**Optional Review of Data Displays**

**(to be used with either lesson 1 or lesson 2, as needed)**

One type of data display that may be used with numerical data is a line plot. A line plot is an extension of a number line, but instead of only being able to put one mark at each point, multiple marks may be used. One x is placed above the number it represents. In the example below, each point on the number line represents the age of a student enrolled in a yoga class. Then an x is placed above the number for each student of that age enrolled. The line plot gives the same information as the table to the right, but it is more visually appealing. At a glance, one can see that 16-year-olds make up the largest group of children enrolled in yoga and that 7-, 12-, and 14-year-olds make up the smallest groups of children enrolled in yoga.

**Line Plot**

**Yoga Enrollment**

**Yoga Enrollment by Age**

|  |  |
| --- | --- |
| **Age** | **Enrollment** |
| 4 | 3 |
| 5 | 4 |
| 6 | 2 |
| 7 | 1 |
| 8 | 4 |
| 9 | 2 |
| 10 | 2 |
| 11 | 5 |
| 12 | 1 |
| 13 | 2 |
| 14 | 1 |
| 15 | 3 |
| 16 | 6 |
| 17 | 2 |
| 18 | 2 |

**X**

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

**Age (in Years)**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**XX**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**XX**

**X**

**X**

**X**

**X**

**X**

**XX**

**X**

**X**

**XX**

One can group data into intervals and record data by the frequency of each interval. This is commonly done with a frequency table or a histogram. Histograms are just like bar graphs except that the bars touch (no space between the bars) and instead of marking just one data point, the numbers along the x-axis mark even intervals. In the table below to the right, age intervals are shown. In the next column, the numbers of students in each age interval are shown. This type of data may also be shown with a tally chart. The numbers in the frequency table below are illustrated in the histogram. Notice that the intervals are the same and the frequencies are the same as in the table. These two data displays are showing the same information about yoga enrollment as the displays above, but they are grouping the data instead of showing it all individually.

**Histogram Frequency Table**

**Yoga Enrollment by Age**

**Yoga Enrollment by Age**

10

9

8

7

6

5

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Frequency** |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |
| --- | --- |
| **Age Interval**  **(in Years)** | **Frequency** |
| 4-6 | 9 |
| 7-9 | 7 |
| 10-12 | 8 |
| 13-15 | 6 |
| 16-18 | 10 |

4-6 7-9 10- 12 13-15 16-18

**Age Interval (in Years)**

Now you try making a line plot. Use the data in the table below about the number of students in Mr. Baxter’s class who have at least one pet at home.

**Students with Pets at Home**

|  |  |
| --- | --- |
| **No. of Pets**  **At Home** | **No. of**  **Students** |
| 1 | 10 |
| 2 | 4 |
| 3 | 3 |
| 4 | 0  **Students with Pets at Home** |
| 5 | 1 |
| 6 | 1 |
| 7 | 0 |
| 8 | 0 |
| 9 | 2 |

1 2 3 4 5 6 7 8 9 10

**No. of Pets at Home**