

STATION 1

1. Turn on the NXT (the square orange button).
2. **List the options on the Main Menu** (you should have seven options).
3. Turn off the NXT by using the gray button, when it says turn off, select with the square orange button.

STATION 2

1. Turn on the NXT.
2. From the Main Menu, select View.
3. **List the options in the View Menu** (you should have twelve options).
4. Turn off the NXT.

STATION 3

1. Turn on the NXT.
2. In the Main Menu, select View, then Motor Rotations. Select a port that has a motor. **Record the number of motor rotations from the green square to the pink square.** Be sure to start at the mark.
3. Reset the count by hitting the orange button. Without turning the robot around, **record the number of motor rotations from the pink square to the green square.**
4. Turn off the NXT.

STATION 4

1. Turn on the NXT.
2. In the Main Menu, select View, then Motor Degrees. Select a port that has a motor. Be sure to

start at the mark and **record the degrees the motor moves as you move from the beige square to the blue square.**

3. Reset the count by hitting the orange button. Without turning the robot around, **record the degrees the motor rotates as you move from the blue square back to the beige square.**
4. Turn off the NXT.

STATION 5

1. Turn on the NXT.
2. In the Main Menu, select the View, and then choose Reflected Light. Select the port that has the light sensor.
3. **Record the percentage of reflected light for each paper square and the black bench top's surface.**
4. Turn off the NXT.

STATION 6

1. Turn on the NXT.
2. In the Main Menu, select the View, and then choose Ultrasonic inch. Select the port that has the ultrasonic sensor.
3. **Set your robot in the square then measure the distance to each of the numbered items.**
4. Turn off the NXT.

STATION 7

1. Turn on the NXT.
2. In the Main Menu, select the View, and then choose Ultrasonic cm (centimeter). Select the port that has the ultrasonic sensor.
3. **Set your robot in the square then measure the distance to each of the numbered items.**
4. Turn off the NXT.
5. After you have completed Station 6, **compare your measurements with the Ultrasonic**

sensor using inches and centimeters. What do you notice? Which measurement do you think is more sensitive to small changes in distance?

STATION 8

1. Turn on the NXT.
2. In the Main Menu, select View, and then Sound dB. Sound dB measures the sound (in decibels) that is present in the room.
3. **Record the initial reading in the room, and the reading when you talk, clap and blow on the sound sensor.**
4. Turn off the NXT.

STATION 9

1. Turn on the NXT.
2. Select View and then Sound dBA. Sound dBA refers to the *adjusted* sound level and measures only the sounds your ears hear.

3. **Record the initial reading in the room, and the reading when you talk, clap and blow on the sound sensor.**
4. Turn off the NXT.
5. **Compare these readings to your Station 8.** Which measurements were larger?

STATION 10

1. Turn on the NXT.
2. In the Main Menu, select the View, and then choose Ambient Light. Select the port that has the light sensor.
3. The ambient light is the light in the robot's immediate surroundings. **Record the ambient light measurement at the table, in the cabinet, and holding the robot at the window.**
4. Turn off the NXT.