Graphs

Learning Objectives

• Define the terms: independent variable (IV), dependent variable (DV), y-axis, x-axis, title, and legend.

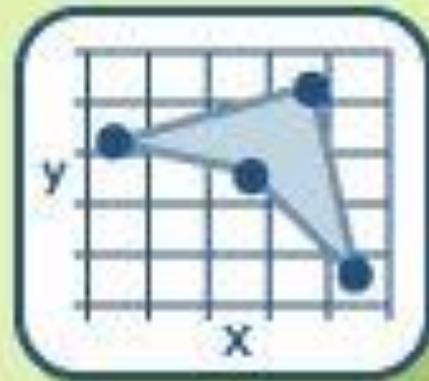• Demonstrate proficiency in creating a graph.

Types of Graphs
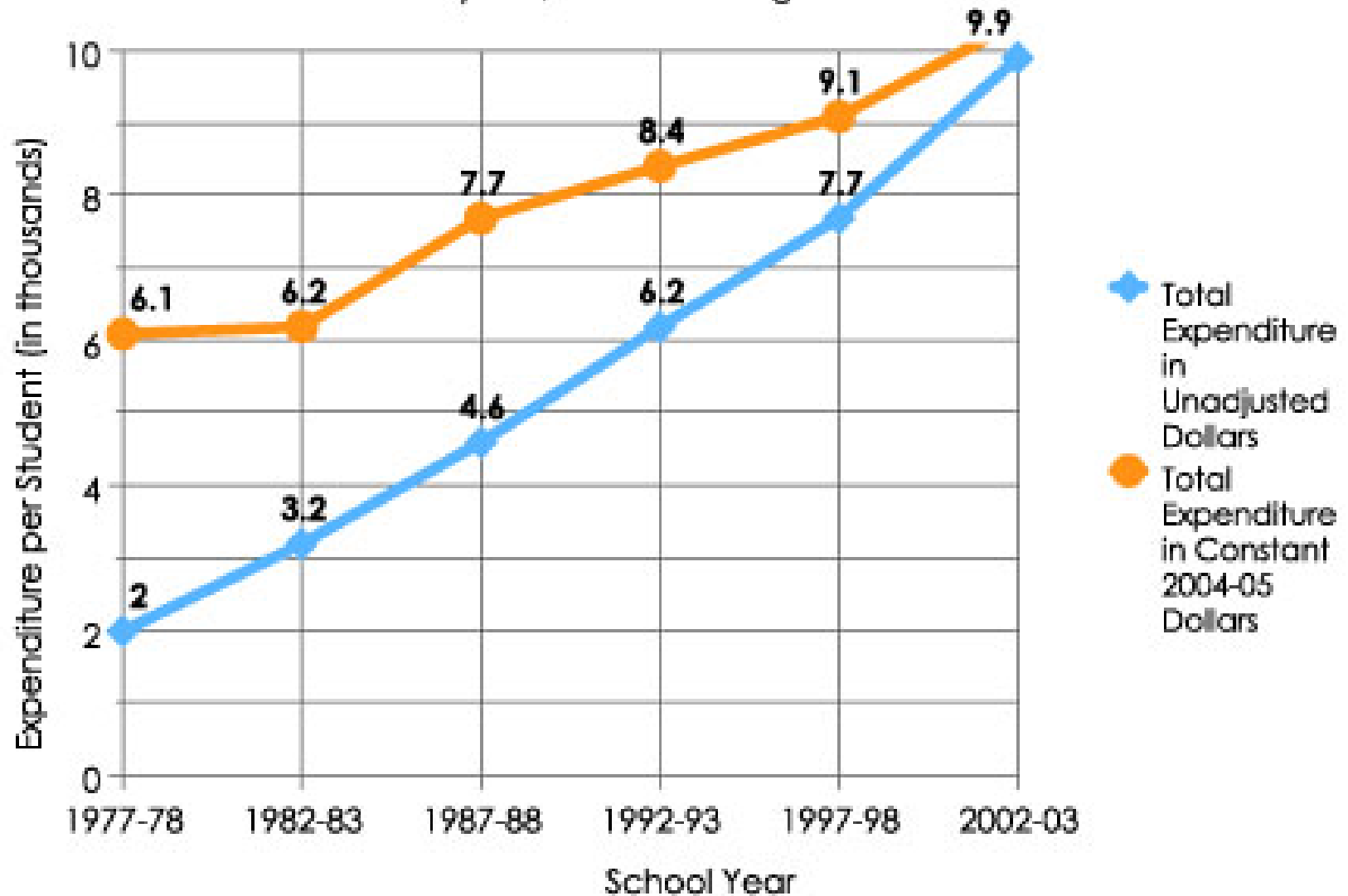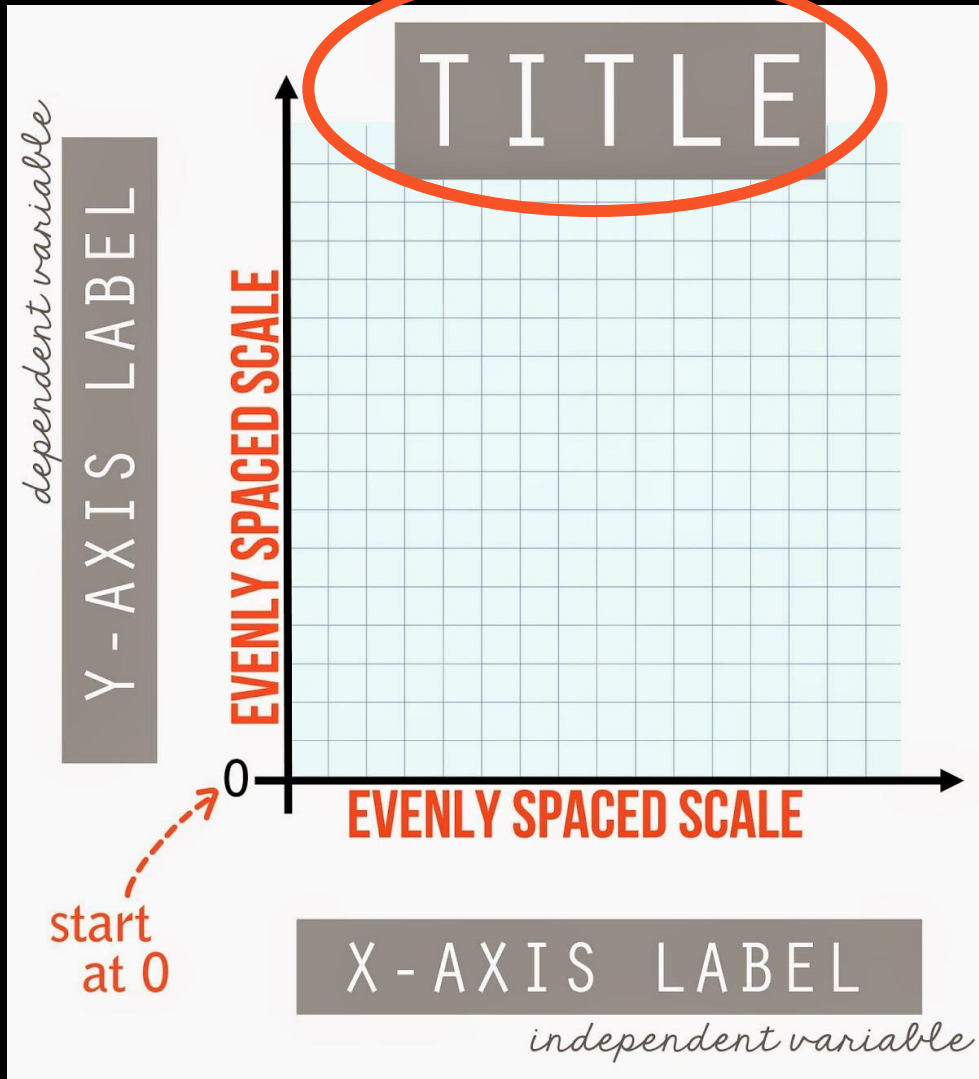
