2017-2018 Term 1 Form 1 ICT Scheme of Work

Week	SPECIFIC OBJECTIVES	CONTENT	SUGGESTED TEACHING AND LEARNING ACTIVITIES	SUGGESTED ASSESSMENT STRATEGIES
	MODULE 1 : Health and Safety			
1	1.1 Demonstrate correct body posture when using computers.	Ergonomics (body posture);	*Presentation* Teacher provides images of health hazards and effects and shows picture of correct body posture to take at a computer work station and allow students to help each other to model picture.	*Peer assessment* Using a peer-assessment rubric students evaluate each other as they each demonstrate correct posture at workstations.
2	1.2 Identify possible health hazards associated with computers and computer-related devices.	Possible health hazards associated with long-term exposure to ICT tools: Including: impaired vision, back- ache, wrist pain, carpel tunnel syndrome, repetitive strain injury, headache, computer addiction, radiation from mobile phones, hearing loss from excessive volume;	*Brainstorming/Discussion* Engage students in brainstorming exercise (e.g. think-pair-share) to determine possible health hazards associated with the use of ICT tools. Discuss the risks associated, and precautions that can be taken.	*Group Presentation* Rubric used to assess students' oral presentations on the possible health risks associated use of ICT tools.
3	1.3 Demonstrate health and safety practices while using ICT tools	Safe practices for use of Computer-based devices including: computers, mobile phones; radiation; electric shock.	Practical session showing appropriate and safe ways of interacting with computers and related devices, such as charging mobile phones, plugging and unplugging computers.	Peer evaluation is done as students demonstrate their understandings of safe practices when using computers and related devices.
	MODULE 2: Computer Fundamentals and Careers in ICT			
4	2.1 Explain the difference among Information Technology (IT), Information and Computer Technology (ICT) and Computer Science	Distinction among – Information Technology (IT), Information and Communication Technology (ICT) and Computer Science;	*Research* Students research terms and discuss orally in class. Students work in groups to put together a definition for one of the terms from phrases given by the teacher	*Questioning* Students respond to prompts to explain stated terms orally and in writing and graded accordingly.

5	2.2 Explain the functions of the main components of a basic computer system	Input; Output; Processing; Storage	*Presentation/Demonstration* Students discuss the functions of various components of a computer system and their interconnection. Use diagrams and other visuals to show the direction of data flow and the effects if one is missing or omitted.	*Drawing* A drawing checklist is used to assess students' drawings and labelling of a typical computer system.
6	2.3 Discuss the reasons why computers are so useful and important in the world today	Speed; Reliability; Accuracy; Consistency; Storage Capacity; Cost-effectiveness; Convenience.	*Visual Presentation/Discussion* Teacher shows video of how computers are being used today. Students work in groups to identify how computers are used in their lives. Students work in groups to research and brainstorm reasons for the computer's usefulness and importance in today's society	*Brainstorming* Students make journal entry on the usefulness of computers as it impacts their lives. A rubric is used to assess students' entries.
7	2.4 State various methods of caring for computers	Adverse temperatures; blocked vents; Dust; Liquids; Magnetic fields; Shutting down; Unplugging when not in use; Cleaning screen,	*Discussion/Research/Demonstrati on* Students can research and present methods of caring for their computer. Students simulate adverse conditions, magnetic fields.	*Chart of Do's and Don'ts* Use a checklist to assess students' statements of do's and don'ts of caring for a computer.
		keyboard; Battery charging cycles; Repetitive use of certain keys;	Teacher and students discuss the effects of liquids and the corrosive effects of dust. Teacher demonstrates the steps of defragmentation Working in groups students create a chart of the DO's and Don'ts of caring for a computer.	
8	2.5 Compare various types of computers	Supercomputers; Mainframes; Servers; Personal computers; Mobile computers, Mobile devices; Embedded systems; Size; Processing speeds; Storage	*Discussion / Brainstorm/ Mind mapping* Students explore different types of computer systems and comparisons made according to specifications, type and function. Teacher demonstrates how mind maps can be used for categorization	*Model* A modelling rubric is used to assess students' models of different computer systems.
9	2.6 Distinguish among types of software	Definition of software. Operating system vs application software; Examples of each type.	*Discussion/Research.* Teacher explains the difference in function. Students discuss types of software types found on their computers.	*Mix and match* Students categorises types of software from a list given by the teacher.

10 to 11	2.7 Practise keyboarding techniques	Qwerty keyboard as input device; Keyboarding application software such as 'Mavis Beacon Teaches Typing'; Proper finger placement.	*Guided Discovery* Teachers guide students on the use of a typing application, eg. 'Mavis Beacon Teaches Typing'	*Typing Assignments* Students aim to reach projected standards of speed and accuracy and evaluates their competency at various times using checklists.