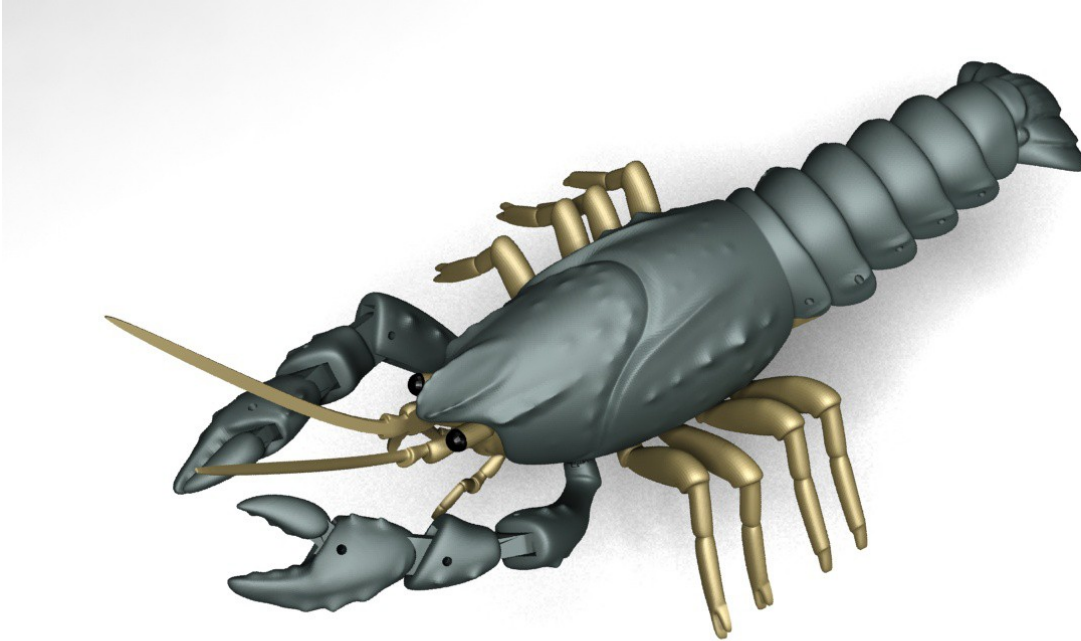


# Assembly Instructions

Model Crayfish with 21 Points of Articulation

<http://www.thingiverse.com/thing:243981>



I have designed this model specifically for FFF/FDM style printers, and the parts are all printable without support material. I recommend printing this with a layer height of 0.2mm or less for best results.

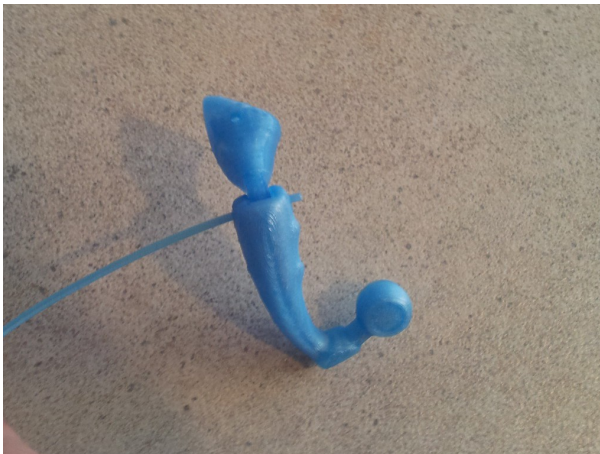
The tail and claws are assembled using offcuts of 1.75mm filament, and the remaining pieces slide together and are held in place by friction. No glue is required for assembly, but of course you're welcome to use it anyway.

## Step 1: Claws

These images show the left claw. The steps are the same for both, but the parts are mirrored. If you're printing both claws at once then make sure to keep the parts separate – they are not symmetrical.

