

DELHI PUBLIC SCHOOL GHAZIABAD
CLASS –XI
COMPUTER SCIENCE LESSON PLAN
UNIT 3: INTRODUCTION TO C++

Unit 3	INTRODUCTION TO C++
Class Transaction	Total: 8 periods (approx. 50 min each)
Pre-requisite for the course	This lesson requires 1. Unit 1 and II of Computer Science
Assessment of qualifying knowledge	1. Written test 2. Lab activity 3. HW notebook
Objective	4. To learn the fundamental programming concepts and methodologies which are essential to building good C/C++ programs. 5. To practice the fundamental programming methodologies in the C/C++ programming language via laboratory experiences. TurboC++ is the programming environment that will be used. 6. To code, document, test, and implement a well-structured, robust computer program using the C/C++ programming language.
Learning Outcomes	<u>KNOWLEDGE-</u> <i>Students will know and understand</i> 1. <u>Keywords</u> 2. <u>Write Simple C++ codes</u> 3. <u>Data types in C++</u> <u>SKILLS-</u> <i>Students would be able to</i> 1. Understand what is C++ programming 2. Learn to write simple C++ programs 3. Execute and debug programs
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- <i>Brain Storming-</i>The class would start with a discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the topic that they would be studying. <i>Introduction of the topic-</i> ppt and Digital Content would be shared <i>Guided practice followed by Independent Practice-</i> Spiral questions to be discussed in the classroom. Techniques to be used:

	Quiz Daily Practice Problem MCQ Peer Assessment Case Studies Lab Activities Any Other KEY COMPETENCIES: Communication and brainstorming: Students develop effective communication skills and learn to put across their views. Critical thinking and problem solving: Helps students to think critically and solve the given problem Collaboration: Students learn to work in collaboration to achieve a common goal. They learn to manage time and divide and delegate work and responsibilities.																
Resources	Reference Book 1. Sultan Chand 2. DPSG Spiral Weblinks: 1. http://Codeprojects//C++																
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks as mentioned in the monthly planner. H.W. notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 marks On time submission.....1 mark Presentation/ Neatness.....1 mark Content.....3 marks It is also advised that the students come to the class with previous knowledge of the topic being discussed. They can refer to the resources stated above.																
Assessments	<table> <tr> <td>UNIT TEST 1 :</td> <td>30 Marks,</td> </tr> <tr> <td>UNIT TEST 2 and 3 :</td> <td>35 Marks each</td> </tr> <tr> <td>HALF YEARLY EXAMINATION</td> <td>70 Marks</td> </tr> <tr> <td>ANNUAL BOARD EXAMINATION</td> <td>70 Marks</td> </tr> </table> INTERNAL ASSESSMENT 30 Marks <table> <tr> <td>• Lab Assignment File</td> <td>05 Marks</td> </tr> <tr> <td>• Lab Practical</td> <td>15 Marks</td> </tr> <tr> <td>• Notebook</td> <td>05 Marks</td> </tr> <tr> <td>• Viva</td> <td>05 Marks</td> </tr> </table>	UNIT TEST 1 :	30 Marks,	UNIT TEST 2 and 3 :	35 Marks each	HALF YEARLY EXAMINATION	70 Marks	ANNUAL BOARD EXAMINATION	70 Marks	• Lab Assignment File	05 Marks	• Lab Practical	15 Marks	• Notebook	05 Marks	• Viva	05 Marks
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Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For High Scoring students:</i> • Spiral Level 3 questions to be done • Encouragement for referring other resources <i>For Low scoring students:</i> • Spiral Level 1 to be completed • Buddy help to be provided • Provide grade-up classes <i>For differently abled students:</i> • Ignore silly mistakes and comments ,if not written • Call parents at regular intervals • Provide grade-up classes • Encourage and motivate them at every level.
Marks	The weightage would be given by CBSE.

DAY PLAN INTRODUCTION TO C++

Anticipatory Set: Facilitator introduces the topic– **INTRODUCTION TO C++**

Objective: Given questions based on the topic. learners will be able to do learn the basic terms and definitions of **C++ programming..** To make students able to learn DIFFERENT types of Data Structure and questions based on the topics to be discussed.

