**Sound Intensity Worksheet**

1. **Measure each sound with the sound sensor approximately 6 inches away from the source of sound, then approximately 12 inches away.**
2. **Use a ruler to measure each distance.**
3. **Take note of what happens to the sensor reading when the distance to the sound changes.**
4. **Use the table below to record your data on the loudness of the various tested sounds, and include some of your own choices for sound-making sources in the blank cells.**

|  |  |  |
| --- | --- | --- |
| **Sound Source** | **NXT Robot Sensor Reading** | |
| **6-inch distance** | **12-inch distance** |
| no sound |  |  |
| clap |  |  |
| soft whistle |  |  |
| loud whistle |  |  |
| telephone ring |  |  |
| vacuum cleaner |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Notes:**

**5. Using your recorded data, create a scatter plot of the sound measurements for both distances. Compare the two and try to include a line of best fit to analyze the relationship of the two.**