

# Stairway to Success

## 8 Design and implement integrated ICT based systems for others to use

Understand ICT systems

### 7 Students define, implement and refine ICT systems, making use of audience and user feedback.

Design and plan an ICT-based system by:

- scoping the information flow through the system
- devising and applying success criteria to ensure a quality solution, refining work as it progresses
- identifying the advantages and limitations of the system

Identify the impact of ICT on people, communities and cultures

Select appropriate tools and techniques to implement an ICT based system in which:

- data flow is automated
- sequences of instructions are developed, tested and refined
- assumptions, variables and rules are identified

Develop an appropriate user interface for an ICT based system which:

- enables efficient data input
- displays system outcomes that are fit for purpose and audience



Use ICT with some efficiency and consider more complex information

### 6 Increased integration and efficiency in the use of ICT tools. A greater range and complexity of information is considered.

Plan and develop solutions which show efficiency and integration of ICT tools and techniques  
Use criteria and feedback to improve effectiveness and efficiency  
Explore the impacts of the use of ICT in work, leisure and home

Devise a data handling solution to test hypotheses that uses techniques to reduce input errors  
Create efficient sequences of instructions including the use of subroutines  
Test predictions by varying rules in models and assess the validity of the conclusions

Use complex lines of enquiry efficiently to interrogate information  
Explain choices when presenting information for different purposes and wider or remote audiences



Able to use a range of ICT tools

### 5 Combining the use of ICT tools. Students critically evaluate fitness for purpose of work as it progresses.

Plan and develop structured solutions using a combination of tools and techniques  
Evaluate solutions, identify improvements and refine work  
Identify benefits and limitations of using ICT, inside and outside school

Use logical and appropriate structures to organise and process data  
Create precise and accurate sequences of instructions  
Change variables within models and explain the impact

Take account of accuracy and potential bias when searching for and selecting information  
Present information in a range of forms for specific purposes and familiar audiences  
Use ICT safely and responsibly



Combine and refine information

### 4 Combine and refine information from various sources for particular purposes

Combine and refine information  
Evaluate your solutions  
Explain how and why the use of ICT varies in and out of school

Organise and process data  
Devise and refine sequences of instructions  
Use models to explore relationships and explain how they work

Find relevant information, and check its plausibility and usefulness  
Present information in different forms suited to purpose  
Use ICT to communicate and collaborate, identifying and minimising some of the risks



Use ICT

### 3 Use ICT to develop ideas and solve problems.

Plan & use ICT, comment on success  
Refine and develop information  
Describe how ICT is used

Collect, store and retrieve data  
Use sequences of instructions  
Use models and/or simulations

Identify information using straightforward lines of enquiry  
Use text, images and other media  
Use digital communication  
Know how you can keep safe

Across a range of contexts