EV3 Claw Attachment EV3.Build.Claw Attachment Version 2.0 ANY YEAR COMPUTER SCIENCE

## **Claw Attachment**

#### **Completed Claw Attachment:**



#### **Design Description**

This claw is powered by a Medium Motor, which is a very fast & responsive device.

In order to make the claw move slowly enough that we can control it, we use a worm gear (essentially a screw). A worm gear helps us make machines that are very strong, and that move slowly. That's exactly what we want with a claw like this.

The worm gear meshes with two 24-tooth gears, which rotate slowly in opposite directions to make the pincers open and close.

In this document we'll show you how to build the claw, and then it's up to you to attach it to your robot! Have fun and get creative!



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#### Pieces:











## Lower Axle Holder

Later on, we'll use the extra pieces shown here to build the Upper Axle Holder. You could build it now, but it's easier to wait.



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### 3 Install Axles and Upper Axle Holder CA At this point, the vertical axles can swing freely (in other words, it's okay if they flop around).



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# **4** Upper Pincers and Gear Meshing



Attach the upper pincers, then slide the round gears into place so they mesh with the worm gear.

Be careful to line up the pincers!





Next, attach the claw to your Code Cruiser (or whatever robot you want).

You can also attach sensors, to make your robot detect the location and color of the object you intend to grab and move.



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## **!** Bonus: Rubber Grippers



Soft rubber provides higher friction than hard plastic. These add-ons give the claw more grip, which makes it work more consistently when grabbing different objects.







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