Tosha Humphrey

2nd Grade Math Lesson Plan

**TN STATE STANDARD:**

**[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.

**OBJECTIVE:**

I can show data on a tally chart and a bar graph.

**STUDENTS’ CURRENT KNOWLEDGE:**

Students have been introduced to a tally chart and a bar graph in 1st grade. We have reviewed how to use tally marks while collecting data. Students have been exposed to different types of graphs. Students will use their knowledge to show data in a tally chart and transfer the information to a bar graph. Students are currently able to read a bar graph by counting each colored part of a particular bar within the graph.

I**NSTRUCTIONAL PROCEDURES**

Introduction/Connection to Prior Knowledge: I will open the lesson by reviewing today’s math agenda. I will activate students’ prior knowledge through the use of a BrainPop video. The video will also help to engage students in today’s math focus. I will stop the video and prompt students with questions and partner talk. We will refer to our learning objective to direct our goals of the lesson.

Direct Instruction/Model: I have previously modeled how to read information in a graph to answer questions. I have also modeled how to record data in different types of graphs. Using a flip chart I have made for this lesson, I will model how to use my sorting mat to sort jellybeans by color. I will record one tally mark, for every jellybean I have, in the appropriate part of the tally chart. I will show data using a bar graph by shading in one box, per color, for every tally mark. I will model questioning as I am completing today’s learning expectations. I will model how to pay close attention and be careful when transferring data. I will emphasize that I need to double-check my work.

Guided Practice /Partner Practice/Informal Assessment:

Today, we will practice hands-on learning by using jellybeans to

1. Sort data
2. Record data in a tally chart
3. Transfer data from a tally chart to represent the data on a bar graph

Students will work with small 1-2 partners during the we-do portion of the lesson. I will inform students of their expectations in groups:

1. All partners are expected to help sort the jellybeans by color.
2. Reverse Order Goes 1st: Partners are expected to alternate recording tally marks for each color.
3. Each partner will transfer their data to create their own bar graph by shading in one box, per color, in the appropriate part of the bar graph.

While walking around, I will use questioning, listen to partner talk, and observe partner work to assess comprehension and differentiate my instruction as needed. I will remind students to double check the data on their and their partner’s tally chart when transferring the data to their own bar graph. I will also remind students that they need to make sure their bar graph matches their partner’s bar graph since they are using the same data. While students respond, I will ask, “How do you know?” “Do you agree/disagree?” “Does anybody have something they would like to add?” I will ask questions to informally assess and clarify each student’s understanding of the concept: What is our data? Does our data on the tally chart match the data represented on the bar graph? How can we use the numbers on the bar graph while recording our information? Do we have to count each space or can we use the numbers? How can we skip count using tally marks?

Centers:

1. Mrs. Humphrey: Students will work on answering questions using data on a bar graph. Students will use accountable talk to support their reasoning. Students will practice skills learned from the R.I.D.E. strategy.
2. Sweet Jellybean Questions: Students will extend their learning by answering questions related to their graphs from the you-do portion of the lesson.
3. My Graphing Booklet: Students will use data collected from the previous day’s survey question they created. They will use the data to make 2 types of bar graphs, a pictograph, and write about their graphing.
4. 16-3 Math Magazine: Students will practice transferring data from a tally chart to make a bar graph. Students will also answer questions related to the data.

Differentiated Independent Work:

I will differentiate the amount of jellybeans placed in individuals’ Baggies for the you-do portion. I will place larger amounts of jellybeans in blue bags for my blue group; smaller amounts of jellybeans in green bags for my orange and yellow groups, and an average amount in pink bags for my pink group. This is to help those who require additional time as well as those you finish early to practice today’s learning goal. I will also differentiate my small group materials and questions to help students reach success of graphing learning goals. My two struggling groups will focus on the Teeth Lost by 2nd Graders bar graph and questions. Questioning will be based on individual learning needs within the group. My advanced and on-level groups will be focusing on reviewing pictographs with the Pictograph: Favorite Sports handout. Again, questioning will be based on individual learning needs within the group. There will be a high focus on the R.I.D.E. strategy in the blue group and reasoning/logical thinking in both the pink and blue group.

