

## **DATA PRESENTATION**

3.20.2019

## **Subject**

#### Mathematics

#### **Prepared By**

[Instructor Name]

#### **Grade Level**

4

#### Overview

This lesson plan covers teaching content for;

- 1. Understanding the concept of data Presentation.
- 2. Understanding and Preparing a tally of data
- 3. Draw bar graphs and pictograms of information collected locally.
- 4. organize, represent, and interpret data

## **Objectives**

Students should be able to;

- 1. Prepare a tally of data
- 2. Draw bar graphs and pictograms of information collected locally.
- organize, represent, and interpret data using a bar graph with at least three categories.

# **Guided Practice**

#### Day 2/ Lesson 2: 20 Mins

 The teacher will present four different kinds of foods on the board.

## **Activity Starter/Instruction**

- Ask pupils to gather information from each of the other pupils in the class. They could find out how many family members each pupil has.
- 2. Ask them to create a visual display of the information they have gathered.
- 3. They may choose to display the data in any form other than in the form of numbers.
- 4. This activity requires quite a bit of time as pupils need to gather information.
- 5. Explain the following key word to the students
- 6. tally: a recorded count of scores
- 7. pictogram: a graph using pictures to represent numbers
- 8. data: a set of facts or numbers
- table: information arranged in rows and columns
- 10. graph: a diagram that represents data

#### **Teacher Guide**

#### Day 1/ Lesson 1: 15 Mins

Interpretation and representation of data in tallies.

- A tally chart is a simple means of recording small samples of categorical data in an organized way.
- The information gathered by a tally chart is to be separated into categories. Categories might be favorite ice cream flavors, number of holidays in each of the twelve months, or shoe size.
- Students can get data through a survey, asking the same question(s) of different people, or by witnessing events over a period of time.
- 4. As you gather information, you make tally marks on your chart.
- 5. For each response, we mark a single vertical line, like a lowercase letter "L".
- 6. When you reach the fifth data point, the notation changes slightly; instead of continuing to use vertical lines, every fifth data point is a diagonal slash across four vertical tally marks.

## Materials Required

- Whiteboard
- Pencil
- Tally table chart
- Square book or graph book
- Ruler

#### Additional Resources

- $\\ \underline{\text{https://www.storyboardthat.com/lesson-plans/teach}}$
- https://za.pearson.com/content/dam/region-growth/ africa/TeacherResourceMaterial/9781447978428 mC
- http://www.cpalms.org/Public/PreviewResourceLesso
- https://www.education.com/download/lesson-plan/gdata-tally-marks.pdf
- http://academic.sun.ac.za/mathed/malati/3PrimDat.p

#### **Additional Notes**

- 2. Then ask each student to place a tally mark next to his or her favorite food.
- 3. When all have done so, ask what kind of food was named most often?
- Now display a large bar graph with the four different kinds of foods.
- Label the columns with foods named and fill in the number of squares in that column that is equal to the number of tallies each food received.
- 6. Now ask the students to compare the columns of the graph by posing a question such as, "How many more students liked rice than beans?"
- Next, encourage the students to generate a similar question, and call on their peers to answer them.

#### **Guided Practice**

#### Day 3/ Lesson 3: 30 Mins

- 1. Draw a table on the board to summarize the ages of the pupils in your class.
- 2. Adapt the first column to reflect the actual ages of your pupils.
- 3.Complete the table by asking your pupils to put up their hands for questions such as 'How many of you are girls and are 10 years old?' and so on.
- 4. Make sure that the total number of pupils matches the number of pupils present in your class.
- 5.If your class has narrower age gaps, adapt the first column to reflect the actual ages of your pupils.
- 6. You should aim for about six age groups. If you have a narrower age
- 7.range, then use smaller age divisions.
- 8. Now draw a bar graph for the girls and a block graph for the boys.
- 9. Discuss the differences between the two graphs, not only in terms of bars versus blocks, but also in terms of the shapes of the graphs.

7. It is an easy visual cue to see the data organized into groups of five. Have your students practice their skip-counting to get the totals for each category!

#### **Teacher Guide**

## Day 4/ Lesson 4: 15 Mins

- 1. Tell your class that they have created a bar graph using the four steps.
- 2. Let them know that they are going to follow the same steps to create their own bar graph about the class's favorite foods.
- Remind students that they will first need to collect the data on their classmate's favorite foods.
- 4. Give each student or group a Tally Chart.
- 5. Allow 2-3 minutes for students to walk around the room and collect data.
- Once data is collected, hand out graph paper. Allow students times to organize and graph their data.
- Rotate around each group to clarify instructions and monitor for understanding.

#### **Assessment Activity**

#### **Assessment Activity**

 You are going to conduct a survey to find out what jobs your classmates would like to do when they are adults.

#### **Assessment Activity**

- 1. In math journals or on a separate piece of paper, have students write the four steps to creating a bar graph.
- 2. Ask students to create their own question they would like answered through the steps.

- Collect the data and write the information in this table. You might need to add some more rows.
- 3. Which is the most popular job? How many children would like to do this job?
- 4. How many different jobs are shown in the table? Try to group those jobs that are similar. For example, you could group nurses, doctors, physiotherapists and paramedics as medical jobs.
- 5. Now use square paper or graph paper to draw a bar graph using your new groups. Remember to give your graph a title.
- 6. What is the most popular type of job?

  Compare this to your answer in question 4.
- 7. Was it useful to group the data in this way? Explain

## Summary

## **Review and Closing**

- 1. Review your class' Favorite Foods bar graphs.
- 2. Ask questions to guide discussion such as: Which food did you find was the class's favorite? Which was not very popular? How many people liked [a particular kind of food]?
- 3. How many more people liked [one kind of food] than [another kind of food]? What is something you could use this graph for?
- 4. The students will meet with other classmates to study each other's bar graphs.