**Gentle Touch Background Handout**

**Completing this document provides you with the general background knowledge necessary to complete and understand the various parts of this activity, including linking the activity to a real-world application.**

1. **Define curve fitting.**
2. **What is the benefit of curve fitting?**
3. **The most basic units measured and used by electrical engineers are:**
4. **Draw the symbols or units used by electrical engineers.**
5. **Using an analogy, draw a diagram that explains the
relationship between voltage, resistance and current.**
6. **What is the equation for Ohm’s law and how can it be used? Give an example, with real values. Hint: What if you are given two of the three unknown variables?**
7. **In your own words, summarize Newton’s second law of motion.**
8. **Amdahl’s law gives us the maximum expected improvement to an overall system when only part of the system is improved. For example, we can add more cores to a computer, which would result in a much faster computer. From the curve fitting graphs, intuitively analyze what will happen if we keep on adding cores?**
9. **What is regression?**
10. **Draw correlation graphs for strong correlation and no correlation.**
11. **Define a line of best fit.**
12. **In your own words, explain how you can use residuals on a scatter plot to check which line is the best fit.**
13. **List the procedure to calculate the line of best fit using a calculator.**
14. **Discuss with your neighbors the engineering challenge given to you at the end of the presentation. Now that you have a better understanding of it, re-state the challenge in your own words.**