Formal Assessment/Close: To close the lesson, I will remind students of today’s learning goal; “I can show data on a tally chart and a bar graph.” I will inform students of my expectations for the you-do portion of the lesson. I will review what students will need to do to complete the you-do portion assessment. I will also allow students time to reflect on their learning through the use of a post-it response. (I will use this assessment to determine individual success.) Students will need to represent data on both a tally chart and a bar graph. Student work must match for every color on the tally chart and the bar graph to receive an E. Students may miss up to 2 colors to receive an S, i.e. the tally chart shows 5 pink jellybeans, but the student colored in 6 spaces on the bar graph.

Questioning: What is a tally mark? How can we transfer data from a tally chart to a bar graph? What is data? What is our data we are using to graph? What is a survey? Does your tally chart match your bar graph? How can we present the same data in different ways? How can we use graphs to answer questions? How can we skip count using tally marks? How does a bar graph help us to view information? Why do you think the title of the graph is important? Why do you think labeling a graph is important? What is the question asking up? What helped you to determine the operation? What do we need to look at first when reading a pictograph? Why?

What key terms helped you?

Learner Involvement: During the beginning of the lesson, students will be asked to activate prior knowledge. Students will review the learning objective to direct their learning. In the middle of the lesson students will participate by working with a partner to sort, record, and categorize data. Then students will put the objective into practice independently at their seats by sorting their own data (bag of jellybeans), record their answers onto a tally chart, and finally use their tally chart to represent data in a bar graph.

Materials: flipchart, pencils, jellybeans presorted into cups for we-do, jellybeans presorted into bags for you-do, crayons, 1 sorting mat per group for we-do, 1 sorting mat per student for you-do, 1 tally chart per group for we-do, 1 tally chart per student for you-do, 1 bar graph per student for we-do, 1 bar graph per student for you-do, 16-3 Envision Math Magazine, Sweet Jellybean Questions, Students’ graphing booklets, highlighters, Handout: Pictograph: Favorite Sports, Handout: Teeth Lost by 2nd Graders bar graph and questions

Learning Environment: Students are familiar with the classroom expectations and rules. Modeling will provide a clear guide for student group work and individual seatwork. Talking with, encouraging, and redirecting when necessary will ensure all students are on-task. Supplies will be easily accessible and ready to use so no instructional time is lost. Having students working at their desks located next to their Number Partner and near similar leveled-learners allows for conversation, motivates and encourages children to share their ideas. The room is filled with student work and class writings. This communicates to students that their work matters and that reading/writing is valued. The room also is filled with academic materials to help students achieve academic success.

Classroom Layout: The classroom layout is safe and predictable for all learners. Students are familiar with transitions and where supplies are located. Students are seated in an order that promotes the highest potential for success.

Grouping: I have grouped students to be seated next to their Number Partners so they are next to someone who will support them or whom they can support. Small groups have been arranged through comprehension, math ability, as well as similarities in Discovery Ed. data. 1-2 groups are arranged with partners who will help students in a way that will enhance the lesson for both children.

Extension/Alternate Plans: If students finish early, they may complete any unfinished work in their black folders located in their desk or continue to work on their graphing notebook. They also will have the opportunity to practice this week’s learning goal through numerous centers. Later this week, students will apply their learning from today’s lesson on their Topic 16 test.

Evaluations/Reteaching/Informing Upcoming Lessons: I will informally assess their understanding when walking around while they work with their 1-2 partners to sort and record data. I can see who can do this and who is still having trouble through informal auditory assessment. In addition to observing understanding, I will be able to redirect students as needed. I will ask questions and listen to the students’ answers to also informally assess their understanding. Informal assessment will continue as I work with students during small group. Formal assessment will occur as students complete the you-do portion of the lesson. At the end of this lesson, 80% of students will show mastery by representing data on a tally chart and bar graph. I will also access students’ ability to use information in a graph to answer questions during center rotations. This formal assessment will drive future lessons and inform me of students’ mastery of the concept. If students have not mastered the objective, future lessons will allow them to practice this skill again. If students have mastered the objective, future lessons will allow them to expand their knowledge of a topic sentence and details. Re-teaching: I will pull back struggling students to work in small group based on their performance during today’s lesson.