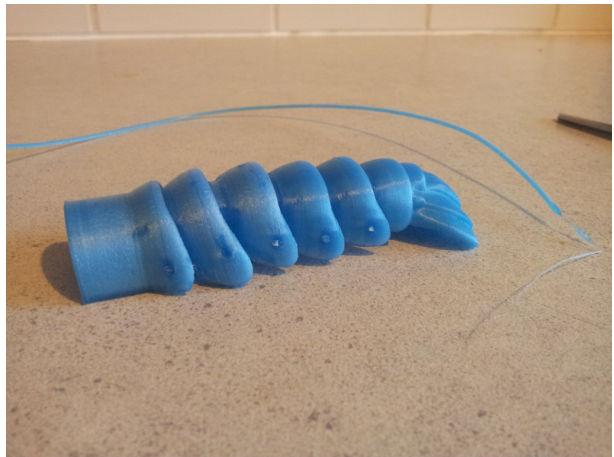
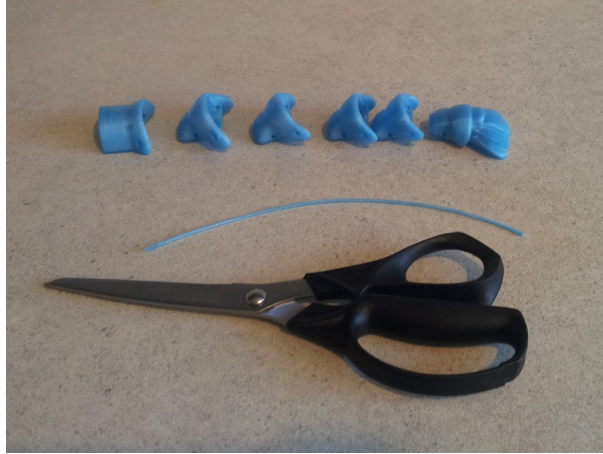


Thread a short piece of filament through each part as shown, and trim it to the right length. See the pictures for the correct orientation of each piece.



## Step 2: Tail

Each segment of the tail is a slightly different size. They should be connected in order from largest to smallest as shown. Hold two segments together and thread a piece of filament all the way through both. Repeat this for all the tail segments.



## Step 3: Head

Slide the head piece into position inside the carapace.

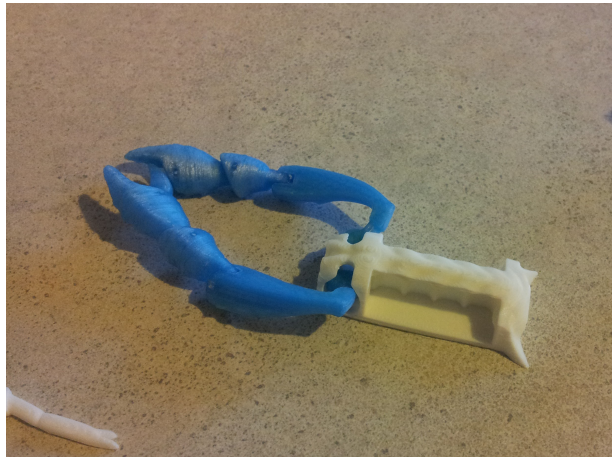




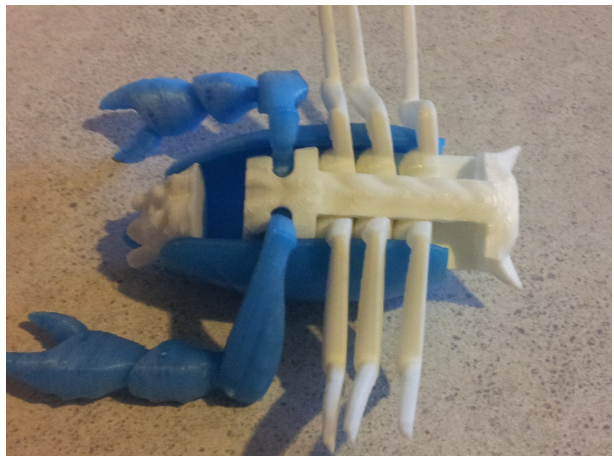
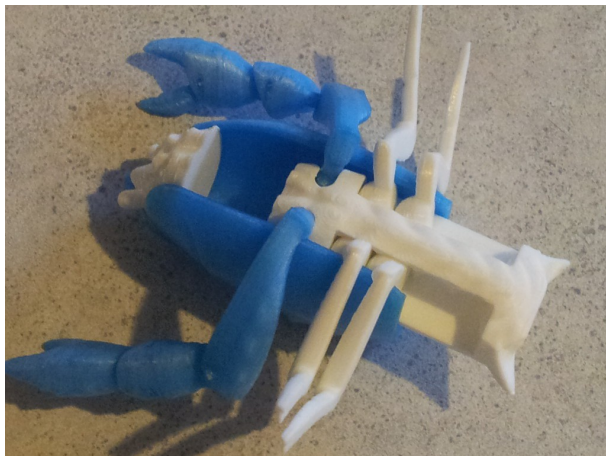
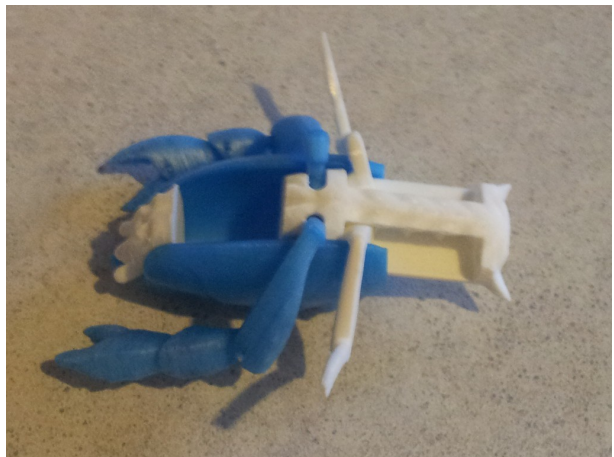
## Step 4: Legs