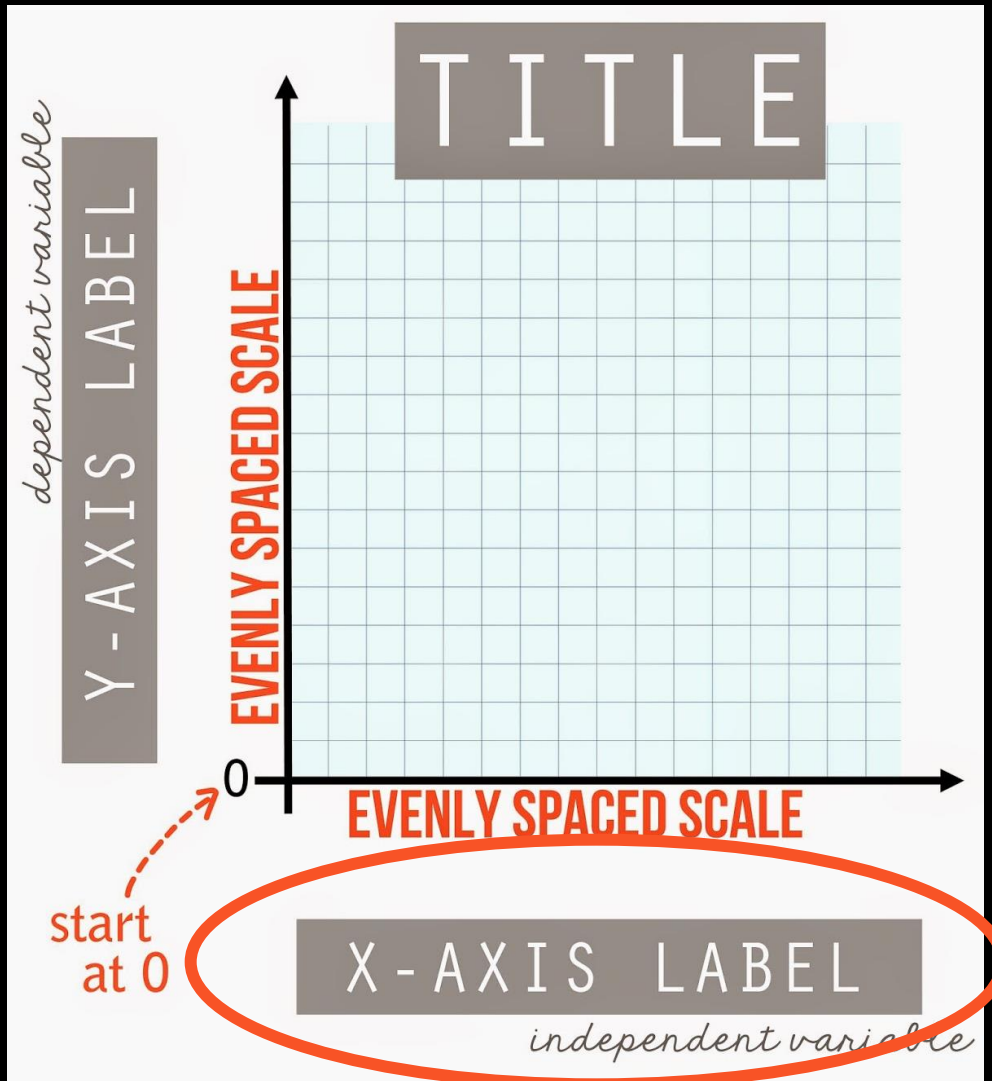Expenditure per Pupil in Average Daily Attendance: Selected years, 1977-78 through 2002-03

