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Create a Double Bar Graph (with your own data) Create a Double Bar Graph (with your own data) Students will collect data, create a double bar graph, and interpret the graph by responding to prompts that will get them thinking critically. Students can: determine a suitable scale for data and recording the scale in a key draw picture or column graphs using a scale or key interpret a given picture or column graph using a scale or key Activities to support the strategy Activity 1 – surveying the class Pose the following problem: What question would you ask the class if you were going to conduct a survey to find out: the favourite milkshake flavour the most popular fruit the preferred team game during sport time What if your survey included all students in the school and your numbers were large, how could you display the data for large numbers? Discuss the use of symbols, for example, 10 symbols can represent 100. Draw one car on the whiteboard. One car = 10 Draw two more cars (three in total). What number would be represented now? Change the number of symbols to 4, 8, 11, and so on and students determine the matching number. Repeat, but change the key so that one symbol equals 5 (or 20) and students determine the matching number of symbols to 4, 8, 11, and so on and students determine the matching number. school. types of cars owned by class families the number of cars passing the school in a given time period. Students suggest other symbols that could be used to represent transport themes. Activity 2 – picture graphs Display a variety of tables, with larger numbers for students to discuss. For example This table records the number of tourist buses visiting a town in one year. Tourist Buses Table 1. Students will use the information to complete a picture graph? What are some advantages of using a picture graph? What are some disadvantages of using a picture graph? Because of the large numbers, can we make the task of showing the numbers in a graph easier? Would using a symbol represent more than one object, make it easier to present the large numbers? What number could each symbol equal 5 buses, how many symbols would need to be shown for each month? Add another column to the table to show the number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, what symbol could be used? Tourist buses Month Number of buses, which was a symbol could be used? Tourist buses Month Number of buses, which was a symbol could be used. Students are given the tourist bus table piture graph template (PDF 77.88KB) to graph the bus arrivals during the year. They use the key because there are a large number of buses to record on the graph represents 10 buses. Half a symbol represents 5 buses When students finish their graph, they: work in pairs and discuss some facts that can be obtained from the graph write three questions that could be answered using the information presented in the picture graph. Activity 3 – column graphs This table records the predicted weather in each of the capital cities on one day in February. Capital city weather City Conditions Maximum degrees (Celcius) Adelaide Fine, sunny 29 Brisbane Rain at times 28 Canberra Showers 17 Darwin Few showers 31 Hobart Fine 20 Melbourne Fine 26 Perth Fine 30 Sydney Rain 22 1. Students use the information in the table and complete a column graph showing the predicted weather in each of the cities, You can great your own or use the predicted weather in capital cities table and column graph template (PDF 126.26KB) Discuss: What information is along the horizontal axis? (temperature) What label could be written to match this information? (Temperature oC) What is the difference between each number on the vertical axis? (5) The markers on the vertical axis is marked in 5°C intervals 2. Students use the information in the table to complete the column graph by drawing the missing columns, giving the graph a title and labelling the axes. As the maximum temperature for some of the capital cities lies between the intervals on the temperature scale, students will use information in a table to present a graph, of their choice. The table shows data from the 2012 Olympic Games medal tally and ranks the top 20 medal-winning countries. The 20 most successful nations at the 2012 London Olympic Games Line graphs and double line graphs with a suitable scale; labeling the axes; giving a title for the graph and more are included in these printable worksheets for students of grade 2 through grade 6. Try some of these worksheets for free! Interpreting Line Graph: Easy Line graph and answer the word problems in each worksheet. Interpreting Line Graph: Moderate Line graphs on different themes are shown in these printable worksheets. Interpret the data from the line graph and answer the questions. Interpret the data from the line graph and answer the questions. Interpret the graph and answer the questions. carefully to answer the questions. Drawing Line Graph: Easy In these pdf worksheets, data for which the graph to be represented are given. Read the data, plot points and draw lines to complete the graph. Drawing Line Graph: Moderate The number usage (given data) gradually increases in this level. Plot points on the graph to represent the data and join them to make a line graph. Drawing Line Graph: Difficult Numerous data are used in these worksheets. Attentively read the data and represent it on the grid to draw the line graph. Reading Double Line Graph. Read them and answer the questions. Drawing Double Line Graph Two sets of data are given. 