

Setting Goals and Selecting Tasks

- 1 Peg Smith: Setting a goal is the first step before engaging in the five practices,
2 because you have to be clear about what it is you want students to learn as
3 a result of engaging in the lesson. If you don't know where you're going,
4 you're going to end up someplace else. And oftentimes, goals are stated in
5 terms of what students are going to do, not in terms of what students are
6 going to learn. And while knowing what they're going to do is certainly
7 important, it's the what they're going to learn that serves as the driver for
8 the questions that you ask throughout the lesson
- 9 Melanie Cifonelli: Tell me about your learning goal today. What is your learning goal today?
- 10 Mrs. Mossotti: At the end of this unit, they're going to get to graphs of linear functions,
11 linear equations that are not proportional. And last year, the only thing that
12 they did see is proportional graphs. So in this graph, they're given three
13 isolated points. And I want them to understand how to take those points
14 and find the rate of change. And none of that language is going to be used
15 during this lesson. But I tried to pick a context that was very relatable, and
16 something also where the initial amount made sense to them. So they're
17 used to going to the state fair, because New York has a huge state fair
18 every year. And they have to get their ticket in. And then they can buy ride
19 tickets once they enter. So for this task, the main goal is for them to find
20 the cost for each ride ticket.
- 21 Peg Smith: Once you set a goal for instruction, you need to find a task that aligns with
22 it. That is a task that actually has the potential to accomplish what you've
23 said you want to do during the lesson.
- 24 Mrs. Mossotti: I think the task contributed to students getting closer to the goal of
25 understanding this rate of change, because the medium that was used, the
26 graph, was very hands on or visually apparent to either understand why a
27 misconception was wrong or give an estimation of what was right and then
28 use that to go forward and determine this constant rate of change, and how
29 it is seen in the graph.
- 30 Peg Smith: Tasks that lend themselves best to discussions are tasks that we would
31 consider to be high level or what we've also referred to as cognitively
32 demanding. And what I mean by that are tasks for which there is no
33 specified pathway as to how you would solve it, so that students actually
34 have to think, reason, and make sense of the situation. Also, it's really
35 important to pick a task for which there is a low floor, so that students can
36 enter the task and a high ceiling, so that there's the potential to really
37 accomplish something that's mathematically important. So if you end up
38 with a mismatch, or you may end up with a high-level task, but you're
39 going after very low-level goals where you're focusing on what students
40 are going to do, not on what you're going to learn. So in the ideal when
41 you're having a discussion, you want a learning goal that explicitly talks

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42 about what students are going to learn and a task that is high level that has
43 the potential to get you there.

44 Mrs. Mossotti: I feel based on for the context of a problem based on student's past
45 experiences just in life, in general, if it's something they haven't
46 experienced or something that's not concrete or something that's not
47 relatable via video, then the underlying mathematics that they want them
48 to understand is not going to be as easily drawn out from them. So when I
49 choose tasks, I make sure that the wording or whatever it is, the context of
50 the problem is makes it obvious for what the values and the problem are.
51 So for example for this problem, most places, most state fairs, you cannot
52 get into for free. And at the same time, they had to purchase something in
53 addition to that. So it made sense that it did not start at zero.

54 Crispin: What I liked about the carnival task today, it was kind of challenging. And
55 it had it made me think actually more in depth to what I am looking at and
56 working on. What I find challenging is they left some few things out that
57 you had to find out for yourself.