Computer Science High Level Plan

Year 7 Autumn Term	Year 8 Autumn Term	Year 9 Autumn Term
School Network, Email & OneNote Class	**School Network, Email & OneNote Class**	**School Network, Email & OneNote Class**
Students will be learning about Networks, Emails/One note and cyber bullying. ***This unit will cover the following:*** ✓ **What the internet is** ✓ **Acting responsibly when using the system and when sending emails.** ✓ **Cyber bullying** ✓ **How to receive, send and forward emails.** ✓ **Email attachments.** ✓ **Search engines** *Students will gain a full understanding of what a network is, what the internet is, how to act responsibly when using the system and when sending emails. They will also be taught how to send, receive and forward emails. This will allow the Students to develop knowledge on key skills that is essential to their academic learning as well as future aspirations.* **End of unit Assessment**	Students will be learning about Networks, Emails/One note and cyber bullying. ***This unit will cover the following:*** ✓ **What the internet is** ✓ **Acting responsibly when using the system and when sending emails.** ✓ **Cyber bullying** ✓ **How to receive, send and forward emails.** ✓ **Email attachments.** ✓ **Search engines** *Students will gain a full understanding of what a network is, what the internet is, how to act responsibly when using the system and when sending emails. They will also be taught how to send, receive and forward emails. This will allow the Students to develop knowledge on key skills that is essential to their academic learning as well as future aspirations.* **End of Unit Assessment**	Students will be learning about Networks, Emails/One note and cyber bullying. ***This unit will cover the following:*** ✓ **What the internet is** ✓ **Acting responsibly when using the system and when sending emails.** ✓ **Cyber bullying** ✓ **How to receive, send and forward emails.** ✓ **Email attachments.** ✓ **Search engines** *Students will gain a full understanding of what a network is, what the internet is, how to act responsibly when using the system and when sending emails. They will also be taught how to send, receive and forward emails. This will allow the Students to develop knowledge on key skills that is essential to their academic learning as well as future aspirations.* **End of unit Assessment**

Year 7 Spring Term	Year 8 Spring Term	Year 9 Spring Term
Digital Multimedia	**What are Computers**	*Python*
Student will understand how to create a presentation suitable for a given target audience and fit for purpose, they will add hyperlinks to a presentation and apply suitable animation and transition effects. They will also use Photoshop to edit and merge images. Create ways of advertising such as billboard and radio advert. **Digital multimedia covers the following:** ✓ *Digital images* ✓ *Pixels* ✓ *Photoshop* ✓ *Greenscreen* ✓ *Trailer* ✓ *Radio advert* ✓ *Crating billboard* ✓ *Multiple ways of creating advert* *Students will have full understanding of how important it is to make a movie, using a spreadsheet to breakdown data. Use formula to add data making sure it is organised.* *Students will develop their creative skills to produce multiple ways of adverts using photoshop.*	Looking at E-safety and how to stay safe online. Also looking at what computers are and learn about them in depth. ***E-safety involves:*** ✓ *Personal data* ✓ *Social networking* ✓ *The dangers of social network sites* ✓ *Cyber bullying* ✓ *Dangers to technology* *Students will have full understanding of what is E-safety is and how to remain safe online, if facing any issues, they ae aware of how to communicate and share their private matter with.* *They will identify what personal data is and how social networking works and how to be safe online.* **E-safety Assessment** **What are computers involves:** ✓ *Input and Output* ✓ *Computer language* ✓ *Health and safety of computers* ✓ *Compute networks* ✓ *Operating systems*	Developing on pupil's imagination skills by introducing programming and teaching them how to code to develop their understanding better of how apps work. **Python involves:** ✓ *Strings and Variables* ✓ *Numbers and Arithmetic* ✓ *Selections* ✓ *Writing Algorithms* ✓ *While Loops* ✓ *Searching* Students will be able to create their own error-free, well-documented program involving selection and iteration. They will be able to describe how a binary search is carried out. They will be able to explain the advantages of a binary search over a linear search for an ordered list. **Python Assessment** **Networking** Students will be able to describe what a network is and identify network topologies. Also, they will be able to Identify IP addresses and use IPCONFIG to find out your workstation's IP Address.

