Grade 8 – Fighting Fleas

https://connectedmath.msu.edu/cmp-classroom-videos/watch-videos/grade-8/fighting-fleas/fighting-fleas-full-length/

These resource sheets utilize the framework to unpack instances of formative assessment from CMP classroom videos. These video resources can be used for planning for and reflecting on formative assessment seen in daily practice. The completed tables are not exhaustive; they provide examples of the enactment of formative assessment practices in the CMP classroom.

	Anticipating Student Thinking ***Setting Up a Plan***	**Gathering and Analyzing Evidence** ***Making Sense of What Students Know***	**Adapting Based on Student Thinking** ***Acting on the Evidence***
Launch	(:26-2:25) The teacher and the students make connections between the current context of the Problem and a previous ACE question. Also, the teacher emphasizes the connection between the current Problem and the previous Problem where Chen is making smaller ballots.		
Explore	(21:00-22:12) In her reflection, the teacher talks about how she wanted to push students to use multiplication by a fraction. She knew students were going to struggle with the difference between a decay rate and a decay factor. The teacher also discussed how she tries to not say anything at first, but to allow students to struggle with understanding these ideas by working in their groups.	(2:56-3:51) As a group works together and two students come up with different approaches, the teacher asks questions to facilitate students translating between the two approaches. For the decay factor, one group member uses multiplication while another group member discusses division. They decide their approaches are really the same because their resulting values match the given table. Another group has developed equations that model the data. One group member talked about multiplying by a value while another talks about dividing by a value. The teacher asks questions to help the group members clarifying their thinking and see how the two approaches are equivalent. (5:17-6:59) Students struggle with part 4.2B of the Problem. The teacher asks probing questions to get a sense of how students are	(6:59 - 7:58) After listening to students, the teacher asks questions to Provide for Individual Needs. She questions students as a way to help them share and clarify their thinking about what the values should be recorded in the table and how the equation should be written to reflect the relationship. Her questions also allow students to get more information about how their peers are approaching the problem. (7:59-8:07) The teacher shows that she has used the evidence from the Explore to plan the Summarize. She states that since most of the group conversation was around Part B of the Problem, the summary discussion will focus on those questions. (21:00-22:12) In her reflection, the teacher talks about how she wanted to push students to use multiplication by a fraction. However, she

		approaching the Problem.	knows that students are more comfortable with dividing by a whole number. She discusses how she knew she needed to start where her students were.
Summarize		(7:59-11:38) Students share out their solutions. Through questioning, the teacher makes connections across the different types of equations students found to model the data. She reiterates how decay factor has previously been defined by the class in their vocabulary. Also, she pushes their thinking about how the mathematics relates to the context of the dog and the flea medication. (11:39-13:58) The next day, one of the class members discusses his group's difficulties with part 4.2B. This student demonstrated how peers assessing one another through questioning allowed the group of students to make sense of the Problem.	(16:45-21:00) Because students struggled with understanding the relationship between the decay rate and the decay factor used in the equation, the teacher introduces a new part c to the Problem so that students can solidify their thoughts after such a lengthy discussion of the Problem. Then, the teacher allows students to work through this new part in groups. Later, the teacher leads a discussion on how students would describe the relationship between decay rate and decay factor so that students are able to make sense of the difference between the two values.