const

[Variable Scope & Qualifiers]

Description

The const keyword stands for constant. It is a variable *qualifier* that modifies the behavior of the variable, making a variable "*read-only*". This means that the variable can be used just as any other variable of its type, but its value cannot be changed. You will get a compiler error if you try to assign a value to a const variable.

Constants defined with the const keyword obey the rules of [variable scoping](https://www.arduino.cc/reference/en/language/variables/variable-scope-qualifiers/scope) that govern other variables. This, and the pitfalls of using [#define](https://www.arduino.cc/reference/en/language/structure/further-syntax/define), makes the const keyword a superior method for defining constants and is preferred over using [#define](https://www.arduino.cc/reference/en/language/structure/further-syntax/define).

Example Code

const float pi = 3.14;

float x;

// ....

x = pi \* 2; // it's fine to use consts in math

pi = 7; // illegal - you can't write to (modify) a constant

Notes and Warnings

[#define](https://www.arduino.cc/reference/en/language/structure/further-syntax/define)**or**const

You can use either const or [#define](https://www.arduino.cc/reference/en/language/structure/further-syntax/define) for creating numeric or string constants. For [arrays](https://www.arduino.cc/reference/en/language/variables/data-types/array), you will need to use const. In general const is preferred over [#define](https://www.arduino.cc/reference/en/language/structure/further-syntax/define) for defining constants.