



GURUKUL TRUST SCHOOLS COMPUTER SYLLABUS

Harnatai Joshi Primary School
Tatyasaheb Samant Highschool

• CLASS 1 TO CLASS 8

A Complete Year-by-Year Learning Journey

From Computer Basics to Via Python Programming to Computational Thinking with AI

Class 1 Computer Basics & Fun Activities	Class 2 Devices, Paint & File Skills
Class 3 Computer Hardware & Introduction to the Internet and AI	Class 4 Windows, Word, PowerPoint, Excel and AI
Class 5 Introduction to Scratch Programming and AI	Class 6 Python Programming and AI
Class 7 Computational Thinking and AI - Part 1	Class 8 Computational Thinking and AI - Part 2

Empowering Students with Digital Skills • With Modern Computer Education with AI

1

CLASS

Computer Basics & Fun Activities

Beginner Level — Introduction to the Digital World

Computer Basics

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| ♦ What is a Computer? | ♦ Parts of a Computer |
| ♦ Monitor & CPU | ♦ Keyboard & Mouse |
| ♦ Uses of Computer | ♦ Turning ON & OFF |

Mouse Skills

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|----------------|-----------------|
| ♦ Left Click | ♦ Right Click |
| ♦ Double Click | ♦ Drag and Drop |

Keyboard Skills

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|-----------------|---------------|
| ♦ Alphabet Keys | ♦ Number Keys |
| ♦ Enter Key | ♦ Space Bar |
| ♦ Backspace | |

MS Paint

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|---------------|--------------|
| ♦ Draw Shapes | ♦ Coloring |
| ♦ Brush Tool | ♦ Fill Color |
| ♦ Eraser | |

★ PRACTICAL PROJECTS

- Draw a House
- Color Fruits
- Connect the Dots

2

CLASS

Computer Devices & File Basics*Building on Foundations — Devices, Paint & Keyboard Practice***Computer Devices**

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| ◆ Input Devices | ◆ Output Devices |
| ◆ Revision of Basics | |

MS Paint Advanced

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| ◆ Shapes | ◆ Text Tool |
| ◆ Save Drawing | ◆ Brush, Highlighter |

Keyboard Practice

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| ◆ Typing A–Z | ◆ Typing Numbers |
| ◆ Simple Words | ◆ Typing Paragraphs |

File Basics

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|----------------|------------------------|
| ◆ Open a File | ◆ Save a File |
| ◆ Close a File | ◆ Export a File to PDF |

★ PRACTICAL PROJECTS

- Draw a Garden
- Draw National Flag
- Birthday Card Design

3

CLASS

Computer Hardware & Introduction to the Internet and AI*Exploring Software & the Web — First Steps Online***Computer Hardware**

♦ Monitor, Mouse	♦ Keyboard
♦ Speakers	♦ Printer

Software

♦ System Software	♦ Application Software (Basic)
♦ MS Paint Advanced	♦ Copy-Paste
♦ Resize Images	

Microsoft Word Basics

♦ Open Word	♦ Type Sentences
♦ Font Size	♦ Bold & Italic
♦ Save File	

Internet Introduction

♦ What is Internet?, Online Searching	♦ Safe Internet Rules
♦ Email Introduction	

Artificial Intelligence

♦ Introduction to AI	♦ Introduction To AI tools
♦ How to Use AI	♦ Activities using AI

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CLASS

Windows, Word, PowerPoint, Excel and AI*Office Suite Skills — Presentations & Internet Safety***Evaluation Of Computer**

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| <ul style="list-style-type: none"> ◆ Generations Of Computer ◆ Storage Devices | <ul style="list-style-type: none"> ◆ Input Devices, Output Devices ◆ System Software, Application Software |
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Windows Basics

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| <ul style="list-style-type: none"> ◆ Desktop ◆ File Explorer | <ul style="list-style-type: none"> ◆ Icons & Taskbar ◆ Folders & Files |
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Microsoft Word

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| <ul style="list-style-type: none"> ◆ Creating Documents ,Fonts & Alignment ◆ Insert Picture, Tables, Icons | <ul style="list-style-type: none"> ◆ Bullets & Numbering, ◆ Page Border, Save & Print |
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Microsoft Excel

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| <ul style="list-style-type: none"> ◆ Creating Sheets ,Uppercase ◆ Height, Width Of Row Column's | <ul style="list-style-type: none"> ◆ Alignment's, ◆ Page Border, Save & Print |
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Microsoft PowerPoint

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| <ul style="list-style-type: none"> ◆ Create Slides ◆ Themes | <ul style="list-style-type: none"> ◆ Insert Images ◆ Slide Show |
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Artificial Intelligence

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| <ul style="list-style-type: none"> ◆ Create Documents Using AI ◆ Office Management Using AI | <ul style="list-style-type: none"> ◆ How To Fix Mistakes Using AI ◆ Syllabus based activities using AI |
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CLASS

Introduction to Scratch Programming and AI

Coding Concepts — Visual Block-Based Programming

Programming Basics

◆ What is Programming?

