



If you have tinkered with Arduino before or are interested in starting on your own at home, you may be wondering where to get started. The best thing to do is to buy a starter kit that has all of the necessary components for making some fun and awesome projects. But there are so many different starter kits out there it may be hard to know which one to buy and what you're getting for the cost. I broke down 3 options below that I think are the best options. The first two are best if you're buying a single kit for yourself, whereas the third option might be best if you want to make a class (or school set).

The Official Arduino Starter Kit:

This kit retails for \$100 on Arduino.com, but can be found on Amazon (<http://amzn.com/B009UKZV0A>) for \$77. It includes a projects book which details how to wire and code 15 different projects. From there, you could use the skills you learned to do many more projects. It also includes most of the components that we use in class and much, much more. The only item that is not included is a full rotation Servo, which you could buy separately for \$10 or less.

Why I love it: *The projects book that comes with this kit is super helpful. Not only does it show you a schematic for each project, it also shows the wires connected to make building a bit easier. The code for each project comes pre-loaded on Arduino, but the book includes every line of code, along with a justification for each step. It also gives suggestions for how you could take the skills used on that specific project and use them to make something different. Lastly, the components included with this kit are pretty awesome. It includes an LCD screen, all types of sensors and buttons, a small servo, a DC motor, LED's, resistors, and more. Basically everything you need to make all of the projects outlined in the book as well as anything else you could imagine.*

What I wish was different: *The cost. Because it is the official Arduino brand, it is going to cost more. However, I think that it is worth the price considering all that is included in the kit.*

The Vilros Ultimate Arduino Starter Kit:

This kit is sold on Amazon for only \$55 (<http://amzn.com/B00BT0NDB8>) and includes many of the same pieces as the official kit as well as a Guide book to help you along the way. This kit still does not contain a full rotation Servo, so you will need to purchase that separately, but does include a DC motor like the official kit.

Why I love it: *The cost is a lot lower than the official kit and it comes with most of the same pieces. The guide book includes good graphics as well as troubleshooting help and a real world application with each project. The code is available for download which makes it a bit easier if you're a slow typist.*

What I wish was different: *The guide book pales in comparison to the official book. Although it has good illustrations and some explanations, it does not go through the code line by line (it doesn't even have*

the code in the book, you HAVE to download it) and that doesn't really let you experience the code for yourself. This kit also does not include an LCD screen, which is pretty awesome to use.

The Thinkabit Lab Kit:

Our kit is great for what we do with a one day experience and could even be used for a one or two week program. However, if you want to use it throughout the year or move on to more advanced elements, you will need to buy the pieces individually.

Why I love it: It has everything you need to replicate what we do here in the lab: Arduino, breadboard, servos, led, resistor, and wires. It can be cheaper since you are buying pieces in bulk and then making kits.

What I wish was different: If you have longer than two weeks to work with Arduino, you're going to want to add more elements. You could buy those pieces separately and add them to your kits, but in the end it may be cheaper to buy a class set of either of the above mentioned kits.

Here's what you need to make the Thinkabit Lab Kit along with links and prices:

Item	Amount needed	Where to Buy	Price
Arduino	1 per kit	http://amzn.com/B008GRTSV6	\$21.19 each
Small Breadboard	1 per kit	http://amzn.com/B00LO32MBM	\$4.36 for 5
Regular Servo	1 per kit	http://amzn.com/B00ZEDRR3Q	\$19.99 for 10
Full Rotation Servo	1 per kit	http://amzn.com/B00MFW42YQ	\$11.95 each
LED	1 per kit	http://amzn.com/B00BN630DE	\$5.18 for 100
Resistor	1 per kit	http://amzn.com/B00ZBS9516	\$6.89 for 100
Box	1 per kit	http://amzn.com/B0106CH98C	\$2.99 each
Red Wire	1 per 40 kits	http://amzn.com/B00NB3SQJU	\$10.35
Black Wire	1 per 40 kits	http://amzn.com/B00NB3U2BU	\$11.10
White Wire	1 per 40 kits	http://amzn.com/B00NB3SSJ8	\$10.35
Wire Strippers	1 per classroom	http://amzn.com/B00I2NU6JW	\$11.39
USB Cable	1 per kit	http://amzn.com/B00UNZ9HLU	\$8.99 for 3

If you purchased enough items for 40 kits, that would be a total of \$1741.16 rather than \$3080 if you bought 40 of the official Arduino starter kits or \$2200 if you bought 40 of the Vilros starter kits. Keep in mind that you may want to buy extra Servos in case some break, and possibly even a few extra Arduinos. With 100 resistors and LED's, I don't think you'll run out, but they are cheap if you decide to order more (for this reason LED projects make great take home projects!). The wire will need to be cut into smaller pieces and stripped at both ends so they can be plugged in, which is why I included wire strippers on the list. You also may want to color code your breadboard for ease of use.

Other items I think are cool that you could add to the Thinkabit Kit:

RGB LEDs	http://amzn.com/B00F4MGA0I	\$3.18 for 50
Photoresistors	http://amzn.com/B016UFA29M	\$3.99 for 50
Buttons	http://amzn.com/B00W0YUV1W	\$6.80 for 100
9V Battery Snaps	http://amzn.com/B00NIOQN9M	\$9.50 for 10
Potentiometer	http://amzn.com/B00NAY2682	\$3.56 each
Temperature Sensor	http://amzn.com/B019TOJQO8	\$4.99 for 5