```
/* This program displays the Character Speed WPM on line 1 and Character
Clock Timing on line 2 of  a 16 x 2
LCD display based on a HD44780 display controller.
WA7RSO - 06/25/2013 -
*/
#include <LiquidCrystal.h>  //  alert compiler to include the lcd library

byte D4=4;                    // D4
byte D5=5;                    // D5
byte D6=6;                    // D6
byte D7=7;                    // D7
byte RS=8;                    // Read Strobe
byte RW=9;                    // Read/Write (hold LOW)
byte E=10;                    // Enable



// initialize the library with the numbers of the Arduino pins used
LiquidCrystal lcd(RS, E, D4,D5,D6,D7);    //defines the pins used from
the LCD to the Arduino
/** QST Version *** New Board *********
LCD 4 RS - AD7      AD8
LCD 5 RW - Gnd      AD9
LCD 6 E  - AD6      AD10

LCD 11 DB4 - AD5    AD4
LCD 12 DB5 - AD4    AD5
LCD 13 DB6 - AD3    AD6
LCD 14 DB7 - AD2    AD7

************************************/
String CharSpeed20 = ("Char Speed-20WPM");
String CharClock20 = ("60 ms 16.7Hz Clk");

void setup()                          //required function
{
// === Define the pin assignments (do this in setup() ) ===
  pinMode(4,OUTPUT);              // D4
  pinMode(5,OUTPUT);              // D5
  pinMode(6,OUTPUT);              // D6
  pinMode(7,OUTPUT);              // D7
//
  pinMode(8,OUTPUT);              // Pin #8 as Read-Strobe (RS)
  pinMode(9,OUTPUT);              // Pin #9 as Read/Write (R/W)
  pinMode(10,OUTPUT);             // Pin #10 as Enable (E)

  digitalWrite(9,LOW);            // Take "R/W" Low to allow Data Write
to LCD

  Serial.begin(9600);      //see text
  lcd.begin(16,2);              //let the program know the size of the
display to be handled
  printspeed();                  // calls the function to print the WPM
message
```

```
//  printclock();                   // calls the function to print the
first 16 characters of the message
}

void loop()                 //  Dummy Loop
{ }

void printspeed()                   // Show the Character Speed in WPM
  {
    lcd.setCursor (0,0);              // Set cursor at beginning of 1st
Row ("0")
    lcd.print(CharSpeed20);             // print the WPM Character Speed
    Serial.println(CharSpeed20);
    lcd.setCursor(0,1);                //sets cursor at the bginning of
the second line and then moves right
    lcd.print(CharClock20);
    Serial.println(CharClock20);
  }
```