

TGC LOVINGS' UBD Lesson

Lesson Title: Creating Box Plots with Real World Data Subject: Math Prepared by: Ms. Lovings

Materials Needed: Student Activity Sheet, Article, Rulers

Global Competency: Investigate the World

Where is the lesson going?
(Learning Target or SWBAT)

SWBAT display and analyze real world numerical data in plots.

Hook:

Tailored Differentiation:

I will display a box plot of the life expectancies of various countries on the board. Four questions will be posted in four different corners of the room. I will explain that this a box plot (or box-and-whisker plot), which is a type of data display of a set of numerical data. Each student will be assigned a number from 1-4 so that there is at least one of each number at a table to come back to the table to share. Students will go to their numbered corner and work together to answer their question.

After 3-5 minutes, students will return to their table to share out. The class will come together to share answers and address any misconceptions. (Look for evidence of MP1.)

1. What is the scale and interval of the number line below the plot?
2. Are you able to tell how many parts the data set is divided into?
3. What do you think the far right and far left points represent (at the end of the whiskers)?
4. What do you think the line inside the box represents?

- Lower level students will be given pre-folded and marked paper for the activity.
- Students will create a graphic organizer illustrating the process of constructing a box and whisker plot.

Equip:

In their groups of 3-4, students will receive life expectancy data for a specific country. Students will read excerpts from the article "US life expectancy at high, but lags behind many countries: Working to make US healthiest nation". Students will complete a paper folding activity for creating a box plot of their data.

Rethink and revise:

Students will leave their box plot activity on their desk and rotate to another table.

<p>Students should study two box plots at the next table and, on the sticky notes, write one compliment of the graph and one suggestion or constructive comment. Student will focus on accurate components of the graph (title, labeled axis, equal intervals, neatly drawn boxes, etc.).</p>	
<p>Evaluate:</p>	
<p>Students will make adjustments or corrections to their own box plots based on their peers' comments. Volunteers will share their box plot for critique by the class.</p>	
<p><u>Notes:</u> Anticipated misconceptions: Students think that the median must fall at the center of the box. Students may think that the box and whiskers are drawn on the number line rather than above the number line.</p>	<p style="background-color: #cccccc;">Organization:</p> <p>Printed copies of the 4 corners questions Copies of Student Resource sheet Rulers</p>