



# Robotics Maker Kit

## Guide

The Hummingbird Robotics Kit is a spin-off product of Carnegie Mellon's CREATE lab. Hummingbird is designed to enable engineering and robotics activities for ages 13 and up (8 with adult supervision) that involve the making of robots, kinetic sculptures, and animatronics built out of a combination of kit parts and crafting materials.

### Getting Started

We're excited that you are ready to get started with your Hummingbird! Before you are ready to start creating amazing robot creations, you probably need to learn a little bit about how to use your Hummingbird kit. We suggest that you familiarize yourself with the Hummingbird by working through this list:

1. Look at what's in the box! As you wonder what all those pieces are, check out the unboxing video for your kit: <https://www.youtube.com/watch?v=tmqU9uEmkcl>
2. Take a look at Hummingbird's software page (<http://hummingbirdkit.com/learning/software>) and decide what programming language you want to use; then download and install it on your computer. For beginners, Hummingbird recommends the CREATE Lab Visual Programmer, Scratch, or Snap!. The CREATE Lab Visual Programmer is an easy-to-learn programming language based around the idea of a story board. Scratch and Snap! are drag-and-drop programming languages that can be used to create projects that include both Hummingbird hardware and simple animations on the computer screen.
3. Next, learn to connect the Hummingbird electronic parts to the board by watching the video tutorial here: <http://hummingbirdkit.com/learning/tutorials/connecting-electronics> . Be sure to follow along and connect some components!
4. You are ready to build a basic robot! You can follow this tutorial — <http://hummingbirdkit.com/learning/building-your-first-bot> — though your robot does not have to look exactly like this one. We recommend that you include at least one motor, one sensor, and a couple of LEDs. Connect all of your components to the Hummingbird board.

5. Use your robot to practice programming. Video tutorials are available for the CREATE Lab Visual Programmer, Scratch, and Snap!. For more information on other programming languages, please see Hummingbird's software page:  
<http://hummingbirdkit.com/learning/software>

## Troubleshooting

If you experience problems, please contact the Reference Desk at [cvref@wcpl.lib.oh.us](mailto:cvref@wcpl.lib.oh.us).

## Feedback

We would love to hear how your experience was! Please complete this survey:

<http://goo.gl/forms/CuU9efutyX>

Also, feel free to share photos or videos of your creations with us on social media:

<https://www.facebook.com/wclibrary.info>

<https://twitter.com/washcentlibrary>

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