Graphing Pets

Suggested Grade Levels: 4-6
Subject: Math
Character: Kindness/Empathy

Materials and technology to be used:

- Whiteboard/markers – **x1**
- Sticky notes – **x2 per student**
- Writing utensil – **x1 per student**
- "Statistics and Opinions About Pets" worksheet – x1 per student
- "Graph of Pet Poll Results" worksheet – x1 per student

Objective(s):

Students will learn how to use a double bar graph by polling other students about their feelings and experiences with pets. Students will also have the opportunity to think about how pets affect their lives.

Anticipatory Set/Hook:

Have a very basic bar graph set up on the board (i.e.. "Favorite Milkshake Flavor" and just have four variables on the x-axis: Chocolate, Vanilla, Strawberry, and None; and then label by 5's on the y-axis). Quickly ask students what their favorite milkshake flavor is by raising their hands. Write these numbers off to the side and then graph their answers using a bar graph. Step back and allow a minute for students to view the final graph. Ask, "What kind of graph did I just create?" *Bar graph!* Tell students that today they are going to get to practice using bar graphs by polling their fellow students about their feelings and experiences with pets. They will also learn about how pets can affect our lives.

Lesson Beginning:

1. Ask students to raise a hand if they have pets at home. Write this number on the board.

2. Pass out a sticky note to each student. Ask students to answer the following question on the sticky note: "What do you like about pets?"

   - After students have answered, they may share their note with a neighbor and then place it on the board. Read over all the notes.

   - Reiterate to students that it is okay if they do not like pets at all, however, it is important that they are always respectful to them.

3. Ask students to turn and talk with a neighbor: "What is the most positive experience that you have ever had with a pet? If you have not had one, is there a particular pet that you wish to meet one day?" Call on volunteers to share. Discuss with the whole group.

4. Discuss how pets enrich our lives. List out examples on chart paper and display this chart at the front of the room...

   - EX: Pets bring us happiness! They keep us company. They make us laugh. They can protect us. Pets are non-judgmental. They encourage us to exercise. They relieve stress. Pets can perform services for people with disabilities. etc.....

5. Ask: "Why do you think so many people have pets?" Call on a couple of volunteers to answer.

Middle of Lesson:

1. Review (or teach) what a bar graph is according to your district's standards.

2. Explain that each student will work independently on this project.

3. Give each student a "Statistics and Opinions About Pets" worksheet. Each student will need to take a turn interviewing every peer in their class to gather data on...

   a. How many/what kinds of pets everyone has.
   b. If you could be a pet, what would you be?

   - Somehow the environment in the classroom will need to be controlled so that each student will have an opportunity to briefly question everyone else in the class. You may wish to complete this step of the lesson throughout an entire day (prior to the lesson) and have smaller groups of students questioning their peers during different times such as

small group rotations, study halls, silent reading time, etc. A class roster of names for each student to record answers on may also be helpful.

4. Once all data has been gathered, and everyone has been interviewed, students will create a double bar graph on the graphing worksheet, "Graph of Pet Poll Results."

-For each category (x-axis, types of pets), one bar should be colored solid, and one bar should be filled with dots, to differentiate them.

End of Lesson:

1. Once all graphs are finished, have the class discuss their findings:

   a. *What results did you have with your graphs?* Go over each category and questions.
   b. *What was the most surprising result of your findings?* Turn and talk with a neighbor.
   c. *What was the most interesting result of your findings?* Share with a different neighbor.
   d. *Overall, what did you learn about how your fellow classmates feel about pets?* (Have all students answer this question in writing on a sticky note or other form of "Exit Ticket" and turn it in.)

2. Collect all graphs and "Statistics and Opinions About Pets" worksheets to be graded.

Closure:

1. Provide students with 1 minute to reflect on what they have learned today. Ask: "What do you think our world would be like without ANY pets?" Allow multiple students to share their thoughts out loud.

Extension:

1. If time, have the class convert their bar graph into a different type of graph – line graph, scatter plot, pie chart, etc.

Information adapted from the Denver D. Friends League

Name: _____

Statistics and Opinions About Pets

1. **What kinds of pets do you have and how many do you have of each?** Interview each student in the class and place the appropriate number of tally marks in each box below…

Dogs	Cats	Small Pets (rabbits, gerbils, guinea pigs, mice, hamsters, rats)	Birds	Reptiles or Amphibians	Fish	Other (farm animals, insects, etc.)	None

2. **If you could be a pet, what would you be?** Interview each student in the class and place the appropriate number of tally marks in each box below…

Dogs	Cats	Small Pets (rabbits, gerbils, guinea pigs, mice, hamsters, rats)	Birds	Reptiles or Amphibians	Fish	Other (farm animals, insects, etc.)	None

3. **Pick two classmates. Why did they choose to "become" the pet that they chose?**

Graph of Poll Results

Name: _____

Using the data you gathered, create a double bar graph. For each animal category, draw a solid-colored bar that indicates how many pets everyone in the class has. Draw another bar next to it with dots in it, to indicate what type of pets they would like to be.

Our Class Pets

	20	18	16	14	12	10	8	6	4	2	0
Dogs											
Cats											
Rodents (rabbits, gerbils, guinea pigs, hamsters, mice, rats, etc.)											
Birds											
Reptiles or Amphibians											
Fish											
Other (farm animals, insects, etc.)											
None											