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ED 427 Section 6
3-26-19
Lesson Plan #17

Topic: How to Collect and Graph Data
Lesson Type: Direct Instruction
Standards: CCSS 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

CCSS LITERACY.SL.2.1 Ask for clarification and further explanation as needed about the topics and texts under discussion.
Objective: Students will be able to gather data and create bar graphs using that data and ask clarifying questions with at least 80% accuracy.
Assessment Plan: 1) Students will be able to gather data and create bar graphs using that data with at least 80% accuracy. 2) This formative assessment will occur throughout the lesson 3) as students work to gather data and draw picture graphs using that data. 4) The instructor will listen to verbal explanations and look written responses to assess individual understanding 5) in order to guide further instruction.
DOK: Level 2. How can we gather data from people? What can we do to organize the data we gather?
Materials Needed: Pencils for each student, post-it-notes, students' work books, smartboard, Collect and Graph Data PowerPoint, smartboard, whiteboard.

Total Participation Techniques: Think-Pair-Share: During the anticipatory set and input and modeling portions of the section ask students questions. Give them 10-15 seconds to think about their answer and then give them 15-30 seconds to share their answers with a buddy.

Differentiation: Struggling: Students who are struggling to understand how to graph data will not be required to write their own survey. Additionally, they will not be required to write their favorite color on the post-it-notes.
Advanced: They will likely understand the concept easily. They will have the opportunity to write their own survey they could give to the class. Additionally, they will be required to write down the name of their favorite color on the post-it-notes.
Anticipatory Set: Watermelon is my favorite fruit. Whose favorite fruit is watermelon?
Students: Me! (Or) not me. I like…
Teacher: My favorite color is blue. Whose favorite color is blue?
Students: Me! (Or) not me. I like…
Teacher: Isn't it kind of fun to see how many people like the same things as you?
Students: Yes!
Recall Prior Knowledge: ***Teacher:*** Now, what have we learned about that helps us organize information so that we can see it better?

Student: Bar graphs!
Teacher: That's right! We can use graphs to organize information.
Input and Modeling: Now, lets make our own survey and take it as a class! How about… favorite colors. I'm going to write four colors on the board. Orange, blue, red, and green. I'm going to give each of you a post-it-note. I want you to write your favorite color, or the one that's closest to it out of these four. For example, my favorite color is blue. I'm going to write blue on my sticky note. If my favorite color was yellow, since it's not on the board, I'm going to write orange. Once you have your favorite color written, put it on the board underneath that color.
(pull up slide with work page 291)
Now, lets put our information in on the work page. Turn to page 291. How many people like orange? (4) let's write that down in our first graph. Now, I want you to write how many people like, red, green, and blue in that first graph. Once you and your shoulder buddy have both written them down, double check your answers and make sure you got the same numbers.
Guided Practice/Independent Practice: Alright, I want you to use the numbers you wrote down on the first graph, and draw pictures for the second graph. Let's do the first one together. Four people like orange. How many pictures am I going to draw in my graph? (***Students:*** 4!)
Teacher: That's right. Remember this is a picture graph so draw a picture and keep using the same picture. Don't change it from color to color. I'm going to use smiley faces, so I'm going to use them for the orange, red, green, and blue lines. After you finish the picture graph, fill in the bar graph. Remember, with a bar graph you fill in one box for each student. After you fill in the graphs, use that information to write a 2-step word problem. Remember, you have to do 2 things in order to find out the answer. For example, I might ask "How many fewer children chose green than red and blue combined?"

Teacher: It looks like we have a puzzle penguin! Let's see what he did. It looks like he did a survey and asked children what their favorite subject was and made a graph of it. Did he make his graph correctly?
Students: No!
Teacher: What did he do wrong? (think-pair-share)
Students: He didn't start his graph with 0!
Teacher: You're write he didn't! What can we do to fix his graph? (think-pair-share). What can we do?
Students: We can put 0 at the beginning of our graph and fill in a box in each line.
Teacher: That's a great idea! We can relabel the graph so that the information it shows us is correct. Do that in your books then solve the addition and subtraction problems.
Transition: Each child will bring their paper to the teacher to have it checked before lining up for recess.

Reflection: