Abstract
A great deal of science learning, often unacknowledged, takes place outside school in informal environments—including everyday activity, designed spaces, and programs (NRC, 2010). With respect to building interest and learning in science, especially in out-of-school contexts, language provides family members, mentors and interested others with a means for talking about science phenomena, scientific processes, scientific methods, and science objects. One of the principal lenses that we leverage in our efforts to understand children’s understanding and interest in science is through language (Gomez, 2007; Lemke, 1990; Osborne & Freyberg, 1985). In this study, we examined the language of nineteen 11-year olds as a way to assess children’s interest, curiosity, and views of science. We used a photo elicitation-interview method that invited learners to be informants of their own activities through the use of a digital camera and notebook. The notebooks and follow up interviews were analyzed with respect to types and kinds of talk used as kids’ describe their wondrous questions, science views, and other reported activities. This qualitative study was also used to explore alternative measures of “activation” in science learning as a validation to quantitative measures under study.

Research Design & Methods
Winter 2010 – Spring 2011
• Pre-survey – Science activation survey
• Notebooks + digital photos
• Photo Elicitation Interviews
• Post-survey – Science activation survey

Participants
19 6th graders
12 – SF East Bay private alternative school
7 – Oakland public charter school

• Each child was given a set of prompts and a digital camera. Pictures were taken every week and printed at the end of the week. Students wrote notes and reflections in paper notebooks about their pictures.
• At the end of 4-5 weeks, students were interviewed about the photos they took similar to the photo elicitation interview approach (Wang & Burris, 1997; Clark-Ibáñez, 2004) and ethnographic interviews (see Zimmerman, 2008 dissertation)

Findings from Notebooks + Notebook Interview Analyses

1) In what ways did students talk about science?
While all sixth graders were able to use descriptive language to describe science in their lives and a majority could relate this to a function, action, or cause-effect (78%), few students used explanatory talk (10%).

2) Which topics did students talk about?
When talking specifically about things they wondered about, students gave more examples related to life sciences and physical sciences than other topics.

3) What were students’ views on science?
When talking about how their photographs ‘show’ science in their lives or talking about what is science, students most often talked about and viewed science as facts and nature. (See Table: Views on Science.)

4) How did students express their curiosity in science?
Mean # interview segments on types of science curiosity

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Conclusions/ Future Work
• Examination of relationships between these findings and quantitative data on science activation especially on items and scores related to ‘sense-making’, ‘fascination’ and ‘values.’
• Refining PEI method further with better camera integration
• Examining specific students as case studies.

Students who displayed more instances of being curious than their peers expressed this curiosity as 1) recognizing anomalies and inconsistencies, and 2) attempting to build a mechanistic model for their observations.

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Photo Elicitation Interview Analyses
The interviews were designed to elicit students’ views on science. The interviews were conducted in a classroom setting, and the interviewers asked the students questions related to science topics. The interviews were audio-recorded, and the responses were transcribed and analyzed for patterns and themes.

Participants
Seven 6th-grade students from a public charter school were interviewed in the spring of 2011.

Findings
The interviews revealed that students had diverse views on science. Some students viewed science as a process of inquiry, while others saw it as a set of facts or knowledge. Some students also expressed a sense of curiosity, while others did not.

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Exploring Everyday Talk as Scientific Talk
Sherry Hsi1, Kim Gomez2, Megan Luce1, Nicole Mancevice2
1- The Lawrence Hall of Science, University of California, Berkeley
2- University of California at Los Angeles

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