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Scattered Data Lesson Plan

Lesson Context:

Students know how to gather and interpret linear functions in order to plot bivariate data as points on a Cartesian grid and to make use of an equation of a line analyzing the relationship between two variables.

Central Focus:

Gathering and interpreting bivariate measurement data using a scatter plot graph.

Placement of Lesson in Learning Segment:

1st of 3

Lesson Overview:

Students will be able to use this model activity in order to collect bivariate data, plot that data, and then analyze the graph. Students will answer questions that use both prior knowledge and new material in order to answer. Students will be able to communicate and collaborate within small groups to interpret the data.

Standard(s) Addresses:

CCSS.MATH.CONTENT.8.SP.A1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

Content Objectives:

Students will be able to graph and analyze a scatter plot for bivariate measurements. Students will be able to answer questions involving scatter plot.

Language Demand:

Vocabulary: Univariate, bivariate, functions, first difference, graphing representations, and scatter plot

Syntax: Graphs (Cartesian grid) and tables, slope intercept formula, linear function equation.

Discourse: The wording of the questions in part 3 of the worksheet and instructions encourages students to use the vocabulary of univariate,biavariate,functions,first differences, and does not explicitly tell which function/regression to calculate (run) or will fit the collected data.

Function: Collect data and then plot on a scatter plot.

Language Objectives:

Students will be able to use the vocabulary to describe and explain the data collected and plotted.

Learning Targets:

"I can gather data, plot that data on a scatter plot, and interpret what a scatter plot means."

Assessment:

Assessment Indicators:

Participation, who is using the manipulatives and how, asking questions, working together, and etc. The students will also be using notes, and whether they are using numbers of measurements, such as seconds, to describe what the perimeter is. Students will also be using part 3 questions and class discussion of the worksheet to demonstrate what they learned and what they need additional guidance and scaffolding in order to fully comprehend the objectives and central focus.

Assessment Methodology:

These assessments will be used to see if students understand the concepts, if they are lost, or if they are still having difficulties with the competencies taught in the previous lessons. Also, it allows the students to voice their opinions and what they still need assistance with.

Evaluative Tool:

- Check list
- Notes sheet
- Exit slip

Differentiation Plan:

Struggling Students:
Math partners will be set up so that students are either at the same level or have a student that can be of assistance to the student and not leave them behind. That way the students who are struggling do not see that there are any extra accommodations for them and they can feel like a typical student in the class.
ELL Students:
The ELL students will also be given partners who can either speak their language and English well, or a student who will not leave the student behind on the partner work. This way both students can get involved with the hands on lesson. The ELL students, if preferred, will be given a graphic organizer to keep track of their notes in they want.
Special Education Students:
The students receiving special education services will be given partners, or accommodations that is appropriate to their IEP and/or 504 plan and other structure approved or set in place by the special educational department, who will assist them through the partner work without leaving them behind, and the students will be given graphic organizers to help their organize their notes and direct their thinking. Any

accommodations will be made for the student if the activity needs to be modified in order to make it accessible and doable for the student.

Delivery (Model, Method, or Instructional Strategy):

Interactive modeling

Procedures:

Anticipatory:
Make prediction of how the data will appear. Numbering off students of when it will be their time to join the circle. Assigning a student to run the stopwatch.

PreTeaching:
Make sure students have the necessary materials in order to write down the data that is taken during the activity.

During Teaching:
Have students communicate with each other when answering the questions in part 3 of the worksheet. When students get done recording they can begin discussing what is happening to the amount of time when an additional student is added to the circle.

Post lesson:
End of class discussion of the class going over the questions from the worksheet.

Check for understanding:
After discussion students would be able to describe the conceptual understanding of bivariate measurement in the class discussion and exit ticket. If they do seem to fully grasp, it would indicate that the lesson and activity would need to be modified. Checking work and also circulating around throughout the small groups when they are filling out the questions in part 3 of the worksheet which will provide indicators for myself if the students are fully comprehending the concepts and learning targets.