Parts of a Graph - Title
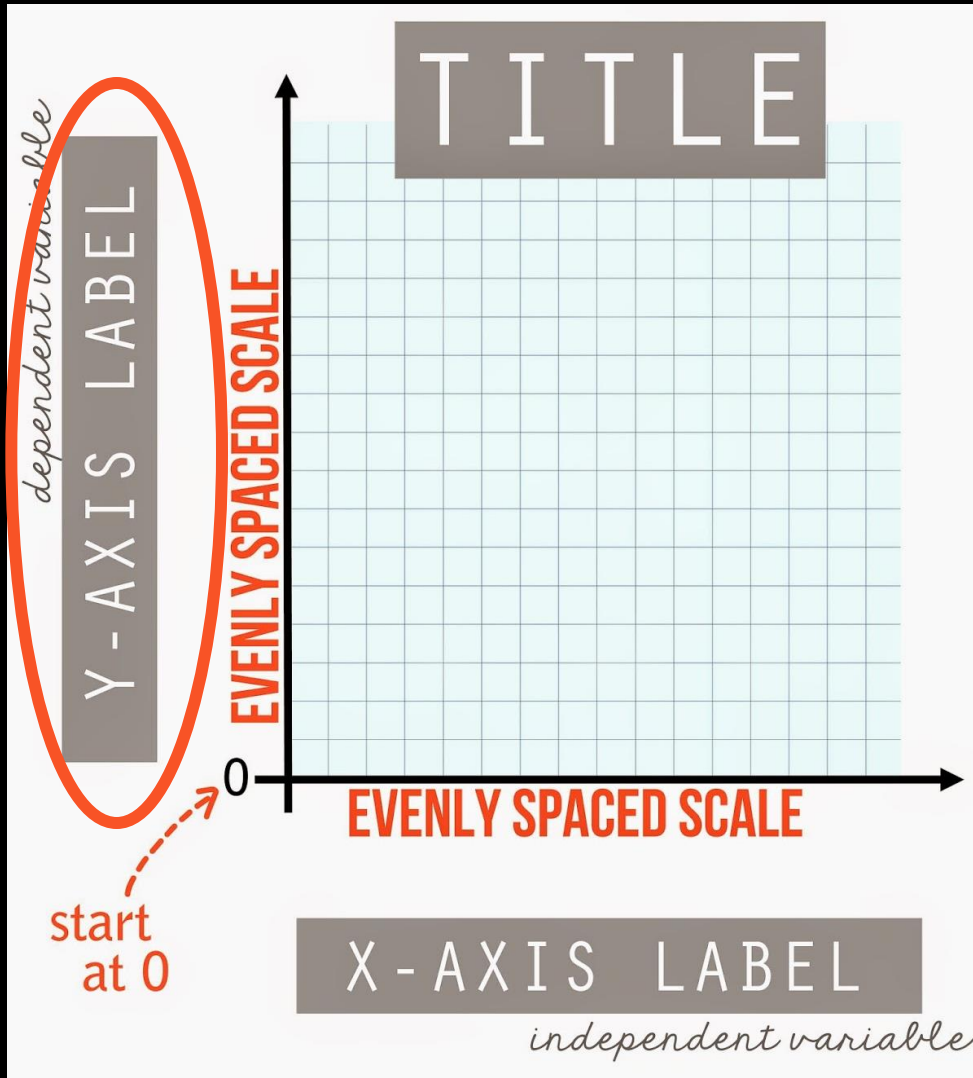

Title - tells you what the graph is about
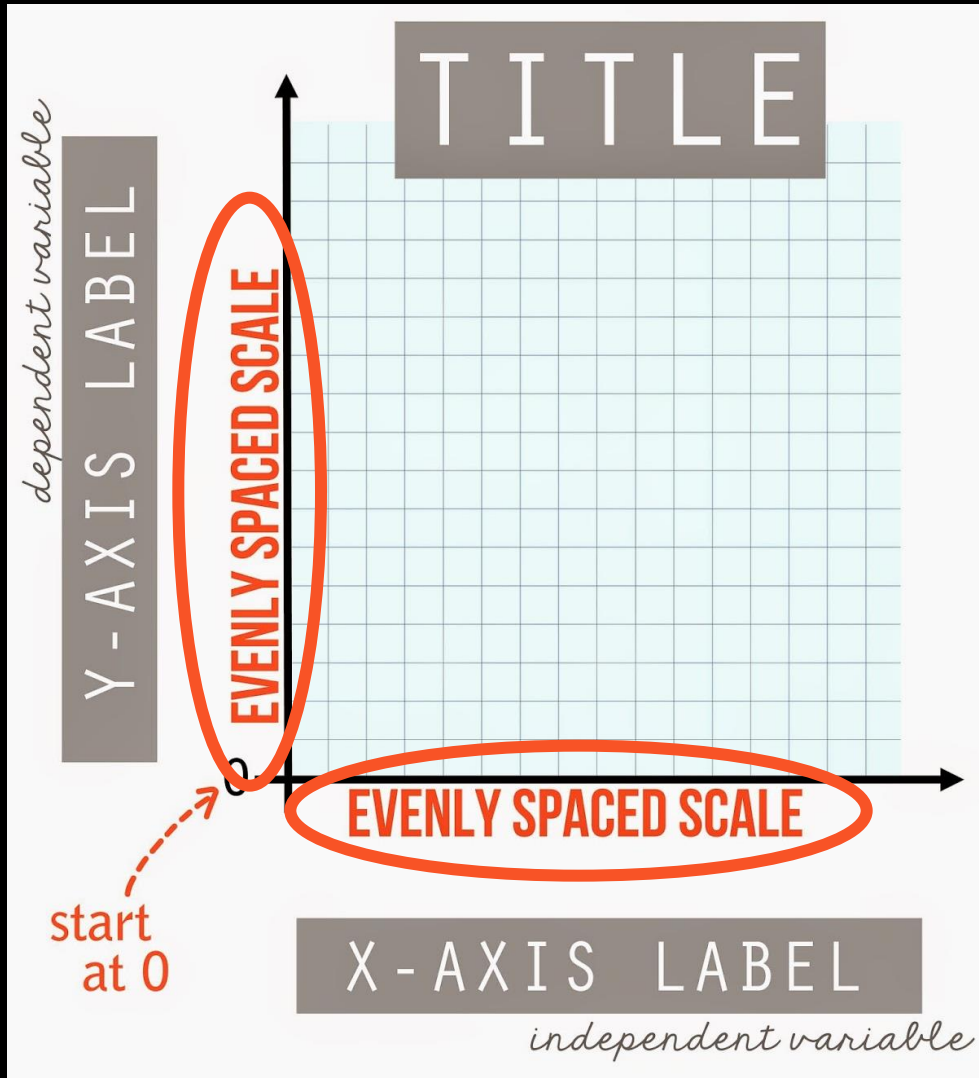
Parts of a Graph - IV

Independent variable (IV)- the variable that is controlled by the experimenter. Plotted on the x-axis.

