

2nd Grade Math: Making Picture Graphs

Introduction

Creating picture graphs (or pictographs) is a fun and engaging way for students to represent and understand data visually. In this lesson, students will learn how to collect data, choose appropriate symbols, and create their own picture graphs. This skill helps them organize information and communicate findings clearly.

Key Concepts

- **Picture Graph:** A graph that uses images or symbols to represent data.
- **Data Collection:** The process of gathering information or responses from a group.
- **Scale:** The value each picture or symbol represents in the graph (e.g., each picture could represent one item or a group of items).

Steps to Make a Picture Graph

1. **Choose a Topic:** Decide what you want to collect data about (e.g., favorite fruits, types of pets, favorite colors).
2. **Collect Data:** Ask classmates or friends to share their preferences on the topic. Make a tally of their responses.
3. **Decide on a Scale:** Determine what each picture or symbol will represent (e.g., one picture = 1 item or one picture = 2 items).
4. **Draw the Graph:** Create a chart with categories and draw the corresponding pictures to represent the data collected.
5. **Label Your Graph:** Include a title and labels for each category, along with a key to explain the scale used.

Example of Making a Picture Graph

Topic: Favorite Ice Cream Flavors

1. Data Collection:

- Ask 10 classmates their favorite ice cream flavor.
- Responses: Chocolate (4), Vanilla (3), Strawberry (2), Mint (1).

2. Decide on a Scale:

- Each ice cream cone symbol will represent 1 favorite flavor.

3. Draw the Graph:

Flavor	Picture
Chocolate	   
Vanilla	  
Strawberry	 
Mint	

4. Label the Graph:

- **Title:** Favorite Ice Cream Flavors
- **Key:** Each ice cream cone () represents 1 favorite.

Practice Problems

1. **Problem 1:** Create a picture graph about favorite fruits. Survey your classmates and use fruit symbols (like  for apples) to represent their choices.
2. **Problem 2:** Make a picture graph showing how many pets each student has. Use symbols like  for dogs,  for cats, and  for birds.

Practice Activity

1. **Group Activity:** In small groups, students will decide on a topic, collect data from classmates, and create a picture graph together. Each group will present their graph to the class, explaining the topic, scale, and findings.
2. **Individual Activity:** Students will create their own picture graph at home or in class based on their favorite things, such as sports, hobbies, or snacks.
3. **Conclusion**

4. Making picture graphs helps students organize and visualize data in a clear way. By practicing this skill, they develop a better understanding of how to collect and represent information, which is valuable in many areas of math and everyday life!