# C++ Lesson Plans

## Lesson Source Code: <https://github.com/TheCriticalPath/C---Lesson-Plans>

Meeting Link: [Join Meeting](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YzViMmI3ZjktNDEyMS00YzFlLWEzNDgtN2U1MWQwNmNkMTQz%40thread.v2/0?context=%7b%22Tid%22%3a%22f9b07b92-43c2-4f5c-8024-d2531c665bb9%22%2c%22Oid%22%3a%22487c91f7-6abd-40d3-8fbe-8be2f62bede0%22%7d)

## Week 1.

### Setup Development Environment

1. [Download Visual Studio Code - Mac, Linux, Windows](https://code.visualstudio.com/Download)
2. [Get Started with C++ and Mingw-w64 in Visual Studio Code](https://code.visualstudio.com/docs/cpp/config-mingw)
3. [C++ programming with Visual Studio Code](https://code.visualstudio.com/docs/languages/cpp)

### Structure of a C++ Program

// This is a single line comment

int main(){

    return 0;

}

/\*

This is a

multi-line

\*/

Types

* Arithmetic Primitives
  + Special
    - void: special type that represents nothing
  + Integral
    - bool: a true or false value.
    - char: single character, 8 bits
    - wchar\_t: wide character, 16 bits
    - char16\_t: Unicode character, 16 bits
    - char32\_t: Unicode character, 32 bits
    - short: short integer, 16 bits. Max value is 32767
    - int: integer, 16 bits. Max value is 32767
    - long: long integer, 32 bits. Max value is
* Arithmetic Primitives - Integral
  + float
  + double
  + long double

Libraries and includes

#### Input and Output

#include <iostream>

int main (){

    // Use standard output to display a prompt

    std::cout << "Enter two numbers: " << std::endl;

    // Create a place to store the input;

    int v1 = 0;

    int v2 = 0;

    // Use standard input to capture

    std::cin >> v1 >> v2 ;

    // Output

    std:: cout << "The sum of " << v1 << " and " <<  v2 << " is " << v1 + v2 << std::endl;

    return 0;

}