Dobot Activity Pick & Place 1 block from Pick Area 1 to Place Area 1.

1. Start with Dobot with Suction Cup attached. Plug the USB into the computer. Press the power button on the back of the Dobot.
2. Place Dobot on the **mat.** Remind students to be very mindful of not shifting their Dobot on the mat once positions begin being saved in their program. This will lead to inaccuracies that will take several minutes to correct.
3. Place a block on the mat as shown.
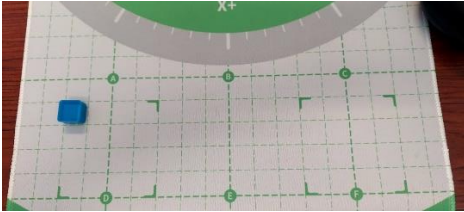
4. Open the **DobotBlock** application. Connect to the Dobot by clicking . Make sure you have selected "Magician Lite." You may have to try several "ports" until you find the right one, depending on your device.

5. "Home" the Dobot by clicking . If at any point while moving the Dobot's arm that the clutches slip/grind, be sure to rehome the robot before saving/using any of the robot's positions in the program. There is no need to start from the beginning if this happens. Simply home the robot right after the slipping occurs and resume.

6. Choose an event to start the program such as . Select Goto from the Motion menu and drag into the program.
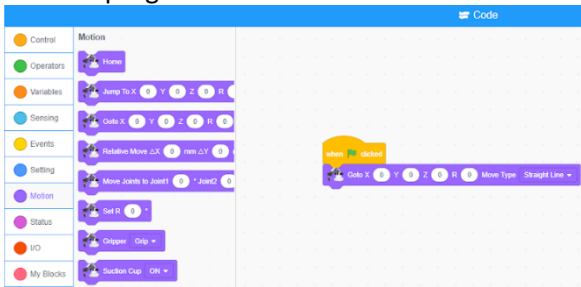

7. By using the unlock button on the arm of the Dobot, move the Dobot to a safe starting position well above the blocks and in the center of the template. To use the Dobots current coordinates in the Goto block, right mouse click the Goto block and choose "Fill Coordinates"
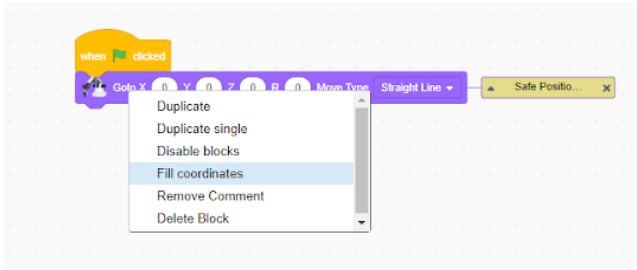
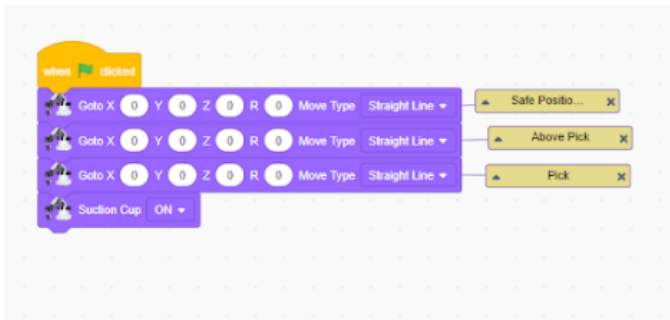

8. From the Motion menu, add another Goto block to the program. Using the unlock button on the arm of the Dobot, move the Suction Cup tool about 1" above the block. Right mouse click the new Goto block and select "Fill Coordinates".

9. From the Motion menu, add another Goto block to the program. Using the unlock button on the arm of the Dobot, move the Suction Cup tool to the top of the block in "Pick 1". The suction cup should be pressed into the block slightly. Right mouse click the new Goto block and select "Fill Coordinates".

10. From the manual controls located at the bottom left of the DobotBlock application, manually turn the suction cup on by clicking "On" beside the suction cup.
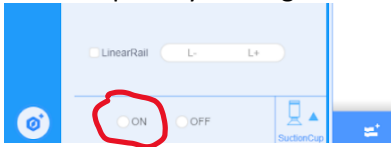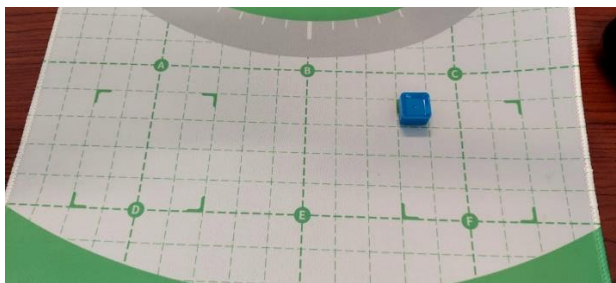

11. From the Motion menu, add a Suction Cup block to the program. Be sure that the dropdown option "On" is selected.

12. Right mouse click the second Goto block. Select "Duplicate Single". Move the new Goto block that is created to the bottom of the program and click to snap it into place.


13. Using the unlock button on the arm of the Dobot, move the suction cup with the block attached to the location shown.

14. The block should be about an inch above the template. Add a Goto block to the bottom of the
    program. Right mouse click the block and select "Fill Coordinates".

15. From the Motion menu, add another Goto block to the program. Using the unlock button on the arm of the
    Dobot, move the Suction Cup with the block attached down to Place Area 1. Right mouse click the new Goto
    block and select "Fill Coordinates".
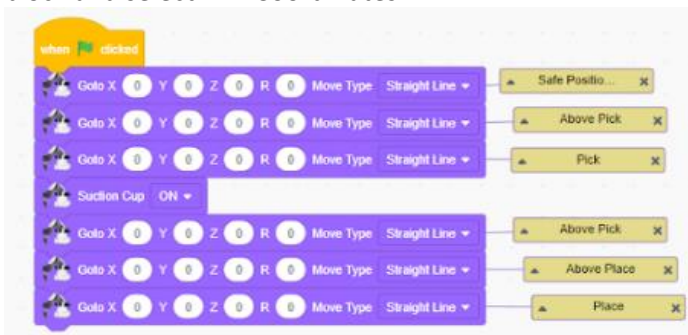
16. From the manual controls located at the bottom left of the DobotBlock application, manually turn the
    suction cup off by clicking "Off" beside the suction cup.

17. From the Motion menu, add a Suction Cup block to the program. Be sure that the dropdown option "Off" is
    selected.

18. Right mouse click the Goto block labeled "Above Place". Select "Duplicate Single". Move the new Goto block that is created to the bottom of the program and click to snap it into place.

19. Right mouse click the first Goto block labeled "Safe Location". Select "Duplicate Single". Move the new Goto block that is created to the bottom of the program and click to snap it into place.

20. The Suction Cup can be moved clear of all blocks by using the unlock button. Make sure a wood/foam block is in Pick 1 and click the green flag on the top left to run the program. The Dobot should successfully move the block from Pick 1 to Place 1.