**Lesson Subject/Title**: Mathematics-Graphing-Survey Data (lesson 3 of 4)

**Date:** Friday, January 24, 2014

**Grade Level:** Second Grade

**Teacher:** Kelly Bing

**Time:** 1 hour

**Student Learning Objectives:**

1. Students will be able to create their own survey question to collect data on a topic of their choice.
2. Students will be able to create and accurate label a tally chart in order to collect their data.
3. Students will be able to collect data by asking their peers a survey question of their choosing.
4. Students will be able to correctly communicate the results of the survey through tally marks on a tally chart.
5. Students will be able to interpret the data, come up with totals, and make observations about the data collected.
6. Students will be able to independently create analytical questions about their data.
7. Students will be able to answer their own questions as well as their peers questions about their data.

**Common Core Standards:**

* [CCSS.Math.Content.2.NBT.A.2](http://www.corestandards.org/Math/Content/2/NBT/A/2) Count within 1000; skip-count by 5s, 10s, and 100s.
* [CCSS.Math.Content.2.NBT.B.5](http://www.corestandards.org/Math/Content/2/NBT/B/5) Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
* [CCSS.Math.Content.2.MD.D.10](http://www.corestandards.org/Math/Content/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 problems1 using information presented in a bar graph.
* [CCSS.Math.Content.1.MD.C.4](http://www.corestandards.org/Math/Content/1/MD/C/4) Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**Materials:**

1. Math journals
2. Graphing Worksheet (framework)
3. 2nd Grade Lost Teeth Graph (adapted from Georgia Common Core Math Curriculum)
4. Pencils
5. SMARTboard

**Anticipatory Set/Introduction:**

Gather whole class on the carpet. Review vocabulary necessary for the lesson: graphing, data, tally chart, and survey question. (3 min)

**Procedure:**

Use SMARTboard to display the 2nd Grade Lost Teeth survey, bar graph, and questions from the day before. Discuss what the survey question might have been and how they got their data. Remind students about the types of questions you can ask about survey data. (5 min)

Dismiss class to get clip boards and their tally chart worksheet from yesterday. Explain data collecting procedures and then let students ask their survey questions to the students. \*Set timer (15 min)

Once the timer has gone off, ask students to return to their seats and take two minutes to look at their data and total the amounts for each category. (2 min)

Use a student example and review types of questions that you can ask about data. What are you trying to figure out? What are you asking? How can you compare? What conclusions can you draw? (3-5 min)

Let students spend independent time coming up with as many questions about their data as they can. (rest of class or second day)

\*\*Extension Activity: Flip the paper over and create a pictograph or bar graph to display their data in a clear and precise way for others to use. Include a title, scale, key, and labels.

\*\*Intervention/Adaptations:

1. Only focus on basic questions directly related to the data.
2. Only need 2-4 questions instead of 6.
3. Work in partners for questions.
4. Ask and answer questions orally instead of written.

**Closure:** (Gather on carpet with completed Tally Chart worksheets)

Today we learned about where data comes from, how to collect data, and how and why it is important to ask and answer questions about data. As an exit ticket today, can you think of one or more situations when taking a survey and looking at (analyzing) data would be useful in today’s world? Example: If I (your teacher) am planning the end of the year picnic where we are going to play games outside…what kind of survey would I want to take? Why would it be important for me to know what games you like? What kinds of questions could I ask to help me make important decisions?

**Assessment Strategies:**

Informal assessment through observation during independent work time.

Formal assessment by their written work on the Tally Chart worksheet.

**Strategies/Accommodations for Students:**

1. Math resources in the front of their math journals (ie: number line, 120 chart, number words, etc.)
2. Tally Chart worksheet used as a framework or guideline with fill-in the blank areas.
3. Extension and Intervention options provided within the lesson framework that still works towards goals and standards.