Parts of a Graph - DV

Dependent variable (DV) - the variable that is affected by the IV. Plotted on the y-axis.

Parts of a Graph - Scale

Scale – provides value to the data points.

Legend or Key
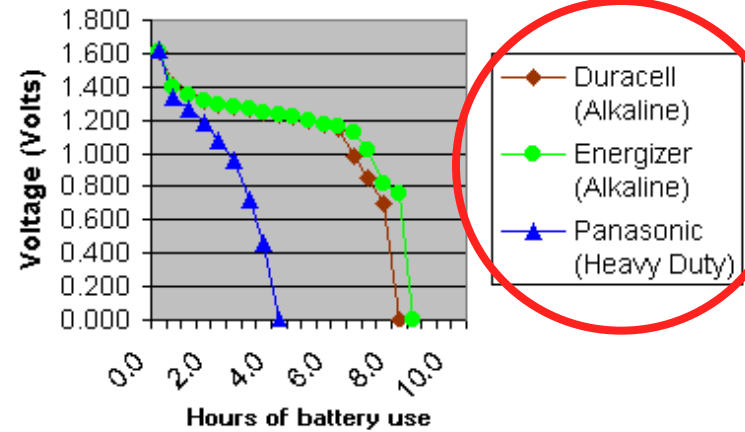
Legend/Key - help identify different parts of a graph

