Teaneck's Advantage: Educational Excellence Through Rigorous Teaching and Learning

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At Teaneck Public Schools (Teaneck, New Jersey) we are focused on establishing common instructional practice across all classrooms that is designed to increase our students' opportunities to engage in demanding curriculum content in both mathematics and English language arts lessons. We have determined to meet this objective by supporting all our teachers with content-specific professional development grounded in the Principles of Learning, developed by the University of Pittsburgh's Institute for Learning (IFL).

We are currently in the first phase of this endeavor. With support from the IFL, we are working to ensure that our students in Grades K–5 have access to high-level tasks and texts and high-quality learning opportunities to build the critical thinking and deep reasoning skills that are essential for academic success. We have identified characteristics of high-level mathematics and English language arts tasks. After working to gain a common vision of rigorous tasks—by studying examples and discussing their characteristics—we have incorporated them into our classrooms. We have made sure to align our definition of high-level tasks with research's named criteria, emphasizing the importance of tasks that require thinking and reasoning.

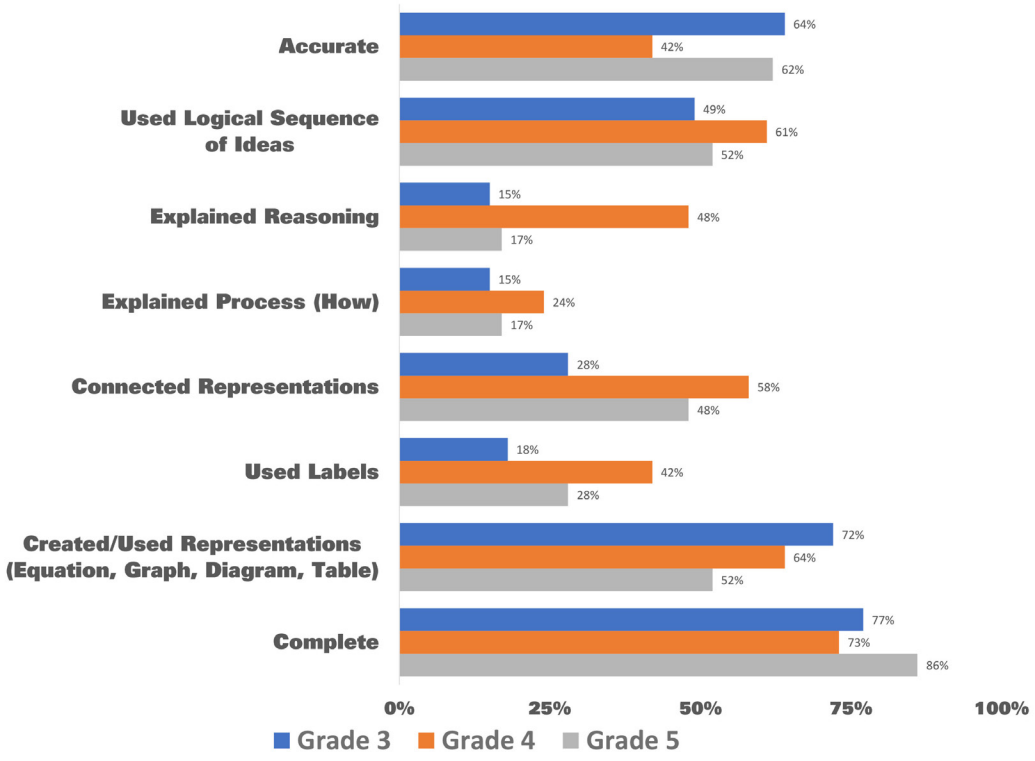
With this understanding of high-level tasks, our educators are equipped to ensure that all students are expected to think and reason at a high level and to provide the support and resources needed to maximize their learning potential. We found that we had to work consistently to make sure students could think and reason cognitively. Research on factors that contribute to a task being carried out as intended tells us that students actually get such opportunities only 37% of the time. Participating in learning labs has provided opportunities and guidance for teachers to adapt their individual instructional practices and increase those opportunities. Host teachers collaboratively plan lessons with IFL fellows using high-level tasks and texts, and then implement the planned lessons in front of their colleagues. Following the lesson, the host teacher and their colleagues debrief and make connections to their own work to increase intentionality of planning and implementing specific pedagogical practices. As such, the learning labs serve as a means to learn and refine pedagogical practice through apprenticeship. Teachers and administrators have had the opportunity to see, plan for, and model high-level tasks that make it possible for students to share and discuss their mathematical reasoning and also develop student agency.

Our overall goal as a district is to give all students access to academically rigorous mathematics learning opportunities. This means that we have a commitment to teaching mathematical reasoning as well as the knowledge core. We will ensure students are academically engaged in making connections, looking for relationships and patterns, and forming generalizations related to mathematical ideas. In our journey, we will keep our eye on the target, by collecting and analyzing student work in order to determine if students are thinking in rigorous ways about mathematics.

In looking at our work, we are proud to notice the following:

> At every grade level, more than half of the students are using representations in their work, and some students are making connections between representations.
>
> We have several examples of mathematical reasoning to guide our instructional practices.

We look forward to our next analysis of student work. We are using this opportunity to monitor and ensure that we are advancing student learning. At the same time, our teachers are developing a shared vision of teaching and learning.▪



Based on set indicators associated with academic rigor, we set out to collect and analyze student work samples. The data has been coded for aspects that lead to the development of conceptual understanding, but are not limited to: use of representations; connection between representations; explanation for how a problem was solved; and explanations of mathematical reasoning.