◆ Introduction To Programming

Introduction to Scratch

◆ Scratch Interface

◆ Stage & Sprites

◆ Backdrops

◆ Blocks Palette

Motion & Looks

◆ Motion Blocks

◆ Looks Blocks, Sound Blocks

Events & Control

◆ Events

◆ Loops

◆ Wait Block

◆ Forever & Repeat

Variables & Sensing

◆ Variables

◆ Score Counter

◆ Ask & Answer

◆ Touching Objects

Mini Projects And Practical

◆ Animated Story

◆ Making Mini Games

Artificial Intelligence

◆ Using AI In Scratch

◆ Machine Learning for Kids

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CLASS

Python Programming and AI*Real Programming Language — Logic, Functions & AI application***Introduction to Python**

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| ♦ What is Python? | ♦ Installing Python |
| ♦ How To Run Python | ♦ First Program — Hello World |

Variables & Data Types

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| ♦ Variables | ♦ Numbers & Strings |
| ♦ Input & Output | |

Operators

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| ♦ Arithmetic Operators | ♦ Comparison Operators |
| ♦ Logical Operators | |

Decision Making & Loops

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| ♦ if Statement | ♦ if-else Statement, Nested if |
| ♦ while Loop, do while loop | ♦ for Loop |

Functions

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| ♦ Define a Function | ♦ Parameters |
| ♦ Return Value | ♦ Programs |

Artificial Intelligence

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| ♦ How To debug program using AI | ♦ Introduction to Canva with AI |
| ♦ How To Do Research Using AI | ♦ AI Activities based on syllabus |

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CLASS

Computational Thinking and AI (Part 1)*Exploring Computational Thinking — First Steps***Introduction to Computational Thinking**

♦ What is Computational Thinking	♦ Real-life examples of Computational Thinking
♦ Importance of Computational Thinking	♦ Four Pillars of Computational Thinking
♦ Computational Thinking in Mathematics	♦ Breaking mathematical problems into smaller steps
♦ Identifying patterns in numbers	♦ Logical sequencing

Algorithms and Flowcharts

♦ What Is Algorithm & Its Characteristics	♦ Writing Algorithms Practice Algorithms Examples
♦ Input & Output, Decision Making	♦ Practice Algorithms Examples
♦ Introduction to Flowcharts	♦ Standard Symbols, Start / End, Process, Decision, Input/Output, Connectors, Flow Lines
♦ Flowchart for LCM and HCF GCD	♦ Flowchart for Simple Interest, Area of Rectangle

Pattern Recognition and Data & Problem Solving

♦ Number Patterns ,Shape Patterns, Math Relationships	♦ Collecting Data ,Reading Graphs
♦ Variables, Expressions	♦ Logical Problem Solving
♦ Understanding the Problem, Planning the Solution, Executing, the Solution, Checking the Result	♦ Logical Games ,Team Activities

Artificial Intelligence

♦ Difference between AI and Human Intelligence	♦ Ethical Use of AI ,Safe Internet Practices
♦ AI Around Us	♦ Voice Assistants, Image Generation, Video Generation
♦ AI based Quiz	♦ Current trends in AI

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CLASS

Computational Thinking and AI (Part 2)*Exploring Computational Thinking — Advance Steps***Advanced Computational Thinking**

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| <ul style="list-style-type: none"> ♦ Review of Computational Thinking ♦ Abstraction | <ul style="list-style-type: none"> ♦ Decomposition ♦ Generalization |
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Algorithms and Advanced Flowcharts

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| <ul style="list-style-type: none"> ♦ Complex Algorithms And Examples ♦ Loops (Conceptual) | <ul style="list-style-type: none"> ♦ Decision-based Algorithms ♦ Nested Decisions |
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Computational Mathematics

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| <ul style="list-style-type: none"> ♦ Expansion Formulae ♦ Variation | <ul style="list-style-type: none"> ♦ Factorisation ♦ Quadrilaterals |
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Data Analysis and Computational Models

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| <ul style="list-style-type: none"> ♦ Equations ♦ Surface Area & Volume | <ul style="list-style-type: none"> ♦ Compound Interest ♦ Circle |
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Artificial Intelligence

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| <ul style="list-style-type: none"> ♦ AI Ethics and data privacy and responsible Use of AI ♦ AI In Healthcare, Agriculture, Education, Banking, Smart Cities | <ul style="list-style-type: none"> ♦ Current trends in AI / ML ♦ Project using AI / ML |
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