Bar Graph Practice

Amount of Sugar in Certain Foods

Percent of Sugar (y-axis): 0, 7, 14, 21, 28, 35

- Ketchup: 8.8
- Peanut Butter: 9.2
- Chocolate Bar: 33.2
- Ice Cream: 21.4
- Chocolate Cake: 30.3
- Soda: 28.9
- Crackers: 11.8
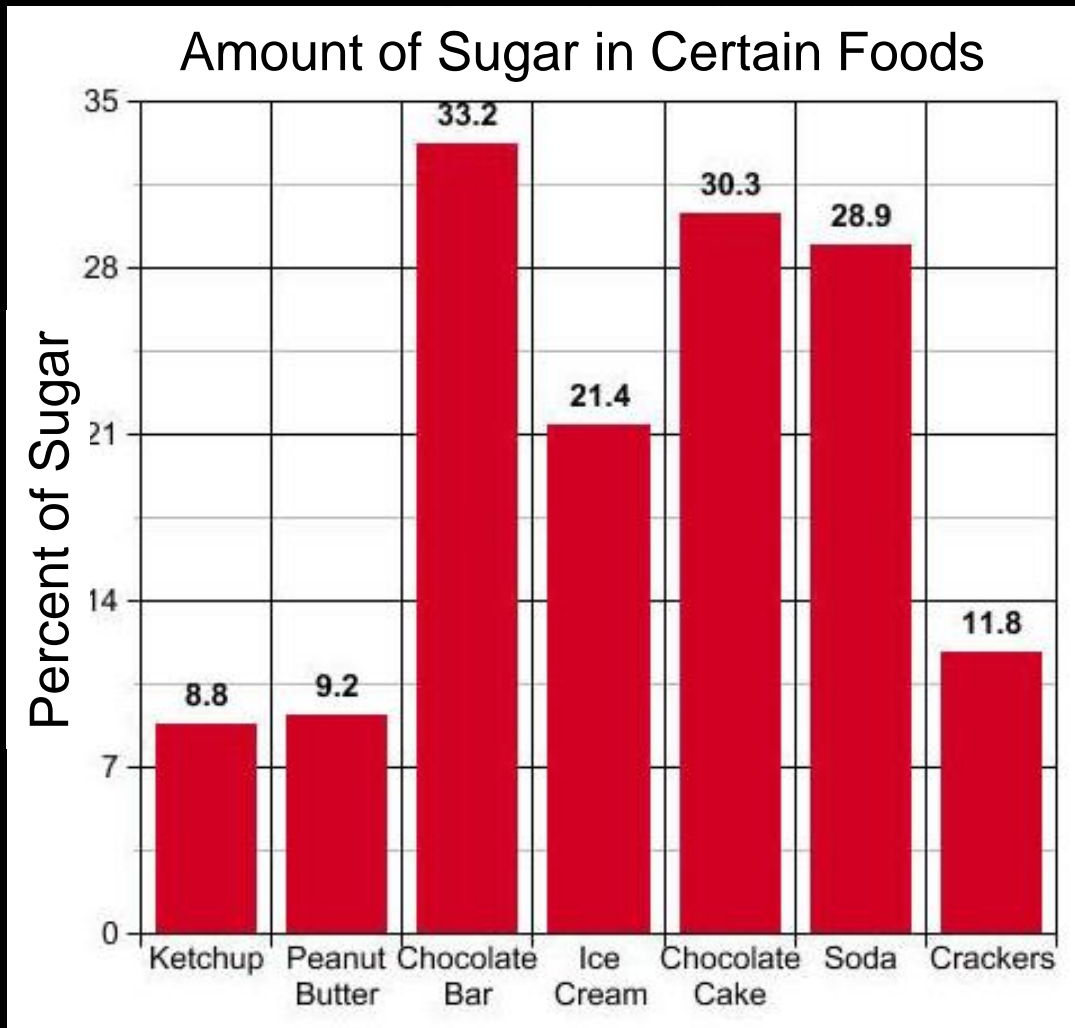
1. What is the title?
2. What is the range of values on the y-axis?
3. What is the independent variable?
4. Which food had the highest % of sugar?
5. What percent of sugar is in soda?
6. What is the dependent variable?