6th grade students need to analyze the data, make a suitable scale and draw double line graph. Label the axes and give a suitable scale and draw double line graph. A line graph is mostly used to show change over time as a series of data points connected by line segments on the coordinate plane. The line graph therefore helps to find the relationship between two data sets, with one data set always being dependent on the y-axis. Line graphs are used to track changes over short and long periods of time or some independent variable. Let's define the various parts of a line graph is all about. 2 Labels The horizontal label across the bottom and the vertical label along the side tells us what kinds of data is being shown. 3 Scales The horizontal scale across the bottom and the vertical scale along the side tell us how much or how many. 4 Points The points or dots on the graph represents the (x,y) coordinates or ordered pairs. 5 Lines The line segments connecting the points give estimated values between th points. Uses of line graphs Line graphs Line graphs are useful in that they show data variables and trends clearly and help us make predictions about the results of data not yet included. They can also be used to show several dependent variables against one independent variables against one independent variables. When comparing data sets, line graphs we interpret line graphs by studying and analysing data from line graphs. Interpreting the line graph data is Making sense of the given data Answering gueries about the data Making predictions on trends, Finding value of one variable given the value of the other and so on. Example 1: The table below shows daily temperatures for New York City, recorded for 6 days, in degrees Fahrenheit. Temperatures In NY City Day Temperature 1 43° F 2 53° F 3 50° F 4 57° F 5 59° F 6 67° F The data from the table below. Value of Sarah bought a new car in 2001 for \$24,000 2002 \$22,500 2003 \$19,700 2004 \$17,500 2005 \$14,500 2006 \$10,000 2007 \$ 5,800 The data from the table above has been represented in the graph below. Example 3: The table above has been represented in the graph below. In Example 1, the temperature changed from day to day. In Example 2, the value of Sarah's car decreased from year to year. In Example 3, Sam's weight increased each month. Each of these graphs shows a change in data over time. Another name for a this type of graph is a line chart. The graph below will be used to help us define the parts of a line graph tells us what the graph below will be used to help us define the various parts of a line graph tells us what the graph tells us what the graph is about. labels The horizontal label across the bottom and the vertical label along the side tells us what kinds of facts are listed. scales The horizontal scale across the bottom and the vertical scale along the side tell us how much or how many, points The points or dots on the graph show us the facts, lines The lines connecting the points give estimates of the values between the points, Now that we are familiar with the parts of a line graph, we can answer some questions about each of the graphs from the examples above. QUESTION ANSWER 1. What is the range of values on the horizontal scale? 1 to 6 3. What is the range of values of v highest temperature recorded? 67° F 7. At what point did the temperature dip? Day 3: 50° F QUESTION ANSWER 1. What is the range of values on the horizontal scale? 2001 to 2007 3. What is the range of values on the vertical scale? 0 to 25,000 4. How many points are in the graph? 7 5. What was the highest value recorded? \$24,000 6. What is the range of values on the horizontal scale? January to May 3. What is the range of values on the vertical scale? 0 to 80 4. How many points are in the graph? 5 5. What was the highest value recorded? 49 kg 7. Did Sam's weight increase or decrease over time? increase example 4: The graph below shows people in a store at various times of the day. QUESTION ANSWER 1. What is the graph about? People in a Store 2. What is the busiest time of day at the store? 1 pm 3. At what time does business start to slow down? 3 pm 4. How many people are in the store at 2:30 pm? 11 6. What was the greatest number of people in the store? 22 7. What was the least number of people in the store? 2 Example 5: The graph below shows the number of teens ages 13 through 19 in Smalltown that have cell phones? 19 years 3. At what age do teens have the least number of cell phones? 13 years 4. How many cell phones do 15 year-olds have? 341 5. About how many cell phones at any age? 642 7. What was the least number of cell phones at any age? 229 Summary: A line graph is useful in displaying data or information that changes continuously over time. The points on the graph are connected by a line. Another name for a this type of graph is a line chart. Exercises: Directions: Refer to the graph below to answer each question. For each exercise below, click once in the ANSWER BOX, type in your answer; and then click ENTER. Your answers should be given as a word or as a whole number. After you click ENTER, a message will appear in the RESULTS BOX to indicate whether your answer is correct or incorrect. To start over, click CLEAR, 1. In which month were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. How many vandals were there in March? 4. In which month were there 24 vandals? 5. 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