Exploring Scientific y

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This project investigated the ways in which free play facilitates science, technology, engineering, and math (STEM) learning in preschool-aged children. Additionally, we explored the roles teachers as well as classroom environments played in fostering or hindering scientific and engineering practices. Over the course of the 2018-2019 academic year, we collected over 100 hours of video data from four preschool sites in Maine in order to identify cases of STEM engagement.

Our summer work mainly revolved around using NVivo software to pinpoint, transcribe, and code interactions that aligned with eight different scientific and engineering practices. We also coded exchanges between students and teachers that occurred in conjunction with STEM practices. The instrument utilized to identify STEM engagement was developed by Professor Miller, adapted from the eight Next Generation Science Standards (NGSS) science and engineering practices in order to better capture the emergence of STEM learning in preschool environments.

Throughout the coding process, we2 T01r9a9(e)(x)-r.

practices in play. Certain teacher behaviors such as direct instruction or disruption of play due to perceived risk serve to inhibit the emergence of scientific and engineering practices. When teachers interrupt children to ask questions or engage in conversation, the child tends to shift