Mini Lesson Graph Day 3

# Breakthrough Denver

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| **Getting Yourself Ready** | | | | |
| **Materials**:  VIPs  Computer + Power Cord | | **Your Preparation**: Have a graph about adaptation ready  Graph powerpoint  Have homework ready  Graph homework | | **Agenda: Introduction to graphs (10 minutes) Graph details (10 minutes)** |
| **Getting Your Students Ready** | | | | |
| \***Do Now**: Why do plants and humans need each other? | | | | |
| **Objective**: *Today you will be able to correctly label a graph (title, x/y-axis, units)* | | | **Proving behavior**: *by writing down correct labels given several graphs.* | |
| **Purpose**: *We are doing this to develop skills in creating scientific graphs.* | | | | |
| **Teaching** | | | | |
| Step 1:  Which is the x-axis, which is the y-axis? | Say: Use graphs powerpoint to show following steps. What is an axis? X is sideways, Y is up and down. Easy way to remember: the letter “y” goes up and down, show line going down from y. X-axis is the other one. Y to the sky!!!  See: Draw letter y with the line going down.  \*Do: Draw letter y on the side of their worksheet to help them remember. | | | |
| Step 2: Labeling the Y-axis | Say: Briefly review dependent/independent variables. Y-axis is always the DV. DV is what is being measured (distance, weight, height, etc.)  See: I made paper airplanes with different amounts of paperclips and measured how far they flew. What was the DV? Distance. Label graph.  \*Do: Use one of the IV/DV homework questions to label their own graph for the Y-axis. | | | |
| Step 3: Labeling the X-axis | Say: What was the IV for the paper airplanes? # of paperclips. IV goes on the X-axis.  See: Label the X-axis.  \*Do: Use the same hw problems to label X-axis. | | | |
| Step 4: Don’t forget units! | Say: You ALWAYS have units. What is the unit for x-axis? Paperclips. What is the unit for y-axis? Inches.  See: Label units in parentheses.  \*Do: Label their units. | | | |
| Step 5: Title | Say: How do you write a title? Title is not the same as the subject, or the topic of the graph. It must say what you are measuring. Easy way to title a graph: (X) vs. (Y)  See: Title graph as Number of Paperclips vs. Distance  Do: Title their graph as X vs. Y | | | |
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| **Practice** | | | | |
| \***Structured Practice** (3-4 additional examples led by teacher with gradually quickening pace, helping students approach automaticity by manipulating time, materials, and group size) | | | | |
| Time:  Materials:  Group Size: | Review everyone’s work. Design graph for the next IV/DV homework question. Pass out VIP.  1. Identify X and Y axis  2. X = IV and Y = DV  3. Label with units  4. Title (X vs. Y) or (IV vs. DV) | | | |
| Time:  Materials:  Group Size: | Do another graph independently. Review as a class. | | | |
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| \***Guided Practice** (the proving behavior of the objective monitored by the teacher) | | | | |
| Assignment: (from proving behavior) | | | Criteria for Mastery: | |
| Independent Practice (Homework) | | | | |
| Explain Homework:  Worksheet: Design a graph for the last IV/DV homework question. | | | | |
| **Closure** | | | | |
| Explain Closure: Why is it important to have standards for graphs? What would happen with no units? | | | | |

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| **VIP** | | |
| 1. Y to the sky! | 2. X = IV and Y = DV | 3. Label with units |
| 4. Title (X vs. Y) or (IV vs. DV) |  |  |