Techniques to be used:

- Peer Assessment
- Quiz
- Case Study
- PPT

Materials required and Teaching Aids: Smart Class Modules, blackboard, chalk, duster, SPIRAL AND STUDY MATERIAL book

Strategy

Student – teacher interaction, collaborative learning, independent practice

DAY 1

TOPICS COVERED:

- The students will be shown a PPT and will be made aware of programming in C++ and basic concepts

- C++ character set, C++ Tokens (Identifiers, Keywords, Constants, Operators,), Structure of a C++ Program (include files, main function), Header files - iostream.h, iomanip.h, cout, cin; use of I/O operators (<<and>>), Use of endl and setw (), Cascading of I/O operators; Compilation, Error Messages and execution.

GUIDED PRACTICE3.

The students will discuss selected questions from SPIRAL AND STUDY MATERIAL book , with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the questions of ex12.1 To 12.5 in assignment notebook This will be a **good brain storming exercise for them that will help hone their creative, critical thinking and collaborative skill-sets.**

DAY-2

TOPICS COVERED:

- **Data Types, Variables and Constants:** Concept of Data types; Built-in Data types: char, int, float and

double; Constants: Integer Constants, Character constants - \n, \t, \b), Floating Point Constants, String Constants; Access modifier; Variables of built-in-data types, Declaration/Initialization of variables, Assignment statement, Type modifier: signed, unsigned, long

GUIDED PRACTICE

The students will solve selected questions from SPIRAL AND STUDY MATERIAL book of exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the remaining questions of ex in their Assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.

DAY 3

TOPICS COVERED:

- **Operator and Expressions:** Operators: Arithmetic operators (-,+,*,/,%),Assignment operator(=),C++

shorthands (+=,- =,*=,/=,%=) Unary operator (-), Increment(++) and Decrement (--) Operators, Relation

operator (>,>=,<=,!=),

GUIDED PRACTICE

The students will solve selected questions from SPIRAL AND STUDY MATERIAL book of exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the remaining questions of exercise in their assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.

DAY 4

TOPICS COVERED:

- Logical operators (!, &&, ||), Conditional operator; Precedence of Operators; Automatic type conversion in expressions, Type casting;

GUIDED PRACTICE

The students will try to learn to solve problems using Inheritance and classes and objects. They will solve selected questions from SPIRAL AND STUDY MATERIAL book of exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some conceptual questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the remaining questions from the exercise in their assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.

DAY 5

TOPICS COVERED:

- Simple programs in C++;

GUIDED PRACTICE

The students will try to learn to solve problems using Inheritance and classes and objects. They will solve selected questions from SPIRAL AND STUDY MATERIAL book of exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some conceptual questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the remaining questions from the exercise in their assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.

DAY 6

TOPICS COVERED:

- Logical operators (!, &&, ||), Conditional operator; Precedence of Operators; Automatic type conversion in expressions, Type casting;

GUIDED PRACTICE

The students will try to learn to solve problems using Inheritance and classes and objects. They will solve selected questions from SPIRAL AND STUDY MATERIAL book of exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some conceptual questions will be asked based on the day's teaching and doubts will be cleared.
INDEPENDENT PRACTICE – Students will do the remaining questions from exercise in their assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.

DAY 7

TOPICS COVERED:

- Relational Operators

GUIDED PRACTICE

The students will try to learn to solve problems using Inheritance and classes and objects. They will solve selected questions from SPIRAL AND STUDY MATERIAL book from the exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some conceptual questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the remaining questions from the exercise in their assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.

DAY 8

TOPICS COVERED:

- UNARY OPERATORS AND THEIR DIFFERENCE

GUIDED PRACTICE

The students will try to learn to solve problems using Inheritance and classes and objects. They will solve selected questions from SPIRAL AND STUDY MATERIAL book from the exercise in their notebook in the class with the help of their teacher.

SUMMARIZE AND CHECK FOR UNDERSTANDING

Some conceptual questions will be asked based on the day's teaching and doubts will be cleared.

INDEPENDENT PRACTICE – Students will do the remaining questions of exercise in their assignment notebook.

Skill-sets honed - Creative, critical thinking and collaborative skill-sets.