Alex- Lesson plan #5



First, place neck in its place. Notice neck placement direction (back wall should be on the side farther from the eyes).



Place bottom jaw on the neck on the neck. Holes should be on top of each other. Notice the jaw's direction.



Hand each student a 30 screw. Insert the screw into the jaw, through the neck, into the face and all the way through. Let students insert the screw on their own.





Lock the screw with a nylock locknut. Tighten the locknut all the way, then release it several full turns so that the parts will be free to move.



Take the assembled base, the jaw, and the face and neck. Place the cross at the neck's bottom, and connect it to the servo on the base.





After placing the cross in its place, turn the neck so you can see the middle of the cross. As you remember, we connected the cross only to one side so we can turn the neck around and see the middle of the cross.

After turning, hand each student a bug screw, and connect the middle of the cross to the servo (as we connect any regular cross to the servo).





After tightening the cross to the servo, turn the neck back. This time, connect the cross's other side to the wood using the bug screw. This way, you will no longer be able to turn the neck around.



This is what your model should now look like.





Disassemble this wooden piece. Hand each student a cross and a bug screw. Insert the bug screw into the small hole and then to the cross. Notice that the wood and the cross' sticking out side are **NOT** facing the same direction!! (Cross' sticking out side faces the table)



Then, connect the bigger hole to the screw at the neck's bottom. Tighten with a nylock locknut (leave option for some mobility). You may also tighten with a regular locknut. Place the cross on the servo and tighten using a bug screw.





Disassemble the last part – the bent wooden piece. Hand each student another bug screw and a servo cross. Insert the larger part of this wooden piece into the hole at the bottom lip. Tighten with a nylock locknut (leave some mobility). You may also tighten with a regular locknut. Connect the cross to the top servo, and tighten with a bug screw. Then, connect the wooden piece's small hole to the cross' outer right side.



This is the complete model.

| Time in minutes | Activity name | Comments |
|-----------------|---------------------------------------|--|
| 5 | Call attendance | Mark attendance sheet + date |
| 15 | Assemble neck and bottom jaw | Notice assembly directions |
| 15 | Connect neck to base | Notice the hinge's center is connected to servo well |
| 15 | Connect hinges from servo to neck and | Notice crosses' directions and wooden pieces' |
| | lip | placements |
| 5 | Collect parts | Store in safe place |
| Total: 60 mins | | |