

## 8<sup>th</sup> Grade Math

Indicator	Evidence	Rating
3a Communicating with Students	<p>The focus of the learning for the lesson is rate of change and slope. The teacher is beginning the lesson by building on students' prior knowledge. The teacher begins the lesson by asking students to imagine that they have invented an app called Sell Something and that they are going to sell it to Zinga. She explains that in order to sell the app the app must have a download rate of at least 5%. The students task is to predict, based on a sample, how many downloads have occurred by using tables, charts, graphs etc. Students will have to justify their thinking. The teacher allowed students to have 5 minutes of individual think time before beginning the group discussions. Students then shared their ideas and developed drafts of their thoughts on copy paper before developing their large tables, graphs, and charts. Students are engaged in a gallery walk activity during which they were asked to review each group's chart, analyze it, and ask questions. The teacher explains that the questions can be about the process or the result. Although this was not modeled for students, students appeared to understand the process and began the process without question.</p>	Proficient
3b Using Questioning and Discussion Techniques	<p>When students were released to begin their discussions, they shared their original ideas and prompted each other's thinking by either asking questions or providing feedback to one another. For example, one student said, "I got <math>\frac{1}{24}</math> but I do not think it is right because of how I graphed it." A second student said, "You would not put that on the Y-axis...you did it backwards on the graph but everything else is right." The first student said, "Okay I see that now."</p> <p>The teacher circulated during this time to each group to offer feedback and scaffold students' thinking. She asked questions, such as: What did she do in her work right here? Did she have to solve the problem? Why was Emma's way easier?" What other things would make sense? If you went back one point, where would we be? Would that make sense? Brooke, what are you noticing about this one? Do you notice anything else?</p>	Distinguished
3c Engaging Students in Learning	<p>The lesson begins by the teacher posing a scenario in which students were developing an app. The task was for students to predict if the app had an acceptable download rate prior to pitching the app to the vendor. The students had to prove their response mathematically. The teacher structured the lesson so that students had individual time to think, process, and identify possible solutions for tackling the problem. Students were then engaged in collaborative discussions</p>	Proficient

	<p>where they questioned one another and provided feedback based on what was shared. Students then posted their charts, graphs, and tables and during a gallery walk, the other student groups analyzed the charts and posed questions around the process or results. The structure of the lesson allowed for most students to be engaged in the learning process as evidenced by students' conversations and questions. The teacher circulated and prompted student thinking through questions. Students appeared very comfortable with the process as evidence by the lack of behavioral questions.</p>	
<p>3d Using Assessment in Instruction</p>	<p>Throughout the lesson, the teacher circulated group to group to support student learning. She frequently asked questions to guide student thinking. For example, she asked, "What did she do in her work right here? Did she have to solve the problem? Why was Emma's way easier? What other things would make sense? If you went back one point, where would we be? Would that make sense? Brooke, what are you noticing about this one? Do you notice anything else? Do you know how they generated their X and Y? Does that connect to the graph – where do you see it in the graph? What did you notice about their equation?" Students appear very comfortable with the teacher questioning their thinking and respond with answers, such as, "They added 24; 24-1 and 48-2 and points to the graph; it is <math>x/24</math> and <math>98/24</math> – Oh..Oh; Continuous...discreet." The teacher uses the students' responses to gauge student understanding as evidenced by her follow up questions.</p>	<p>Proficient</p>
<p>3e Demonstrating Flexibility and Responsiveness</p>	<p>The use of the app scenario was motivating to students and it allowed them to apply their own understanding of the rate/slope concept to a familiar situation. This was evidenced by the active student conversations. The gallery walk allowed students the opportunity to again apply their own understanding of the content to the situation through generating questions about their classmates' work. The teacher used the student dialogue as an opportunity for supporting current understanding and clearing up any misconceptions. For example, when one student posed a question about another group's work, the teacher asked the student, "Do you know how they generated their X and Y -did they multiply by 2?" As a result of this question, the student realized his own error in thinking and said 24-1 and 48-2.</p>	<p>Proficient</p>