

Name: Linda Barnett

Title: Representing Survey Data

Grade Level: 1st grade

Time Frame: 7 class periods/ 1 hour each

School/District: Machan, Creighton Elementary School District

Subject Area: Math and Technology

Summary:

During the first quarter of the first grade students are required to collect data from their peers and represent that data on paper. For this lesson students will choose a survey question to ask their classmates. For example, students could ask which animal they like better, a cat or a dog. Then students will represent the data they collect from their peers using the Kid Pix program. Students will also write a sentence that describes the data they have collected and represented.

Standards:

Math:

- 1M-F1 PO 1 Make a model to represent a given whole number
- 2M-F1 PO 1 Collect and record data from surveys or experiments
- 2M-F1 PO 2 Organize information from surveys or experiments
- 2M-F2 PO 1 Make and label a graph (horizontal bar, vertical bar, picture graph or tall chart from organized data)
- 2M-F2 PO 6 Draw conclusions (e.g., valid decisions, conjectures and predictions) from graphed data

Technology:

- 1T-F2 PO 2 Use multimedia resources.
- 3T-F3 PO 1 Use a pre-designed template or stationery to publish a document
- 4T-F2 PO 1 Plan, design, and present an academic product to classroom or community.
- 6T-F1 PO 2 Based on a problem selected by the student, use technology to :
 - (a) collect data
 - (b) interpret data

(c) express a solution to the problem

Objectives:

At the end of this lesson students will be able to:

1. Compose a survey question.
2. Collect data from their peers.
3. Represent data using pictures to make a picture graph.
4. Make an conclusion about the data collected.

Assessment:

Students will be assessed using a four point rubric. Depending on student performance in each area the student will receive a rating of 1-4, 4 being the highest rating. A rating of a 4 would demonstrate a clear understanding of the objective. A rating of a 3 would demonstrate an understanding of the objective. A rating of 2 would demonstrate an unclear or misunderstanding of the objective. A rating of 1 would demonstrate no understanding of the objective or no attempt. Below are the criteria on which students will be rated.

Student has an appropriate survey question.	1	2	3	4
Student collects data accurately.	1	2	3	4
Student represents data accurately.	1	2	3	4
Student writes an appropriate conclusion about data.	1	2	3	4

Prerequisite Knowledge:

Before beginning the surveys students will have spent a lot of time doing surveys as a class. They will be given homework in which they must survey their family about the kinds of foods they like. Students will have also spent a lot of time becoming familiar with the computers. They will practice using the tools and writing in the Kid Pix program.

Learning Environment:

The students will be using the computers in our classroom which consist of 5 iMacs, a G4, two laser printers, and a television that can be used to project presentations for the entire class to see. Students will work in groups of 6 on the computers for 30-45 minutes at a time.

Procedures:

Period 1: This lesson will require one hour of in class work.

The teacher will have the students think of a question that they would like to ask their peers. For example, how many students prefer dogs to cats or who likes rainy days more than sunny days. The teacher will model some questions that students could use to survey their peers. Each student will write their question down and show it to the teacher before beginning their data collection. Students will be instructed to only chose two or three items (ie. pizza, ice cream, and cake) in their question. The students will then share the question with the class. Then students will be given a blank piece of paper to use as they survey their peers. Students will survey each boy and girl in the classroom.

Period 2: This lesson will require five hours of in class work during five days.

After each student has collected their data the teacher will review how to make a picture graph to represent the data. The teacher will use the Kid Pix program to make the picture graph using stamps or the tools to draw. In groups of 6, students will make picture graphs to represent the data from their surveys. After making the picture graph students will write one sentence that describes the results (ex. More students like to go swimming than to the park.)

Period 3: This lesson will require one hour of in class work.

Each student will share their survey question with the class. He/she will share the results from their survey and the picture graph and their conclusion about the survey with the class.

Tools and Resources:

Number of computers: Six.

Software: Kid Pix

Peripherals: Presentation television

Modifications for Differentiated Instruction:

Special Education: Students who struggle with counting, one to one correspondence, drawing, and writing a complete thought will be helped one

on one by a teacher or a sixth grade helper.

SSL: SSL students may ask their question to their peers in English as well as write their conclusion in English.

Gifted: Students who demonstrate a clear understanding of the task will be asked to make a bar graph of their survey data. They can use the Graph Maker program to make graphs.