小太陽關愛協會 feedback analysis

dataset:
https://docs.google.com/spreadsheets/d/15Hcf8d9mxynQVOaMWqzAcIra9eRw-wP81Fj8oVOibio/edit?gid=377769428#gid=377769428

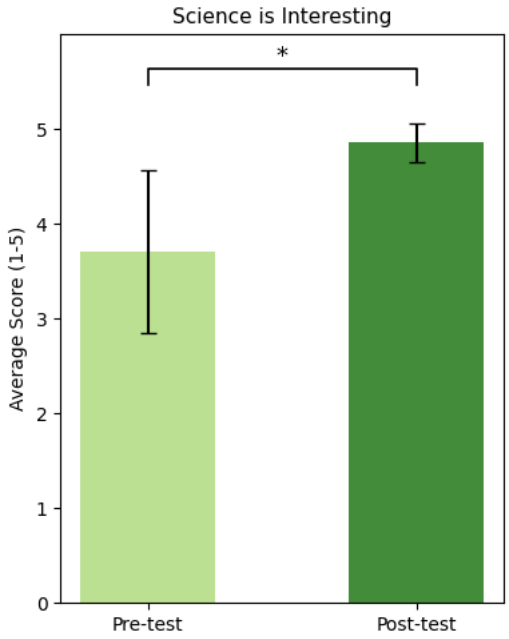
Q1 Science is Interesting

Pre-Test Mean Score: 3.71/5.00

Post-Test Mean Score: 4.86/5.00

Net Growth Contribution: +1.14

Statistical Significance: Welch's t(14.5) = 2.79, p = 0.014 (Significant, *)



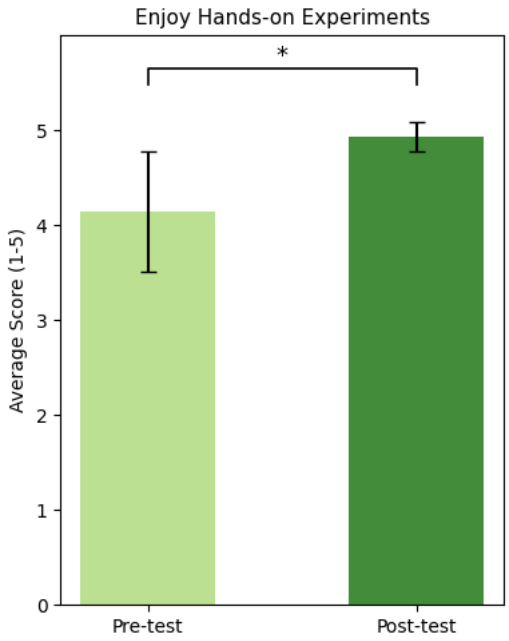
Q2 Enjoy Hands-on Experiments

Pre-Test Mean Score: 4.14/5.00

Post-Test Mean Score: 4.93/5.00

Net Growth Contribution: +0.79

Statistical Significance: Welch's t(14.5) = 2.60, p = 0.021 (Significant, *)



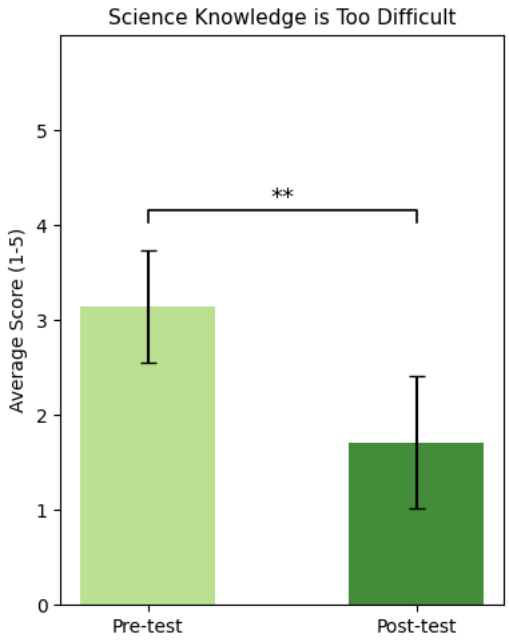
Q3 Science Knowledge is Too Difficult (reverse-scored item — lower is better)

Pre-Test Mean Score: 3.14/5.00

Post-Test Mean Score: 1.71/5.00

Net Growth Contribution: −1.43

Statistical Significance: Welch's t(25.4) = −3.38, p = 0.002 (Significant, **)