	Students will have full understanding of what are computers, they will develop strong understanding of how a computer operates and processes data. They will identify computer language are and how the computers communicate to receive and send data all over the world.	**What are networks involves:** ✓ **Networks** ✓ **Topologies** ✓ **IP address** ✓ **LAN and a WAN?** ✓ **What does a MODEM do** ✓ **ISP** ✓ **Computer threats.** *Students will have full understanding of what computers threats are and learn to protect the computer and identify the threats.*
Digital Multimedia Assessment	**Computers Assessment**	**Networks Assessment**
Year 7 Summer Term	**Year 8 Summer Term**	**Year 9 Summer Term**
Unit 3 – HTML, Web Awareness & E-safety **Unit 4 – Scratch**	***Flash and game creation in kodu game lab***	***Web Designs & Lake Garda***
HTML, Web Awareness & E-safety This unit will help develop student's creativity skills as well as enhance their knowledge in knowing how to stay safe online and being aware of their responsibilities when being online. ***This unit includes:*** ✓ ***E-safety*** ✓ **Phishing** ✓ **Viruses** ✓ **Creating a short video on E-safety** ✓ **HTML**	**Flash** This unit will help develop students creativity skills as they will be creating their own animations using flash. ***This unit includes:*** ✓ ***Flash*** ✓ ***Drawing to create simple shapes.*** ✓ **Adding motions, layers and key frames.** ✓ **Exporting animations** ✓ **Adding motion tweens.**	**Web design** This unit will develop students creativity skills as they will critically analyse a range of different websites before creating their own. ***This unit includes:*** ✓ ***Dreamweaver*** ✓ ***Creating a new HTML*** ✓ **Navigation and house styles** ✓ **Adding text, tables and images on a website.**

Students will be able able to develop their creative skills by creating their own shapes and drawings during this unit. Students will also be gaining knowledge in using the different features that are available within flash and then using these same features in their own work e.g. **motion tweens, key frames and layers.**

✓ **Exporting images as a gif.**

Students will be able able to develop their creative skills by creating their own shapes and drawings during this unit. Students will also be gaining knowledge in using the different features that are available within flash and then using these same features in their own work e.g. **motion tweens, key frames and layers.**

End of Unit Assessment
Game creation in kodu game lab
This unit will help advance students' innovative skills as they will be creating a game project.

This unit will cover the following:
Students will write computer programs and will produce their very own game using a software package called ***Kodu. This will be done*** by following their **Design Proposal**. Students will also be producing a detailed **Development Log;** this should provide evidence of:

◦The dates they worked on their game
◦What they did on each day of development
◦What skills / techniques they used
◦What problems they encountered
◦How they solved these problems

Students will gain a full understanding of how to use kodu. They will also learn how to create a simple game by adding character movements and other features

Student will understand how to use a programming language called Scratch.

✓ **Adding buttons, hyperlinks and image hotspots.**

Students will be able to be creative and produce their very own website. Students will also be looking at different features that are included within existing websites. They will then be able to add those same features to their own website such as buttons, navigation bars, hyperlinks and hotspot images.

End of Unit Assessment

Lake Garda.
This unit will develop student's creativity skills as they will be creating and designing different media for a tour company.

This unit will cover the following:
Students will be creating several different media for a tour company specialising in breaks to Lake Garda. Students will be creating their own tv adverts, business cards, brochures, flyers and a presentation.

Students will gain a full understanding of what a network is, what the internet is, how to act responsibly when using the system and when sending emails. They will also be taught how to send, receive and forward emails. This will allow the Students to develop knowledge on key skills that is essential to their academic learning as well as future aspirations.

This uses pieces of code known as "*script*" to affect a character on the screen known as a "*sprite*".

Scratch covers the following:
- ✓ **Drawing repeated patterns**
- ✓ **Motions & movements**
- ✓ **Creating games**
- ✓ **Functions**
- ✓ **Loops**
- ✓ **Drawing complex shapes**
- ✓ **Variables**
- ✓ **If statements**
- ✓ **Broadcast messages**
- ✓ **Flow diagrams**

Students will have full understanding of how-to code in script (block-based programming language) using scratch. They will also be using variables, if statements and flow diagrams throughout this project which will further their computing knowledge and skills.
Students will also develop their creative skills as they have a games project within this unit.

End of Unit Assessment

within the program. This will allow the Students to express themselves as well as develop their creativity skills that will help them in both their academic learning and future aspirations.

End of Unit Assessment

End of Unit Assessment