Topic 1: A Computer System

A computer system is a complex system to perform specific tasks. It consists of hardware and software components. Hardware is the physical part of the computer whereas software is the program that makes the hardware work. According to Input-Process-Output (IPO) model, the computer system accepts data as input, processes it to provide the required output.

Learning Outcomes:

Children will be able to:

- locate input and output devices;
- define a computer system;
- describe briefly the components of the CPU;
- explain the working of a computer using an IPO model;
- explain the need of software to make the hardware work;
- correlate parts of a computer in terms of its hardware.

A Computer System		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
⮞ A Computer system – meaning ⮞ Hardware and software – meaning and examples ⮞ IPO cycle	⮞ Recapitulating the different types of Input and Output devices. ⮞ Explain the meaning of different terms of a computer system along with examples. ⮞ Demonstrating the working of hardware through visuals. ⮞ Discussing the computer system with the help of a labelled diagram ⮞ Explaining IPO model showing components of CPU (Control unit, Memory unit and Arithmetic logic unit) and flow of data. ⮞ Providing opportunities for practice worksheets on IPO model, etc. ⮞ Discussing a few commonly used software application software.	⮞ Computer/IWB with Internet connectivity. ⮞ Videos related to the Topic.

Life Skills: Technical awareness

Topic 2: GUI Operating System – An Introduction

An operating system (OS) is an interface between the hardware and user. It is responsible for the management and coordination of activities and the sharing of the resources of a computer. The Graphical User Interface (GUI) operating system has a visual environment using windows, buttons, and icons.

Learning Outcomes:

Children will be able to:

- ☑ describe the basic terminologies related to GUI;
- ☑ list different types of OS and their functions;
- ☑ use various power modes of the computer.

GUI Operating System – An Introduction		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▶ Graphic user interface (GUI) ▶ An Operating System (OS) ▶ OS is a software which makes the computer work with a special reference to GUI. ▶ Desktop and its components ▶ the desktop and its components (icons, taskbar, start button) ▶ Basic operations on the desktop ▶ the basic operations on the desktop like opening, moving and arranging desktop icons and setting wallpaper and screensaver.	▶ Illustrating / discussing the key concepts of OS, Desktop its components and basic operations. ▶ OS is a software which makes the computer work with a special reference to GUI. ▶ Putting up charts and diagrams and asking some of the children to explain the concepts to others in the class. ▶ Explaining briefly the distinction between safe mode and normal mode. ▶ Inculcating the habit of systematically switching on (Login) and off (Shut down) the computer.	▶ Computer /IWB with a GUI operating system. ▶ Hands on experiences. ▶ Worksheets.

Life Skills: Working tgether, Creative thinking

Topic 3: Word processor – An Introduction

Word processor is a software program used to store, format or manipulate a text document such as a letter, a resume or a report. It provides tools for typing, copying, deleting and various types of formatting and editing. Saving is a concept of moving data from a temporary storage area to a permanent one so that continuation or editing of a file is possible later on.

Learning Outcomes:

Children will be able to:

- explain the purpose of word processor;
- describe the components of word processor window;
- create, save and close a file;
- differentiate between save and save as;
- open and edit an existing file.

Word processor – An Introduction		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
Introduction to the word processor and its purpose Opening and exiting the software Components of word processor window. Create, save and close a file Open and edit existing files.	Explaining that the Word Processor as a software is used for creating documents. Illustrating different components of the word processor window and their functions. Demonstrating the editing features using an existing file. Explaining on a monitor the concept of Save and Save as Providing opportunities for hands on experience for creating, editing, saving and closing a file. Encouraging children to enter simple text using appropriate keys. Inculcating the habit of not to touch (open/ edit/ delete, etc.) others file.	Computer system/IWB with word processor. Working on a "Word" software

Life Skills: Working together

Topic 4: The Internet – An Introduction

The Internet is a global system of interconnected computer systems. It is used for many constructive purposes like collecting and sharing information. It is important to be responsible and follow Netiquettes for safe browsing on the Internet.

Learning Outcomes:

Children will be able to:

- explain the purpose of the Internet;
- list its advantages and disadvantages;
- classify basic terminologies;
- open a website using the web browser;
- list the best practices while using Internet;
- list out safety precautions;
- give reasons for following safety precautions while working online.

The Internet – An Introduction

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▶ Brief introduction to the Internet (collecting information, communication, sharing information, e-commerce etc.) ▶ Uses of Internet ▶ Advantages and disadvantages of the Internet ▶ Basic terminologies related to the Internet like web Browser, website, webpage, home page, and search engines etc. ▶ Open web page using web address ▶ Best practices related to online safety ▶ Responsibilities of a good digital citizen	▶ Discussing the Internet and its usage and its application in our daily lives. ▶ Interacting with the children to get an overview of the advantages and disadvantages of the Internet. ▶ Demonstrating the basic terminologies through visual representation. ▶ Assisting children to open appropriate sites related to the Topics. Assisting them whenever necessary. ▶ Explaining the need for best practices and the importance to follow them. ▶ Sensitising children towards the responsibilities of a good digital citizen. ▶ Facilitating a quiz game amongst children in teams on: uses of internet, advantages and disadvantages, basic terminologies, best practices and responsibilities of a good digital citizen.	▶ Computer system/IWB with internet connection. ▶ Search appropriate sites under adult supervision. ▶ Discussions on best practices.

Integration: Social Studies, Languages

Topic 5: Fun with Paint

Paint software is a utility software used to draw, copy and edit pictures using various tools. While saving the file various file extensions are used based on the type of software. For example, digital pictures can be stored in formats like .png, .jpg etc. This would be helpful in organising the files in the computer.

Learning Outcomes:

Children will be able to:

- ☑ use various tools of Paint to draw and modify a picture;
- ☑ save a file in different formats.

Fun with Paint		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▸ Recapitulation of skills learnt in Paint software earlier. ▸ Tools of Paint software like, colour picker, callout etc. ▸ Different file formats like .jpg, .png, etc.	▸ Demonstrating the use of different Paint tools ▸ Showing how to modify a picture by: ▸ copying and moving pictures ▸ free form selection ▸ resizing the pictures ▸ Discussing how to save files in different file formats ▸ Conducting hands on practice /activities with children on the computer either individually or in groups.	▸ Computer system/IWB with any Paint software.

Integration: Arts Education
Life Skills: Creative thinking

Topic 6: File Management – Organisation of Folders

As files are documents, presentations, etc. created using a software, folders are hypothetical spaces at desired locations to store information in the computer. Folders are used to organize files that may contain other folders/ individual files.

Learning Outcomes:

Children will be able to:

☑ explain the concept of a folder;
☑ save a file in the folder using a specified path.

File Management – Organisation of Folders		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
❯ Concept of a folder ❯ Creating, saving and opening a file and folder	❯ Discussing the purpose of saving a file in a folder. ❯ Demonstrating the path for the file to be saved. ❯ Providing Hands on experience on computers to each child in the class on creating, saving and opening a file and folder.	❯ Computer / IWB

Life Skills: Organisational skills