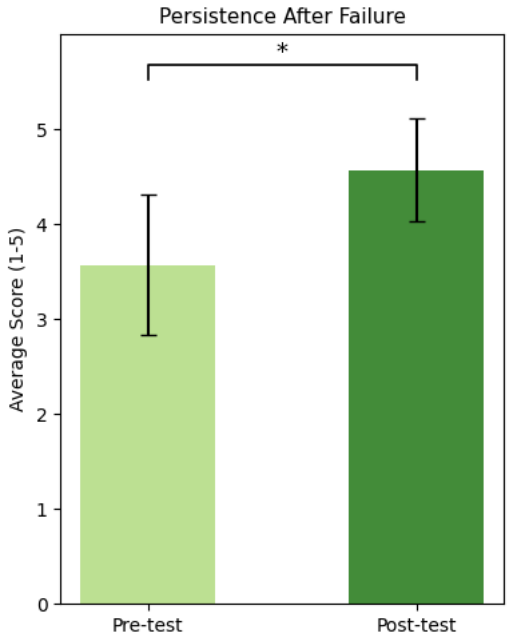
Q4 Persistence After Failure

Pre-Test Mean Score: 3.57/5.00

Post-Test Mean Score: 4.57/5.00

Net Growth Contribution: +1.00

Statistical Significance: Welch's t(23.8) = 2.35, p = 0.027 (Significant, *)



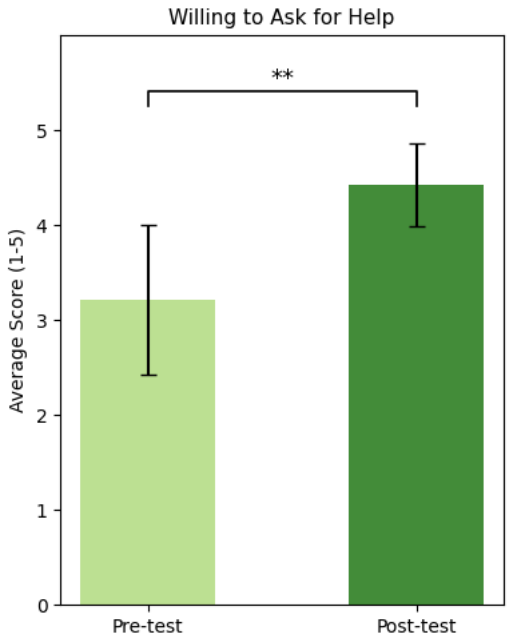
Q5 Willing to Ask for Help

Pre-Test Mean Score: 3.21/5.00

Post-Test Mean Score: 4.43/5.00

Net Growth Contribution: +1.21

Statistical Significance: Welch's t(20.3) = 2.91, p = 0.009 (Significant, **)



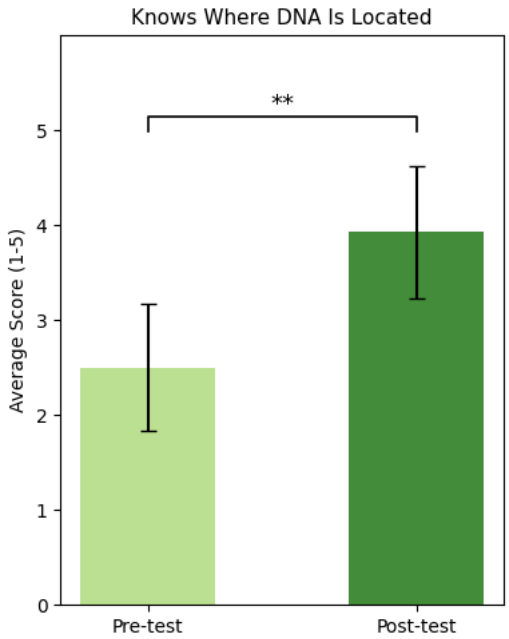
Q6 Knows Where DNA Is Located

Pre-Test Mean Score: 2.50/5.00

Post-Test Mean Score: 3.93/5.00

Net Growth Contribution: +1.43

Statistical Significance: Welch's t(26.0) = 3.19, p = 0.004 (Significant, **)



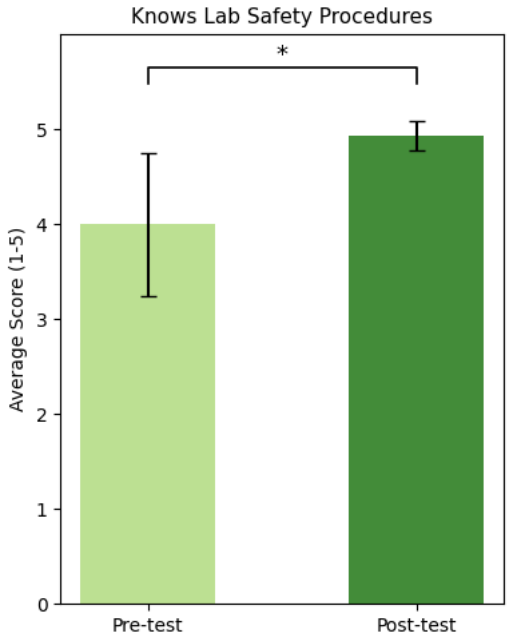
Q7 — Knows Lab Safety Procedures

Pre-Test Mean Score: 4.00/5.00

Post-Test Mean Score: 4.93/5.00

Net Growth Contribution: +0.93

Statistical Significance: Welch's t(14.1) = 2.62, p = 0.020 (Significant, *)



Overall Graph

