'light cycle' game called 'Rainbow Line Warriors', which allows two players to race against each other and try to force the other to crash. Player 1 (red) starts on the left-hand side of the screen and is initially moving right. In contrast, player 2 (green) starts on the right-hand side of the screen and is initially moving left. Both players can move in four directions (up, down, left and right) using a different set of keys to control their cycle. The game awards 1 point for each victory, with the winner being the first to reach an agreed number of rounds.

A design for the starting screen is shown below.



1. Please explain what a variable is:

.....

2. Identify three aspects of the game that would be represented as variables.

1.....

2.....

3.....

TASK 2

UNIT 01 - PRINCIPALS OF COMPUTER SCIENCE

Carry out research into the different genres of computer games and complete the table below (Use the following link for extra help if you get stuck: https://www.youtube.com/embed/1IRw_Ar5A-o?feature=oembed)

Genre of Games	Definition	Example	Likes	Dislikes
Action games.				
Role-playing games.				
Simulation games.				
Strategy games.				
Sports games.				

TASK 3

UNIT 02 FUNDAMENTALS OF COMPUTER SYSTEMS

1. **Types of Hardware** – Explain the operation. Give examples and identify any numerical information (Speed, capacity etc.) that relates to the hardware components

COMPONENT	Image	Description	Example/s
Central Processing Unit			
Random Access Memory			
Motherboard			
Heatsink & Fan (or other cooling)			
Hard Disk (Any type)			

2. What is an Operating System and what different operating systems exist? What are each of them used for – how/why are they different?

- 1.
- 2.
- 3.

