**Subject description for proposed Year 9 Digital Technologies – 2017**

**Overview:**

*The focus of this unit for the 2017 year is new. Due to emerging technologies in the market from both the developer and users perspectives, we will be examining in further depth, the role that hardware and software plays in technological use for our everyday applications.*

3 major categories will be examined as the focus of the units over the 2 years to be studied and developed:

1. Digital Systems;
2. Data and Information;
3. Creating digital solutions.

Clearly, due to the emerging technologies of both the workplace and home, students will be required to have a broad understanding of how these are used and utilized, together with how they are developed and tested/evaluated.

Over the 2 years(Year 9 and 10), the System Development Lifecycle(4 phases) will be a theme to be expanded on in this subject of Digital Technologies.

The stages of the “Systems Development Process/Cycle” will be broken down and applied in a computing/digital context.

The 4 Stages are :

1. Analysis 2. Design 3. Development 4. Evaluation

At the Year 9 Level, we will be focussing on the **Analysis** and **Design** phase of this 4 phase process.

SEMESTER 1 Focus:

* *Digital Systems*
	+ What are these systems and how do they influence the choices around which solutions are developed?
* *Data and Information*
	+ What are key skills and techniques used to develop solutions that are available from both the commercial and the retail sector.

SEMESTER 2 Focus:

* *Creating Digital solutions*
	+ What are some of the programming languages that are used to create solutions in the digital sector and what influences the choice of languages and techniques?

**Subject description for proposed Year 10 Digital Technologies – 2017**

**Overview:**

*The focus of this unit for the 2017 year is new. Due to emerging technologies in the market from both the developer and users perspectives, we will be examining in further depth, the role that hardware and software plays in technological use for our everyday applications.*

3 major categories will be examined as the focus of the units over the 2 years to be studied and developed: The Year 10 content will be an extension of the work started in Year 9.

1. Digital Systems;
2. Data and Information;
3. Creating digital solutions.

Students will be extended to the phases of Development and Implementation of Digital Technologies

at the Year 10 Level.

The stages of the “Systems Development Cycle” will be broken down and applied in a computing/digital context.

The 4 Stages are :

1. Analysis 2. Design 3. Development 4. Evaluation

At the Year 10 Level, we will be focussing on the **Development** and **Implementation** phases of this 4 phase process.

SEMESTER 1 Focus:

* *Digital Systems*
	+ What are these systems and how do they influence the choices around which solutions are created and implemented together with testing and evaluation?
* *Data and Information*
	+ What are key skills and techniques used to obtain data and apply to solutions that are available from both the commercial and the retail sector.

SEMESTER 2 Focus:

* *Creating Digital solutions*
	+ A Programming language will be used to create a working version of a solution to a problem that will be presented. Various programming techniques and libraries available for the selected language will also be explored and utilized.

All these stages will be covered both individually and in the context overall of the development of real world scenarios

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Typical examples might be:

What are the stages of developing a Web site or, How do we develop a suitable environment to obtain materials for, and develop a product which is to be manufactured?

Examination of these stages will include Analysis of the problem, the Design of a suitable solution using design tools and graphic/charting techniques, Development of a solution using available digital technologies and techniques such as databases and a suitable programming language and finally, Evaluation of the finished product to be done via user feedback and various techniques of testing and redesign following the feedback. Typically in industry, this is an ongoing process as designs and user needs grow and change.

**Assessment** will be done via student observation(ongoing) and a series of small tasks/projects involving both classroom based context and external contexts(research). Progressive topic tests will also be incorporated on a smaller(micro) basis during the development of the learning process.

Topic tools: School resources will be utilized for this unit but students will also be encouraged to explore digital technologies that are used in a wider context such as Robotics, Social Media, Electronic presentation tools and commercial digital technologies.