

Crab – Lesson Plan #2

***Call attendance and fill out attendance sheet!**

1. Assemble legs' sticks (35 mins)

- Students disassemble the legs' sticks from the wooden plate, and file them.
- Students assemble the legs we put together last class. Place one stick above the leg and another under.
- Hand each students two 15 mm screws and 2 nylock locknuts.
- After sticks are connected to one pair of legs, students will put together the other pair (hand out the same screws and locknuts).
- Let students to assemble on their own at first.
- Notice directions of assembly, the two pairs should mirror each other.
- Students must connect the locknuts all the way in and then undo the connection by a full circle and a half (because the legs should be a little loose).

2. File and glue head and servo place

- Disassemble body parts, head parts and the servo place from wooden plate.
- After filing, let students try and put the parts in their correct place.
- Those who assembled correctly receive glue, and glue the parts together.
- They may need to also file the parts' sides to thin them so they can fit in their place.
- Make sure students don't apply too much glue so that the parts dry before class ends.
- A students who applies too much glue must wipe some off using a paper towel.

3. Collect and check parts (5 mins)

- Call students name alphabetically, and put each student's name on his/her plate.
- Each student's robot parts will be put into his/her own plastic bag.
- **Make sure the painted plates are stored in a place with some air.**

Time in minutes	Activity name	Comments
35	Assemble legs' sticks	Make sure legs mirror each other
15	File and glue head and servo place	Notice parts are glued well
5	Collect and check parts	Each student's bag must have a name
Total: 60 mins		



These are the legs with the leg bars.
File the bars.



Assemble legs' bars

Place one bar above and another under, "sandwich" the leg.

Insert a 15 screw from one side of the sandwich to the other. Put a nylock locknut, screw it all the way then **release a full circle and a half.**

Do the same thing with the front and back leg, so that each pair includes one regular leg and another with a servo circle. Notice the direction toward which the servo circle faces.

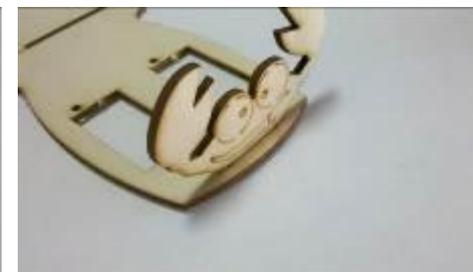


A finished pair of legs:

Make sure legs are well connected
(Check that the locknut isn't too tight)
Make sure legs mirror each other as shown in this photo



Disassemble and file body parts, head and servo home. You may need to file the parts' sides of them to fit into the right holes.



Glue the servo place under the model.
Glue the head on the head's other side (so that they don't face the same direction)



Glue parts
The head is above, and the box is on the bottom as shown in the photo