

25 Classroom Projects

# STEM Data

# The STEAM+C Classroom

## Inside the Book

- 25 Tested Projects
- Large Data Set Collection and Analysis
- Science and Engineering Fair Ideas
- Standards Alignments
- 100+ Project Extensions
- Materials Lists
- Tested Code
- Technical Diagrams and Photos
- Assessments

## Integrates

- Excel™, Google® Sheets, & SD Cards
- Photo and Video
- C / C++ Programming
- Digital Prototyping

## Free with Website Registration

- Project Updates
- Community Ideas
- Project Submissions

### C / C++ Programming

```

// Arduino IDE
// File Edit Tools Help
// C/C++ Programming
void setup() {
  Serial.begin(115200); //Baud rate
  dht.begin();
  pinMode(gas_sensor, INPUT); //Gas sensor as input
  pinMode(ANALOGPIN, INPUT); //Gas sensor as input
  pinMode(fan, OUTPUT); // Fan connect
  delay(10);
  Serial.println("Connecting to ");
  Serial.print("Connecting... ");
  Serial.println(ssid);
  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED)
  {
    delay(500);
    Serial.print(".");
  }
  Serial.println("");
  Serial.println("WiFi connected");
  Serial.print("IP Address: ");
  Serial.println(WiFi.localIP());
  server.begin();
}

void loop() {
  float rzero = gasSensor.getRZero();
  delay(1000);
  Serial.print("MQ135 RZERO Calibration Value");
  Serial.println(rzero);
  float ppm = gasSensor.getPPM();
}

```

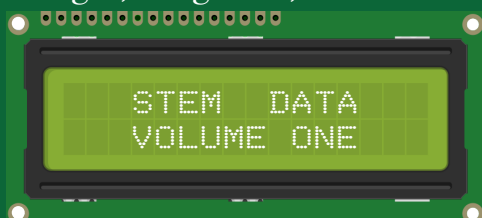
### Digital Design and Prototyping

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[www.thearduinoclassroom.com](http://www.thearduinoclassroom.com)

## Premium Website Membership

- Videos of Projects
- Classroom Presentations
- Images, Diagrams, and Code



Microcontroller projects for  
science and engineering fairs  
and competitions.