There are 5 legs on each side. In order from head to tail they are: large claw, two walking legs with a small claw, then two walking legs with no claw.

Slide the two claws into place. There is a small square block inside the socket for each of the claw legs. This is designed to stop the flattened ball-joint from rotating in an unrealistic way.



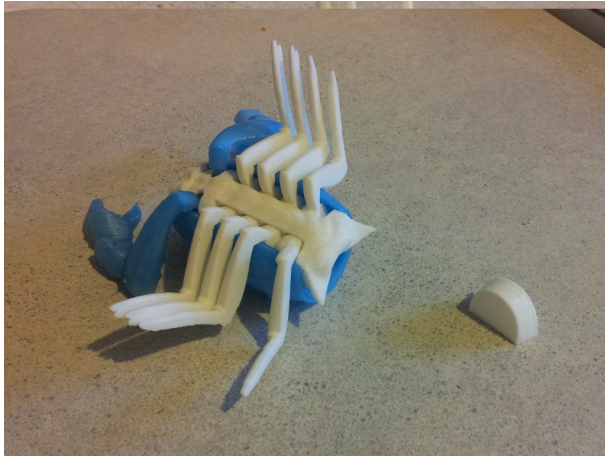
Slide the assembly into the carapace just far enough to hold the claws in place. Then insert the first pair of legs (with small claws). Push the assembly in a bit further to hold these legs in place. Repeat for the remaining legs.



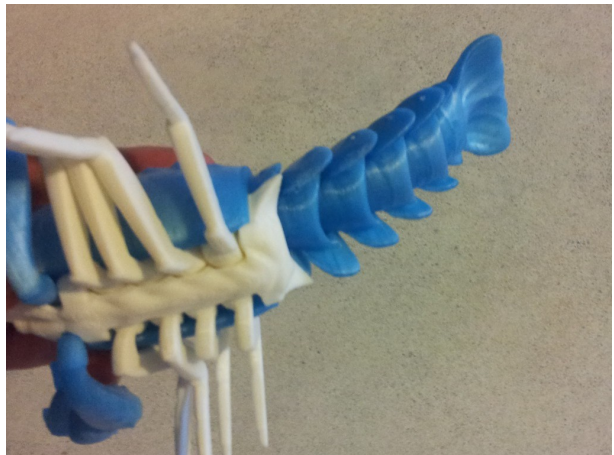
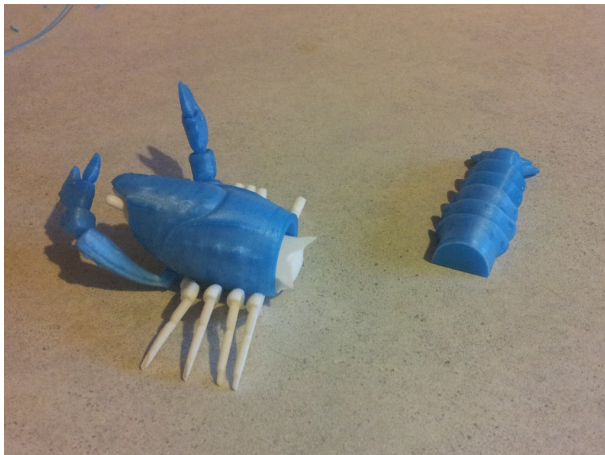


## Step 5: Locking it in

Take the small brace and push it down the gap between the body and carapace. Push it all the way down to the head. This should firmly lock the body piece in position at the head end.



Next take the completed tail assembly and push it into the opening. This should lock the rest of the body in place.



Finally insert the antennae and mandibulae... and draw/paint on some eyes!

