

DIY Sensor Guides and Tutorials

Corey Halbert for Caravan Studios, July 2018

Introduction

Making a Do-It-Yourself (DIY) sensor can be a daunting task, but it can also be very fun with the right resources. Check out some of these guides and tutorials for building your own air/water quality sensors. These guides include parts lists, where to get them, and instructions to assemble. Involve someone you know who may have mechanical engineering or computer software experience, these projects work great collaboratively.

DIY Air Quality Sensor Construction Guides

A great intro to difficulties and challenges with sensors (with solutions)

<https://www.aeroqual.com/diy-air-quality-sensor>

Beginner/Intermediate Tutorials

https://www3.epa.gov/airnow/teachers/gh_pmsensorkit_handoutandinstructions.pdf

<https://www.instructables.com/id/Air-Quality-Test-Box/>

Intermediate/Comprehensive

<https://www.instructables.com/id/Air-Pollution-Detector/>

<https://www.voltaicsystems.com/blog/solar-powered-air-quality-sensor-tutorial/>

<http://geojournalism.org/2014/04/dustduino-arduino-uno-edition/>

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DIY Water Quality Sensor Construction Guides

Beginner/Intermediate Tutorials

<https://www.instructables.com/id/Arduino-Water-Pollution-Monitor/>

<https://publiclab.org/wiki/open-water>

Intermediate/Comprehensive

<https://www.hackster.io/chanhj/water-quality-monitoring-system-ddcb43>

<https://publiclab.org/notes/shanlter/06-08-2017/knowflow-automatic-water-meter>

Sensor Fabrication Companies

DIY Geiger Counter

<https://blog.safecast.org/>

Water Quality Test Kits

<https://www.filtersfast.com/Hach-Drinking-Water-Test-Kit-Cat.asp>

<https://www.chemetrics.com/index.php?route=product/category&path=59>

DIY Sound Detector

<http://www.learningaboutelectronics.com/Articles/Sound-detector-circuit.php>

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