

Modules

We are aiming the high school kids in the rural areas, at least a few among them never had access to the computers! The videos you shoot, the articles you write and the way you present the concepts **must be** very basic and simple enough for them to understand. Our idea is '*not*' to teach them something about Computers or Programming, obviously we can't do that in 9 - 10 hours! Computer Learning Kit is meant to **motivate and inspire** the kids to learn it by themselves.

A few points to remember

1. Make the modules and articles very interesting - Illustrate concepts using simple examples and sample programs.
 2. In each programming module, demonstrate an **interesting** and **very** simple C-program.
 3. Use simple English - please do not show your writing skills there!
 4. Do not try to "teach" them "everything" - it is never gonna work out!
Example - In Module-5 (Taking input from Users), take a simple code and demonstrate. Explain them what exactly happens there. And then teach the concepts.
 5. Ultimately, "No kid should sleep while we screen the video during the Winter Camp!"
Make it **very** Simple. Interesting and Informative!
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Module Set A - Introduction to Computers

(Modules 1, 2 and 3)

Module 1 -What is a computer:

- Definition
- History
- Analog and Digital
- Old computer models and new ones
- What's the need of them?
- World without computers

Module 2 - How do the computers work?

- Control Unit
- ALU
- Input (Keyboard, Mouse etc.)
- Memory/Storage (different types and their functions)
- Processing (CPU)
- Output (Monitors, Printers etc)
- What is a program?
- Low level and High level language
- Hardware and Software
- Operating Systems
- Network and Internet

Note : Make sure you can present these concepts at a very basic level, else cut-short some points.

Module 3 - Applications of Computer:

- Idea about places where it is used
- A brief lecture on functions in OpenOffice Calc - open source equivalent of Microsoft Excel (worksheets, format cells, find and select, data validation, functions like count and sum, logical, date and time, round, sorting, filtering, conditional formatting, tables, and charts)

Module Set B - Introduction to Programming

(Modules 4, 5, 6, 7, 8 and 9)

Module 4 - Introduction to Programming:

- Introduction to C language.
- Data Variable and operations on them.

Module 5 - Input from User

- Taking inputs from
- Manipulate the input data

Module 6 - Conditional Statements

- if conditions, if-else conditions
- switch conditions

Module 7 - Loops

- for loops
- while loops

Module 8 - Arrays

- The need for arrays
- 1D Array
- 2D Array

Module 9 - User Defined Functions

- Need for user defined functions (Pass by Value only)