EZ-Robot

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EZ-Robot



The EZ-Robot is comprised of EZ-Bits, EZ-Robots are DIY assembly robots, with high level coding and control options available via PC or tablet, bringing sophisticated robotics to users of all abilities.

EZ Robot kits are comprised of 'EZ-Bits' - heavy duty servo motors which clip together to form the limbs of the robot. EZ-Bit servo's connect to the 'brain' of the robot, a Wi-Fi robot controller, enabling direct control of the robot via tablet or PC. Additional EZ-Bits can be purchased or 3D printed from the EZ-Builder software.

Recommended Ages	Year 4 to Year 10 (ages 10 to 16)
Product Cost	EZ-Robot JD Humanoid $1000-$1300 EZ-Robot Hexapod $800-$1000
Where to Purchase	EZ-Robots and their components can be purchased from The Brainary.

Product Requirements

The EZ-Robot is controlled by a laptop or tablet.

Loanable Kits

State Library has kits of this item available for loan to libraries within the Regional Libraries Queensland and Indigenous Knowledge Centres network. Libraries can place a reservation through the Aurora catalogue (availability is subject to existing reservations, loans and associated return dates).

The kits are for use by patrons within the library only, as part of supervised library programming. They will not be listed in the public online catalogue for personal reservation.

Please contact Access Services, or phone 07 3842 9014 with any queries.

Use In Libraries

Moreton Bay Libraries

Kathleen Davison, Senior Library Assistant.

At Redcliffe Library (Moreton Bay Region Libraries), I had the pleasure of organising a workshop for teenagers on how to use EZ-Robot Battle Flippers. I found that Battle Flippers can be used as a great introduction to robots and coding for pre-teens and younger teenagers that haven't had any previous experience or just the basics with coding. The workshop went for two hours and I set up the room into three stations.

- Laptops and robots ready to assemble on tables. I also had iPads ready to use.
- Rubber mats set up in the middle of the room where the participants would try and push each Battle Flipper of the mats. The last Battle Flipper left on the mat was the winner.
- An obstacle course set up using large plastic blocks. The participants had to try and move the Battle Flipper from one end to the other without bumping into the blocks.

I found that setting up the room like this worked well because I then had all the participants engaged in some activity. I also found that it was easier to follow the assembly instructions using the laptops first and then moving to the iPads to use the app.

The Battle Flippers came ready to assemble and consists of a range of servos that slide together. We used the EZ-Builder program on the laptops which takes the participants through a step-by-step assembly of each robot. This gives the participants a great understanding of the inner workings of a robot and their circuit board.

Once the robots are assembled the participants can code the robots to move in a sequence, film the room and/or record voices. This can all be done using the EZ-Builder program on the laptops.

Note: The Battle Flippers connect to the laptop and iPad via a Wi-Fi signal that the robot emits. If you are using more than one Battle Flipper, make sure your connect each Battle Flipper before the workshop and write the last 4 digits of each Battle Flipper's WiFi network name on the robot. This will make it easier to find the Battle Flipper you are using when you connect to WiFi during the workshop.

After the participants, has familiarized themselves with the EZ-Builder program it was time to move to the iPads and the different activities I had set up. Using Wi-Fi and the EZ-Builder app participants found and connected to their Battle Flipper so they could follow it around the room selecting the pre-coded buttons to control the robots' movements, to use the built-in camera and record voices.

Overall, we had a great afternoon playing with the Battle Flippers and using coding.

A few extra points:

- The Battle Flippers batteries lasted for more than the two-hour allocated workshop time.
- The preparation time that I had to work out how to use the Battle Flippers was a 1 hour training session on how to assemble and use the robot and then about 2 hours to re-assemble, work out the laptop program and iPad app, what resources we had and to get ideas on how to run the workshop.
- Here are a couple of YouTube videos which I found useful in setting up the workshop:

Flipper Bots in action at EZ Robot Workshop

Ez Robots Battle Flippers

Resources

- EZ JD Shoulder Joint Fix
- Video Tutorials