Performance Task Protocol, Set 3

**ELMI**

**SVMI Task: Classroom Organization**

Grade level: **Kindergarten**

Team members: Raquel and Caroline

Common Core State Standards:

[CCSS.MATH.CONTENT.K.OA.A.1](http://www.corestandards.org/Math/Content/K/OA/A/1/)  
Represent addition and subtraction with objects, fingers, mental images, drawings1, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

[CCSS.MATH.CONTENT.K.OA.A.2](http://www.corestandards.org/Math/Content/K/OA/A/2/)  
Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

[CCSS.MATH.CONTENT.K.OA.A.3](http://www.corestandards.org/Math/Content/K/OA/A/3/)  
Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).

[CCSS.MATH.CONTENT.K.OA.A.4](http://www.corestandards.org/Math/Content/K/OA/A/4/)  
For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Standards for Mathematical Practice:

#### [CCSS.MATH.PRACTICE.MP1](http://www.corestandards.org/Math/Practice/MP1/) Make sense of problems and persevere in solving them.

#### [CCSS.MATH.PRACTICE.MP3](http://www.corestandards.org/Math/Practice/MP3/) Construct viable arguments and critique the reasoning of others.

#### [CCSS.MATH.PRACTICE.MP4](http://www.corestandards.org/Math/Practice/MP4/) Model with mathematics.

--------------------------------------------------------DIRECTIONS------------------------------------------------------------------

Before you administer the task:

1. Choose a common grade-level formative task for the next PLC meeting.
2. Independently, complete the task. Think about:
   * How might your students respond to the prompts?
   * What are the different ways or strategies students could use to respond to the prompts?
   * What are the common misconceptions students might have about the mathematics?
3. With your team, discuss the above prompts.
4. With your team, complete items 1 and 2 below.

Administer the task before the next PLC meeting.

After you administer the task:

1. Review your student responses.
2. With your team, complete items 3 and 4 below.

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1. **Big Ideas**

*Identify the central ideas of the mathematics. What mathematical ideas might be helpful for students to know to be able to respond to the prompts? Prerequisite math knowledge?*

Adding, composing the number 10, categorization based on student choice of attribute.

In order for students to be able to respond to the prompts, students must feel comfortable solving addition problems using counting, drawings, or manipulatives.

Students should also be able to sort based on their choice of attribute.

1. **Anticipated Student Responses**

*How do you anticipate students will respond to the prompts? What are all the possible ways students might respond to the prompts? What are possible student misconceptions?*

I think students will struggle with the third question that deals with composing and decomposing. They may be able to find one way, but I think they’ll struggle when asked to show “a different combination of pencils”.

I also think that students will struggle with the second question, which is an addition problem with change unknown.

1. **Student Performance**

*How did students perform? What is the math they know? What is the math they are working on? What patterns emerged? Any surprises?*

This was a VERY telling pre-assessment. Students have a good grasp of simple addition when both groups are known. However, when we get into problems that deal with change unknown or both addends unknown, they have a much harder time figuring out the problems. Students also struggled with choosing their method of sorting objects. The question was much more open-ended than they are used to, we need a lot of practice!

1. **Instructional Implications**

*What will be our response if they* ***do know it****?*

Students are doing well when given both addends, that shows that they are ready to move on to story problems with an unknown change occurring.

*What will be our response if they* ***don’t know it****?*

We will continue practicing sorting objects in different ways.

We will continue to work on story problems in whole and small-group settings. Additionally, we will model and allow students time to explore and practice different methods of solving these problems: manipulatives, drawings, fingers, etc.