Table

*NOAA Climate Literacy Principles* (2009) *Addressed by the* Climate Change and Michigan Forests *Pilot Unit*

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| Principle | # Lessons ( 1-8 ) |
| Life on Earth depends on, is shaped by, and affects climate. | 1, 4, 5 |
| Climate varies over space and time through both natural and man-made processes. | 4, 5 |
| Our understanding of the climate system is improved through observations, theoretical studies, and modeling. | 2, 3, 8 |
| Human activities are impacting the climate system. | 5, 6 |
| Climate change will have consequences for the Earth system and human lives. | 5, 6, 7 |

Table

*Detailed multilevel model results*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable Name | Desire to Learn More about Climate Change Effects on Forests | | | Interest in Climate Change Effects on Forests | | | Interest in Hands-On Science Activities | | | Interest in Science | | | Perception of Climate Change Risk | | |
| Potential Values | -3 to +3 | | | -3 to +3 | | | -3 to +3 | | | -3 to +3 | | | -3 to +3 | | |
| Unconditional Model (All Observations) | | | | | | | | | | | | | | | |
| L1 Residual Variance | 0.25 | | | 0.29 | | | 0.37 | | | 0.17 | | | 0.41 | | |
| L2 Intercept Variance (Students nested within Teachers) | 0.65 | | | 0.60 | | | 0.48 | | | 0.72 | | | 0.47 | | |
| L3 Intercept Variance (Teacher) | 0.08 | | | 0.08 | | | 0.08 | | | 0.09 | | | 0.02 | | |
| Intraclass Correlation Coefficient (ICC) (Students nested within teachers) | 66% | | | 62% | | | 52% | | | 73% | | | 52% | | |
| Intraclass Correlation Coefficient (ICC) (Teacher) | 75% | | | 70% | | | 60% | | | 83% | | | 54% | | |
| Full Model (Matched Observations Only) | Coef | SE | p | Coef | SE | p | Coef | SE | p | Coef | SE | p | Coef | SE | p |
| Time (T1 = 0) | -0.09 | 0.07 | 0.17 | -0.06 | 0.07 | 0.37 | 0.04 | 0.08 | 0.63 | 0.02 | 0.05 | 0.72 | 0.08 | 0.08 | 0.34 |
| Gender (Male = 0) | -0.25 | 0.16 | 0.12 | -0.35 | 0.16 | \* | -0.36 | 0.15 | \* | -0.33 | 0.15 | \* | -0.38 | 0.12 | \*\* |
| L1 Residual Variance | 0.24 | | | 0.29 | | | 0.38 | | | 0.17 | | | 0.38 | | |
| L2 Intercept Variance (Students nested within Teachers) | 0.65 | | | 0.59 | | | 0.49 | | | 0.62 | | | 0.26 | | |
| L3 Intercept Variance (Teacher) | 0.05 | | | 0.04 | | | 0.08 | | | 0.10 | | | 0.02 | | |
| Differences in Marginal Means | | | | | | | | | | | | | | | |
| Pre-Intervention vs. Post-Intervention | -0.05 | | | -0.06 | | | 0.04 | | | 0.02 | | | 0.06 | | |
| Male vs. Female (Post-Intervention) | -0.02 | | | -0.28 | | | -0.23 | | | -0.21 | | | -0.19 | | |

\* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001