Measuring Blocks

My four year-old son has a set of measuring blocks called Inchimals®. The key feature of the blocks is they vary in length – so it's not necessary to have this exact set. In fact, Jesse wasn't even interested in the puzzles presented in the accompanying workbook. He did, however, enjoy lining the blocks in order and figuring out how to put all the blocks back in the box.

Image courtesy Fat Brain Toys ® (http://www.fatbraintoys.com/)

My Challenges:

- How do I weave Jesse's combined interest in building a staircase / lining things up from small to big to deepen **mathematical concepts** (equivalence, compensation, difference, multiples, etc.) that might be announced by the properties of the materials?
- How do I enhance his **mathematical reasoning**; for example, conjecturing generalized properties, finding examples and counter-examples?
- How do I enhance his **problem solving**; for example, Can I encourage him to see connections between building the stairs and putting the blocks back in the box? Can I encourage him to figure out why they won't fit back into the box rather than using a dump-and-restart strategy? To what extent do I encourage him to stay focused on a particular problem rather than going off on tangents or becoming immersed in a sub-problem?
- What role do other toys and made-believe stories play in the exploration? To me, they're a means to an end - they create a context that he might **model mathematically**. To Jesse, they are the end.
- In all of these cases, how do I recognize when my interventions become too directive and therefore counter-productive? When does my agenda begin to conflict, rather than enrich his?

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