Line Graph Practice

People in a Store
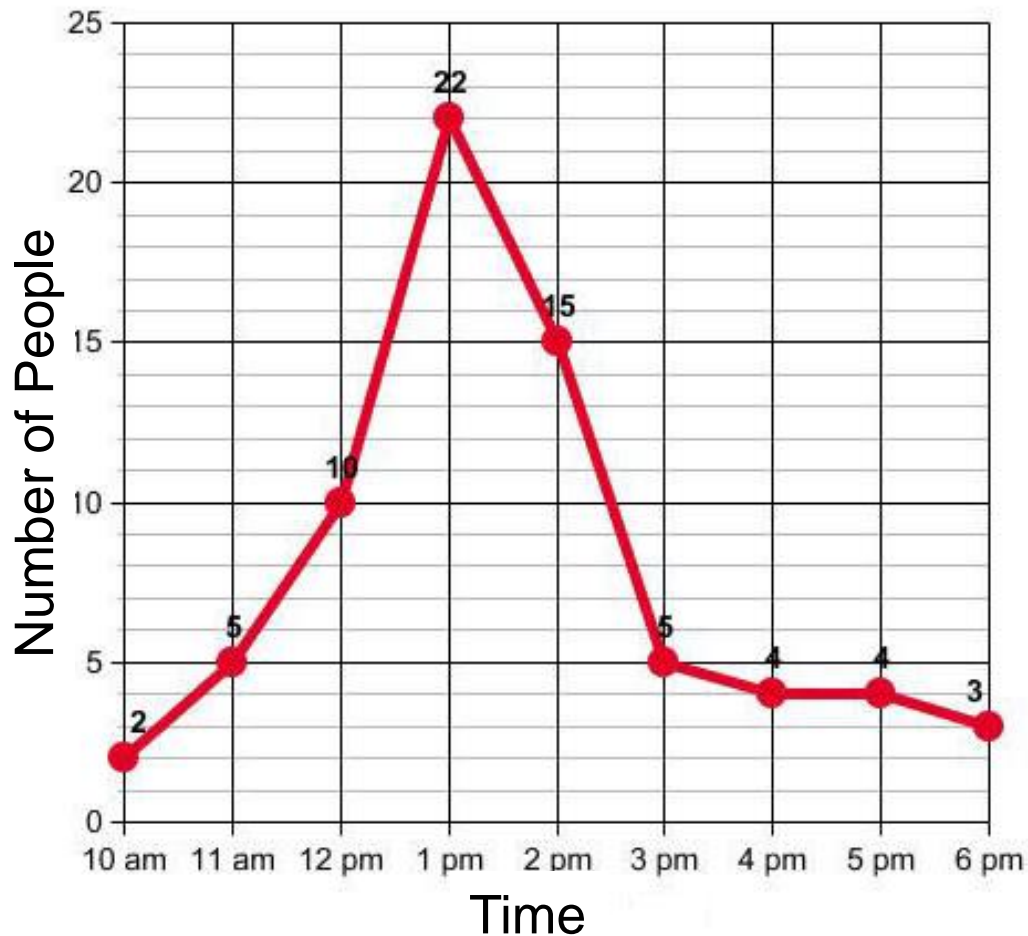
1. What is this graph about?
2. What is the busiest time of day at the store?
3. What is the dependent variable?
4. What was the greatest number of people in the store?

Let's Practice!

Constructing Bar Graphs

Students' Favorite After-School Activities	
Activity	**Number of Students**
Play Sports	45
Talk on Phone	53
Visit With Friends	99
Earn Money	44
Chat Online	66
School Clubs	22
Watch TV	37

Example 1 - A survey of students' favorite after-school activities was conducted at RBV. Construct a bar graph to visually display this data.

Constructing Line Graphs

Jill's Secondary Math Scores	
Grade Level	Math Score (%)
7	72
8	75
9	81
10	80
11	83
12	91

Example 3 - the table above shows Jill's math scores between grades 7-12. Construct a line graph to visually display this data.

Constructing Bar Graphs

Student Housing at Union University

Type of Housing	Number of Students
Residence Halls	3995
Fraternity/Sorority Houses	985
Off Campus Aparments	2347
Off Campus Houses	1093

Example 3 - the table above shows the number of students at Union University living in different types of housing. Construct a bar graph to visually display this data.

Constructing Line Graphs

Cell Phone Use While Driving in Anytown, NY	
Year	Number of People
2000	309
2001	274
2002	256
2003	238
2004	197
2005	203
2006	195
2007	192

Example 4 - In 2000, a law was passed against the use of cell phones while driving in Anytown, N.Y. The number of people using cell phones while driving has changed each year. Create a line graph to visually display this data.

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