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Turn waist more/less

Shoulder

Bend/unbend

Elbow

Bend/unbend

Hand

Open/close

Control the Joints

“Forward Kinematics”

1. Place blocks on the table.
2. Students give commands for the “human robot’s” shoulder, elbow, wrist, and hand. Students can say, “shoulder up”/”shoulder down”, etc.
3. “Human robot” closes eyes, and students pick one block for the “robot” to grab
4. Practice this activity twice, moving the blocks once the “robot” closes their eyes.

Hand: forward/backward

Hand: up/down

Hand: left/right

Hand

Open/close

Control the hand

“Inverse Kinematics”

1. Place blocks on the table.
2. “Human robot” closes eyes, and students pick one block for the “robot” to grab
3. Students command “move hand: forward/backward, left/right, or up/down”
4. Practice this activity twice, moving the blocks once the “robot” closes their eyes.