

 **Liverpool Girls’ High School**

 *Innovation Excellence Learning*

 **Information and Software Technology**

 Stage 5 Course Outline

INTRODUCTION TO INFORMATION SOFTWARE AND TECHNOLOGY

The study of Information and Software Technology Years 7–10 assists students to develop the knowledge, understanding and skills to solve problems in real life contexts. Through experiential and collaborative tasks, students engage in processes of analysing, designing, producing, testing, documenting, implementing and evaluating information and software technology-based solutions. Creative, critical and meta-cognitive thinking skills are developed through students’ practical involvement in projects.

COURSE OBJECTIVES AND OUTCOMES

*1. Students will develop knowledge and understanding of a range of computer software and hardware*

5.1.1 selects and justifies the application of appropriate software programs to a range of tasks

5.1.2 selects, maintains and appropriately uses hardware for a range of tasks

*2. Students will develop problem-solving and critical thinking skills in order to design and develop creative information and software technology solutions for a variety of real-world problems*

5.2.1 describes and applies problem-solving processes when creating solutions

5.2.2 designs, produces and evaluates appropriate solutions to a range of challenging problems

5.2.3 critically analyses decision-making processes in a range of information and software solutions

*3. Students will develop responsible and ethical attitude related to the use of information and software technology*

5.3.1 justifies responsible practices and ethical use of information and software technology

5.3.2 acquires and manipulates data and information in an ethical manner

*4. Students will develop knowledge and understanding of the effects of past, current and emerging information and software technologies on the individual and society*

5.4.1 analyses the effects of past, current and emerging information and software technologies on the individual and society

5. Students will develop effective communication skills and collaborative work practices leading to information and software technology solutions for specific problems

5.5.1 applies collaborative work practices to complete tasks

5.5.2 communicates ideas, processes and solutions to a targeted audience

5.5.3 describes and compares key roles and responsibilities of people in the field of information and software technology

**Stage 5 Information Software and Technology –** Two Year Course

*Students will learn the following core, options content and projects:*

Information Software

and Technology

***Activities and Assessments***

* Celebrities database
* Hardware presentation
* Folio
* Examination
* Web design
* Topic test
* Digital media project

## Information and Software Technology ~ Performance Descriptors

### Areas for Assessment

**Computer software and hardware
Information and software technologies and society
Designing and developing software solutions
Communication and collaborative practices
Responsible and ethical practices**

### Grade A

*A student at this grade typically:*

* demonstrates extensive knowledge and understanding of, and skills in, selecting and using suitable software and hardware for a range of tasks.
* perceptively analyses the effects on individuals and society of a range of past, current and emerging information technologies.
* is a critical thinker who insightfully and creatively applies problem-solving and decision-making processes when designing, producing and evaluating solutions for a wide range of challenging situations.
* independently justifies and applies responsible and ethical practice in the use of information and software technology when acquiring and manipulating data and information.
* independently and logically communicates, using appropriate documentation, complex ideas and solutions to a variety of audiences.

### Grade B

*A student at this grade typically:*

* demonstrates thorough knowledge and understanding of, and skills in, selecting and using suitable software and hardware for a range of tasks.
* analyses the effects on individuals and society of a range of past, current and emerging information technologies.
* confidently applies problem-solving and decision-making processes when designing, producing and evaluating solutions for a range of challenging situations.
* justifies and applies responsible and ethical practice in the use of information and software technology when acquiring and manipulating data and information.
* coherently communicates, using appropriate documentation, complex ideas and solutions to a variety of audiences.

### Grade C

*A student at this grade typically:*

* demonstrates sound knowledge and understanding of, and skills in, selecting and using suitable software and hardware for a range of tasks.
* describes the effects on individuals and society of a range of past, current and emerging information technologies.
* applies problem-solving and decision-making processes when designing, producing and evaluating solutions for a range of situations.
* applies responsible and ethical practice in the use of information and software technology when acquiring and manipulating data and information.
* communicates, using appropriate documentation, complex ideas and solutions to a variety of audiences.

### Grade D

*A student at this grade typically:*

* demonstrates basic knowledge and understanding of, and skills in, selecting and using suitable software and hardware for a limited range of tasks.
* outlines the effects on individuals and society of a limited range of past, current and emerging information technologies.
* applies basic problem-solving and decision-making processes when designing, producing and evaluating solutions for familiar situations.
* recalls responsible and ethical practice in the use of information and software technology when acquiring and manipulating data and information.
* communicates, using appropriate documentation, ideas and solutions to an audience.

### Grade E

*A student at this grade typically:*

* demonstrates elementary knowledge and understanding of, and skills in, selecting and using suitable software and hardware for a limited range of simple tasks.
* with guidance identifies effects on individuals and society of some past, current and emerging information technologies.
* applies elementary problem-solving or decision-making processes when designing, and producing solutions for some familiar situations.
* with guidance, recognises responsible and ethical practice in the use of information and software technology when acquiring and manipulating data and information.
* with support, communicates, using limited documentation, ideas and solutions to an audience.